



Mitchell E. Daniels, Jr.
 Governor

Thomas W. Easterly
 Commissioner

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

**NEW SOURCE REVIEW (NSR)
 PREVENTION OF SIGNIFICANT DETERIORATION (PSD)
 PART 70 OPERATING PERMIT**

OFFICE OF AIR QUALITY

**Auburn Nugget LLC
 County Road 55 and 42
 Butler, IN 46721**

(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.

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 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

This permit is issued in accordance with 326 IAC 2-2 Prevention of Significant Deterioration (PSD).

Except as otherwise stated in 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. Except as otherwise stated in this permit, noncompliance with any provision of this permit, except any provision specifically designated as not federally enforceable, constitutes a violation of the Clean Air Act. 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.19 - Emergency Provisions.

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| NSR/PSD/Part 70 Permit 033-19475-00092 | |
| Issued by: Original Signed by Paul Dubenetzky, Chief Permits Branch Office of Air Quality | Issuance Date: May 31, 2005 Expiration Date: May 31, 2010 |

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D.8 FACILITY OPERATION CONDITIONS - - Paved and Unpaved Roadways

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D.9 FACILITY OPERATION CONDITIONS - - Cooling Towers and Emergency Generator(s)

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E Fugitive Dust Control Plan

Affidavit of Construction

Part 70 Permit Certification

Part 70 Permit Emergency Occurrence Report

Part 70 Permit Usage Report

Part 70 Permit Quarterly Report

Part 70 Permit Quarterly Deviation and Compliance Monitoring Report

| | |
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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 2-7-4(c)] [326 IAC 2-7-5(15)] [326 IAC 2-7-1(22)]

The Permittee owns and operates a stationary iron nugget production plant.

| | |
|------------------------------|---|
| Responsible Official: | Manager or Designee pursuant to 326 IAC 2-7-1(34) |
| Source Location: | County Road 55 and 42, Butler, IN 46721 |
| Mailing Address: | 221 South Main Street, Auburn, IN 46706 |
| General Source Phone Number: | 218-349-1277 |
| County: | Dekalb |
| SIC Code: | 3312 (Steel Mill) |
| NAICS Code: | 331111 |
| Source Location Status: | Attainment for all criteria pollutants |
| Source Status: | 1 of 28 Source Categories Part 70 Permit Program Major Source, under PSD Rules Major Source, Section 112 of the Clean Air Act Clean Unit Source |

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)]
[326 IAC 2-7-5(15)]

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

SECTION D.1 and SECTION D.2

(a) Stack 1001 and Roof Monitor

- (1) One (1) Rotary Hearth Furnace, identified as RHF, nominally rated at 75.521 tons per hour of iron nugget product and 217 million (MM) Btu per hour. This RHF uses natural gas as the primary fuel, and propane as a back up fuel.

The sulfur dioxide (SO₂), particulate matter, lead, mercury, fluorides, and acid gases emissions from the RHF are controlled by up to four (4) wet scrubbers, identified as Wet Scrubber 1, Wet Scrubber 2, Wet Scrubber 3, and Wet Scrubber 4. These wet scrubbers exhaust to a common duct and then to Stack 1001.

The nitrogen oxides (NO_x) emissions from the RHF are reduced by low NO_x burners, in addition to the low excess air (LEA) design.

The volatile organic compound (VOC), carbon monoxide (CO), and organic

hazardous air pollutants (HAPs) emissions from the RHF are controlled by the air infiltration inherent design of the RHF.

The RHF is equipped with the following continuous emission monitoring systems (CEMSs): SO₂, VOC, NO_x and CO.

- (2) Three (3) Agglomerate Dryers, identified as Green Ball Dryer 1, Green Ball Dryer 2, and Green Ball Dryer 3, with a total nominal rating of 153.248 tons of dried green balls per hour and 205.2 million (MM) Btu per hour.

During normal operations, these dryers operate using the air preheated by the RHF exhaust. These dryers use natural gas during start up periods and when sufficient preheated air is not available. Low NO_x burners are used to reduce the NO_x emissions from these three (3) Green Ball Dryers when they are using natural gas as fuel.

Each Green Ball Dryer is controlled by a baghouse, identified as Green Ball Dryer Baghouse 1, Green Ball Dryer Baghouse 2, and Green Ball Dryer Baghouse 3. These baghouses exhaust to a common duct and then to Stack 1001.

- (3) One (1) Product Separator/Dryer, nominally rated at 33 tons of dry product per hour, and 25 MMBtu per hour. This dryer uses natural gas and is equipped with low NO_x burners to reduce the NO_x emissions.

The particulate matter emissions from the Product Separator/Dryer are controlled by a baghouse, identified as Product Separator/Dryer Baghouse.

The controlled emissions from the RHF, Green Ball Dryers, and Product Separator/Dryer exhaust through a stack, identified as Stack 1001.

The remaining uncontrolled emissions exhaust through the Roof Monitor.

Stack 1001 is equipped with a continuous opacity monitor (COM) to measure the visible emissions.

SECTION D.3

(b) Stack 1002

- (1) One (1) Coal #1 Pulverizer/Dryer, nominally rated at 33 tons per hour, and 36.0 million (MM) Btu per hour.

The particulate matter emissions from the Coal #1 Pulverizer/Dryer are controlled by a baghouse, identified as Coal #1 Pulverizer/Dryer Baghouse.

- (2) One (1) Coal #2 Pulverizer/Dryer, nominally rated at 9 tons per hour, and 9.23 MMBtu per hour.

The particulate matter emissions from the Coal #2 Pulverizer/Dryer are controlled by a baghouse, identified as Coal #2 Pulverizer/Dryer Baghouse.

- (3) Flux Pulverizer(s)/Dryer(s), nominally rated at a total of 13 tons per hour and

14.58 MMBtu per hour.

Due to design uncertainty at this time of the review, the numbers of flux pulverizers/dryers and associated pieces of control equipment are permitted to change, however, the total heat input and process capacity will remain the same.

The particulate matter emissions from the Flux Pulverizer(s)/Dryer(s) are controlled by baghouse(s), identified as Flux Pulverizer(s)/Dryer(s) Baghouse(s).

These dryers use natural gas and are equipped with ~~L~~ low NO_x burners.

The controlled emissions from the:

- Coal #1 Pulverizer/Dryer,
 - Coal #2 Pulverizer/Dryer, and
 - Flux Pulverizer(s)/Dryer(s)
- exhaust through a stack, identified as Stack 1002.

SECTION D.4

(c) Stack 1003

One (1) Ore Dryer, nominally rated at 125 tons per hour and 25 million (MM) Btu per hour.

The particulate matter emissions from the Ore Dryer are controlled by a baghouse, identified as Ore Dryer Baghouse and exhaust through a stack, identified as Stack 1003.

SECTION D.5

(d) Stack 1004

Coal Railcar Unloading, nominally rated at 165 tons per hour, with a baghouse, identified as Coal Railcar Unloading Baghouse, for particulate control and exhaust through a stack, identified as Stack 1004.

SECTION D.6

(e) Fugitive Dust Collection Systems

- (1) Fugitive Dust Collection #1, with baghouse(s), identified as Fugitive Baghouse #1, for particulate control and exhaust through a stack, identified as Stack 1001.
- (2) Fugitive Dust Collection #2, with baghouse(s), identified as Fugitive Baghouse #2, for particulate control and exhaust through a stack, identified as Stack 1005.

Due to design uncertainty at this time of the review, the number of fugitive dust collection baghouses is permitted to change, however, the total dust collection volume and emissions will remain the same.

SECTION D.7

(f) Material storage, handling, transfer, and conveying, each nominally rated at 200 tons per hour.

| Summary of Bin Vents and Corresponding Operations | | | |
|---|----------------------|-------------|------------------------------|
| Bin Vent ID | Operation | Bin Vent ID | Operation |
| 1006 | Raw Ore Silo | 1022 | Flux Silo #3 |
| 1010 | Raw Flux Silo | 1023 | Flux Silo #4 |
| 1011 | Binder Silo | 1024 | Recycle Silo |
| 1014 | Raw Coal Silo | 1025 | Flux Silo #5 |
| 1015 | Recycle Fines Silo | 1027 | EAF Dust Silo |
| 1018 | Raw Coal Silo | 1037 | Product Silo |
| 1019 | Pulverized Coal Silo | 1038 | Raw Flux Silo |
| 1020 | Pulverized Coal Silo | 1040 | Slag Separator Baghouse Silo |
| 1021 | Pulverized Coal Silo | Total | 17 |
| These silos are controlled by bin vent filters. | | | |

SECTION D.8

(g) Paved and Unpaved Roadways

Roadways used by the semi-tractor trailers, employee vehicles, and support vehicles are either paved or unpaved stone or gravel.

Fugitive dust emissions are controlled by the implementation of the Fugitive Dust Control Plan (FDCP).

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

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

SECTION D.9

(a) Two (2) Cooling Towers:

- (1) Identified as Cooling Tower 743, with nominal capacity of 23,450 gallons per minute and 0.005% drift rate.
- (2) Identified as Cooling Tower 726, with nominal capacity of 10,350 gallons per minute and 0.005% drift rate.

(b) Emergency Generator(s)

A.4 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability), because:

- (a) It is a major source, as defined in 326 IAC 2-7-1(22).
- (b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

SECTION B GENERAL CONDITIONS

Part 1 General Construction Conditions

B.1 Permit No Defense [IC 13-11 through 13-20][IC 13-22 through 13-25] [IC 13-17]

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

B.2 Effective Date of the Permit [IC 13-15-5-3]

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

B.3 Revocation of Permits [326 IAC 2-2-8]

Pursuant to 326 IAC 2-2-8(a)(1), this permit to construct shall expire if construction is not commenced within eighteen (18) months after receipt of this approval, if construction is discontinued for a period of eighteen (18) months or more, or if construction is not completed within a reasonable time. The IDEM may extend the eighteen (18) month period upon satisfactory showing that an extension is justified.

B.4 Modification to Construction Conditions [326 IAC 2]

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

B.5 Advanced Source Modification Approval [326 IAC 2-7-5(16)] [326 IAC 2-7-10.5]

The requirements to obtain a source modification approval under 326 IAC 2-7-10.5 or a permit modification under 326 IAC 2-7-12 are satisfied by this permit for the proposed emission units, control equipment or insignificant activities in Sections A.2 and A.3.

B.6 Significant Source Modification [326 IAC 2-7-10.5(h)]

This document shall also become the approval to operate pursuant to 326 IAC 2-7-10.5(h) when, prior to start of operation, the following requirements are met:

- (a) The attached Affidavit of Construction shall be submitted to the Office of Air Quality (OAQ), verifying that the emission units were constructed or modified as proposed in the application or the permit. The emissions units covered in [this permit](#) may begin operating on the date the affidavit of construction is postmarked or hand delivered to IDEM if constructed as proposed.

If construction is completed in phases: i.e.: the entire construction is not done continuously, a separate affidavit must be submitted for each phase of construction. Any permit conditions associated with operation start up dates such as stack testing for NSPS shall be applicable to each individual phase.

- (b) If actual construction of the emissions units differs from the construction or modification proposed in the application or the permit in a manner that is regulated under the provisions of 326 IAC 2-2, the Permittee may not begin operation until the source

modification has been revised pursuant to the provisions of that rule and an Operation Permit Validation Letter is issued.

- (c) If actual construction of the emissions units differs from the construction proposed in the application or the permit in a manner that is not regulated under the provisions of 326 IAC 2-2, the Permittee may not begin operation until the source modification has been revised pursuant to the provisions of that rule and the provisions of 326 IAC 2-7-11 or 326 IAC 2-7-12 and an Operation Permit Validation Letter is issued.
- (d) The Permittee shall attach the Operation Permit Validation Letter received from the OAQ [to this permit](#).

B.7 General Provisions and NSPS Reporting [326 IAC 12-1][40 CFR Part 60, Subpart A]

- (a) The provisions of 40 CFR Part 60, Subpart A (General Provisions), which are incorporated by reference in 326 IAC 12-1, apply to the Coal #1 Dryer and Coal #2 Dryer.
- (b) Pursuant to the New Source Performance Standards (NSPS), 40 CFR Part 60 Subpart Y, the Permittee shall report the following at the appropriate times:
 - (1) Notification of the commencement of construction date of the affected units (postmarked no later than 30 days after such date) [40 CFR 60.7a(1)];
 - (2) Notification of the actual initial start-up date of the affected units (postmarked [no later than](#) 15 days after such date) [40 CFR 60.7a(3)];
 - (3) Date of performance testing (at least 30 days prior to such date), when required by a condition elsewhere in this permit; and
 - (4) Notification of the anticipated date for conducting opacity observations (postmarked no later than 15 days after such date) [40 CFR 60.7a(6)].

Reports are to be sent to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue
Indianapolis, IN 46204

The application and enforcement of these standards have been delegated to the IDEM, OAQ. The requirements of 40 CFR Part 60 are also federally enforceable.

SECTION B GENERAL CONDITIONS

Part 2 General Operating Conditions

B.8 Definitions [326 IAC 2-7-1]

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.9 Permit Term [326 IAC 2-7-5(2)] [326 IAC 2-1.1-9.5] [326 IAC 2-7-4(a)(1)(D)] [IC 13-15-3-6(a)]

- (a) This permit, **T033-19475-00092**, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.
- (b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, including any permit shield provided in 326 IAC 2-7-15, until the renewal permit has been issued or denied.

B.10 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.11 Enforceability [326 IAC 2-7-7]

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.12 Termination of Right to Operate [326 IAC 2-7-10] [326 IAC 2-7-4(a)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-7-3 and 326 IAC 2-7-4(a).

B.13 Severability [326 IAC 2-7-5(5)]

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.14 Property Rights or Exclusive Privilege [326 IAC 2-7-5(6)(D)]

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

B.15 Duty to Provide Information [326 IAC 2-7-5(6)(E)]

- (a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ, may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The submittal by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34). Upon request, the Permittee shall also furnish to IDEM, OAQ, copies of records required to be kept by this permit.
- (b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

B.16 Certification [326 IAC 2-7-4(f)] [326 IAC 2-7-6(1)] [326 IAC 2-7-5(3)(C)]

- (a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by a responsible official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) One (1) certification shall be included, using the attached Certification Form or its equivalent, with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.
- (c) A responsible official is defined at 326 IAC 2-7-1(34).

B.17 Annual Compliance Certification [326 IAC 2-7-6(5)]

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

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

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Air Enforcement Branch - Indiana (AE-17J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

- (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 2-7-5(3); and
 - (5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ, may require to determine the compliance status of the source.

The submittal by the Permittee does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

B.18 Preventive Maintenance Plan (PMP) [326 IAC 2-7-5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)] [326 IAC 1-6-3]

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) **not later than** ninety (90) days after issuance of this permit, including the following information on each facility:
- (1) Identification of the individual(s) by **job title or classification** responsible for inspecting, maintaining, and repairing emission control devices;
 - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
 - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

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

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

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

- (b) The Permittee shall implement the PMPs, including any required record keeping as necessary to ensure that failure to implement a PMP does not cause or contribute to an exceedance of any limitation on emissions or potential to emit.
- (c) A copy of the PMPs shall be submitted to IDEM, OAQ, upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ, may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions or potential to emit. The PMP does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (d) To the extent the Permittee is required by 40 CFR Part 60 or 40 CFR Part 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.19 Emergency Provisions [326 IAC 2-7-16]

- (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 otherwise provided in 326 IAC 2-7-16.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a 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, 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 Section), or
Telephone Number: 317-233-5674 (ask for Compliance Section)
Facsimile Number: 317-233-5967

- (5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

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

100 North Senate Avenue
Indianapolis, Indiana 46204

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 2-7-5(3)(C)(ii) and must contain the following:

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

The notification which shall be submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (6) The Permittee immediately took all reasonable steps to correct the emergency.
- (c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
- (d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.
- (e) IDEM, OAQ, may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4(c)(9) for the emission unit that experienced an emergency 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 2-7 and any other applicable rules.
- (g) 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.
- (h) The Permittee shall include all emergencies in the Quarterly Deviation and Compliance Monitoring Report.

B.20 Permit Shield [326 IAC 2-7-15] [326 IAC 2-7-20] [326 IAC 2-7-12]

- (a) Pursuant to 326 IAC 2-7-15, the Permittee has been granted a permit shield. The permit shield provides that compliance with the conditions of this permit shall be deemed in compliance with any applicable requirements as of the date of permit issuance, provided that either the applicable requirements are included and specifically identified in this permit or the permit contains an explicit determination or concise summary of a determination that other specifically identified requirements are not applicable. The Indiana statutes from IC 13 and rules from 326 IAC, referenced 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 Part 70 permit under 326 IAC 2-7 or for applicable requirements for which a permit shield has been granted.

This permit shield does not extend to applicable requirements which are promulgated after the date of issuance of this permit unless this permit has been modified to reflect such new requirements.

- (b) If, after issuance of this permit, it is determined that the permit is in nonconformance with an applicable requirement that applied to the source on the date of permit issuance, IDEM, OAQ, shall immediately take steps to reopen and revise this permit and issue a compliance order to the Permittee to ensure expeditious compliance with the applicable requirement until the permit is reissued. The permit shield shall continue in effect so long as the Permittee is in compliance with the compliance order.
- (c) No permit shield shall apply to any permit term or condition that is determined after issuance of this permit to have been based on erroneous information supplied in the permit application. Erroneous information means information that the Permittee knew to be false, or in the exercise of reasonable care should have been known to be false, at the time the information was submitted.
- (d) Nothing in 326 IAC 2-7-15 or in this permit shall alter or affect the following:
 - (1) The provisions of Section 303 of the Clean Air Act (emergency orders), including the authority of the U.S. EPA under Section 303 of the Clean Air Act;
 - (2) The liability of the Permittee for any violation of applicable requirements prior to or at the time of this permit's issuance;
 - (3) Any applicable requirements of the acid rain program, consistent with Section 408(a) of the Clean Air Act; and
 - (4) The ability of U.S. EPA to obtain information from the Permittee under Section 114 of the Clean Air Act.
- (e) This permit shield is not applicable to any change made under 326 IAC 2-7-20(b)(2) (Sections 502(b)(10) of the Clean Air Act changes) and 326 IAC 2-7-20(c)(2) (trading based on State Implementation Plan (SIP) provisions).
- (f) This permit shield is not applicable to modifications eligible for group processing until after IDEM, OAQ, has issued the modifications. [326 IAC 2-7-12(c)(7)]
- (g) This permit shield is not applicable to minor Part 70 permit modifications until after IDEM, OAQ, has issued the modification. [326 IAC 2-7-12(b)(8)]

B.21 Deviations from Permit Requirements and Conditions [326 IAC 2-7-5(3)(C)(ii)]

- (a) Deviations from any permit requirements (for emergencies see Section B.19 - Emergency Provisions), the probable cause of such deviations, and any response steps or preventive measures taken shall be reported to:

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

using the attached Quarterly Deviation and Compliance Monitoring Report, or its equivalent. A deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report.

The Quarterly Deviation and Compliance Monitoring Report does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

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

B.22 Permit Modification, Reopening, Revocation and Reissuance, or Termination
[326 IAC 2-7-5(6)(C)] [326 IAC 2-7-8(a)] [326 IAC 2-7-9]

- (a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Part 70 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 2-7-5(6)(C)] The notification by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (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 2-7-9(a)(3)]
- (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 2-7-9(b)]
- (d) The reopening and revision of this permit, under 326 IAC 2-7-9(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 2-7-9(c)]

B.23 Permit Renewal [326 IAC 2-7-3] [326 IAC 2-7-4]

- (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 2-7-4. Such information shall be included in the application for each emission unit at this source,

except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

Request for renewal shall be submitted to:

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

- (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 2-7 until IDEM, OAQ, to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by IDEM, OAQ, any additional information identified as being needed to process the application.

B.24 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]

- (a) Permit amendments and modifications are governed by the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this permit.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:
- Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204
- Any such application shall be certified by the “responsible official” as defined by 326 IAC 2-7-1(34).
- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]
- (d) No permit amendment or modification is required for the addition, operation or removal of a nonroad engine, as defined in 40 CFR 89.2.

B.25 Permit Revision Under Economic Incentives and Other Programs [326 IAC 2-7-5(8)]
[326 IAC 2-7-12 (b)(2)]

- (a) No Part 70 permit revision shall be required under any approved economic incentives, marketable Part 70 permits, emissions trading, and other similar programs or processes for changes that are provided for in a Part 70 permit.
- (b) Notwithstanding 326 IAC 2-7-12(b)(1) and 326 IAC 2-7-12(c)(1), minor Part 70 permit modification procedures may be used for Part 70 modifications involving the use of economic incentives, marketable Part 70 permits, emissions trading, and other similar approaches to the extent that such minor Part 70 permit modification procedures are explicitly provided for in the applicable State Implementation Plan (SIP) or in applicable requirements promulgated or approved by the U.S. EPA.

B.26 Operational Flexibility [326 IAC 2-7-20] [326 IAC 2-7-10.5]

- (a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-7-20(b), (c), or (e), 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 preconstruction approval required by 326 IAC 2-7-10.5 has been obtained;
 - (3) The changes do not result in emissions which exceed the emissions allowable under this permit (whether expressed herein as a rate of emissions or in terms of total emissions);
 - (4) The Permittee notifies the:

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

and

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

in advance of the change by written notification at least ten (10) days in advance of the proposed change. The Permittee shall attach every such notice to the Permittee's copy of this permit; and
 - (5) The Permittee maintains records on-site which document, on a rolling five (5) year basis, all such changes and emissions trading that are subject to 326 IAC 2-7-20(b), (c), or (e) and makes 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 2-7-20(b)(1), (c)(1), and (e)(2).

- (b) The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(36)) without a permit revision, subject to the constraint of 326 IAC 2-7-20(a). For each such Section 502(b)(10) of the Clean Air Act change, the required written notification shall include the following:
- (1) A brief description of the change within the source;
 - (2) The date on which the change will occur;
 - (3) Any change in emissions; and
 - (4) Any permit term or condition that is no longer applicable as a result of the change.

The notification which shall be submitted is not considered an application form, report or compliance certification. Therefore, the notification by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (c) Emission Trades [326 IAC 2-7-20(c)]
The Permittee may trade increases and decreases in emissions in the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-7-20(c).
- (d) Alternative Operating Scenarios [326 IAC 2-7-20(d)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-7-5(9). No prior notification of IDEM, OAQ, or U.S. EPA is required.
- (e) 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.27 Source Modification Requirement [326 IAC 2-7-10.5] [326 IAC 2-2-2]

- (a) A modification, construction, or reconstruction is governed by the [applicable](#) requirements of 326 IAC 2 and 326 IAC 2-7-10.5.
- (b) Any [major](#) modification at an existing major source is governed by the requirements of 326 IAC 2-2-2.

B.28 Inspection and Entry [326 IAC 2-7-6] [IC 13-14-2-2] [IC 13-30-3-1] [IC 13-17-3-2]

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 Part 70 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 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 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 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.29 Transfer of Ownership or Operational Control [326 IAC 2-7-11]

- (a) The Permittee must comply with the requirements of 326 IAC 2-7-11 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.
- (b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

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

The application which shall be submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

B.30 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-7-5(7)][326 IAC 2-1.1-7]

- (a) The Permittee shall pay annual fees to IDEM, OAQ, within thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ, the applicable fee is due April 1 of each year.
- (b) Except as provided in 326 IAC 2-7-19(e), 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.31 Credible Evidence [326 IAC 2-7-5(3)][326 IAC 2-7-6][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 2-7-5(1)]

C.1 Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) Pounds per Hour [40 CFR Part 52 Subpart P] [326 IAC 6-3-2]

- (a) Pursuant to 40 CFR 52 Subpart P, particulate matter emissions from any process not already regulated by 326 IAC 6-1 or any New Source Performance Standard, and which has a maximum process weight rate less than 100 pounds per hour shall not exceed 0.551 pounds per hour.
- (b) Pursuant to 326 IAC 6-3-2(e)(2), particulate emissions from any process not exempt under 326 IAC 6-3-1(b) or (c) which has a maximum process weight rate less than 100 pounds per hour and the methods in 326 IAC 6-3-2(b) through (d) do not apply shall not exceed 0.551 pounds per hour.

This condition is not federally enforceable.

C.2 Opacity [326 IAC 5-1]

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

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

C.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.

326 IAC 4-1-3 (a)(2)(A) and (B) are not federally enforceable.

C.4 Incineration [326 IAC 4-2] [326 IAC 9-1-2]

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

326 IAC 9-1-2 is not federally enforceable.

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).

326 IAC 6-4-2(4) is not federally enforceable.

C.6 Fugitive Particulate Matter Emission Limitations [326 IAC 6-5]

Pursuant to 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations), fugitive particulate matter emissions shall be controlled according to the fugitive dust control plan ([Section E of this permit](#)).

C.7 Operation of Equipment [326 IAC 2-7-6(6)]

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

C.8 Motor Vehicle Fugitive Dust Sources [326 IAC 6-4-4]

Pursuant to 326 IAC 6-4-4, no vehicle shall be driven or moved on any public street, road, alley, highway, or other thoroughfare, unless such vehicle is so constructed as to prevent its contents from dripping, sifting, leaking, or otherwise escaping there from so as to create conditions which result in fugitive dust. This section applies only to the cargo any vehicle may be conveying and mud tracked by the vehicle.

C.9 Stack Height [326 IAC 1-7]

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

The provisions of 326 IAC 1-7-1(3), 326 IAC 1-7-2, 326 IAC 1-7-3(c) and (d), 326 IAC 1-7-4, and 326 IAC 1-7-5(a), (b), and (d) are not federally enforceable.

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

The Permittee shall comply with the applicable requirements of 326 IAC 14-10, 326 IAC 18, and 40 CFR 61.140.

Testing Requirements [326 IAC 2-7-6(1)]

C.11 Performance Testing [326 IAC 3-6]

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

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

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

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

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

- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (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.12 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 [applicable](#) methods approved by the commissioner or the U. S. EPA.

Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]

C.13 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

Unless otherwise specified in this permit, all monitoring and record keeping requirements not already legally required shall be implemented when operation begins.

The Permittee shall be responsible for installing any necessary equipment [listed in Section D of this permit](#) and initiating any required monitoring related to that equipment.

If due to circumstances beyond its [reasonable](#) control, that equipment cannot be installed and operated [not later than](#) ninety (90) days, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

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

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

The notification which shall be submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

C.14 Monitoring Methods [326 IAC 3] [40 CFR Part 60] [40 CFR Part 63]

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

C.15 Pressure Gauge and Other Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)]
[326 IAC 2-7-6(1)]

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

Corrective Actions and Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]

C.16 Emergency Reduction Plans (ERPs) [326 IAC 1-5-2] [326 IAC 1-5-3]
Pursuant to 326 IAC 1-5-2 (Emergency Reduction Plans; Submission):

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

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

[not later than](#) 180 days from the date on which this source commences operation.

The ERP does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).
- (c) If the ERP is disapproved by IDEM, OAQ, the Permittee shall have an additional thirty (30) days to resolve the differences and submit an approvable ERP.
- (d) These ERPs shall state those actions that will be taken, when each episode level is declared, to reduce or eliminate emissions of the appropriate air pollutants.
- (e) Said ERPs shall also identify the sources of air pollutants, the approximate amount of reduction of the pollutants, and a brief description of the manner in which the reduction will be achieved.
- (f) Upon direct notification by IDEM, OAQ, that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level. [326 IAC 1-5-3]

C.17 Risk Management Plan (RMP) [326 IAC 2-7-5(12)] [40 CFR Part 68.215]

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 Part 68.

C.18 Compliance Response Plan (CRP) - Preparation, Implementation, Records, and Reports
[326 IAC 2-7-5] [326 IAC 2-7-6]

- (a) The Permittee is required to prepare a Compliance Response Plan (CRP) for each compliance monitoring condition [specified in Section D](#) of this permit.

If a Permittee is required to have an:

- Operation, Maintenance and Monitoring (OMM) Plan; or
- Parametric Monitoring Plan; or
- Start-up, Shutdown, and Malfunction (SSM) Plan

under 40 CFR 60 or 40 CFR Part 63, such plans shall be deemed to satisfy the requirements for a CRP for those compliance monitoring conditions

A CRP shall be submitted to IDEM, upon request. The CRP shall be prepared [not later than](#) ninety (90) days after issuance of this permit by the Permittee, supplemented from time to time by the Permittee, maintained on site, and comprised of:

- (1) Reasonable response steps that may be implemented in the event that a response step is needed pursuant to the requirements of Section D of this permit; and an expected timeframe for taking reasonable response steps.
- (2) If, at any time, the Permittee takes reasonable response steps that are not set forth in the Permittee's current:
 - Compliance Response Plan; or
 - Operation, Maintenance and Monitoring (OMM) Plan; or
 - Parametric Monitoring Plan; and
 - Start-up, Shutdown, and Malfunction (SSM) Plan;and the Permittee documents such response in accordance with subsection (e) below, the Permittee shall amend its Compliance Response Plan or Operation, Maintenance and Monitoring (OMM) Plan or Parametric Monitoring Plan and Start-up, Shutdown, and Malfunction (SSM) Plan to include such response steps taken.

The OMM Plan or Parametric Monitoring and SSM Plan shall be submitted within the time frames specified by the applicable 40 CFR Part 60 or 40 CFR Part 63 requirement.

- (b) For each compliance monitoring condition of this permit, reasonable response steps shall be taken when indicated by the provisions of that compliance monitoring condition as follows:
- (1) Reasonable response steps shall be taken as set forth in the Permittee's current Compliance Response Plan or Operation, Maintenance and Monitoring (OMM) Plan or Parametric Monitoring Plan and Start-up, Shutdown, and Malfunction (SSM) Plan; or
 - (2) If none of the reasonable response steps listed in the Compliance Response Plan or Operation, Maintenance and Monitoring (OMM) Plan or Parametric Monitoring Plan and Start-up, Shutdown, and Malfunction (SSM) Plan is applicable or responsive to the excursion, the Permittee shall devise and implement additional [appropriate](#) response steps as expeditiously as practical. Taking such additional [appropriate](#) response steps shall not be considered a deviation from this permit

so long as the Permittee documents such response steps in accordance with this condition.

- (3) If the Permittee determines that additional response steps would necessitate that the emissions unit or control device be shut down, and it will be ten (10) days or more until the unit or device will be shut down, then the Permittee shall promptly notify the IDEM, OAQ of the expected date of the shut down. The notification shall also include the status of the applicable compliance monitoring parameter with respect to normal, and the results of the response actions taken up to the time of notification.
 - (4) Failure to take reasonable response steps shall be considered a deviation from the permit.
- (c) The Permittee is not required to take any further response steps for any of the following reasons:
- (1) A false reading occurs due to the malfunction of the monitoring equipment and prompt action was taken to correct the monitoring equipment.
 - (2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for a minor permit modification to the permit, and such request has not been denied.
 - (3) An automatic measurement was taken when the process was not operating.
 - (4) The process has already returned or is returning to operating within "normal" parameters and no response steps are required.
- (d) When implementing reasonable steps in response to a compliance monitoring condition, if the Permittee determines that an exceedance of an emission limitation has occurred, the Permittee shall report such deviations pursuant to Section B.21-Deviations from Permit Requirements and Conditions.
- (e) The Permittee shall record all instances when, in accordance with Section D, response steps are taken. In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.
- (f) Except as otherwise provided by a rule or provided specifically in Section D, all monitoring as required in Section D shall be performed when the emission unit is operating, except for time necessary to perform quality assurance and maintenance activities.

C.19 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5]
[326 IAC 2-7-6]

- (a) When the results of a stack test performed in conformance with Section C.11 - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess

emissions from the affected facility while the **appropriate** response actions are being implemented.

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

The response action documents submitted pursuant to this condition do require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

C.20 Emission Statement [326 IAC 2-7-5(3)(C)(iii)][326 IAC 2-7-5(7)][326 IAC 2-7-19(c)] [326 IAC 2-6]

-
- (a) Pursuant to 326 IAC 2-6-3(a)(1), the Permittee shall submit by July 1 of each year an emission statement covering the previous calendar year. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4(c) and shall meet the following requirements:
 - (1) Indicate estimated actual emissions of all pollutants listed in 326 IAC 2-6-4(a);
 - (2) Indicate estimated actual emissions of regulated pollutants as defined by 326 IAC 2-7-1 (32) (“Regulated pollutant, which is used only for purposes of Section 19 of this rule”) from the source, for purpose of fee assessment.

The statement must be submitted to:

Indiana Department of Environmental Management
Technical Support and Modeling Section, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204

The emission statement does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

- (b) The emission statement 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.21 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [326 IAC 2-2]

-
- (a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are

available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

(b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented no later than ninety (90) days of permit issuance.

(c) Pursuant to 326 IAC 2-2-8(b), if there is a reasonable possibility that a "project" (as defined in 326 IAC 2-2-1 (qq)) at a major source other than projects at a Clean Unit which is not part of a "major modification" (as defined in 326 IAC 2-2-1 (ee)) may result in significant emissions increase and the Permittee elects to utilize the "projected actual emissions" (as defined in 326 IAC 2-2-1 (rr)), the Permittee shall comply with following:

(1) Before beginning actual construction of the "project" (as defined in 326 IAC 2-2-1 (qq)) document and maintain the following records:

(A) A description of the project;

(B) Identification of any emissions unit whose emissions of a regulated new source review pollutant could be affected by the project;

(C) A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including:

(i) Baseline actual emissions;

(ii) Projected actual emissions;

(iii) Amount of emissions excluded under section 326 IAC 2-2-1(rr)(2)(A)(iii); and

(iv) An explanation for why the amount was excluded, and any netting calculations, if applicable.

(2) Monitor the emissions of any regulated NSR pollutant that could increase as a result of the project and that is emitted by any emissions unit identified in (1)(B) above; and

(3) Calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of five (5) years following resumption of regular operations after the change, or for a period of ten (10) years following resumption of regular operations after the change if the project increases the design capacity of or the potential to emit that regulated NSR pollutant at the emissions unit.

C.22 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11] [326 IAC 2-2]

(a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the reasonable response steps taken must be reported. This report shall be submitted no later than thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

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

- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.
- (d) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted **no later than** thirty (30) days of the end of the reporting period. All reports do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (e) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period. Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.

- (f) If the Permittee is required to comply with the recordkeeping provisions of (c) in Section C.21 - General Record Keeping Requirements for any "project" (as defined in 326 IAC 2-2-1 (qq)) and the project meets the following criteria, then the Permittee shall submit a report to IDEM, OAQ:

- (1) The annual emissions, in tons per year, from the project identified in (c)(1) in Section C.21 - General Record Keeping Requirements exceed the baseline actual emissions, as documented and maintained under Section C.21 - General Record Keeping Requirements (c)(1)(C)(i), by a significant amount, as defined in 326 IAC 2-2-1 (xx), for that regulated NSR pollutant, and
- (2) The emissions differ from the preconstruction projection as documented and maintained under Section C.21 - General Record Keeping Requirements (c)(1)(C)(ii).

- (g) The report shall be submitted **not later than** sixty (60) days after the end of the year and contain the following:

- (1) The name, address, and telephone number of the major stationary source.
- (2) The annual emissions calculated in accordance with (c)(2) and (3) in Section C.21 - General Record Keeping Requirements.
- (3) The emissions calculated under the actual-to-projected actual test stated in 326 IAC 2-2-2(d)(3).

(4) Any other information that the Permittee deems fit to include in this report,

Reports required in this part shall be submitted to:

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

(h) The Permittee shall make the information required to be documented and maintained in accordance with (c) in Section C.21- General Record Keeping Requirements available for review upon a request for inspection by IDEM, OAQ. The general public may request this information from the IDEM, OAQ under 326 IAC 17.1.

Stratospheric Ozone Protection

C.23 Compliance with 40 CFR Part 82 and 326 IAC 22-1

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

Post Construction Ambient Monitoring

C.24 Post Construction Ambient Monitoring [326 IAC 2-2-4]

Pursuant to 326 IAC 2-2-4, the Permittee shall comply with the following:

- (a) The Permittee shall establish two (2) ambient monitoring sites at locations approved by IDEM.
- (b) All monitors shall meet the operating and maintenance criteria outlined in the IDEM, OAQ Quality Assurance Manual.
 - (i) Each monitoring site shall monitor PM₁₀, SO₂, NO_x, CO and ozone.
 - (ii) Based on the prevailing winds, one of the two (2) sites shall also monitor the following meteorological parameters:
 - - wind speed,
 - - wind directions, and
 - - outdoor temperature.
- (c) The Permittee shall operate the monitors for at least thirty six (36) months from the initial start of the plant and conduct a minimum of thirty six (36) months of post-construction monitoring at each site.
- (d) The monitoring must be performed using US EPA approved methods, procedures, and quality assurance programs and be in accordance with plan and protocol approved by IDEM, OAQ.
- (e) A monitoring and quality assurance plan shall be submitted to the:

Indiana Department of Environmental Management
Office of Air Quality, Ambient Monitoring Section
2525 North Shadeland Avenue, Indianapolis, IN

no later than 90 calendar days in advance of the start of the monitoring. The plan must be approved by OAQ prior to commencement of monitoring.

- (f) Ambient data along with precision and accuracy data from the monitors shall be submitted on a quarterly basis in a format approved by IDEM, OAQ, no later than 60 days after the end of the quarter being reported.
- (g) The quarterly summary of monitoring shall be submitted to IDEM, OAQ, Ambient Monitoring Section, in the same address mentioned above.
- (h) No sooner than 6 months prior to the end of the minimum monitoring period, the Permittee may submit an application to modify the permit to discontinue one or more of the monitoring sites.

The application shall include the air quality and meteorological monitoring data collected, actual emissions of PM₁₀, SO₂, NO_x, CO, ozone, and actual iron nuggets production and any addition information that would support a request to discontinue the monitoring site(s).

- (i) The commissioner shall review the information submitted by the Permittee and other available information to determine whether the proper operation of the source could potentially cause or contribute to a violation of any National Ambient Air Quality Standard or maximum allowable increase under 326 IAC 1-3-4 or 326 IAC 2-2-6.
- (j) Any decision regarding the application shall proceed in accordance with the significant permit modifications provisions of 326 IAC 2-7-12(d).

Clean Unit General Requirements

C.25 Clean Unit [326 IAC 2-2.2]

Pursuant to 326 IAC 2-2.2, emission units designated as Clean Units are subject to the following requirements:

- (a) Clean Units shall comply with all applicable requirements per 326 IAC 2-7 contained in this permit. No physical change or change in the method of operation shall be undertaken at these emissions units that would allow them to operate in a manner inconsistent with the physical or operational characteristics of the emission units.
- (b) Any project at the Clean Units for which actual construction begins after the effective date of the clean unit designations and before the expiration date shall be considered to have occurred while the emissions units were clean units.
- (c) If a project at the Clean Units does not cause the need for a change in the emission limitations or work practice requirements in this permit for these units that were adopted in conjunction with BACT and the project would not alter any physical or operational characteristics that formed the basis for the BACT determination, the clean unit designations remain unchanged.

- (d) If a project causes the need for a change in the emission limitations or work practice requirements in this permit for the Clean Unit that were adopted in conjunction with BACT or the project would alter any physical or operational characteristics that formed the basis for the BACT determination, then the clean unit designations shall expire upon issuance of the necessary permit modifications, unless the units re-qualify as clean units. If the Permittee begins actual construction on the project without first applying to modify the emissions unit's permit, the clean unit designations shall expire immediately prior to the time when actual construction of this project begins.
- (e) A project that causes emissions units to lose their clean unit designations shall be subject to the applicability requirements of 326 IAC 2-2-2(d)(1) through 326 IAC 2-2-2(d)(4) and 326 IAC 2-2-2(d)(6).

SECTION D.1

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

Stack 1001 and Roof Monitor

One (1) Rotary Hearth Furnace, identified as RHF, nominally rated at 75.521 tons per hour of iron nugget product and 217 million (MM) Btu per hour. This RHF uses natural gas as the primary fuel, and propane as a back up fuel.

The sulfur dioxide (SO₂), particulate matter, lead, mercury, fluorides, and acid gases emissions from the RHF are controlled by up to four (4) wet scrubbers, identified as Wet Scrubber 1, Wet Scrubber 2, Wet Scrubber 3, and Wet Scrubber 4. These wet scrubbers exhaust to a common duct and then to Stack 1001.

The nitrogen oxides (NO_x) emissions from the RHF are **reduced** by low NO_x burners, in addition to the low excess air (LEA) design.

The volatile organic compound (VOC), carbon monoxide (CO), and organic hazardous air pollutants (HAPs) emissions from the RHF are controlled by the air infiltration inherent design of the RHF.

The RHF is equipped with the following continuous emission monitoring systems (CEMSs): SO₂, VOC, NO_x and CO.

The controlled emissions from the RHF exhaust through a stack, identified as Stack 1001.

The remaining uncontrolled emissions exhaust through the Roof Monitor.

Stack 1001 is equipped with a continuous opacity monitor (COM) to measure the visible emissions.

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

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 Rotary Hearth Furnace (RHF) PSD BACT Limits [326 IAC 2-2] [326 IAC 2-4.1]

Pursuant to 326 IAC 2-2 Prevention of Significant Deterioration (PSD), the Permittee shall comply with the following PSD Best Available Control Technology (BACT) standards.

If the stack test required under Condition D.1.6 demonstrates that these emission limits are less stringent than what is achieved in practice, the Department may, at its discretion, use the authority under IC 13-15-7-2 and 326 IAC 2-2 to reopen and revise the emission limit(s) to more closely reflect the actual stack test results.

Because a best available control technology (BACT) level has not previously been established for an iron nugget production plant, if the stack test required under Condition D.1.6 demonstrates that

the emission limit initially established in this permit is not achievable in practice, the Permittee may submit to the Department an application for a revision to the permit to reflect the emission level achieved in the stack test. The Permittee has the burden of demonstrating that it took all steps necessary to ensure that the emissions levels achieved in the stack test were the lowest achievable.

Any revisions of the emissions limits made as the result of this provision shall be subject to the best available control technology (BACT) review and air quality analysis, specified in 326 IAC 2-2.

The Department will provide an opportunity for public notice and comment under 326 IAC 2-7-10.5(f)(1) prior to finalizing any permit modification. IC 13-15-7-3 (Revocation or Modification of a Permit: Appeal to Board) shall apply to the permit modification.

This provision does not have any impact on current or future enforcement actions.

(a) Fuel

The rotary hearth furnace (RHF) burners shall use natural gas as fuel and propane as back up fuel.

Wet Scrubbers

(b) The wet scrubbers shall capture and control the Sulfur dioxide (SO₂), Sulfuric acid mist (H₂SO₄), Fluoride, filterable and condensable particulate matter (PM/PM₁₀), Lead, Mercury, and Beryllium emissions from the rotary hearth furnace (RHF).

(c) The SO₂ emissions after control from the RHF shall not exceed 185.2 pounds per hour based on a 3-hour block average. The overall control efficiency of each wet scrubber shall be at least 90% when controlling the SO₂ emissions from the RHF.

(d) The Sulfuric Acid Mist (H₂SO₄) emissions after control from the RHF shall not exceed 0.66 pounds per ton of iron nugget product and 50.0 pounds per hour, based on a 3-hour block average.

The Permittee's compliance with these Sulfuric acid mist (H₂SO₄) limits is also required pursuant to 326 IAC 2-4.1 (Major Source of Hazardous Air Pollutants (HAPs)).

(e) The Fluoride emissions after control from the RHF shall not exceed 0.33 pounds per ton of iron nugget product and 24.57 pounds per hour, based on a 3-hour block average.

The Permittee's compliance with these Fluoride limits is also required pursuant to 326 IAC 2-4.1 (Major Source of Hazardous Air Pollutants (HAPs)).

(f) The filterable and condensable particulate matter (PM/PM₁₀) emissions after control from the RHF shall not exceed 0.03 grains per dry standard cubic feet and 39.35 pounds per hour, based on a 3-hour block average.

(g) The Lead emissions after control from the RHF shall not exceed 0.02 pounds per ton of iron nugget product and 1.36 pounds per hour, based on a 3-hour block average.

The Permittee's compliance with these Lead limits is also required pursuant to 326 IAC 2-4.1 (Major Source of Hazardous Air Pollutants (HAPs)).

- (h) The Mercury emissions after control from the RHF shall not exceed 0.001 pounds per ton of iron nugget product and 0.05 pounds per hour, based on a 3-hour block average.

The Permittee's compliance with these Mercury limits is also required pursuant to 326 IAC 2-4.1 (Major Source of Hazardous Air Pollutants (HAPs)).

- (i) The Beryllium emissions after control from the RHF shall not exceed 0.00027 pounds per ton of iron nugget product and 0.02 pounds per hour, based on a 3-hour block average.

The Permittee's compliance with these Beryllium limits is also required pursuant to 326 IAC 2-4.1 (Major Source of Hazardous Air Pollutants (HAPs)).

Thermal Oxidation by Infiltration Air Design

- (j) The Thermal Oxidation by Infiltration Air Design of the RHF shall capture and control the carbon monoxide (CO) and Volatile organic compound (VOC) emissions from the RHF.

- (k) The CO emissions from the RHF shall not exceed 0.77 pounds per ton of iron nugget product, based on a 24-hour block average and 58.15 pounds per hour, based on a 24-hour block average.

- (l) The VOC emissions from the RHF shall not exceed 0.074 pounds per ton of iron nugget product, based on a 24-hour block average and 5.59 pounds per hour, based on an 8-hour block average.

Low NO_x Burners and Low Excess Air

- (m) Low NO_x burners shall be installed and utilized to reduce the Nitrogen Oxides (NO_x) emissions from the RHF. The use of Low Excess Air (LEA) will also be used in addition to low NO_x burners.

- (n) The NO_x emissions from the RHF shall not exceed 2.8 pounds per ton of iron nugget product, based on a 24-hour block average and 211.9 pounds per hour, based on a 24-hour block average.

Stack 1001

- (o) The visible emissions from Stack 1001 shall not exceed 3 5% opacity, based on a 6-minute average. Compliance will be demonstrated through the use of a continuous opacity monitor (COM) system.

Roof Monitor

- (p) The visible emissions from the Roof Monitor shall not exceed 3% opacity, based on a 6-minute average.

D.1.2 Rotary Hearth Furnace (RHF) Clean Unit [326 IAC 2-2.2]

- (a) Pursuant to 326 IAC 2-2.2 (Clean Unit), the Rotary Hearth Furnace (RHF) is classified as Clean Unit for:

- (1) Sulfur dioxide (SO₂),
- (2) NO_x,
- (3) VOC,

- (4) CO,
 - (5) Sulfuric acid mist (H₂SO₄)
 - (6) Fluoride,
 - (7) Filterable and condensible particulate matter (PM/PM₁₀),
 - (8) Lead,
 - (9) Mercury, and
 - (10) Beryllium.
- (b) The Clean Unit designations for the RHF are in effect for ten (10) years from the initial start up of the RHF.
- (c) In order to maintain the clean unit designations for the RHF, the Permittee shall comply with the RHF's Sulfur dioxide (SO₂), NO_x, VOC, CO, Sulfuric acid mist (H₂SO₄) Fluoride, Filterable and condensible particulate matter (PM/PM₁₀), Lead, Mercury, Beryllium, and Opacity PSD BACT limits.

D.1.3 Hazardous Air Pollutants Major Limits [326 IAC 2-4.1-1]

- (a) Pursuant to 326 IAC 2-4.1-1, the rotary hearth furnace (RHF) shall use natural gas as fuel and propane as back up fuel.
- (b) Pursuant to 326 IAC 2-4.1-1, the wet scrubbers shall control the Manganese emitted from the rotary hearth furnace (RHF).

D.1.4 Preventive Maintenance Plan (PMP) [326 IAC 2-7-5(13)] [326 IAC 1-6-3]

A Preventive Maintenance Plan (PMP), in accordance with Section B.18 - Preventive Maintenance Plan (PMP), of this permit, is required for the RHF and its emission control devices.

Compliance Determination Requirements

D.1.5 Operation of Add-on Control Devices Exhausting Through Stack 1001 [326 IAC 2-2] [326 IAC 2-4.1]

- (a) **Wet Scrubbers**
Pursuant to 326 IAC 2-2 Prevention of Significant Deterioration (PSD) and 326 IAC 2-4.1 (Major Source of Hazardous Air Pollutants (HAPs)), the wet scrubbers for Sulfur dioxide (SO₂), Sulfuric acid mist (H₂SO₄), Fluoride, filterable and condensible particulate matter (PM/PM₁₀), Lead, Mercury, Beryllium, and hazardous air pollutants emissions control shall be in operation and control the emissions from the Rotary Hearth Furnace (RHF) at all times when the RHF is in operation.
- (b) **Low NO_x Burners**
Pursuant to 326 IAC 2-2 Prevention of Significant Deterioration (PSD), the Rotary Hearth Furnace (RHF) shall utilize low NO_x burners at all times when the RHF is in operation.

D.1.6 Rotary Hearth Furnace (RHF) Testing Requirements [326 IAC 2-7-6(1) and (6)] [326 IAC 2-2] [326 IAC 2-1.1-11] [326 IAC 2-4.1]

(a) Pursuant to 326 IAC 2-2, 326 IAC 2-4.1, and 326 IAC 2-7, not later than 60 days after achieving maximum production rate, but no later than 180 days after initial start-up of the RHF, the Permittee shall perform compliance testing for the following:

- (1) Total Filterable and condensible particulate matter (PM/PM₁₀),
- (2) Lead,
- (3) Sulfuric acid mist (H₂SO₄),
- (4) Mercury,
- (5) Fluoride, and
- (6) Beryllium

using 40 CFR Part 60, Appendix A, Method 5, Method 8, Method 12, Method 13A, Method 13B, Method 29, Method 201, Method 201A, Method 202, or methods as approved by the Commissioner.

- (b) Pursuant to 326 IAC 2-1.1-11, not later than 60 days after achieving maximum production rate, but no later than 180 days after initial start-up of the RHF, the Permittee shall perform compliance tests to demonstrate compliance with Condition D.1.3, utilizing methods as approved by the Commissioner.
- (c) The filterable and condensible particulate matter (PM/PM₁₀), Lead and Sulfuric acid mist (H₂SO₄) tests shall be repeated at least once every 2.5 years from the date of the last valid compliance demonstration.
- (d) The Mercury tests shall be repeated at least once a year from the date of the last valid compliance demonstration.
- (e) The Fluoride and Beryllium tests shall be repeated at least once every five (5) years from the date of the last valid compliance demonstration.
- (f) These tests shall be performed using methods as approved by the Commissioner.
- (g) Testing shall be conducted in accordance with Section C.11 - Performance Testing.

D.1.7 Rotary Hearth Furnace (RHF) CO, VOC, NO_x, and SO₂ Continuous Emission Rate Monitoring Requirement [326 IAC 2-2] [326 IAC 3-5] [40 CFR Part 64]

SO₂ CEMS

- (a) Pursuant to 326 IAC 2-2, 326 IAC 3-5-1(d) and 40 CFR Part 64, the Permittee shall install, calibrate, certify, operate, and maintain continuous emission monitoring system(s) (CEMSs) and related equipment for measuring inlet and outlet SO₂ emissions rates (in pounds per hour) from the RHF exhaust in accordance with 326 IAC 3-5-2 and 326 IAC 3-5-3.

The control efficiency of the wet scrubbers is determined by calculating the 24-hour daily geometric average percent reduction using EPA Method Reference 19 or other approved methods and determining the inlet and outlet data.

CO, VOC, and NO_x CEMS

- (b) Pursuant to 326 IAC 2-2 and 326 IAC 3-5-1(d), the Permittee shall install, calibrate, certify, operate, and maintain continuous emission monitoring systems (CEMSs) and related equipment for measuring CO, VOC, and NO_x emissions rates (in pounds per hour) from the RHF exhaust in accordance with 326 IAC 3-5-2 and 326 IAC 3-5-3.

D.1.8 Stack 1001 Continuous Opacity Monitoring (COM) [326 IAC 2-2] [326 IAC 3-5] [40 CFR Part 64]

Pursuant to 326 IAC 2-2, 326 IAC 3-5 and 40 CFR Part 64, the Permittee shall install, calibrate, certify, operate, and maintain a continuous opacity monitoring (COM) system and related equipment to measure opacity from Stack 1001 in accordance with 326 IAC 3-5-2 and 326 IAC 3-5-3.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.1.9 Maintenance of Continuous Opacity Monitoring (COM) Equipment [326 IAC 2-7-5(3)(A)(iii)]

- (a) The continuous opacity monitoring (COM) system shall meet the performance specifications of 40 CFR Part 60, Appendix B, Performance Specification No. 1, and is subject to monitor system certification requirements pursuant to 326 IAC 3-5.
- (b) In the event that a breakdown of a continuous opacity monitoring system occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem.
- (c) If a COM is not online within twenty-four (24) hours of shutdown or malfunction of the primary COM and the RHF is in operation, the Permittee shall provide certified opacity reader(s), who may be employees of the Permittee or independent contractors, to self-monitor the emissions from the emission unit stack.
- (1) Visible emission readings shall be performed in accordance with 40 CFR 60, Appendix A, Method 9, for a minimum of five (5) consecutive six (6) minute averaging periods beginning not more than twenty-four (24) hours after the start of the malfunction or down time.
- (2) Method 9 opacity readings shall be repeated for a minimum of five (5) consecutive six (6) minute averaging periods at least once every four (4) hours during daylight operations, until such time that a COM is in operation.
- (3) Method 9 readings may be discontinued once a COM is online.
- (4) Any opacity exceedances determined by Method 9 readings shall be reported with the Quarterly Opacity Exceedances Reports.
- (d) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C.18 - Compliance Response Plan - Preparation, Implementation, Records, and Reports. Observation of abnormal emissions that do not violate an applicable opacity limit is not a deviation from this permit. Failure to take response steps in accordance with Section C.18 - Compliance Response Plan -

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

- (e) Nothing in this permit shall excuse the Permittee from complying with the requirements to operate a continuous opacity monitoring system pursuant to 326 IAC 3-5, 326 IAC 2-2, and 40 CFR Part 64.

D.1.10 Maintenance of Continuous Emission Monitoring (CEM) Equipment [326 IAC 2-7-5(3)(A)(iii)]
[326 IAC 2-7-6]

- (a) The continuous emission monitoring systems (CEMs) shall meet the performance specifications of 40 CFR Part 60, Appendix B, and are subject to monitor system certification requirements pursuant to 326 IAC 3-5.
- (b) In the event that a breakdown of the SO₂, CO, VOC, and NO_x continuous emission monitoring system (CEMS) occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem.
- (c) SO₂ CEMS
Whenever the SO₂ CEMS is malfunctioning or down for repairs or adjustments for a period of four (4) hours or more and the rotary hearth furnace (RHF) is in operation, the Permittee shall monitor and record the pH, and flow rate of the wet scrubbers.
 - (1) Scrubber parametric monitoring readings shall be recorded at least once per hour until the primary CEMS or a backup CEMS is brought online.
 - (2) When for any one reading, the pH or flow rate is outside the normal range or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C.18- Compliance Response Plan (CRP) - Preparation, Implementation, Records, and Reports.
 - (3) The instrument used for determining the pH and flow rate to comply with Section C.15 - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.
 - (4) Failure to take response steps in accordance with Section C.18 - Compliance Response Plan (CRP) – Preparation, Implementation, Records and Reports shall be considered a deviation from this permit.
- (d) CO, NO_x, and VOC CEMS
Whenever the CO, NO_x or VOC CEMS is malfunctioning or down for repairs or adjustments for a period of four (4) hours or more and the rotary hearth furnace (RHF) is in operation, the Permittee shall continuously monitor and record the operating temperature of the rotary hearth furnace (RHF).

The RHF parametric monitoring readings shall be recorded continuously until the primary CEMS or a backup CEMS is brought online.

- (e) Nothing in this permit shall excuse the Permittee from complying with the requirements to operate a continuous emission monitoring system pursuant to 326 IAC 3-5, 326 IAC 2-2, and 40 CFR Part 64.

D.1.11 Scrubbers Operation [326 IAC 2-2] [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

Scrubber Inspection

- (a) An inspection of the wet scrubbers shall be performed at least once every two (2) years, in accordance with the Preventive Maintenance Plan (PMP) prepared in accordance with Section B.18 - Preventive Maintenance Plan (PMP).

Defective parts shall be repaired or replaced.

A record shall be kept of the results of the inspection and the part(s) repaired or replaced.

- (b) Inspections shall be made whenever there is an outage of any nature lasting more than three (3) days unless such measurements have been taken within the past twelve (12) months.
- (c) Reasonable response steps shall be taken in accordance with Section C.18 - Compliance Response Plan (CRP) - Preparation, Implementation, Records, and Reports for any improper or abnormal conditions found during an inspection.

Discovery of an abnormal or improper condition is not a deviation from this permit.

(d) Scrubber Parametric Monitoring

The Permittee shall record the pH, and flow rate of the wet scrubbers, at least once per day, when the rotary hearth furnace (RHF) is in operation when venting to the atmosphere.

- (e) When for any one reading, the pH, or flow rate is outside the normal range or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C.18- Compliance Response Plan (CRP) - Preparation, Implementation, Records, and Reports.
- (f) The instrument used for determining the pH and flow rate shall comply with Section C.15 - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.
- (g) Response Steps
Failure to take response steps in accordance with Section C.18 - Compliance Response Plan (CRP) – Preparation, Implementation, Records and Reports shall be considered a deviation from this permit.

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.1.12 Record Keeping Requirements [326 IAC 2-2] [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

- (a) The Permittee shall maintain records required under 326 IAC 3-5-6 at the source in a manner that they may be inspected by the IDEM, OAQ, or the US EPA, if so requested or required.
- (b) The Permittee shall record the output (in pounds per hour) of the CO, VOC, NO_x and SO₂ continuous emission monitoring systems (CEMSs), and shall perform the required record keeping and reporting, pursuant to 326 IAC 3-5-6, 326 IAC 3-5-7 and 40 CFR Part 64, that includes, but not limited to, the following:

- (1) All documentation relating to:
 - (A) Design, installation, and testing of all elements of the monitoring system.
 - (B) Required corrective action or compliance plan activities.
 - (2) All maintenance logs, calibration checks, and other required quality assurance activities.
 - (3) All records of corrective and preventive action.
 - (4) A log of plant operations, including the following:
 - (A) Date of facility downtime.
 - (B) Time of commencement and completion of each downtime.
 - (C) Reason for each downtime.
 - (5) Records that describe **any** supplemental monitoring implemented during the downtime to assure compliance with applicable emission limitations.
- (c) The Permittee shall record the output of the continuous opacity monitoring (COM) system and shall perform the required record keeping and reporting, pursuant to 326 IAC 3-5-6 and 326 IAC 3-5-7, that includes, but not limited to, the following:
- (1) All documentation relating to:
 - (A) Design, installation, and testing of all elements of the monitoring system.
 - (B) Required corrective action or compliance plan activities.
 - (2) All maintenance logs, calibration checks, and other required quality assurance activities.
 - (3) All records of corrective and preventive action.
 - (4) A log of plant operations, including the following:
 - (A) Date of facility downtime.
 - (B) Time of commencement and completion of each downtime.
 - (C) Reason for each downtime.
 - (5) Records that describe **any** supplemental monitoring implemented during the downtime to assure compliance with applicable emission limitations.
- (d) The Permittee shall record the scrubber's inspections and part(s) replaced, and make such records available upon request to IDEM, OAQ, and the US EPA.

- (e) The Permittee shall maintain the following records, and make such records available upon request to IDEM, OAQ, and the US EPA:
 - (1) Records of the once per **day** readings of the pH, **and** flow rate of the wet scrubbers, during normal operation when venting to the atmosphere.
 - (2) Records of the results of the wet scrubbers inspections.
- (f) The Permittee shall maintain records of any additional inspections prescribed by the Preventive Maintenance Plan (PMP) and make such records available upon request to IDEM, OAQ, and the US EPA.
- (g) Records necessary to demonstrate compliance shall be available **no later than** 30 days of the end of each compliance period.
- (h) All records shall be maintained in accordance with Section **C.21** - General Record Keeping Requirements of this permit.

D.1.13 Reporting Requirements [326 IAC 2-2] [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

- (a) The Permittee shall maintain and submit with the Affidavit of Construction (Section B.6), the final design specifications and vendor guarantees of the RHF.
- (b) The Permittee shall maintain and submit to IDEM, OAQ, upon initial start up, a complete written continuous monitoring standard operating procedure (CMSOP) for the COM and CEMS, in accordance with the requirements of 326 IAC 3-5-4.
- (c) The Permittee shall maintain and submit a quarterly report of excess emissions, using the Quarterly Deviation and Compliance Monitoring Report or equivalent, of the following:
 - (1) CO, VOC, NO_x, and SO₂ readings from the CEMS.
 - (2) Opacity readings from the COM.
- (d) In accordance with 326 IAC 3-5-7(5), the Permittee shall submit reports of continuous monitoring system instrument downtime **when the rotary hearth furnace (RHF) was in operation**, except for zero (0) and span checks, which shall be reported separately.

The reports shall include the following:

- (1) Date of downtime.
- (2) Time of commencement.
- (3) Duration of each downtime.
- (4) Reasons for each downtime.
- (5) Nature of system repairs and adjustments.

- (e) These reports shall be submitted no later than thirty (30) calendar days following the end of each [reporting period](#) and in accordance with Section [C.22](#) - General Reporting Requirements of this permit.
- (f) These reports do require the certification by the responsible official, as defined by 326 IAC 2-7-1(34).

SECTION D.2 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

Stack 1001 and Roof Monitor

- (1) Three (3) Agglomerate Dryers, identified as Green Ball Dryer 1, Green Ball Dryer 2, and Green Ball Dryer 3, with a total nominal rating of 153.248 tons of dried green balls per hour and 205.2 million (MM) Btu per hour.

During normal operations, these dryers operate using the air preheated by the RHF exhaust. These dryers use natural gas during start up periods and when sufficient preheated air is not available. Low NO_x burners are used to **reduce** the NO_x emissions from these three (3) Green Ball Dryers when they are using natural gas as fuel.

Each Green Ball Dryer is controlled by a baghouse, identified as Green Ball Dryer Baghouse 1, Green Ball Dryer Baghouse 2, and Green Ball Dryer Baghouse 3. These baghouses exhaust to a common duct and then to Stack 1001.

- (2) One (1) Product Separator/Dryer, nominally rated at 33 tons of dry product per hour, and 25 MMBtu per hour. This dryer uses natural gas and is equipped with low NO_x burners to **reduce** the NO_x emissions.

The particulate matter emissions from the Product Separator/Dryer are controlled by a baghouse, identified as Product Separator/Dryer Baghouse.

The controlled emissions from the Green Ball Dryers and Product Separator/Dryer exhaust through a stack, identified as Stack 1001.

The remaining uncontrolled emissions exhaust through the Roof Monitor.

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

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.2.1 Green Ball Dryers PSD BACT Limits [326 IAC 2-2]

Pursuant to 326 IAC 2-2 Prevention of Significant Deterioration (PSD), the Permittee shall comply with the following PSD Best Available Control Technology (BACT) standards.

If the stack test required under Condition D.2.8 demonstrates that these emission limits are less stringent than what is achieved in practice, the Department may, at its discretion, use the authority under IC 13-15-7-2 and 326 IAC 2-2 to reopen and revise the emission limit(s) to more closely reflect the actual stack test results.

Because a best available control technology (BACT) level has not previously been established for an iron nugget production plant, if the stack test required under Condition D.2.8 demonstrates that the emission limit initially established in this permit is not achievable in practice, the Permittee may submit to the Department an application for a revision to the permit to reflect the emission level

achieved in the stack test. The Permittee has the burden of demonstrating that it took all steps necessary to ensure that the emissions levels achieved in the stack test were the lowest achievable.

Any revisions of the emissions limits made as the result of this provision shall be subject to the best available control technology (BACT) review and air quality analysis, specified in 326 IAC 2-2.

The Department will provide an opportunity for public notice and comment under 326 IAC 2-7-10.5(f)(1) prior to finalizing any permit modification. IC 13-15-7-3 (Revocation or Modification of a Permit: Appeal to Board) shall apply to the permit modification.

This provision does not have any impact on current or future enforcement actions.

- (a) Fuel
- (1) The Green Ball Dryers shall use the air preheated by the RHF exhaust.
 - or
 - (2) The Green Ball Dryers shall use natural gas as fuel:
 - during start up and shut down periods only, or
 - when sufficient preheated air is not available.
- (b) When the Green Ball Dryers are using either preheated air or natural gas:
- (1) The filterable particulate matter (PM/PM₁₀) emissions from the Green Ball Dryers shall be captured and controlled by three (3) baghouses (identified as Green Ball Dryer Baghouse 1, Green Ball Dryer Baghouse 2, and Green Ball Dryer Baghouse 3).
 - (2) The filterable particulate matter (PM) emissions exhausting through the Green Ball Dryer Baghouses shall not exceed 0.013 grains per dry standard cubic foot of exhaust air, and a total of 30.94 pounds per hour, based on a 3-hour block average.
 - (3) The filterable and condensable particulate matter (PM/PM₁₀) emissions exhausting through the Green Ball Dryer Baghouses shall not exceed 0.015 grains per dry standard cubic foot of exhaust air, and a total of 36.26 pounds per hour, based on a 3-hour block average.
- (c) When the Green Ball Dryers are using preheated air only:
- (1) The combined NO_x emissions from the Green Ball Dryers shall not exceed 0.044 pounds per ton of iron nugget product and a total of 6.74 pounds per hour, based on a 3-hour block average.
 - (2) The combined CO emissions from the Green Ball Dryers shall not exceed 0.242 pounds per ton of iron nugget product and a total of 37.1 pounds per hour, based on a 3-hour block average.
 - (3) The VOC emissions from the Green Ball Dryers shall not exceed a total of 19.34 pounds per hour, based on a 3-hour block average.
 - (4) The SO₂ emissions from the Green Ball Dryers shall not exceed a total of 0.05 pounds per hour, based on a 3-hour block average.

- (d) When the Green Ball Dryers are using natural gas only:
- (1) Low NO_x burners shall be installed and utilized to reduce the NO_x emissions from the Green Ball Dryers when they are using natural gas as fuel.
 - (2) The combined NO_x emissions from the Green Ball Dryers shall not exceed 0.22 pounds per ton of iron nugget product and a total of 33.8 pounds per hour, based on a 3-hour block average.
 - (3) The combined CO emissions from the Green Ball Dryers shall not exceed 0.33 pounds per ton of iron nugget product and a total of 58.2 pounds per hour, based on a 3-hour block average.
 - (4) The VOC emissions from the Green Ball Dryers shall not exceed a total of 20.2 pounds per hour, based on a 3-hour block average.
 - (5) The SO₂ emissions from the Green Ball Dryers shall not exceed a total of 0.14 pounds per hour, based on a 3-hour block average.

D.2.2 Product Separator/Dryer PSD BACT Limits [326 IAC 2-2]

Pursuant to 326 IAC 2-2 Prevention of Significant Deterioration (PSD), the Permittee shall comply with the following PSD Best Available Control Technology (BACT) standards.

If the stack test required under Condition D.2.8 demonstrates that these emission limits are less stringent than what is achieved in practice, the Department may, at its discretion, use the authority under IC 13-15-7-2 and 326 IAC 2-2 to reopen and revise the emission limit(s) to more closely reflect the actual stack test results.

Because a best available control technology (BACT) level has not previously been established for an iron nugget production plant, if the stack test required under Condition D.2.8 demonstrates that the emission limit initially established in this permit is not achievable in practice, the Permittee may submit to the Department an application for a revision to the permit to reflect the emission level achieved in the stack test. The Permittee has the burden of demonstrating that it took all steps necessary to ensure that the emissions levels achieved in the stack test were the lowest achievable.

Any revisions of the emissions limits made as the result of this provision shall be subject to the best available control technology (BACT) review and air quality analysis, specified in 326 IAC 2-2.

The Department will provide an opportunity for public notice and comment under 326 IAC 2-7-10.5(f)(1) prior to finalizing any permit modification. IC 13-15-7-3 (Revocation or Modification of a Permit: Appeal to Board) shall apply to the permit modification.

This provision does not have any impact on current or future enforcement actions.

- (a) The Product Separator/Dryer shall use natural gas as fuel.
- (b) The filterable particulate matter (PM/PM₁₀) emissions from the Product Separator/Dryer shall be captured and controlled by a baghouse (identified as Product Separator/Dryer Baghouse).

- (c) The filterable particulate matter (PM) emissions from the Product Separator/Dryer Baghouse shall not exceed 0.0052 grains per dry standard cubic foot of exhaust air, and 2.21 pounds per hour, based on a 3-hour block average.
- (d) The filterable and condensible particulate matter (PM/PM₁₀) emissions from the Product Separator/Dryer Baghouse shall not exceed 0.015 grains per dry standard cubic foot of exhaust air, and 7.65 pounds per hour, based on a 3-hour block average.
- (e) Low NO_x burners shall be installed and utilized to reduce the NO_x emissions from the Product Separator/Dryer.
- (f) The NO_x emissions from the Product Separator/Dryer shall not exceed 0.037 pounds per ton of iron nugget product and 1.22 pounds of NO_x per hour based on a 3-hour block average.
- (g) The CO emissions from the Product Separator/Dryer shall not exceed 0.062 pounds per ton of iron nugget product and 2.05 pounds of CO per hour based on a 3-hour block average.
- (h) The VOC emissions from the Product Separator/Dryer shall not exceed 0.13 pounds of VOC per hour based on a 3-hour block average.
- (i) The SO₂ emissions from the Product Separator/Dryer shall not exceed 0.03 pounds of SO₂ per hour based on a 3-hour block average.

D.2.3 Stack 1001 and Roof Monitor Opacity PSD BACT Limit [326 IAC 2-2]

Pursuant to 326 IAC 2-2 Prevention of Significant Deterioration (PSD):

- (a) The visible emissions from Stack 1001 shall not exceed 5% opacity, based on a 6-minute average. Compliance will be demonstrated through the use of a continuous opacity monitor (COM) system.
- (b) The visible emissions from the Roof Monitor shall not exceed 3% opacity, based on a 6-minute average.

D.2.4 Green Ball Dryers Clean Unit [326 IAC 2-2.2]

- (a) Pursuant to 326 IAC 2-2.2 (Clean Unit), the Green Ball Dryers are classified as Clean Units for:
 - filterable and condensible particulate matter (PM/PM₁₀), and
 - NO_x.
- (b) The Clean Unit designations for the Green Ball Dryers are in effect for ten (10) years from the initial start ups of the Green Ball Dryers.
- (c) In order to maintain the clean unit designations for the Green Ball Dryers, the Permittee shall comply with the Green Ball Dryer's' filterable and condensible particulate matter (PM/PM₁₀), NO_x and Opacity PSD BACT limits.

D.2.5 Product Separator/Dryer Clean Unit [326 IAC 2-2.2]

- (a) Pursuant to 326 IAC 2-2.2 (Clean Unit), the Product Separator/Dryer is classified as Clean Unit for:
- filterable particulate matter (PM/PM₁₀), and
 - NO_x.
- (b) The Clean Unit designation for the Product Separator/Dryer is in effect for ten (10) years from the initial start up of the Product Separator/Dryer.
- (c) In order to maintain the clean unit designations for the Product Separator/Dryer, the Permittee shall comply with the Product Separator/Dryer's filterable particulate matter (PM), NO_x and Opacity PSD BACT limits.

D.2.6 Preventive Maintenance Plan (PMP) [326 IAC 2-7-5(13)] [326 IAC 1-6-3]

A Preventive Maintenance Plan (PMP), in accordance with Section B.18 - Preventive Maintenance Plan (PMP), of this permit, is required for these facilities and their emission control devices.

Compliance Determination Requirements

D.2.7 Operation of Add-on Control Devices Exhausting Through Stack 1001 [326 IAC 2-2]

Pursuant to 326 IAC 2-2 Prevention of Significant Deterioration (PSD):

Baghouse

- (a) The Green Ball Dryers Baghouses for particulate control shall be in operation and control the emissions at all times from the Green Ball Dryers when the Green Ball Dryers are in operation.
- (b) The Product Separator/Dryer Baghouse for particulate control shall be in operation and control the emissions at all times from the Product Separator/Dryer when the Product Separator/Dryer is in operation.

Low NO_x Burners

- (c) The Green Ball Dryers shall be equipped and operated with low NO_x burners when using natural gas or when sufficient preheated air is not available.
- (d) The Product Separator/Dryer shall be equipped and operated with low NO_x burners.

D.2.8 Green Ball Dryers Baghouses Testing Requirements and Stack 1001 Continuous Opacity Monitoring (COM) [326 IAC 2-7-6(1) and (6)] [326 IAC 2-2] [326 IAC 3-5] [40 CFR Part 64]

Testing Requirements

- (a) Pursuant to 326 IAC 2-2 Prevention of Significant Deterioration (PSD), 326 IAC 2-7 Part 70 Permit and 40 CFR Part 64, **no later than** 60 days after achieving maximum production rate, but no later than 180 days after initial start-up of the Green Ball Dryers, the Permittee shall perform filterable and condensible particulate matter (PM/PM₁₀) compliance tests at the Green Ball Dryer Baghouses common duct/exhaust, **using 40 CFR Part 60, Appendix A, Method 5, Method 201 or 201A, Method 202 or methods as approved by the Commissioner.**
- (b) The filterable and condensible particulate matter (PM/PM₁₀) tests shall be repeated at least once every five (5) years from the date of the last valid compliance demonstration.

- (c) These tests shall be performed using methods as approved by the Commissioner.
- (d) Testing shall be conducted in accordance with Section C.11 - Performance Testing.

Stack 1001 Continuous Opacity Monitoring (COM)

- (f) Refer to Conditions D.1.8 and D.1.9 for the Stack 1001 Continuous Opacity Monitor (COM) compliance requirements.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.2.9 Baghouse Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)] [40 CFR Part 64]

- (a) Green Ball Dryers Baghouses
Pursuant to 326 IAC 2-7-6(1), 326 IAC 2-7-5(1) and 40 CFR Part 64, the Permittee shall record the total static pressure drop across the Green Ball Dryers Baghouses, used in conjunction with the Green Ball Dryers, at least once per day when the process is in operation when venting to the atmosphere.
- (b) Product Separator/Dryer Baghouse
Pursuant to 326 IAC 2-7-6(1) and 326 IAC 2-7-5(1), the Permittee shall record the total static pressure drop across the Product Separator/Dryer Baghouse, used in conjunction with the Product Separator/Dryer, at least once per day when the process is in operation when venting to the atmosphere.
- (c) Normal Range
When for any one reading, the pressure drop across the baghouse is outside the normal range of 6.0 and 12.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C.18 - Compliance Response Plan (CRP) - Preparation, Implementation, Records, and Reports.

A pressure reading that is outside the above mentioned range is not a deviation from this permit.
- (d) Response Steps
Failure to take response steps in accordance with Section C.18 - Compliance Response Plan (CRP) – Preparation, Implementation, Records and Reports shall be considered a deviation from this permit.
- (d) Instrumentation
The instrument used for determining the pressure shall comply with Section C.15 - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.2.10 Baghouse Inspections [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)] [40 CFR Part 64]

- (a) An inspection shall be performed each calendar year of all bags controlling the:
 - (1) Green Ball Dryers, and
 - (2) Product Separator/Dryer,when venting to the atmosphere.

- (b) Inspections required by this condition shall not be performed in consecutive months.
- (c) All defective bags shall be replaced.

D.2.11 Broken or Failed Bag Detection [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)] [40 CFR Part 64]

In the event that bag failure has been observed:

- (a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan (CRP) shall be initiated.

For any failure with corresponding response steps and timetable not described in the Compliance Response Plan (CRP), response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion.

Failure to take response steps in accordance with Section C.18 - Compliance Response Plan (CRP) - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

If operations continue after bag failure is observed and it will be 10 days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

- (b) For single compartment baghouses, if failure is indicated by a significant drop in the baghouse's pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, then failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced.

Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B.19 - Emergency Provisions).

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.2.12 Record Keeping Requirements [326 IAC 2-2] [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

- (a) The Permittee shall maintain records required under 326 IAC 3-5-6 at the source in a manner that they may be inspected by the IDEM, OAQ, or the US EPA, if so requested or required.
- (b) The Permittee shall maintain the following records, and make such records available upon request to IDEM, OAQ, and the US EPA:
 - (1) Records of the dates when preheated air and natural gas is used by the Green Ball Dryers.

- (2) Records of the once per **day** readings of the baghouses' total static pressure drop during normal operation when venting to the atmosphere.
- (3) Records of the results of the baghouse inspections.
- (c) Refer to Condition D.1.12(c) for the Stack 1001 Continuous Opacity Monitor (COM) record keeping requirements.
- (d) The Permittee shall maintain records of any additional inspections prescribed by the Preventive Maintenance Plan (PMP) and make such records available upon request to IDEM, OAQ, and the US EPA.
- (e) Records necessary to demonstrate compliance shall be available **no later than** 30 days of the end of each compliance period.
- (f) All records shall be maintained in accordance with **Section C.21** - General Record Keeping Requirements of this permit.

D.2.13 Reporting Requirements [326 IAC 2-2] [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

- (a) The Permittee shall maintain and submit with the Affidavit of Construction (Section B.6), the final design specifications and vendor guarantees of the Green Ball Dryers and Product Separator Dryer.
- (b) Refer to Conditions D.1.13(b), D.1.13(c)(2) and D.1.13(d) for the Stack 1001 Continuous Opacity Monitor (COM) reporting requirements.
- (c) These reports shall be submitted no later than thirty (30) calendar days following the end of each calendar quarter and in accordance with Section C.22 - General Reporting Requirements of this permit.
- (d) These reports shall be submitted in accordance with Section C.22 - General Reporting Requirements of this permit.
- (e) These reports do require the certification by the responsible official, as defined by 326 IAC 2-7-1(34).

SECTION D.3 FACILITY OPERATION CONDITIONS

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| <p>Facility Description [326 IAC 2-7-5(15)]</p> <p style="text-align: center;">Stack 1002</p> <p>(1) One (1) Coal #1 Pulverizer/Dryer, nominally rated at 33 tons per hour, and 36.0 million (MM) Btu per hour.</p> <p>The particulate matter emissions from the Coal #1 Pulverizer/Dryer are controlled by a baghouse, identified as Coal #1 Pulverizer/Dryer Baghouse.</p> <p>(2) One (1) Coal #2 Pulverizer/Dryer, nominally rated at 9 tons per hour, and 9.23 MMBtu per hour.</p> <p>The particulate matter emissions from the Coal #2 Pulverizer/Dryer are controlled by a baghouse, identified as Coal #2 Pulverizer/Dryer Baghouse.</p> <p>(3) Flux Pulverizer(s)/Dryer(s), nominally rated at a total of 13 tons per hour and 14.58 MMBtu per hour.</p> <p>Due to design uncertainty at this time of the review, the numbers of flux pulverizers/dryers and associated pieces of control equipment are permitted to change, however, the total heat input and process capacity will remain the same.</p> <p>The particulate matter emissions from the Flux Pulverizer(s)/Dryer(s) are controlled by baghouse(s), identified as Flux Pulverizer(s)/Dryer(s) Baghouse(s).</p> <p>These dryers use natural gas and are equipped with L low NO_x burners.</p> <p>The controlled emissions from the:</p> <ul style="list-style-type: none">-- Coal #1 Pulverizer/Dryer,-- Coal #2 Pulverizer/Dryer, and-- Flux Pulverizer(s)/Dryer(s) <p>exhaust through a stack identified as Stack 1002.</p> <p>(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)</p> |
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Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.3.1 Coal #1 Pulverizer/Dryer PSD BACT Limits [326 IAC 2-2]

Pursuant to 326 IAC 2-2 Prevention of Significant Deterioration (PSD), the Permittee shall comply with the following PSD Best Available Control Technology (BACT) standards.

If the stack test required under Condition D.3.9 demonstrates that these emission limits are less stringent than what is achieved in practice, the Department may, at its discretion, use the authority under IC 13-15-7-2 and 326 IAC 2-2 to reopen and revise the emission limit(s) to more closely reflect the actual stack test results.

Because a best available control technology (BACT) level has not previously been established for an iron nugget production plant, if the stack test required under Condition D.3.9 demonstrates that the emission limit initially established in this permit is not achievable in practice, the Permittee may submit to the Department an application for a revision to the permit to reflect the emission level achieved in the stack test. The Permittee has the burden of demonstrating that it took all steps necessary to ensure that the emissions levels achieved in the stack test were the lowest achievable.

Any revisions of the emissions limits made as the result of this provision shall be subject to the best available control technology (BACT) review and air quality analysis, specified in 326 IAC 2-2.

The Department will provide an opportunity for public notice and comment under 326 IAC 2-7-10.5(f)(1) prior to finalizing any permit modification. IC 13-15-7-3 (Revocation or Modification of a Permit: Appeal to Board) shall apply to the permit modification.

This provision does not have any impact on current or future enforcement actions.

- (a) The Coal #1 Pulverizer/Dryer shall use natural gas as fuel with propane as backup fuel.
- (b) The filterable particulate matter (PM/PM₁₀) emissions from the Coal #1 Pulverizer/Dryer shall be captured and controlled by a baghouse (identified as Coal #1 Pulverizer/Dryer Baghouse).
- (c) The filterable particulate matter (PM) emissions exhausting through the Coal #1 Pulverizer/Dryer Baghouse shall not exceed 0.01 grains per dry standard cubic foot of exhaust air and 6.64 pounds per hour, based on a 3-hour block average.
- (d) The filterable and condensable particulate matter (PM/PM₁₀) emissions exhausting through the Coal #1 Pulverizer/Dryer Baghouse shall not exceed 0.015 grains per dry standard cubic foot of exhaust air and 9.96 pounds per hour, based on a 3-hour block average.
- (e) Low NO_x burners shall be installed and utilized to reduce the NO_x emissions from the Coal #1 Pulverizer/Dryer.
- (f) The NO_x emissions from the Coal #1 Pulverizer/Dryer shall not exceed 0.053 pounds per ton and 1.75 pounds per hour, based on a 3-hour block average.
- (g) The CO emissions from the Coal #1 Pulverizer/Dryer shall not exceed 0.090 pounds per ton and 2.97 pounds per hour, based on a 3-hour block average.
- (h) The VOC emissions from the Coal #1 Pulverizer/Dryer shall not exceed 0.20 pounds per hour, based on a 3-hour block average.
- (i) The SO₂ emissions from the Coal #1 Pulverizer/Dryer shall not exceed 0.03 pounds per hour, based on a 3-hour block average.

D.3.2 Coal #2 Pulverizer/Dryer PSD BACT Limits [326 IAC 2-2]

Pursuant to 326 IAC 2-2 Prevention of Significant Deterioration (PSD), the Permittee shall comply with the following PSD Best Available Control Technology (BACT) standards.

If the stack test required under Condition D.3.9 demonstrates that these emission limits are less stringent than what is achieved in practice, the Department may, at its discretion, use the authority under IC 13-15-7-2 and 326 IAC 2-2 to reopen and revise the emission limit(s) to more closely reflect the actual stack test results.

Because a best available control technology (BACT) level has not previously been established for an iron nugget production plant, if the stack test required under Condition D.3.9 demonstrates that the emission limit initially established in this permit is not achievable in practice, the Permittee may submit to the Department an application for a revision to the permit to reflect the emission level achieved in the stack test. The Permittee has the burden of demonstrating that it took all steps necessary to ensure that the emissions levels achieved in the stack test were the lowest achievable.

Any revisions of the emissions limits made as the result of this provision shall be subject to the best available control technology (BACT) review and air quality analysis, specified in 326 IAC 2-2.

The Department will provide an opportunity for public notice and comment under 326 IAC 2-7-10.5(f)(1) prior to finalizing any permit modification. IC 13-15-7-3 (Revocation or Modification of a Permit: Appeal to Board) shall apply to the permit modification.

This provision does not have any impact on current or future enforcement actions.

- (a) The Coal #2 Pulverizer/Dryer shall use natural gas as fuel with propane as backup fuel.
- (b) The filterable particulate matter (PM/PM₁₀) emissions from the Coal #2 Pulverizer/Dryer shall be captured and controlled by a baghouse (identified as Coal #2 Pulverizer/Dryer Baghouse).
- (c) The filterable particulate matter (PM) emissions exhausting through the Coal #2 Pulverizer/Dryer Baghouse shall not exceed 0.01 grains per dry standard cubic foot of exhaust air and 1.45 pounds per hour, based on a 3-hour block average.
- (d) The filterable and condensable particulate matter (PM/PM₁₀) emissions exhausting through the Coal #2 Pulverizer/Dryer Baghouse shall not exceed 0.015 grains per dry standard cubic foot of exhaust air and 2.17 pounds per hour, based on a 3-hour block average.
- (e) Low NO_x burners shall be installed and utilized to reduce the NO_x emissions from the Coal #2 Pulverizer/Dryer.
- (f) The NO_x emissions from the Coal #2 Pulverizer/Dryer shall not exceed 0.051 pounds per ton and 0.46 pounds per hour, based on a 3-hour block average.
- (g) The CO emissions from the Coal #2 Pulverizer/Dryer shall not exceed 0.086 pounds per ton and 0.774 pounds per hour, based on a 3-hour block average.
- (h) The VOC emissions from the Coal #2 Pulverizer/Dryer shall not exceed 0.054 pounds per

hour, based on a 3-hour block average.

- (i) The SO₂ emissions from the Coal #2 Pulverizer/Dryer shall not exceed 0.01 pounds per hour, based on a 3-hour block average.

D.3.3 Flux Pulverizer(s)/Dryer(s) PSD BACT Limits [326 IAC 2-2]

Pursuant to 326 IAC 2-2 Prevention of Significant Deterioration (PSD), the Permittee shall comply with the following PSD Best Available Control Technology (BACT) standards.

If the stack test required under Condition D.3.9 demonstrates that these emission limits are less stringent than what is achieved in practice, the Department may, at its discretion, use the authority under IC 13-15-7-2 and 326 IAC 2-2 to reopen and revise the emission limit(s) to more closely reflect the actual stack test results.

Because a best available control technology (BACT) level has not previously been established for an iron nugget production plant, if the stack test required under Condition D.3.9 demonstrates that the emission limit initially established in this permit is not achievable in practice, the Permittee may submit to the Department an application for a revision to the permit to reflect the emission level achieved in the stack test. The Permittee has the burden of demonstrating that it took all steps necessary to ensure that the emissions levels achieved in the stack test were the lowest achievable.

Any revisions of the emissions limits made as the result of this provision shall be subject to the best available control technology (BACT) review and air quality analysis, specified in 326 IAC 2-2.

The Department will provide an opportunity for public notice and comment under 326 IAC 2-7-10.5(f)(1) prior to finalizing any permit modification. IC 13-15-7-3 (Revocation or Modification of a Permit: Appeal to Board) shall apply to the permit modification.

This provision does not have any impact on current or future enforcement actions.

- (a) The Flux Pulverizer(s)/Dryer(s) shall use natural gas as fuel with propane as backup fuel.
- (b) The filterable particulate matter (PM/PM₁₀) emissions from the Flux Pulverizer(s)/Dryer(s) shall be captured and controlled by baghouse(s) (identified as Flux Pulverizer(s)/Dryer(s) Baghouse(s)).
- (c) The total filterable and condensable particulate matter (PM/PM₁₀) emissions exhausting through the Flux Pulverizer(s)/Dryer(s) Baghouse(s) shall not exceed 0.015 grains per dry standard cubic foot of exhaust air and 4.06 pounds per hour, based on a 3-hour block average.
- (d) Low NO_x burners shall be installed and utilized to reduce the NO_x emissions from the Flux Pulverizer(s)/Dryer(s).
- (e) The NO_x emissions from the Flux Pulverizer(s)/Dryer(s) shall not exceed 0.054 pounds per ton and 0.702 pounds per hour, based on a 3-hour block average.
- (f) The CO emissions from the Flux Pulverizer(s)/Dryer(s) shall not exceed 0.091 pounds per ton and 1.18 pounds per hour, based on a 3-hour block average.

- (g) The VOC emissions from the Flux Pulverizer(s)/Dryer(s) shall not exceed 0.08 pounds per hour, based on a 3-hour block average.
- (h) The SO₂ emissions from the Flux Pulverizer(s)/Dryer(s) shall not exceed 0.013 pounds per hour, based on a 3-hour block average.

D.3.4 Stack 1002 Opacity PSD BACT Limit [326 IAC 2-2]

Pursuant to 326 IAC 2-2 Prevention of Significant Deterioration (PSD), the visible emissions from Stack 1002 shall not exceed 3% opacity, based on a 6-minute average.

D.3.5 Clean Units [326 IAC 2-2.2]

- (a) Pursuant to 326 IAC 2-2.2 (Clean Unit):
 - (1) The Coal #1 Pulverizer/Dryer is classified as Clean Unit for:
 - filterable particulate matter (PM),
 - filterable and condensible particulate matter (PM/PM₁₀), and
 - NO_x.
 - (2) The Coal #2 Pulverizer/Dryer is classified as Clean Unit for:
 - filterable particulate matter (PM),
 - filterable and condensible particulate matter (PM/PM₁₀), and
 - NO_x.
 - (3) The Flux Pulverizer(s)/Dryer(s) are classified as Clean Unit(s) for:
 - filterable particulate matter (PM),
 - filterable and condensible particulate matter (PM/PM₁₀), and
 - NO_x.
- (b) The Clean Unit designations for these pulverizers/dryers are in effect for ten (10) years from their initial start-ups.
- (c) In order to maintain the clean unit designations for the:
 - (1) Coal #1 Pulverizer/Dryer:
The Permittee shall comply with the Coal #1 Pulverizer/Dryer's filterable particulate matter (PM), filterable and condensible particulate matter (PM/PM₁₀), NO_x and Opacity PSD BACT limits.
 - (2) Coal #2 Pulverizer/Dryer:
The Permittee shall comply with Coal #2 Pulverizer/Dryer's filterable particulate matter (PM), filterable and condensible particulate matter (PM/PM₁₀), NO_x and Opacity PSD BACT limits.
 - (3) Flux Pulverizer(s)/Dryer(s):
The Permittee shall comply with Flux Pulverizer/Dryer's filterable particulate matter (PM), filterable and condensible particulate matter (PM/PM₁₀), NO_x and Opacity PSD BACT limits.

D.3.6 General Provisions Relating to NSPS [326 IAC 12-1][40 CFR Part 60, Subpart A]
[40 CFR Part 60, Subpart Y]

- (a) The provisions of 40 CFR Part 60, Subpart A (General Provisions), which are incorporated by reference in 326 IAC 12-1, apply to the Coal #1 Dryer and Coal #2 Dryer, except when otherwise specified in 40 CFR Part 60, Subpart Y (Standards of Performance for Coal Preparation Plants).
- (b) Pursuant 40 CFR Part 60.252(a)(1), the filterable particulate emissions from the Coal #1 Dryer and Coal #2 Dryer shall not exceed 0.031 grains per dry standard cubic foot of exhaust air.
- (c) Pursuant 40 CFR Part 60.252(a)(2), the visible emissions from the Coal #1 Dryer and Coal #2 Dryer shall not exceed 20% opacity.

D.3.7 Preventive Maintenance Plan (PMP) [326 IAC 2-7-5(13)] [326 IAC 1-6-3]

A Preventive Maintenance Plan (PMP), in accordance with Section B.18 - Preventive Maintenance Plan (PMP), of this permit, is required for these pulverizers/dryers and their emission control devices.

Compliance Determination Requirements

D.3.8 Operation of Add-on Control Devices Exhausting Through Stack 1002 [326 IAC 2-2]

Pursuant to 326 IAC 2-2 Prevention of Significant Deterioration (PSD):

- (a) The Coal #1 Pulverizer/Dryer Baghouse for particulate control shall be in operation and control the emissions at all times from the Coal #1 Pulverizer/Dryer when the Coal #1 Pulverizer/Dryer is in operation.
- (b) The Coal #2 Pulverizer/Dryer Baghouse for particulate control shall be in operation and control the emissions at all times from the Coal #2 Pulverizer/Dryer when the Coal #2 Pulverizer/Dryer is in operation.
- (c) The Flux Pulverizer(s)/Dryer(s) Baghouses for particulate control shall be in operation and control the emissions at all times from the Flux Pulverizer(s)/Dryer(s) when the Flux Pulverizer(s)/Dryer(s) are in operation.

D.3.9 Coal #1 Pulverizer/Dryer Baghouse and Coal #2 Pulverizer/Dryer Baghouse
Testing Requirements [326 IAC 2-7-6(1) and (6)] [326 IAC 2-2] [40 CFR Part 60 Subpart Y]

- (a) Pursuant to 326 IAC 2-2 Prevention of Significant Deterioration (PSD) and 40 CFR Part 60, Subpart Y, **no later than** 60 days after achieving maximum production rate, but no later than 180 days after initial start-up of the:
 - Coal #1 Pulverizer/Dryer, and
 - Coal #2 Pulverizer/Dryer,the Permittee shall perform filterable particulate matter (PM) and filterable and condensable particulate matter (PM/PM₁₀) compliance tests at the:
 - Coal #1 Pulverizer/Dryer Baghouse exhaust, and
 - Coal #2 Pulverizer/Dryer Baghouse exhaust

using 40 CFR Part 60, Appendix A, Method 5, Method 201 or 201A, Method 202 or methods as approved by the Commissioner.

- (b) The filterable particulate matter (PM) and filterable and condensible particulate matter (PM/PM₁₀) tests shall be repeated at least once every five (5) years from the date of the last valid compliance demonstration.
- (c) These tests shall be performed using methods as approved by the Commissioner.
- (d) Testing shall be conducted in accordance with Section C.11 - Performance Testing.

D.3.10 Coal #1 Pulverizer/Dryer and Coal #2 Pulverizer/Dryer Opacity Testing Requirement
[40 CFR Part 60 Subpart Y]

Pursuant to 40 CFR Part 60, Subpart Y, the Permittee shall perform an initial compliance test for opacity on the Coal #1 Pulverizer/Dryer and Coal #2 Pulverizer/Dryer exhaust stack no later than 60 days after achieving maximum capacity, but no later than 180 days after initial start up, utilizing 40 CFR Part 60, Appendix A, Method 9.-

Testing shall be conducted in accordance with Section C.11 - Performance Testing.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.3.11 Visible Emissions Notations [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

- (a) Visible emission notations of Stack 1002, consisting of the:

- (1) Coal #1 Pulverizer/Dryer Baghouse,
- (2) Coal #2 Pulverizer/Dryer Baghouse,
- (3) Flux Pulverizer(s)/Dryer(s) Baghouse(s),

shall be performed once per shift during normal daylight operations when exhausting to the atmosphere.

A trained employee shall record whether emissions are normal or abnormal.

- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan (CRP) for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C.18 - Compliance Response Plan (CRP) - Preparation, Implementation, Records, and Reports, shall be considered a

deviation from this permit.

D.3.12 Baghouse Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

The Permittee shall record the total static pressure drop across the:

- (a) Coal #1 Pulverizer/Dryer Baghouse, used in conjunction with the Coal #1 Pulverizer/Dryer;
- (b) Coal #2 Pulverizer/Dryer Baghouse, used in conjunction with the Coal #2 Pulverizer/Dryer;
- (c) Flux Pulverizer(s)/Dryer(s) Baghouse(s), used in conjunction with the Flux Pulverizer(s)/Dryer(s);

at least once per shift when the process is in operation when venting to the atmosphere.

When for any one reading, the pressure drop across the baghouse is outside the normal range of 6.0 and 12.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C.18- Compliance Response Plan (CRP) - Preparation, Implementation, Records, and Reports.

A pressure reading that is outside the above mentioned range is not a deviation from this permit.

Failure to take response steps in accordance with Section C.18 - Compliance Response Plan (CRP) – Preparation, Implementation, Records and Reports shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C.15 - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.3.13 Baghouse Inspections [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

- (a) An inspection shall be performed each calendar quarter of all bags controlling the:
 - (1) Coal #1 Pulverizer/Dryer,
 - (2) Coal #2 Pulverizer/Dryer, and
 - (3) Flux Pulverizer(s)/Dryer(s),when venting to the atmosphere.
- (b) Inspections required by this condition shall not be performed in consecutive months.
- (c) All defective bags shall be repaired or replaced.

D.3.14 Broken or Failed Bag Detection [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

In the event that bag failure has been observed:

- (a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan (CRP) shall be initiated.

For any failure with corresponding response steps and timetable not described in the

Compliance Response Plan (CRP), response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion.

Failure to take response steps in accordance with Section C.18 - Compliance Response Plan (CRP) - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

If operations continue after bag failure is observed and it will be 10 days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

- (b) For single compartment baghouses, if failure is indicated by a significant drop in the baghouse's pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, then failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced.

Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B.19 - Emergency Provisions).

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.3.15 Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

- (a) The Permittee shall maintain records required under 326 IAC 3-5-6 at the source in a manner that they may be inspected by the IDEM, OAQ, or the US EPA, if so requested or required.
- (b) The Permittee shall maintain the following records, and make such records available upon request to IDEM, OAQ, and the US EPA:
 - (1) Records of the once per shift visible emission notations.
 - (2) Records of the once per shift readings of the baghouses' total static pressure drop during normal operation when venting to the atmosphere.
 - (3) Records of the results of the baghouse inspections.
- (c) The Permittee shall maintain records of any additional inspections prescribed by the Preventive Maintenance Plan (PMP) and make such records available upon request to IDEM, OAQ, and the US EPA.
- (d) Records necessary to demonstrate compliance shall be available **no later than** 30 days of the end of each compliance period.
- (e) All records shall be maintained in accordance with Section C.21 - General Record Keeping Requirements of this permit.

D.3.16 Reporting Requirements [\[326 IAC 2-2\]](#) [\[326 IAC 2-7-5\(3\)\]](#) [\[326 IAC 2-7-19\]](#)

The Permittee shall submit with the Affidavit of Construction (Section [B.6](#)), the final design specifications and vendor guarantees of the Coal #1 Pulverizer/Dryer, Coal #2 Pulverizer/Dryer, and Flux Pulverizer(s)/Dryer(s).

These reports shall be submitted in accordance with Section [C.22](#) - General Reporting Requirements of this permit and do require the certification by the responsible official, as defined by [326 IAC 2-7-1\(34\)](#).

SECTION D.4 FACILITY OPERATION CONDITIONS

| |
|---|
| Facility Description [326 IAC 2-7-5(15)] |
| Stack 1003 |
| One (1) Ore Dryer, nominally rated at 125 tons per hour and 25 million (MM) Btu per hour. |
| The particulate matter emissions from the Ore Dryer are controlled by a baghouse, identified as Ore Dryer Baghouse and exhaust through a stack, identified as Stack 1003. |
| (The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.) |

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.4.1 Ore Dryer PSD BACT Limits [326 IAC 2-2]

Pursuant to 326 IAC 2-2 Prevention of Significant Deterioration (PSD), the Permittee shall comply with the following PSD Best Available Control Technology (BACT) standards.

If the stack test required under Condition D.4.5 demonstrates that these emission limits are less stringent than what is achieved in practice, the Department may, at its discretion, use the authority under IC 13-15-7-2 and 326 IAC 2-2 to reopen and revise the emission limit(s) to more closely reflect the actual stack test results.

Because a best available control technology (BACT) level has not previously been established for an iron nugget production plant, if the stack test required under Condition D.4.5 demonstrates that the emission limit initially established in this permit is not achievable in practice, the Permittee may submit to the Department an application for a revision to the permit to reflect the emission level achieved in the stack test. The Permittee has the burden of demonstrating that it took all steps necessary to ensure that the emissions levels achieved in the stack test were the lowest achievable.

Any revisions of the emissions limits made as the result of this provision shall be subject to the best available control technology (BACT) review and air quality analysis, specified in 326 IAC 2-2.

The Department will provide an opportunity for public notice and comment under 326 IAC 2-7-10.5(f)(1) prior to finalizing any permit modification. IC 13-15-7-3 (Revocation or Modification of a Permit: Appeal to Board) shall apply to the permit modification.

This provision does not have any impact on current or future enforcement actions.

- (a) The Ore Dryer shall use natural gas as fuel with propane as backup fuel.
- (b) The filterable particulate matter (PM/PM₁₀) emissions from the Ore Dryer shall be captured and controlled by a baghouse (identified as Ore Dryer Baghouse).
- (c) The filterable particulate matter (PM) emissions exhausting through the Ore Dryer Baghouse shall not exceed 0.01 grains per dry standard cubic foot of exhaust air and 4.29 pounds per hour, based on a 3-hour block average.

- (d) The filterable and condensible particulate matter (PM/PM₁₀) emissions exhausting through the Ore Dryer Baghouse shall not exceed 0.015 grains per dry standard cubic foot of exhaust air and 6.43 pounds per hour, based on a 3-hour block average.
- (e) Low NO_x burners shall be installed and utilized to reduce the NO_x emissions from the Ore Dryer.
- (f) The NO_x emissions from the Ore Dryer shall not exceed 0.010 pounds per ton and 1.25 pounds per hour, based on a 3-hour block average.
- (g) The CO emissions from the Ore Dryer shall not exceed 0.016 pounds per ton and 2.0 pounds per hour, based on a 3-hour block average.
- (h) The VOC emissions from the Ore Dryer shall not exceed 0.13 pounds per hour, based on a 3-hour block average.
- (i) The SO₂ emissions from the Ore Dryer shall not exceed 0.013 pounds per hour, based on a 3-hour block average.
- (j) The visible emissions from Stack 1003 shall not exceed 3% opacity, based on a 6-minute average.

D.4.2 Ore Dryer Clean Unit [326 IAC 2-2.2]

- (a) Pursuant to 326 IAC 2-2.2 (Clean Unit), the Ore Dryer is classified as Clean Unit for:
 - filterable particulate matter (PM),
 - filterable and condensible particulate matter (PM/PM₁₀), and
 - NO_x.
- (b) The Clean Unit designation for the Ore Dryer is in effect for ten (10) years from its initial start up.
- (c) In order to maintain the clean unit designations for the Ore Dryer, the Permittee shall comply with the Ore Dryer's filterable particulate matter (PM), filterable and condensible particulate matter (PM/PM₁₀), NO_x, and Opacity PSD BACT limits.

D.4.3 Preventive Maintenance Plan (PMP) [326 IAC 2-7-5(13)] [326 IAC 1-6-3]

A Preventive Maintenance Plan (PMP), in accordance with Section B.18 - Preventive Maintenance Plan (PMP), of this permit, is required for the Ore Dryer and its emission control devices.

Compliance Determination Requirements

D.4.4 Operation of Add-on Control Device Exhausting Through Stack 1003 [326 IAC 2-2]

Pursuant to 326 IAC 2-2 Prevention of Significant Deterioration (PSD), the Ore Dryer Baghouse for particulate control shall be in operation and control the emissions at all times from the Ore Dryer when the Ore Dryer is in operation.

D.4.5 Ore Dryer Baghouse Testing Requirements [326 IAC 2-7-6(1) and (6)] [326 IAC 2-2]

- (a) Pursuant to 326 IAC 2-2 Prevention of Significant Deterioration (PSD), no later than 60 days after achieving maximum production rate, but no later than 180 days after initial

start-up of the Ore Dryer, the Permittee shall perform:

- (1) Filterable particulate matter (PM) compliance tests, and
- (2) Filterable and condensible (PM/PM₁₀) particulate matter compliance tests

at the Ore Dryer Baghouse stack (Stack 1003), using 40 CFR Part 60, Appendix A, Method 5, Method 201 or 201A, Method 202 or methods as approved by the Commissioner.

- (b) The particulate matter tests shall be repeated at least once every five (5) years from the date of the last valid compliance demonstration.
- (c) These tests shall be performed using methods as approved by the Commissioner.
- (d) Testing shall be conducted in accordance with Section C.11 - Performance Testing.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.4.6 Visible Emissions Notations [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

- (a) Visible emission notations of the Ore Dryer Baghouse stack exhaust (Stack 1003) shall be performed once per shift during normal daylight operations when exhausting to the atmosphere.

A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan (CRP) for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C.18 - Compliance Response Plan (CRP) - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

D.4.7 Baghouse Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

The Permittee shall record the total static pressure drop across the Ore Dryer Baghouse, used in conjunction with the Ore Dryer, at least once per shift when the process is in operation when venting to the atmosphere.

When for any one reading, the pressure drop across the baghouse is outside the normal range of 6.0 and 12.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C.18- Compliance Response

Plan (CRP) - Preparation, Implementation, Records, and Reports.

A pressure reading that is outside the above mentioned range is not a deviation from this permit.

Failure to take response steps in accordance with Section C.18 - Compliance Response Plan (CRP) – Preparation, Implementation, Records and Reports shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C.15 - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.4.8 Baghouse Inspections [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

- (a) An inspection shall be performed each calendar quarter of all bags controlling the Ore Dryer when venting to the atmosphere.
- (b) Inspections required by this condition shall not be performed in consecutive months.
- (c) All defective bags shall be repaired or replaced.

D.4.9 Broken or Failed Bag Detection [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

In the event that bag failure has been observed:

- (a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan (CRP) shall be initiated.

For any failure with corresponding response steps and timetable not described in the Compliance Response Plan (CRP), response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion.

Failure to take response steps in accordance with Section C.18 - Compliance Response Plan (CRP) - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

If operations continue after bag failure is observed and it will be 10 days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

- (b) For single compartment baghouses, if failure is indicated by a significant drop in the baghouse's pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, then failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced.

Operations may continue only if the event qualifies as an emergency and the Permittee

satisfies the requirements of the emergency provisions of this permit (Section [B.19](#) - Emergency Provisions).

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.4.10 Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

- (a) The Permittee shall maintain records required under 326 IAC 3-5-6 at the source in a manner that they may be inspected by the IDEM, OAQ, or the US EPA, if so requested or required.
- (b) The Permittee shall maintain the following records, and make such records available upon request to IDEM, OAQ, and the US EPA:
 - (1) Records of the once per shift visible emission notations.
 - (2) Records of the once per shift readings of the baghouses' total static pressure drop during normal operation when venting to the atmosphere.
 - (3) Records of the results of the baghouse inspections.
- (c) The Permittee shall maintain records of any additional inspections prescribed by the Preventive Maintenance Plan (PMP) and make such records available upon request to IDEM, OAQ, and the US EPA.
- (d) Records necessary to demonstrate compliance shall be available **no later than** 30 days of the end of each compliance period.
- (e) All records shall be maintained in accordance with Section [C.21](#) - General Record Keeping Requirements of this permit.

D.4.11 Reporting Requirements [326 IAC 2-2] [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

The Permittee shall submit with the Affidavit of Construction (Section [B.6](#)), the final design specifications and vendor guarantees of the Ore Dryer.

These reports shall be submitted in accordance with Section [C.22](#) - General Reporting Requirements of this permit and do require the certification by the responsible official, as defined by 326 IAC 2-7-1(34).

SECTION D.5 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

Stack 1004

Coal Railcar Unloading, nominally rated at 165 tons per hour, with a baghouse, identified as Coal Railcar Unloading Baghouse, for particulate control and exhaust through a stack, identified as Stack 1004.

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

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.5.1 Railcar Unloading PSD BACT Limits [326 IAC 2-2]

Pursuant to 326 IAC 2-2 Prevention of Significant Deterioration (PSD), the Permittee shall comply with the following PSD Best Available Control Technology (BACT) standards:

- (a) The filterable particulate matter (PM) emissions from the Coal Railcar Unloading shall be captured and controlled by a baghouse (identified as Railcar Unloading Baghouse).
- (b) The filterable particulate matter (PM) emissions exhausting through the Coal Railcar Unloading Baghouse shall not exceed 0.0052 grains per dry standard cubic foot of exhaust air.
- (c) The visible emissions from Stack 1004 shall not exceed 3% opacity, based on a 6-minute average.
- (d) The Coal Railcar Unloading operation shall be conducted in a shed. The air pressure or water spray system in the shed shall be maintained at a level to reduce particulate matter emissions escaping through the doors while the unloading process is taking place.

D.5.2 Railcar Unloading Clean Unit [326 IAC 2-2.2]

- (a) Pursuant to 326 IAC 2-2.2 (Clean Unit), the Coal Railcar Unloading is classified as Clean Unit for filterable particulate matter (PM).
- (b) The Clean Unit designation for the Railcar Unloading is in effect for ten (10) years from its initial start up.
- (c) In order to maintain the clean unit designations for the Coal Railcar Unloading, the Permittee shall comply with the Railcar Unloading's filterable particulate matter (PM) and opacity PSD BACT limits.

D.5.3 Preventive Maintenance Plan (PMP) [326 IAC 2-7-5(13)] [326 IAC 1-6-3]

A Preventive Maintenance Plan (PMP), in accordance with Section B.18 - Preventive Maintenance Plan (PMP), of this permit, is required for the Coal Railcar Unloading Baghouse.

Compliance Determination Requirements

D.5.4 Operation of Add-on Control Device Exhausting Through Stack 1004 [326 IAC 2-2]

Pursuant to 326 IAC 2-2 Prevention of Significant Deterioration (PSD), the Coal Railcar Unloading Baghouse for particulate control shall be in operation and control the emissions at all times from the Railcar Unloading when the Railcar Unloading is in operation.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.5.5 Visible Emissions Notations [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

- (a) Visible emission notations of the Coal Railcar Unloading Baghouse stack (Stack 1004) exhaust shall be performed once per shift during normal daylight operations when the railcar unloading is in operation and exhausting to the atmosphere.

A trained employee shall record whether emissions are normal or abnormal.

- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan (CRP) for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C.18 - Compliance Response Plan (CRP) - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

D.5.6 Baghouse Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

The Permittee shall record the total static pressure drop across the Coal Railcar Unloading Baghouse, used in conjunction with the Railcar Unloading, at least once per shift when the process is in operation when venting to the atmosphere.

When for any one reading, the pressure drop across the baghouse is outside the normal range of 6.0 and 12.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C.18 - Compliance Response Plan (CRP) - Preparation, Implementation, Records, and Reports.

A pressure reading that is outside the above mentioned range is not a deviation from this permit.

Failure to take response steps in accordance with Section C.18 - Compliance Response Plan (CRP) – Preparation, Implementation, Records and Reports shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C.15 - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.5.7 Baghouse Inspections [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

- (a) An inspection shall be performed **annually** of all bags controlling the **Coal** Railcar Unloading when venting to the atmosphere.
- (b) Inspections required by this condition shall not be performed in consecutive months.
- (c) All defective bags shall be **repaired or** replaced.

D.5.8 Broken or Failed Bag Detection [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

In the event that bag failure has been observed:

- (a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan (CRP) shall be initiated.

For any failure with corresponding response steps and timetable not described in the Compliance Response Plan (CRP), response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion.

Failure to take response steps in accordance with Section C.18 - Compliance Response Plan (CRP) - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

If operations continue after bag failure is observed and it will be 10 days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

- (b) For single compartment baghouses, if failure is indicated by a significant drop in the baghouse's pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, then failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced.

Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B .19 - Emergency Provisions).

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.5.9 Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

- (a) The Permittee shall maintain records required under 326 IAC 3-5-6 at the source in a manner that they may be inspected by the IDEM, OAQ, or the US EPA, if so requested or required.
- (b) The Permittee shall maintain the following records, and make such records available upon request to IDEM, OAQ, and the US EPA:
 - (1) Records of the once per shift visible emission notations.
 - (2) Records of the once per shift readings of the baghouses' total static pressure drop during normal operation when venting to the atmosphere.
 - (3) Records of the results of the baghouse inspections.
- (c) The Permittee shall maintain records of any additional inspections prescribed by the Preventive Maintenance Plan (PMP) and make such records available upon request to IDEM, OAQ, and the US EPA.
- (d) Records necessary to demonstrate compliance shall be available **not later than** 30 days of the end of each compliance period.
- (e) All records shall be maintained in accordance with Section **C.21** - General Record Keeping Requirements of this permit.

SECTION D.6 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

Fugitive Dust Collection Systems

- (1) Fugitive Dust Collection #1, with baghouse(s), identified as Fugitive Baghouse #1, for particulate control and exhaust through a stack, identified as Stack 1001.
- (2) Fugitive Dust Collection #2, with baghouse(s), identified as Fugitive Baghouse #2, for particulate control and exhaust through a stack, identified as Stack 1005.

Due to design uncertainty at this time of the review, the number of fugitive dust collection baghouses is permitted to change, however, the total dust collection volume and emissions will remain the same.

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

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.6.1 Fugitive Dust Collection Systems PSD BACT Limits [326 IAC 2-2]

Pursuant to 326 IAC 2-2 Prevention of Significant Deterioration (PSD), the Permittee shall comply with the following PSD Best Available Control Technology (BACT) standards:

Fugitive Dust Collection #1 - - Stack 1001

- (a) The filterable particulate matter (PM) emissions from the Fugitive Dust Collection #1 shall be captured and controlled by baghouse(s) (identified as Fugitive Baghouse #1).
- (b) The filterable particulate matter (PM) emissions exhausting through the Fugitive Baghouse #1 shall not exceed 0.0052 grains per dry standard cubic foot of exhaust air.
- (c) The visible emissions from Stack 1001 shall not exceed 3% opacity, based on a 6-minute average.

Fugitive Dust Collection #2 - - Stack 1005

- (d) The filterable particulate matter (PM) emissions from the Fugitive Dust Collection #2 shall be captured and controlled by baghouse(s) (identified as Fugitive Baghouse #2).
- (e) The filterable particulate matter (PM) emissions exhausting through the Fugitive Baghouse #2 shall not exceed 0.0052 grains per dry standard cubic foot of exhaust air.
- (f) The visible emissions from Stack 1005 shall not exceed 3% opacity, based on a 6-minute average.

D.6.2 Preventive Maintenance Plan (PMP) [326 IAC 2-7-5(13)] [326 IAC 1-6-3]

A Preventive Maintenance Plan (PMP), in accordance with Section B.18 - Preventive Maintenance Plan (PMP), of this permit, is required for the Fugitive Baghouse #1 and Fugitive Baghouse #2.

Compliance Determination Requirements

D.6.3 Operation of Add-on Control Devices [326 IAC 2-2]

- (a) Fugitive Baghouse #1- - Stack 1001
Pursuant to 326 IAC 2-2 Prevention of Significant Deterioration (PSD), the Fugitive Baghouse #1 for particulate control shall be in operation and control the emissions at all times from the Fugitive Dust Collection #1 when fugitive emissions are emitted.
- (b) Fugitive Baghouse #2 - - Stack 1005
Pursuant to 326 IAC 2-2 Prevention of Significant Deterioration (PSD), the Fugitive Baghouse #2 for particulate control shall be in operation and control the emissions at all times from the Fugitive Dust Collection #2 when fugitive emissions are emitted.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.6.4 Visible Emissions Notations [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

- (a) Visible emission notations of the Fugitive Baghouse #2 stack (Stack 1005) exhaust shall be performed once per shift during normal daylight operations when exhausting to the atmosphere.

A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan (CRP) for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C.18 - Compliance Response Plan (CRP) - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

D.6.5 Baghouse Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

The Permittee shall record the total static pressure drop across the:

- (a) Fugitive Baghouse #1, used in conjunction with the Fugitive Dust Collection #1;
and
- (b) Fugitive Baghouse #2, used in conjunction with the Fugitive Dust Collection #2;

at least once per shift when the process is in operation when venting to the atmosphere.

When for any one reading, the pressure drop across the baghouse is outside the normal range of 6.0 and 12.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C.18 - Compliance Response Plan (CRP) - Preparation, Implementation, Records, and Reports.

A pressure reading that is outside the above mentioned range is not a deviation from this permit.

Failure to take response steps in accordance with Section C.18 - Compliance Response Plan (CRP) – Preparation, Implementation, Records and Reports shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C.15 - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.6.6 Baghouse Inspections [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

- (a) An inspection shall be performed each calendar quarter of all bags controlling the:
 - Fugitive Dust Collection #1, and
 - Fugitive Dust Collection #2when venting to the atmosphere.
- (b) Inspections required by this condition shall not be performed in consecutive months.
- (c) All defective bags shall be repaired or replaced.

D.6.7 Broken or Failed Bag Detection [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

In the event that bag failure has been observed:

- (a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan (CRP) shall be initiated.

For any failure with corresponding response steps and timetable not described in the Compliance Response Plan (CRP), response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion.

Failure to take response steps in accordance with Section C.18 - Compliance Response Plan (CRP) - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

If operations continue after bag failure is observed and it will be 10 days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

- (b) For single compartment baghouses, if failure is indicated by a significant drop in the

baghouse's pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, then failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced.

Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section [B.19](#) - Emergency Provisions).

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.6.8 Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

- (a) The Permittee shall maintain records required under 326 IAC 3-5-6 at the source in a manner that they may be inspected by the IDEM, OAQ, or the US EPA, if so requested or required.
- (b) The Permittee shall maintain the following records, and make such records available upon request to IDEM, OAQ, and the US EPA:
 - (1) Records of the once per shift visible emission notations.
 - (2) Records of the once per shift readings of the baghouses' total static pressure drop during normal operation when venting to the atmosphere.
 - (3) Records of the results of the baghouse inspections.
- (c) The Permittee shall maintain records of any additional inspections prescribed by the Preventive Maintenance Plan (PMP) and make such records available upon request to IDEM, OAQ, and the US EPA.
- (d) Records necessary to demonstrate compliance shall be available **no later than** 30 days of the end of each compliance period.
- (e) All records shall be maintained in accordance with Section [C.21](#) - General Record Keeping Requirements of this permit.

SECTION D.7 FACILITY OPERATION CONDITIONS

| Facility Description [326 IAC 2-7-5(15) | |
|--|-------------|
| Material storage, handling, transfer, and conveying, each nominally rated at 200 tons per hour. | |
| Summary of Bin Vents and Corresponding Operations | |
| | Bin Vent ID |
| | Operation |
| | Bin Vent ID |
| | Operation |
| | 1006 |
| Raw Ore Silo | |
| | 1022 |
| Flux Silo #3 | |
| | 1010 |
| Raw Flux Silo | |
| | 1023 |
| Flux Silo #4 | |
| | 1011 |
| Binder Silo | |
| | 1024 |
| Recycle Silo | |
| | 1014 |
| Raw Coal Silo | |
| | 1025 |
| Flux Silo #5 | |
| | 1015 |
| Recycle Fines Silo | |
| | 1027 |
| EAF Dust Silo | |
| | 1018 |

| | |
|------------------------------|-------|
| Raw Coal Silo | 1037 |
| Product Silo | 1019 |
| Pulverized Coal Silo | 1038 |
| Raw Flux Silo | 1020 |
| Pulverized Coal Silo | 1040 |
| Slag Separator Baghouse Silo | 1021 |
| Pulverized Coal Silo | Total |
| | 17 |

These silos are controlled by bin vent filters.

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

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.7.1 Silos PSD BACT Limits [326 IAC 2-2]

Pursuant to 326 IAC 2-2 (PSD), the Permittee shall comply with the following:

- (a) The filterable particulate matter (PM) emissions from each storage silo shall be each controlled by its bin vent filter at an outlet grain loading of 0.01 grains per dry standard cubic feet of exhaust air.
- (b) The visible emissions from each storage silo bin vent shall not exceed 3% opacity, based on a 6-minute average.

D.7.2 Silos Clean Unit [326 IAC 2-2.2]

- (a) Pursuant to 326 IAC 2-2.2 (Clean Unit), the storage silos are classified as Clean Units for filterable particulate matter (PM).
- (b) The Clean Unit designations for the storage silos are in effect for ten (10) years from their initial start ups.
- (c) In order to maintain the clean unit designations for the silos, the Permittee shall comply

with the silos' filterable particulate matter (PM) and opacity PSD BACT limits.

D.7.3 Preventive Maintenance Plan (PMP) [326 IAC 1-6-3] [326 IAC 1-6-3]

A Preventive Maintenance Plan (PMP), in accordance with Section B.18 - Preventive Maintenance Plan (PMP), of this permit, is required for the bin vent filters.

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

D.7.4 Particulate Matter (PM) [326 IAC 2-2]

Pursuant to 326 IAC 2-2 (PSD), the bin vents filters for particulate control shall be in operation and control emissions at all times from the storage silos when the storage silos are in operation.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

None

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

None

SECTION D.8 FACILITY OPERATION CONDITIONS

| |
|---|
| <p>Facility Description [326 IAC 2-7-5(15)]</p> <p style="text-align: center;">Paved and Unpaved Roadways</p> <p>Roadways used by the semi-tractor trailers, employee vehicles, and support vehicles are either pave or unpaved stone or gravel.</p> <p>Fugitive dust emissions are controlled by the implementation of the Fugitive Dust Control Plan (FDCP).</p> <p>(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)</p> |
|---|

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.8.1 Paved Roadways [326 IAC 2-2]

Pursuant to 326 IAC 2-2 Prevention of Significant Deterioration (PSD), the Permittee shall pave roadways used by semi-tractor trailers, employee vehicles, and support vehicles within the plant property.

D.8.2 Opacity PSD BACT Limit [326 IAC 2-2]

Pursuant to 326 IAC 2-2 Prevention of Significant Deterioration (PSD), the visible emissions from:

- (a) paved roadways,
- (b) unpaved roadways and
- (c) unpaved areas

shall not exceed 10% opacity, based on a 6-minute average.

D.8.3 Paved Roadways Clean Unit [326 IAC 2-2.2]

-
- (a) Pursuant to 326 IAC 2-2.2 (Clean Unit), the Paved Roadways are classified as Clean Units for filterable particulate matter (PM).
 - (b) The Clean Unit designations for the Paved Roadways are in effect for ten (10) years from their respective initial start ups.
 - (c) In order to maintain the clean unit designations for the Paved Roadways, the Permittee shall comply with the paved roadways filterable particulate matter (PM) and Opacity PSD BACT limits.

Compliance Determination Requirements

D.8.4 Fugitive Dust Control Plan (FDCP) [326 IAC 2-2]

Pursuant to 326 IAC 2-2 Prevention of Significant Deterioration (PSD), the Permittee shall maintain and implement its Fugitive Dust Control Plan (FDCP) (Section E of this permit).

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]
None

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.8.5 Record Keeping Requirements [326 IAC 2-2] [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

- (a) The Permittee shall maintain records of the activities required by the fugitive dust control plan (FDCP) and make such records available upon request to IDEM, OAQ and the US EPA.
- (b) Records necessary to demonstrate compliance shall be available **no later than** 30 days of the end of each compliance period.
- (c) All records shall be maintained in accordance with Section **C.21** - General Record Keeping Requirements of this permit.

SECTION D.9 FACILITY OPERATION CONDITIONS

| |
|---|
| <p>Facility Description [326 IAC 2-7-5(15)]</p> <p style="text-align: center;">Insignificant Activities</p> <p>(a) Two (2) Cooling Towers:</p> <p style="padding-left: 40px;">(1) Identified as Cooling Tower 743, with nominal capacity of 23,450 gallons per minute and 0.005% drift rate.</p> <p style="padding-left: 40px;">(2) Identified as Cooling Tower 726, with nominal capacity of 10,350 gallons per minute and 0.005% drift rate.</p> <p>(b) Emergency Generator(s)</p> <p>(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)</p> |
|---|

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.9.1 Cooling Towers PSD BACT Limits [326 IAC 2-2]

- (a) Pursuant to 326 IAC 2-2 Prevention of Significant Deterioration (PSD), the visible emissions from each cooling tower shall not exceed 20% opacity, based on a 6-minute average.
- (b) Pursuant to 326 IAC 2-2 Prevention of Significant Deterioration (PSD), the drift rate from each cooling tower shall not exceed 0.005%.

D.9.2 Emergency Generator(s) PSD BACT Limits [326 IAC 2-2]

Pursuant to 326 IAC 2-2 Prevention of Significant Deterioration (PSD), the Permittee shall comply with the following PSD Best Available Control technology (BACT) standards:

- (a) Each emergency generator shall provide back up power when electric power is interrupted or for periodic generator testing purposes.
- (b) Each emergency generator shall not operate more than 500 hours per 12-consecutive month period, with compliance determined at the end of each month.
- (c) Good combustion practices shall be performed.

Compliance Determination Requirements

None

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

None

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.9.3 Record Keeping Requirements [326 IAC 2-2] [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

- (a) The Permittee shall maintain records of the hours of operation of each emergency generator(s) and make such records available upon request to IDEM, OAQ and the US EPA.
- (b) Records necessary to demonstrate compliance shall be available **no later than** 30 days of the end of each compliance period.
- (c) All records shall be maintained in accordance with Section **C.21** - General Record Keeping Requirements of this permit.

D.9.4 Reporting Requirements [326 IAC 2-2] [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

The Permittee shall maintain and submit with the Affidavit of Construction (**Condition B.6**), the final design specifications and vendor guarantees of the cooling towers.

These reports shall be submitted in accordance with Section **C.22** - General Reporting Requirements of this permit and do require the certification by the responsible official, as defined by 326 IAC 2-7-1(34).

SECTION E FUGITIVE DUST CONTROL PLAN (FDCP)

E.1 Introduction

The following control plan, when implemented, is designed to reduce uncontrolled fugitive dust, based on a particulate matter mass emission basis from:

- (a) Paved roadways and parking lots -- down to 9.7 grams per square meter,
- (b) Unpaved areas – 90 percent, and
- (c) Feedstock and product outdoor operations – by 95 percent,

such that the silt loading limitation and visible emissions limitations specified in the permit are met.

The plan shall be implemented on a year-round basis until such time as another plan is approved or ordered by the Indiana Department of Environmental Management (IDEM).

E.2 Paved Roadways and Parking Lots

Paved roads and parking lots shall be controlled by the use of a vehicular vacuum sweeper, wet sweeping, or water flushing and shall be performed **at least** every 14 days.

Upon request of the Assistant Commissioner, Auburn Nugget LLC shall sample and provide to IDEM surface material silt content and surface dust loadings in accordance with C. Cowherd, Jr., et al., Iron and Steel Plant Open Dust Source Fugitive Emission Evaluation, EPA-600/2-79-103, U.S. Environmental Protection Agency, Cincinnati, OH, May 1979.

IDEM will have the right to specify road segments to be sampled. Auburn Nugget shall provide supplemental cleaning of paved road sections found to exceed the controlled silt surface loading of 9.7 grams per square meter.

Cleaning of paved road segments and parking lots may be delayed by one day when:

- (a) 0.1 or more inches of rain has accumulated during the 24-hour period prior to the scheduled cleaning.
- (b) The road segment is closed or abandoned. Abandoned roads will be barricaded to prevent vehicle access.
- (c) It is raining at the time of the scheduled cleaning.
- (d) The ambient air temperature is below 32°F.

The above dust control measures shall be performed such that the visible emission limitations in the permit are met. Visible emissions shall be determined in accordance with the procedures specified in the permit.

E.3 Unpaved Areas within the Plant

Unpaved areas traveled shall be treated with an IDEM-approved chemical dust suppressant at a rate necessary to meet compliance with the associated visible emissions limitations. Fugitive dust emissions shall be reduced by at least 90 percent instantaneous control on a particulate matter mass emission basis.

Treating of unpaved areas may be delayed by one (1) day when:

- (a) 0.1 or more inches of rain have accumulated during the 24-hour period prior to the scheduled treatment.
- (b) Unpaved areas are saturated with water such that chemical dust suppressants cannot be accepted by the surface.
- (c) Unpaved areas are frozen or covered by ice, snow, or standing water.
- (d) The area is closed or abandoned.
- (e) It is raining at the time of the scheduled treatment.
- (f) The ambient air temperature is below 32°F.

The above dust control measures shall be performed such that the visible emission limitations in the permit are met. Visible emissions shall be determined in accordance with the procedures specified in the permit.

E.4 Wind Erosion from Open Piles

Piles shall be sprayed with water or chemical dust suppressant on an "as-needed" basis to eliminate wind erosion and not exceed the visible emission limitations in the permit.

The above dust control measures shall be performed such that the visible emission limitations in the permit are met. Visible emissions shall be determined in accordance with the procedures specified in the permit.

E.5 Product Handling and Processing

Emissions from pile processing operations shall be controlled through the application of water or chemical dust suppressant on an as-needed basis and by limiting front-end loader batch drop height into trucks and hoppers to less than six feet.

Water application or chemical dust suppressant rate and frequency shall be sufficient to meet permit limitations.

Emissions from conveyor transfer points shall be controlled through the application of water or chemical dust suppressant.

Treating of pile processing operations and conveyor transfer points shall be delayed by one (1) day when:

- (a) 0.1 or more inches of rain has accumulated during the 24-hour period prior to the scheduled cleaning.
- (b) The pile or material is saturated with water such that chemical suppressants are ineffective.
- (c) The material is frozen or covered by ice, or snow.
- (d) The ambient air temperature is below 32°F.

E.6 Vehicle Speed Control

Posted speed limits on paved roads shall be 20 miles per hour.

Posted speed limits on unpaved areas shall be 10 miles per hour.

Upon violation, employees shall receive a written warning, followed by disciplinary action if a second violation occurs.

Visitors to the plant shall be denied access if repeated violations occur.

E.7 Material Spill Control

Incidents of material spillage on plant property that may create fugitive dust shall be properly cleaned up.

E.8 Monitoring and Recording Keeping

Records shall be kept of the vacuum sweeping, wet sweeping, or water flushing, spill control activities, and dust suppressant application frequency and amount. Also, records shall contain the amount of water or chemical dust suppressant used to control fugitive dust.

Records and support information required by this plan shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

E.9 Compliance Schedule

This plan shall be fully implemented when construction is completed. Until that time, the plan shall be implemented within portions of the site where construction is considered complete. Where construction is incomplete, appropriate control measures shall be implemented. These activities shall be recorded.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE BRANCH
100 North Senate Avenue, Indianapolis, IN 46204**

**PART 70 OPERATING PERMIT
CERTIFICATION**

Source Name: Auburn Nugget LLC
Source Location: County Road 55 and 42, Butler, IN 46721
Mailing Address: 221 South Main Street, Auburn, IN 46706

| | |
|--|--|
| This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this approval. | |
| Please check what document is being certified: | |
| <input type="checkbox"/> Test Result (specify) _____ | |
| <input type="checkbox"/> Report (specify) _____ | |
| <input type="checkbox"/> Notification (specify) _____ | |
| <input type="checkbox"/> Affidavit (specify) _____ | |
| <input type="checkbox"/> Other (specify) _____ | |

| |
|---|
| I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. |
| Signature: _____ |
| Printed Name: _____ |
| Title/Position: _____ |
| Date: _____ |

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY, COMPLIANCE BRANCH
100 North Senate Avenue, Indianapolis, IN 46204**

**PART 70 OPERATING PERMIT
EMERGENCY OCCURRENCE REPORT**

Source Name: Auburn Nugget LLC
Source Location: County Road 55 and 42, Butler, IN 46721
Mailing Address: 221 South Main Street, Auburn, IN 46706

| |
|--|
| <p><input type="checkbox"/> This is an emergency as defined in 326 IAC 2-7-1(12)</p> <p>The Permittee must notify the Office of Air Quality (OAQ), no later than four (4) business hours (1-800-451-6027 or 317-233-5674, ask for Compliance Section); and</p> <p>The Permittee must submit notice in writing or by facsimile no later than two (2) working days (Facsimile Number: 317-233-5967), and follow the other requirements of 326 IAC 2-7-16.</p> <p>Address: 100 North Senate Avenue, Indianapolis, Indiana 46204</p> |
|--|

This EMERGENCY OCCURRENCE REPORT consists of 2 pages.

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

| |
|---|
| Facility/Equipment/Operation: |
| Control Equipment: |
| Permit Condition or Operation Limitation in Permit: |
| Description of the Emergency: |
| Describe the cause of the Emergency: |
| Date/Time Emergency started: |
| Date/Time Emergency was corrected: |

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

| |
|--------------------|
| Form Completed By: |
| Title/Position: |
| Date: |
| Telephone: |

A certification by the responsible official as defined by 326 IAC 2-7-1(34) is NOT required for this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION
100 North Senate Avenue, Indianapolis, IN 46204**

**PART 70 OPERATING PERMIT
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT**

Source Name: Auburn Nugget LLC
Source Location: County Road 55 and 42, Butler, IN 46721
Mailing Address: 221 South Main Street, Auburn, IN 46706

Months: _____ to _____ Year: _____

This Quarterly Deviation And Compliance Monitoring Report consists of 2 pages.

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

| Page 2 of 2 of Quarterly Deviation And Compliance Monitoring Report | |
|--|------------------------|
| Permit Requirement (specify permit condition #) | |
| Date of Deviation: | Duration of Deviation: |
| Number of Deviations: | |
| Probable Cause of Deviation: | |
| Response Steps Taken: | |
| Permit Requirement (specify permit condition #) | |
| Date of Deviation: | Duration of Deviation: |
| Number of Deviations: | |
| Probable Cause of Deviation: | |
| Response Steps Taken: | |
| Permit Requirement (specify permit condition #) | |
| Date of Deviation: | Duration of Deviation: |
| Number of Deviations: | |
| Probable Cause of Deviation: | |
| Response Steps Taken: | |

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| Form Completed By: |
| Title/Position: |
| Date: |
| Telephone: |

Attach a signed certification to complete this report. _____

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

Technical Support Document (TSD)
New Source Review (NSR), Prevention of Significant Deterioration (PSD)
and Part 70 Operating Permit

Source Background and Description

| | |
|-----------------------|--|
| Source Name: | Auburn Nugget LLC |
| Source Location: | County Road 55 and 42, Butler, IN 46721 |
| Mailing Address: | 221 South Main Street, Auburn, IN 46706 |
| Responsible Official: | Manager |
| County: | Dekalb |
| SIC Code: | 3312 (Steel Mill) |
| NAICS Code: | 331111 |
| Source Categories: | 1 of 28 Listed Source Categories Major PSD Source Major Source under Section 112 of the CAA Part 70 Source Clean Unit Source |
| Permit Number: | NSR/PSD/Part 70 Permit 033-19475-00092 |
| Permit Writer: | Iryn Calilung 317/233-5692 icalilun@dem.state.in.us |

General Description of the Operation

On August 12, 2004, Auburn Nugget LLC (ANC) submitted an application to the Office of Air Quality (OAQ) for the construction and operation of a 600,000 tons per year iron nugget production plant. This process involves the direct production of iron nuggets from iron ore and coal fines on a rotary hearth furnace in a single step. This iron nugget conversion process uses less energy than the former DRI process to create product which will be approximately 96 to 98% iron, and can be fed directly to electric arc furnaces of mini mills, as well as to foundries and conventional integrated iron and steel manufacturing plants. Raw materials involved in the production are iron ore concentrate, various coals, flux and binders.

The plant will consist of three (3) major operations:

- (1) **Raw Material Delivery and Preparation**
The raw materials consist of iron ore concentrate, coals, fluxes, and binders. These raw materials are delivered by rail, pneumatic truck, or in bulk super sacks with all materials in storage piles or storage bins. The coals and fluxes are pulverized on-site. The fluxes and binders do not contain any volatile organic compounds.
- (2) **Iron Nugget Production and Product Separation**
The raw materials (iron ore concentrate, coals, fluxes, and binders) will be mixed and formed into green balls. The balls will be dried and fed to a rotary hearth furnace (RHF), where they are converted to metallic iron and slag material. The iron and slag are cooled and separated.
- (3) **Product Handling and Shipping**
The iron nuggets and slag products will either be directly loaded into rail cars, or stored in on-site piles for shipment at a later date.

| |
|------------------------------------|
| Emission Units Descriptions |
|------------------------------------|

The proposed iron nugget production plant will consist of the following new operations:

(a) Stack 1001 and Roof Monitor

- (1) One (1) Rotary Hearth Furnace, identified as RHF, nominally rated at 75.521 tons per hour of iron nugget product and 217 million (MM) Btu per hour. This RHF uses natural gas as the primary fuel, and propane as a back up fuel.

The sulfur dioxide (SO₂), particulate matter, lead, mercury, fluorides, and acid gases emissions from the RHF are controlled by up to four (4) wet scrubbers, identified as Wet Scrubber 1, Wet Scrubber 2, Wet Scrubber 3, and Wet Scrubber 4. These wet scrubbers exhaust to a common duct and then to Stack 1001.

The nitrogen oxides (NO_x) emissions from the RHF are minimized by low NO_x burners, in addition to the low excess air (LEA) design.

The volatile organic compound (VOC), carbon monoxide (CO), and organic hazardous air pollutants (HAPs) emissions from the RHF are controlled by the air infiltration inherent design of the RHF.

The RHF is equipped with the following continuous emission monitoring systems (CEMSs): SO₂, VOC, NO_x and CO.

- (2) Three (3) Agglomerate Dryers, identified as Green Ball Dryer 1, Green Ball Dryer 2, and Green Ball Dryer 3, with a total nominal rating of 153.248 tons of dried green balls per hour and 205.2 million (MM) Btu per hour. During normal operations, these dryers operate using the air preheated by the RHF exhaust. These dryers use natural gas during start up periods and when sufficient preheated air is not available. Low NO_x burners are used to minimize the NO_x emissions from these three (3) Green Ball Dryers when they are using natural gas as fuel.

Each Green Ball Dryer is controlled by a baghouse, identified as Green Ball Dryer Baghouse 1, Green Ball Dryer Baghouse 2, and Green Ball Dryer Baghouse 3. These baghouses exhaust to a common duct and then to Stack 1001.

- (3) One (1) Product Separator/Dryer, nominally rated at 33 tons of dry product per hour, and 25 MMBtu per hour. This dryer uses natural gas and is equipped with low NO_x burners to minimize the NO_x emissions.

The particulate matter emissions from the Product Separator/Dryer are controlled by a baghouse, identified as Product Separator/Dryer Baghouse.

The controlled emissions from the RHF, Green Ball Dryers, and Product Separator exhaust through a stack, identified as Stack 1001.

The remaining uncontrolled emissions exhaust through the Roof Monitor.

Stack 1001 is equipped with a continuous opacity monitor (COM) to measure the visible emissions.

(b) Stack 1002

- (1) One (1) Coal #1 Pulverizer/Dryer, nominally rated at 33 tons per hour, and 36.0 million (MM) Btu per hour.

The particulate matter emissions from the Coal #1 Pulverizer/Dryer are controlled by a baghouse, identified as Coal #1 Pulverizer/Dryer Baghouse.

- (2) One (1) Coal #2 Pulverizer/Dryer, nominally rated at 9 tons per hour, and 9.23 MMBtu per hour.

The particulate matter emissions from the Coal #2 Pulverizer/Dryer are controlled by a baghouse, identified as Coal #2 Pulverizer/Dryer Baghouse.

- (3) Flux Pulverizer(s)/Dryer(s), nominally rated at 13 tons per hour and 14.58 MMBtu per hour.

Due to design uncertainty at this time of the review, the number of flux pulverizers/dryers is permitted to change, however, the total heat input and process capacity will remain the same.

The particulate matter emissions from the Flux Pulverizer(s)/Dryer(s) are controlled by baghouse(s), identified as Flux Pulverizer(s)/Dryer(s) Baghouses.

These dryers use natural gas and are equipped with Low NO_x burners.

The controlled emissions from the:

- Coal #1 Pulverizer/Dryer,
- Coal #2 Pulverizer/Dryer, and
- Flux Pulverizer(s)/Dryer(s)

exhaust through a stack identified as Stack 1002.

(c) Stack 1003

One (1) Ore Dryer, nominally rated at 125 tons per hour and 25 million (MM) Btu per hour.

The particulate matter emissions from the Ore Dryer are controlled by a baghouse, identified as Ore Dryer Baghouse and exhaust through a stack, identified as Stack 1003.

(d) Stack 1004

Railcar Unloading, nominally rated at 165 tons per hour, with a baghouse, identified as Railcar Unloading Baghouse, for particulate control and exhaust through a stack, identified as Stack 1004.

(e) Fugitive Dust Collection Systems

- (1) Fugitive Dust Collection #1, with baghouse(s), identified as Fugitive Baghouse #1, for particulate control and exhaust through a stack, identified as Stack 1001.

- (2) Fugitive Dust Collection #2, with baghouse(s), identified as Fugitive Baghouse #2, for particulate control and exhaust through a stack, identified as Stack 1005.

Due to design uncertainty at this time of the review, the number of fugitive dust collection baghouses is permitted to change, however, the total dust collection volume and emissions will remain the same.

- (f) Material storage, handling, transfer, and conveying, nominally rated at 200 tons per hour.

| Table 1 - - Summary of Bin Vents and Corresponding Operations | | | |
|---|----------------------|-------------|------------------------------|
| Bin Vent ID | Operation | Bin Vent ID | Operation |
| 1006 | Raw Ore Silo | 1022 | Flux Silo #3 |
| 1010 | Raw Flux Silo | 1023 | Flux Silo #4 |
| 1011 | Binder Silo | 1024 | Recycle Silo |
| 1014 | Raw Coal Silo | 1025 | Flux Silo #5 |
| 1015 | Recycle Fines Silo | 1027 | EAF Dust Silo |
| 1018 | Raw Coal Silo | 1037 | Product Silo |
| 1019 | Pulverized Coal Silo | 1038 | Raw Flux Silo |
| 1020 | Pulverized Coal Silo | 1040 | Slag Separator Baghouse Silo |
| 1021 | Pulverized Coal Silo | Total | 17 |
| These silos are controlled by bin vent filters. | | | |

- (g) Paved and Unpaved Roadways

Roadways used by the semi-tractor trailers, employee vehicles, and support vehicles are paved; and the rest are unpaved stone or gravel.

Fugitive dust emissions are controlled by the implementation of the Fugitive Dust Control Plan (FDCP).

- (h) Two (2) Cooling Towers:

- (1) Identified as Cooling Tower 743, with nominal capacity of 23,450 gallons per minute and 0.005% drift rate.
- (2) Identified as Cooling Tower 726, with nominal capacity of 10,350 gallons per minute and 0.005% drift rate.

- (i) Emergency Generator(s)

Table Summary of Units, Control Devices and Stacks

| Table 2 - - Stacks and Corresponding Operations/Add-On Control Devices | | |
|--|-----------------------------|--------------------|
| Stack ID | Operation | Control Technology |
| 1001 | RHF | Wet Scrubbers |
| | Green Ball Dryers | Baghouses |
| | Product Separator | Baghouse |
| | Fugitive Dust Collection #1 | Baghouse(s) |
| 1002 | Coal #1 Pulverizer/Dryer | Baghouse |
| | Coal #2 Pulverizer/Dryer | Baghouse |
| | Flux Pulverizer(s)/Dryer(s) | Baghouse(s) |
| 1003 | Ore Dryer | Baghouse |
| 1004 | Railcar Unloading | Baghouse |
| 1005 | Fugitive Dust Collection #2 | Baghouse(s) |

| Table 3 - - Nominal Capacities of Operations | | |
|--|---------------------------|------------|
| Operation | Nominal Capacity | |
| | tons/hour | MMBtu/hour |
| RHF | 75.3521 | 219.0 |
| Green Ball Dryers | 153.248 | 205.2 |
| Product Separator | 33.0 | 25.0 |
| Coal #1 Pulverizer/Dryer | 33.0 | 36.0 |
| Coal #2 Pulverizer/Dryer | 9.0 | 9.23 |
| Flux Pulverizer(s)/Dryer(s) | 13.0 | 14.58 |
| Ore Dryer | 125.0 | 25.0 |
| Railcar Unloading | 165.0 | |
| Material Transfer and Conveying | 200.0 | |
| Cooling Tower 743 | 23,450 gallons per minute | |
| Cooling Tower 726 | 10,350 gallon per minute | |

| Table 4 - - Number of Units/Control Devices | |
|---|--------------|
| Emission Units/Control Devices | Total Number |
| RHF | 1 |
| Wet Scrubbers | Up to 4 |
| Dryers | At least 8 |
| Baghouses | 11 or more |
| Silos | 27 |
| Cooling Towers | 2 |
| Bin Vents | 17 |
| Stacks | 5 |
| CEMS | 4 |
| COM | 1 |

| Table 5 - - Baghouses Specifications | | | | |
|--------------------------------------|---|-----------------------------------|----------------------|------------------------|
| Stack ID | Baghouse ID | Outlet Grain Loading (grain/dscf) | Flow Rate (dscf/min) | Control Efficiency (%) |
| 1001 | Green Ball Dryers Baghouses | 0.015 | 282,017 | 95 |
| | Product Separator Baghouse | 0.0052 | 49,500 | 95 |
| | Fugitive Dust Collection #1 Baghouse(s) | 0.0052 | 100,000 | 95 |
| 1002 | Coal #1 Pulverizer/Dryer Baghouse | 0.01 0.015 | 77,468 | 95 |
| | Coal #2 Pulverizer/Dryer Baghouse | 0.01 0.015 | 16,890 | 95 |
| | Flux Pulverizer(s)/Dryer(s) Baghouse(s) | 0.015 | 31,572 | 95 |
| 1003 | Ore Dryer Baghouse | 0.01 0.015 | 50,000 | 95 |
| 1004 | Railcar Unloading Baghouse | 0.0052 | 66,225 | 95 |
| 1005 | Fugitive Dust Collection #2 Baghouse(s) | 0.0052 | 100,000 | 95 |

Major Source Determination

The following sources have been evaluated to determine if they are considered as one (1) major source pursuant to 326 IAC 2-7-1(21) and 326 IAC 2-7-2:

| Table 6 - - Major Source Determination | | |
|--|---|-----------|
| Company Name | Location | Plant ID |
| Steel Dynamics Inc. (SDI) | 4500 County Road 59, Butler, IN 46721 | 033-00043 |
| Auburn Nugget LLC | County Road 55 and 42, Butler, IN 46721 | 033-00092 |

In accordance with the IDEM Non Rule Policy (AIR-006 NPD September 24, 1996), it was determined that Steel Dynamics Inc. and Auburn Nugget LLC are two (2) separate sources because there is no common ownership or control. This determination is based on the following:

- (a) At this time, there are no contracts between SDI and Auburn Nugget LLC on how much product will be provided or consumed between the two (2) sources.
- (b) Each source can continue to operate even if the other source is not in operation.

For additional information about the non rule policy, refer to the IDEM's web site on the Internet at: <http://www.in.gov/idem/rules/policies/index.html>.

Emissions Calculations

Detailed emissions calculations before and after any add-on control devices are provided in Appendix A of this technical Support Document (TSD). It is estimated that emissions from this proposed iron nugget production plant will be less than the emissions from conventional iron making operations. Emissions from this process are expected to be 41% to 96% less than the coke plant, sinter plant, pellet plant and blast furnace emissions for the same amount of pig iron produced.

Potential to emit calculations were based on the Mesabi Nugget Pilot Demonstration Plant, located in Silver Bay Minnesota. This pilot plant made its first iron nuggets in May, 2003.

Potential To Emit (PTE) After Control

Auburn Nugget LLC is located in Dekalb County, Indiana

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

See Appendix A (Potential to Emit Calculations) for the detailed calculations (13 pages).

| Table 7 - - - Total PTE After Control | |
|---------------------------------------|-----------------------|
| Pollutant | Total PTE (tons/year) |
| SO ₂ | 988.605 |
| NO _x | 900.44 |
| CO | 456.53 |
| VOC | 110.32 |
| PM | 498.90 |
| PM ₁₀ | 485.6 |
| Sulfuric Acid Mist | 531.91 |
| Fluorides | 117.21 |
| Lead | 5.85 |
| Beryllium | 1.14 |
| Mercury | 0.21 |
| Any single HAPs | 158 |
| Total HAPs | 160 |

Permitting Level Determination

- (1) Construction Permit - - 326 IAC 2-2.1-2(b)(1) and 326 IAC 2-1.1-4(b)
 Pursuant to 326 IAC 2-2.1-2(b)(1) and 326 IAC 2-1.1-4(b), Auburn Nugget LLC is required to obtain a permit prior to construction and operation of the proposed iron nugget production plant under 326 IAC 2-2 for Prevention of Significant Deterioration (PSD) major sources.
- (2) Approval to operate in a Construction Permit - - 326 IAC 2-5.1-4(a)
 Pursuant to 326 IAC 2-5.1-4(a), initial construction permit shall include an approval to operate and operating conditions.
- (3) Operating Permit - - 326 IAC 2-2.1-2(b)(7) and 326 IAC 2-5.1-4(a)(3)
 Pursuant to 326 IAC 2-2.1-2(b)(7) and 326 IAC 2-5.1-4(a)(3), Auburn Nugget LLC is required to obtain a permit under 326 IAC 2-7 for Part 70 major sources.

PSD Applicability Determination

To determine if this proposed modification will be a major modification, the emissions increases occurring at all new or modified units, and any other increases at existing emissions units not being modified, which could experience emissions increases that will result from the change have to be determined. Since this type of operation is one of the 28 listed source categories under 326 IAC 2-2-1(gg), the fugitive particulate matter emissions are counted toward determination of PSD applicability.

| Table 8 - - - Total Potential to Emit After Control | | | |
|---|----------------------------------|--------------------------------------|--------------------------------|
| Pollutant | PTE after control (tons/year) | PSD Significant Level (tons/year) | Subject to PSD Review (Y/N) |
| SO ₂ | 988.605 | 40 | Yes |
| NO _x | 900.44 | 40 | Yes |
| CO | 456.53 | 40 | Yes |
| VOC | 110.32 | 100 | Yes |
| PM | 498.90 | 25 | Yes |
| PM ₁₀ | 485.6 | 15 | Yes |
| Sulfuric Acid Mist | 531.91 | 7.0 | Yes |
| Fluorides | 117.21 | 3.0 | Yes |
| Lead | 5.85 | 0.6 | Yes |
| Beryllium | 1.14 | 0.0004 | Yes |
| Mercury | 0.21 | 0.1 | Yes |

Source Status

- (1) **PSD Major Source**
 Auburn Nugget LLC is classified as a new major stationary source because one or more attainment-regulated pollutants will be emitted at a rate of 100 tons per year or more.
- (2) **1 of 28 Listed Source Categories**
 Auburn Nugget LLC is one of the 28 listed source categories under 326 IAC 2-2-1(gg).
- (3) **Hazardous Air Pollutants (HAPs) Major Source**
 Auburn Nugget LLC is classified as major source for HAPs because it has PTE greater than 10 tons per year for a single HAP or 25 tons per year for any combination.
- (4) **Part 70 Source**
 Auburn Nugget LLC is a Part 70 source because one or more attainment-regulated pollutants will be emitted at a rate of 100 tons per year or more.

County Attainment Status

Auburn Nugget LLC is located in Dekalb County, Indiana.

| Table 9 - - - Dekalb County | |
|-----------------------------|------------|
| Pollutant | Status |
| PM ₁₀ | Attainment |
| PM _{2.5} | Attainment |
| SO ₂ | Attainment |
| NO ₂ | Attainment |
| 1-Hour Ozone | Attainment |
| 8-Hour Ozone | Attainment |
| CO | Attainment |
| Lead | Attainment |

- (1) **Volatile organic compounds (VOC) and Nitrogen Oxides (NO_x)**
 VOC and NO_x are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air quality Standards (NAAQS) for ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to the ozone standards. Dekalb County has been designated as attainment or unclassifiable for the 1-hour ozone standard and 8-hour ozone standard. Therefore, VOC emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD) 326 IAC 2-2.
- (2) **Criteria Pollutants**
 Dekalb County has been classified as attainment or unclassifiable for all the other pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

| |
|---|
| Federal Rule Applicability Determination |
|---|

- (1) New Source Performance Standards (NSPS) 40 CFR Part 60
- (a) The Coal #1 Dryer and Coal #2 Dryer are subject to 40 CFR Part 60, Subpart Y, because they can process at least 200 tons of coal per day.
- Coal #1 Dryer = (33 tons/hour)*(24 hours/day) = 792 tons/day
- Coal #2 Dryer = (9 tons/hour)*(24 hours/day) = 216 tons/day
- (b) 40 CFR Part 60 Subpart Y requires the visible emissions from the dryers be limited to 20% or less opacity.
- The proposed PSD BACT limit of 3% opacity is more stringent than this federal requirement. See Appendix B of this TSD for the PSD BACT opacity limit analysis.
- (c) 40 CFR Part 60, Subpart Y requires the filterable particulate emissions from the dryers be limited to 0.031 grains/dscf or less.
- The coal dryers comply with this requirement by using baghouses with 0.01 grains/dscf.
- (2) National Emission Standards for Hazardous Air Pollutants (NESHAP)
40 CFR Part 61 or 40 CFR Part 63
- (a) There are no NESHAPS included in the permit for this source.
- Case by case Maximum Achievable Control Technology (MACT) applies.
- Auburn Nugget LLC submitted, as part of their application, a case by case MACT analysis.
- (b) The Iron and Steel Foundry MACT does not apply to Auburn Nugget because of the difference in the operating conditions of the rotary hearth furnace (RHF) in the iron nugget production.
- (c) Based on the case by case MACT analysis conducted, the MACT standards and mass limitations are as follows:
- (i) The rotary hearth furnace (RHF) shall use natural gas as fuel and propane as back up fuel.
- (ii) The wet scrubbers shall control the following hazardous air pollutants emitted from the rotary hearth furnace (RHF).

| Hazardous Air Pollutants | Pounds per Ton | Pounds per Hour (based on a 3-hour block average) |
|--------------------------|----------------|---|
| Sulfuric Acid Mist | 1.609 | 121.49 |
| Fluoride | 0.3543 | 26.76 |
| Lead | 0.018 | 1.36 |
| Mercury | 0.001 | 0.076 |
| Beryllium | 0.003 | 0.226 |
| Manganese | 4.78 | 36.1 |
| Phosphorous | 0.00111 | 0.0923 |
| Chromium | 0.00573 | 0.0216 |
| Nickel | 0.0121 | 0.0183 |
| Arsenic | 0.00124 | 0.00657 |
| Cadmium | 0.000257 | 0.00252 |
| Cobalt | 0.00155 | 0.00117 |
| Selenium | 0.00142 | 0.00644 |

- (3) Prevention of Significant Deterioration (PSD) 40 CFR 52.21
- (a) US EPA has granted conditional approval to the PSD State Implementation Plan (SIP) of Indiana under provisions of 40 CFR 51.166 and 40 CFR 52.770 and superceding the delegated PSD SIP authority under 40 CFR 52.793. The effective date for these provisions is April 2, 2003. Therefore, the PSD permits will be issued under the authority of 326 IAC 2-2 and will no longer be issued under the provision of 40 CFR 52.21 and 40 CFR 124.
 - (b) Under PSD SIP approved program:
 - the permit becomes effective upon its issuance. [IC 13-15-5-3]
 - petitions of appeals are directed to the Office of Environmental Adjudication (OEA).
 - There is also no automatic stay if the permit is appealed.
 - (c) The OAQ web site has been updated to include the SIP approval and information about the rulemaking. <http://www.in.gov/idem/air/permits/psdapprovalhistory.html>
 - (d) The conditional approval of the PSD program can be found at: <http://a257.g.akamaitech.net/7/257/2422/14mar20010800/edocket.access.gpo.gov/2003/03-5024.htm>

Detailed PSD BACT determinations are shown in Appendix B of this TSD.

- (4) 40 CFR 64 (Compliance Assurance Monitoring)
 (a) The Rotary Hearth Furnace (RHF) is subject to the compliance requirements under 40 CFR Part 64.2(a)(2) because there are specific pollutants emitted from this RHF that are going to be emitted at a rate of 100 tons per year or more after control.

Monitoring of the pollutant-specific emission unit will be conducted pursuant to 40 CFR Part 64.

| Table 10 - - Rotary Hearth Furnace (RHF) | | |
|--|---------------------------------|--------------------|
| Pollutant | PTE After Control (tons/year) * | Control Technology |
| SO ₂ | 986.07 | Wet Scrubbers |
| PM/PM ₁₀ | 172.34 | |

* See Table 2 of Appendix A - Potential to Emit Calculations

- (i) Sulfur Dioxide (SO₂)
 The SO₂ PTE after control of the RHF is greater than 100 tons/year. Compliance is assured by the use of a SO₂ continuous emission monitoring system (CEMS).
- (ii) Particulate Matter (PM and PM₁₀)
 The PM and PM₁₀ PTE after control of the RHF is greater than 100 tons/year. Compliance is assured by monitoring the operating parameters of the wet scrubbers. Stack tests will also be required.

Opacity readings from the continuous opacity monitor (COM) are also used as surrogate parameters to assure compliance.

- (b) The Green Ball Dryers are subject to the compliance requirements under 40 CFR Part 64.2(a)(2) because particulate matter (PM/PM₁₀) are going to be emitted at a rate of 100 tons per year or more after control (Baghouses).

Monitoring of the pollutant-specific emission unit will be conducted pursuant to 40 CFR Part 64.

PTE after control PM/PM₁₀ = 151.70 tons per year
 (See Table 2 of Appendix A - Potential to Emit Calculations)

Compliance is assured by monitoring the operating parameters of the baghouses. Stack tests will also be required.

State Rule Applicability Determination

- (1) Pursuant to 326 IAC 2-1.1-4 (Federal Provisions), in case of a conflict between the state rules and a provision of federal law or regulation, the more stringent requirement applies.
- (2) 326 IAC 1-6-3 and 326 IAC 2-7-5(13) (Preventive Maintenance Plan (PMP))
 Auburn Nugget LLC is subject to the PMP requirements. Development, implementation, and maintenance of PMPs will be required for the following:
 - (a) RHF and its wet scrubbers,
 - (b) Green Ball Dryers and their baghouses,
 - (c) Product Separator/Dryer and its baghouse,
 - (d) Coal #1 Pulverizer/Dryer and its baghouse,
 - (e) Coal #2 Pulverizer/Dryer and its baghouse,
 - (f) Flux Pulverizer(s)/Dryer(s) and their baghouse(s),
 - (g) Ore Dryer and its baghouse,
 - (h) Railcar Unloading and its baghouse,
 - (i) Fugitive Baghouse #1, and
 - (j) Fugitive Baghouse #2.
- (3) 326 IAC 1-7-1 (Stack Height Requirements)
 - (a) Stack 1001 for the RHF, Green Ball Dryer, Product Separator and Fugitive Baghouse #1 is subject to this requirement because the SO₂ and PM emissions are greater than 25 tons/year.
 - (b) The heights of the stacks are less than the Good Engineering Practice (GEP). A dispersion model to determine the significant ambient air impact area was developed and analysis of actual stack height with respect to GEP was performed. See Appendix C of this TSD.
 - (c) The table below summarizes the stack dimensions:

Table 11 - - Stack Dimensions

| Stack ID | Outlet Diameter (feet) | Height (feet) | Maximum Outlet Flow Rate (acfm) | Outlet Gas Temperature (°F) |
|----------|------------------------|---------------|---------------------------------|-----------------------------|
| 1001 | 17.9 | 125 | 746,000 | 187 |
| 1002 | 6.7 | 125 | 165,000 | 180 |
| 1003 | 3.8 | 125 | 60,000 | 162 |
| 1004 | 3.1 | 125 | 60,000 | 70 |

- (4) 326 IAC 2-1.1-6 (Public Notice)
 - (a) Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant on August 6, 2004.

An application for the purposes of this review was received on August 12, 2004. Additional information was received on August 23, 2004; September 27, 2004; December 3, 2004; December 8, 2004; December 16, 2004; January 28, 2005; February 7, 2005; February 18, 2005; and February 21, 2005.

- (b) The applicant has provided a copy of the application in the Butler Public Library, 340 South Broadway, Butler, IN 46721
 - (c) The following officials have been notified of this application:
 - (1) Mayor, Butler, IN and
 - (2) Chairperson of Dekalb County Council, Dekalb, IN.
 - (d) A notice of the preliminary findings will be published in the most circulated newspaper in the area. There will be a 30-day comment period.
- (5) 326 IAC 2-1.1-8 (Time periods for determination on permit applications)
Pursuant to 326 IAC 2-1.1-8(a)(1), a final action needs to be issued no later than 270 calendar days from the receipt of the application, taking into account actions that can suspend the time period. The application was received on August 12, 2004. Without any suspension in the time period, the 270 day-period is estimated to end on May 12, 2005.
- (6) 326 IAC 2-2-2 (Prevention of Significant Deterioration (PSD) Applicability)
This plant is considered major for all the criteria pollutants based on the emission calculations. See Appendix A of this TSD for detailed emission calculations.
- (a) 326 IAC 2-2-3 (PSD Control Technology)
Detailed PSD BACT control technology evaluations are shown in Appendix B of this TSD.
 - (b) 326 IAC 2-2-4 (PSD Air Quality Analysis)
Detailed air quality analysis is shown in Appendix C of this TSD.
 - (c) 326 IAC 2-2-5 (PSD Air Quality Impact)
Auburn Nugget LLC is not located within 100 kilometers radius of the closest Federal Class I area. The closest Class I area is the Mammoth Cave, KY. Detailed air quality analysis is shown in Appendix C of this TSD.
 - (d) 326 IAC 2-2-6 (PSD Increment Consumption)
Demonstration has been shown that the emissions from this plant are not expected to exceed 80% of the available maximum allowable increment. Detailed increment consumption analysis is shown in Appendix C of this TSD.
 - (e) 326 IAC 2-2-8 (PSD Source Obligation)
 - (1) Approval to construct shall become invalid if construction is not commenced within 18 months after the receipt of the approval, or if construction is not completed within reasonable time.
 - (2) Approval for construction does not relieve Auburn Nugget LLC of the responsibility to comply with applicable provisions of the Indiana implementation plan and any other requirements under local, state, or federal law.
 - (f) 326 IAC 2-2-9 (PSD Innovative Control Technology)
There is no requirement at the State or Federal level which requires innovative control to be used. Innovative control means a control that has not been demonstrated in a commercial application on similar units, as stated in the U.S. EPA Top-Down BACT Guidance (Section V.A.2):

“Although not required, innovative controls may also be evaluated and proposed as BACT... Innovative technologies are distinguished from technology transfer BACT candidates in that an innovative technology is still under development and has not been demonstrated in a commercial application on identical or similar emission units.”

Innovative controls are normally given a waiver from the BACT requirements due to the uncertainty of actual control efficiency. PSD BACT requires that the applicant install the best available control technology, not create new ones. Based on this, the OAQ will not evaluate or require any innovative controls for this BACT analysis. Only available and proven control technologies are evaluated. A control technology is considered “available” when “there are sufficient data indicating (but not necessarily proving)” the technology “will lead to a demonstrable reduction in emissions of regulated pollutants or will otherwise represent BACT.”

- (g) 326 IAC 2-2-10 (PSD Source Information)
Auburn Nugget LLC has submitted the information necessary to perform analysis or make a determination required under PSD review.
 - (h) 326 IAC 2-2-11 (PSD Stack Height)
This rule applies to sources which commenced construction after December 31, 1970. The stacks heights of the plant are less than the good engineering practice (GEP) stack heights, thus a dispersion modeling has been performed to analyze air quality impact. See Appendix C of this TSD for the analysis.
 - (i) 326 IAC 2-2-12 (PSD Permit Rescission)
The construction permit remains in effect, unless it is rescinded, modified, revoked, or expires.
 - (j) 326 IAC 2-2-13 (Area Designation and Re-designation)
Auburn Nugget LLC does not fall within any of the listed areas.
 - (k) 326 IAC 2-2-14 (Additional Requirements Impacting Class I Area).
Auburn Nugget LLC is not subject to this requirement because it does not impact a Federal Class I area. The nearest Class 1 area is the Mammoth Cave National Park, Edmonson County, KY. The state of Indiana has no Federal Class I or III areas.
 - (l) 326 IAC 2-2-15 (Public Participation)
A notice of the preliminary findings will be published in the most circulated newspaper in the area. There will be a 30-day comment period. No public hearing was scheduled.
- (7) 326 IAC 2-2.2 (Clean Unit)
The following emission units are classified as Clean Units because they have been reviewed under the PSD program and will achieve emissions reductions by implementing work practices or operation of add on control devices.

The Clean Unit designations for these emission units and pollutants will be in effect for 10 years after the initial start up of their corresponding control devices or implementations of the work practices.

| Table 12 - - Clean Units | | |
|---------------------------------|---|--|
| Emission Unit/Operations | Pollutants | Control Technology |
| Rotary Hearth Furnace (RHF)* | SO ₂ , PM, PM ₁₀ , Lead, Mercury, Fluorides, NO _x , Beryllium and Sulfuric acid mist | Wet Scrubbers Low NO _x Burners |
| Green Ball Dryers | PM and PM ₁₀ | Baghouses |
| | NO _x | Low NO _x Burners |
| Product Separator/Dryer | PM and PM ₁₀ | Baghouse |
| | NO _x | Low NO _x Burners |
| Coal #1 Pulverizer/Dryer | PM and PM ₁₀ | Baghouse |
| | NO _x | Low NO _x Burners |
| Coal #2 Pulverizer/Dryer | PM and PM ₁₀ | Baghouse |
| | NO _x | Low NO _x Burners |
| Flux Pulverizer(s)/Dryer(s) | PM and PM ₁₀ | Baghouse(s) |
| | NO _x | Low NO _x Burners |
| Ore Dryer | PM and PM ₁₀ | Baghouse |
| | NO _x | Low NO _x Burners |
| Railcar Unloading | PM and PM ₁₀ | Baghouse |
| Material Transfer and Conveying | PM and PM ₁₀ | Baghouse (on product unloading operations) |
| Material Storage and Handling | PM and PM ₁₀ | Baghouse |
| Storage Silos | PM and PM ₁₀ | Baghouse |
| Paved and Unpaved Roadways | PM and PM ₁₀ | Fugitive Dust Control Plan |

The RHF is not classified as Clean Unit for CO and VOC, reductions in emissions have not been achieved by using an add-on control or implementing work practices or made an investment to install the control technology, research the application of pollution prevention technique to the emission unit, or apply a pollution prevention to the RHF. The Air Infiltration Design is an inherent design specification of the RHF.

- (8) 326 IAC 2-3 (Emission Offset)
 The Office of Air Quality (OAQ) has the authority to grant a permit pursuant to 326 IAC 2-3 and 40 CFR 51.166 (Nonattainment Rules) only when the source is located in a designated nonattainment area as specified in 40 CFR 81.315.

Dekalb County has been designated as attainment area in 40 CFR Part 81.315. Therefore, the OAQ does not have the authority to require lowest achievable emission rate (LAER).

- (9) 326 IAC 2-4.1 (Major Sourced of Hazardous Air Pollutants (HAPs))
 Auburn Nugget LLC is considered a major source in terms of hazardous air pollutant (HAP) emissions because hazardous air pollutants (HAPs) are emitted greater than 10 tons/year for single HAP or 25 tons/year for any combination.

Detailed case by case maximum achievable control technology (MACT) determinations are shown under the Federal Applicability Determination portion of this technical support document.

- (10) 326 IAC 2-6-1 (Emission Reporting)
Auburn Nugget LLC is subject to this requirement because at least one regulated pollutant has the potential to emit 100 tons/year or more.
- (11) 326 IAC 2-7 (Part 70 Program)
Auburn Nugget LLC is considered a Part 70 source because at least one regulated pollutant has the potential to emit 100 tons/year or more.
- (12) 326 IAC 2-8 (FESOP)
This program does not apply because Auburn Nugget LLC is a Part 70 source.
- (13) 326 IAC 3-5-1 (Continuous Monitoring of Emissions)
The proposed PSD permit for Auburn Nugget LLC requires the following monitors:
 - (a) Stack 1001:
a continuous opacity monitor (COM)
 - (b) RHF exhaust:
 - (1) a CO continuous emissions monitor system (CEMS),
 - (2) a VOC CEMS,
 - (3) a NO_x CEMS, and
 - (4) a SO₂ CEMS.
- (14) 326 IAC 4-1 (Open Burning)
Auburn Nugget LLC shall not open burn material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4, or 326 IAC 4-1-6.
- (15) 326 IAC 5-1 (Opacity limitations)
The opacity standard specified 326 IAC 5-1 applies, except otherwise specified under 326 IAC 2-2 (PSD) or 40 CFR Part 60, Subpart Y.
- (16) 326 IAC 6-1 (PM Nonattainment limitation)
This rule does not apply to Auburn Nugget LLC because it is not located in any of the counties or areas specified in 326 IAC 6-1-7.
- (17) 326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating)
This rule does not apply because there are no boilers involved in this source.
- (18) 326 IAC 6-3 (Particulate Emission For Manufacturing Process)
The particulate emitting units in this source are not subject to 326 IAC 6-3, because pursuant to 326 IAC 6-3(c)(1), this rule does not apply if PM emissions limitations have been established under 326 IAC 2-2 (PSD).
- (19) 326 IAC 6-4 and 6-5 (Fugitive Dust)
Auburn Nugget LLC is subject to these rules. At the request of IDEM, OAQ, Auburn Nugget LLC submitted a Fugitive Dust Control Plan (FDCP) as part of the application.

- (20) 326 IAC 7-1 (Sulfuric Dioxide (SO₂) Limitation)
Auburn Nugget LLC is subject to this rule, however, there are no specific SO₂ limitations that apply to natural gas fueled emission units.
- (21) 326 IAC 8-1-6 (New Facilities, General Reduction Requirements)
The VOC major review under 326 IAC 2-2 (PSD) satisfies the VOC review requirements under 326 IAC 8-1-6.
- (22) 326 IAC 9 (Carbon Monoxide (CO) Emission Rules)
This rule does not apply because there are no applicable requirements specified for rotary hearth furnaces.
- (23) 326 IAC 10 (Nitrogen Oxides (NO_x) Rules)
This rule does not apply to Auburn Nugget LLC because it is not located in Clark County or Floyd County.
- (24) 326 IAC 11 (Source Specific Limitations)
This rule does not apply because iron nugget production is not one of the operations listed in this rule.
- (25) 326 IAC 12 (New Source Performance Standards (NSPS))
This rule incorporates by reference the 40 CFR Part 60. Applicability determinations with this rule have been addressed under the Federal Rules Applicability of this TSD.
- (26) 326 IAC 13 (Motor Vehicles Emissions)
Not applicable.
- (27) 326 IAC 14 (Hazardous Air Pollutants (HAPs) Emission)
This rule incorporates by reference 40 CFR Part 61. The requirements for asbestos abatement projects under 40 CFR Part 61, Subpart M have been included in the permit for this source.
- (28) 326 IAC 15 (Lead Rules)
Auburn Nugget LLC is not one of the listed sources subject to this rule.
- (29) 326 IAC 16 (Environmental Assessment, Activities of State Agencies)
Environmental assessments and environmental impact studies for recommendations or reports on proposals for legislation and other major state actions significantly affecting the quality of the human environment have to be performed. However, 326 IAC 16 and the Indiana Code 13-12-4-8 specifically state that an environmental impact statement is not required under state law for the issuance of a license or permit by any state agency. Therefore, no environmental impact statement under 326 IAC 16 has been performed for this permit. Similar provisions exempt PSD permit actions from the National Environmental Policy Act [15 USC 793(c)(1)].
- (30) 326 IAC 17 (Public Records)
Auburn Nugget LLC requested additional information to be treated as confidential information. The information has been processed as confidential materials.
- (31) 326 IAC 19 (Mobile Source Rules)
These particular rules are applicable to employees in Lake and Porter Counties only. These rules are not applicable because Auburn Nugget LLC is located in Dekalb County.

- (32) 326 IAC 20 (Hazardous Air Pollutants HAPs)
This rule incorporates by reference 40 CFR Part 63. There are no 40 CFR Part 63 requirements included in the permit for this source.
- (33) 326 IAC 21 (Acid Deposition Control)
This rule incorporates by reference the federal Acid Rain Program. There are no acid rain applicable requirements included in the permit for this source.
- (34) 326 IAC 22 (Stratospheric Ozone Protection)
This rule incorporates by reference the 40 CFR part 82. The standards for recycling and emissions reduction under 40 CFR Part 82 have been included in the permit for this source.
- (35) 326 IAC 23 (Lead Based Paint Program)
This rule does not apply because this source will not perform operations using lead-based paints.

Site Area Characteristics

The following information has been used for additional PSD analysis, as required under 326 IAC 2-2-7.

Auburn Nugget LLC is located in Butler, Dekalb County, Indiana. See Appendix B for Air Quality Impact Analyses for details.

- (1) Land Use Classification
Butler is classified as rural. This classification was based on USEPA Auer (1978) land-use typing methodology. Rural dispersion coefficients were used in the modeling analyses.
- (2) Topography
The topography of the plant site is relatively flat lands. The elevation of the plant is approximately 870 feet above mean sea level.

Air modeling analysis did not need consider terrain elevations.
- (3) Wind Flow Pattern
The prevailing wind directions are from west to southwest. Measurements of surface wind flow are from the National Weather Service (NWS) station in Fort Wayne, IN. This data is considered representative of the local meteorology at the plant site (Dekalb County).
- (4) Air Quality Status
Auburn Nugget LLC is located in Dekalb County, which is considered attainment for all criteria pollutants.
- (5) Air Quality Impact on Vegetation
There will be no significant adverse impact on the vegetation around the area because the predicted concentrations of the emissions are below the secondary national ambient air quality standards.
- (6) Air Quality Impact on Soil
No significant adverse impact on the soil around the area is anticipated, because the concentrations are below the secondary national ambient air quality standards.

- (7) Air Quality Impact on Visibility
- (a) The state of Indiana has no Class I or III areas.
 - (b) The closest Class I area is the Mammoth Cave National Park, Edmonson County, KY.

 Auburn Nugget LLC will not adversely impact the visibility at a Class I area because Auburn Nugget LLC is not located within a 200-kilometer radius of the closest Class I area.
 - (c) Auburn Nugget LLC is not subject to additional requirements for impacting a Class I area because it does not impact a Class I area. Additional modeling required for sources affecting a Class I area is not is not required.
- (8) Construction Impact
 Emissions during the construction period are not expected to cause significant impact.

| |
|---------------------------|
| Endangered Species |
|---------------------------|

The Clean Air Act (CAA) does not contain or express requirement for the applicant or the permitting agency to analyze or consider the impact of hazardous air pollutants on endangered species when applying for or making a decision on a PSD permit. The CAA only requires impacts to endangered species be considered when the US EPA modifies the HAPs list or promulgates a NESHAP. (42 USC 7412). In addition, Indiana's state rules do not require the performance of studies or analyses to determine the effect of toxic emissions from a source on federal or state-listed endangered species in the PSD permitting process. Endangered species are protected under state and federal laws, which prohibit the unlawful taking of an endangered species. IC 14-22-34 and 16 USC 701 et. seq.

The OAQ is not aware of any federally-listed endangered species within the vicinity of this source. Based on the location of the plant and the air quality analysis done, the impact of the new plant in an industrial area would not affect habitats of endangered species. Therefore, emissions from this source will not adversely affect any federally-listed endangered species or any state-listed endangered species. Below is a listing of endangered, threatened or rare species in Indiana.

| Table 13 - - - Endangered, Threatened or Rare Species in Indiana | | | |
|--|---------|------------|---|
| Common Name | Type | County | Town Name |
| White Cat's Paw Pearlymussel | Mollusk | Allen | Fort Wayne, Cedarville, Woodburn, Grabill |
| | | Kosciusko | Burket , Leesburg |
| Eastern Fanshell Pearlymussel | Mollusk | Wabash | Lagro, Wabash |
| Clubshell | Mollusk | Allen | Fort Wayne, Woodburn, Grabill, Cedarville |
| | | Kosciusko | South Whitley, Mentone, Burket , Leesburg |
| | | Huntington | Mount Etna |
| | | Wabash | North Manchester |
| Northern Riffleshell | Mollusk | Allen | Fort Wayne, Grabill, Cedarville |
| | | Kosciusko | Mentone, Burket , Leesburg, North Webster |
| Peregrine Falcon | Bird | Allen | Fort Wayne |
| | | Kosciusko | North Webster |
| Indiana Bat Or Social Myotis | Mammal | Kosciusko | Warsaw |
| | | Huntington | Mount Etna |
| | | Wabash | Roann |
| Prairie White-Fringed Orchid | Plant | Noble | Merriam, Kendallville |

Post Construction Ambient Monitoring

- (1) Two (2) ambient monitors will be required to be operated for at least 36 months from the initial operation of the plant to measure:
 - (a) Ozone,
 - (b) filterable and condensable PM₁₀,
 - (c) SO₂,
 - (d) NO_x,
 - (e) CO,
 - (f) Wind speed,
 - (g) Wind direction, and
 - (h) Outdoor temperature.
- (2) The Office of Air Quality (OAQ) will evaluate and decide the location sites of these monitors.

Compliance Determination and Monitoring

The OAQ has evaluated the compliance monitoring requirements and recommends the following:

- (1) Stack 1001 will be equipped with a continuous opacity monitor (COM).
- (2) The RHF exhaust will be equipped with SO₂, VOC, NO_x and CO continuous emission monitor systems (CEMSs).
- (3) Due to limited applicability and insufficient information of the use of mercury CEMS for this type of operation, at this time, a continuous emission monitor for mercury was not required to be installed. Instead, Auburn Nugget is required to conduct mercury compliance tests on an annual basis.
- (4) The wet scrubbers will be monitored and inspected on a routine basis.
- (5) The Green Ball Dryers Baghouses, Product Separator/Dryer Baghouse, Coal #1 Pulverizer/dryer Baghouse, Coal #2 Pulverizer/dryer Baghouse, Flux Pulverizer(s)/Dryer(s) Baghouse(s), Railcar Unloading Baghouse, Fugitive Baghouse #1 and Fugitive Baghouse #2 will be monitored for pressure drop ranges. These baghouses will also be inspected on a routine basis.
- (6) Fugitive emissions from storage piles, paved and unpaved roads will be reduced by the implementation and maintenance of the fugitive dust control plan (FDCP).

| |
|--|
| Compliance Testing Requirements |
|--|

- (1) The following pollutants emitted from the rotary hearth furnace (RHF) will be required to be tested.
- (a) Once every 2.5 years:
 - filterable particulate matter (PM),
 - filterable and condensable (PM/PM₁₀),
 - Sulfuric acid mist (H₂SO₄) and
 - Lead.
 - (b) Once a year:
 - Mercury
 - (c) Once every 5 years:
 - Beryllium and
 - Fluoride.
 - (d) -- HAPs

No compliance tests will be required for SO₂, VOC, NO_x, and CO because compliance is determined by the use of continuous emission monitoring systems (CEMS).

- (2) Performance tests will be required for the following baghouses to verify compliance with the particulate PSD BACT mass emission rates:

| Table 14 - - Baghouses To Be Tested | | |
|-------------------------------------|---------------------------|--------------------|
| Stack ID | Operation | Control Technology |
| 1001 | Green Ball Dryers | Baghouses |
| 1002 | Coal #1 Pulverizer/Dryer* | Baghouse |
| | Coal #2 Pulverizer/Dryer* | Baghouse |
| 1003 | Ore Dryer | Baghouse |

These tests will be required at a frequency of once every 5 years.

The filterable particulate matter (PM) performance tests for the coal dryers are also required under 40 CFR Part 60, Subpart Y.

- (3) Performance tests will be required for the following baghouses to verify compliance with the opacity limit specified under 40 CFR Part 60 Subpart Y:

| Table 14 - - Baghouses To Be Tested | | |
|-------------------------------------|--------------------------|--------------------|
| Stack ID | Operation | Control Technology |
| 1002 | Coal #1 Pulverizer/Dryer | Baghouse |
| | Coal #2 Pulverizer/Dryer | Baghouse |

- (4) At this time, performance tests will not be required for the following baghouses because the potential to emit after control are minimal. However, stack testing may be required at any time to assure compliance with all applicable requirements by issuing an order under 326 IAC 2-1.1-11.

| Table 15 - - Baghouses Not To Be Tested | | |
|---|-----------------------------|--------------------|
| Stack ID | Operation | Control Technology |
| 1001 | Product Separator | Baghouse |
| | Fugitive Dust Collection #1 | Baghouse(s) |
| 1002 | Flux Pulverizer(s)/Dryer(s) | Baghouse(s) |
| 1004 | Railcar Unloading | Baghouse |
| 1005 | Fugitive Dust Collection #2 | Baghouse(s) |

- (5) At this time, no compliance testing will be required for pollutants of any emission units that can be verified by the submission of vendor specifications or guarantees. However, stack testing may be required at any time to assure compliance with all applicable requirements by issuing an order under 326 IAC 2-1.1-11.
- (6) Initial compliance test for opacity will be required for the slag handling and processing operation.
- (7) At this time, no compliance testing will be required to verify the composition of the natural gas fuel, as long as the natural gas used is distributed through natural gas pipeline. However, stack testing may be required at any time to assure compliance with all applicable requirements by issuing an order under 326 IAC 2-1.1-11.
- (8) Testing requirements are subject to the provisions of 326 IAC 3-6.

Public Health and Safety

The Office of Air Quality (OAQ) issues technically sound permits that are protective of public health. Within the boundaries of the law, the OAQ has conducted appropriate analysis of the impacts of this proposed facility on human health. State Implementation Plan (SIP) requirements are examples of health-based standards, because the SIP requirements were proposed by the state and approved by the U.S. EPA for the purposes of maintaining the National Ambient Air Quality Standards (NAAQS). These standards are health-based standards and based on the assessment of public health risks associated with certain levels of pollution in the ambient environment. The Clean Air Act (CAA) requires each state to develop air quality plans and outlines how the standards will be met.

U.S. EPA has established ambient levels that are protective of human health. Anticipated emissions can be modeled and the resulting ambient levels compared to the federal standard. If levels are not expected to increase above U.S. EPA's ambient standard, it is appropriate to conclude that the proposed facility will not pose an increased threat to public health.

Noise, Odor and Zoning

The Office of Air Quality (OAQ) does not have jurisdiction over noise pollution, odor and zoning.

Environmental Justice (EJ)

Based on the 2000 US Census, there are 12.5% of Indiana residents who identified themselves as racial minority. An area is classified as High Racial Minority if it falls between 18.75% to 24.99 %. Dekalb County, IN, where Auburn Nugget LLC is going to be located does not fall under this classification.

Based on the 1990 US Census, 28% of Indiana residents lived in households that received an income less than or equal to twice the poverty level. This is classified a Low Income Household. Dekalb County, IN does not fall under this classification.

If the source being reviewed is going to be located in an area considered to be either a High Racial Minority or Low Income Household, the OAQ attempts to publish the notice for the public review in a non-English newspaper, and holds a public meeting prior to the issuing a final action. Since Dekalb County is neither of these classifications, the OAQ will only publish the notice in a most circulated newspaper in the area.

For more information on EJ, please refer to <http://www.in.gov/idem/environmetaljustice>.

Recommendation and Conclusion

- (1) Based on the facts, conditions and evaluations made, OAQ recommends to the IDEM Commissioner that the PSD/NSR/Part 70 Permit 033-19475-00092 be approved.
- (2) A copy of the preliminary findings is also available on the Internet at: www.IN.gov/idem/air/permits/Air-Permits-Online.
- (3) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.IN.gov/idem/guides.

Attachments

The following are attachments to this TSD:

- (1) Appendix A - - Potential to Emit Calculations
- (2) Appendix B - - PSD BACT Evaluations
- (3) Appendix C - - Air Quality Impact Analysis

IDEM Contact

Questions regarding this proposed PSD permit can be directed to Iryn Calilung at the Indiana Department Environmental Management, Office of Air Quality, 100 North Senate Avenue, Indianapolis, Indiana 46204 or by telephone at (317) 233-5692 or toll free at 1-800-451-6027 extension 3-5692 or by e-mail at icalilun@dem.state.in.us.

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

Appendix A - - Potential to Emit Calculations
New Source Review (NSR), Prevention of Significant Deterioration (PSD)
And Part 70 Operating Permit

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| Source Background and Description |
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| | |
|-----------------------|---|
| Source Name: | Auburn Nugget LLC |
| Source Location: | County Road 55 and 42, Butler, IN 46721 |
| Mailing Address: | 221 South Main Street, Auburn, IN 46706 |
| Responsible Official: | Manager |
| County: | Dekalb |
| SIC Code: | 3312 (Steel Mill) |
| NAICS Code: | 331111 |
| Source Categories: | 1 of 28 Listed Source Categories Major PSD Source Major Source under Section 112 of the CAA Part 70 Source |
| Permit Number: | PSD 033-19475-00092 |
| Permit Writer: | Iryn Calilung 317/233-5692 icalilun@dem.state.in.us |

| |
|---|
| Potential to Emit (PTE) Calculations |
|---|

Auburn Nugget is proposing to construct an iron nugget production plant. The nuggets will be high yield iron quality, and can be fed directly to electric arc furnaces used by mini mills. Unless otherwise specified, the emission rates were based on the results of the pilot study conducted by Mesabi Nugget for a Mesabi Nugget Pilot Demonstration Plant, Silver Bay Minnesota, rated at 3 tons/hour).

| | | |
|----------|----|--|
| Table 1 | -- | Total PTE After Control |
| Table 2 | -- | Emissions from the Rotary Hearth Furnace (RHF) |
| Table 3 | -- | Emissions from the Green Ball Dryers |
| Table 4 | -- | Emissions from the Product Separator/Dryer |
| Table 5 | -- | Emissions Exhausting Through the Roof Monitor |
| Table 6 | -- | Emissions from the Coal #1 Pulverizer/Dryer |
| Table 7 | -- | Emissions from the Coal #2 Pulverizer/Dryer |
| Table 8 | -- | Emissions from the Flux Pulverizer(s)/Dryer(s) |
| Table 9 | -- | Emissions from the Ore Dryer |
| Table 10 | -- | Emissions from Railcar Unloading and Fugitive Dust Baghouses |
| Table 11 | -- | Material Storage |
| Table 12 | -- | Emissions from the Material Storage |
| Table 13 | -- | Miscellaneous Particulate Emitting Facilities |

| Table 1 - - Total PTE After Control (tons/year) | | | | | | | |
|---|-----------------|-----------------|---------------|---------------|---------------|------------------|------------------------------|
| Unit/Process | SO ₂ | NO _x | CO | VOC | PM | PM ₁₀ | Pb |
| RHF (219 MMBtu/hour and 75.35 tons/hour) | 986.07 | 847.13 | 254.7 | 23.15 | 172.34 | 172.34 | 5.85 |
| Green Ball Dryers (205.2 MMBtu/hour and 153.248 tons/hour) | 0.21 | 29.53 | 162.44 | 84.57 | 151.70 | 151.70 | 4.49 x 10 ⁻⁴ |
| Product Separator (25 MMBtu/hour and 33 tons/hour) | 0.06 | 5.35 | 8.96 | 0.578 | 9.68 | 9.68 | 5.48x10 ⁻⁵ |
| Subtotal Stack 1001 | 986.34 | 882.01 | 426.10 | 108.30 | 333.72 | 333.72 | 5.85 |
| Roof Monitor | 1.97 | 0.218 | 0.085 | 0.022 | 2.22 | 2.22 | 0.00117 |
| Coal No. 1 Pulverizer/Dryer (33 tons/hour and 36 MMBtu/hour) | 0.144 | 7.66 | 13.01 | 0.867 | 43.51 | 43.51 | 7.88x10 ⁻⁵ |
| Coal No. 2 Pulverizer/Dryer (9 tons/hour and 9.23 MMBtu/hour) | 0.039 | 2.01 | 3.39 | 0.236 | 9.69 | 9.69 | 2.02x10 ⁻⁵ |
| Flux Pulverizer(s) /Dryer(s) (13 tons/hour and 14.58 MMBtu/hour) | 0.057 | 3.07 | 5.18 | 0.342 | 17.48 | 17.48 | 3.19x10 ⁻⁵ |
| Subtotal Stack 1002 | 0.24 | 12.74 | 21.58 | 1.445 | 70.68 | 70.68 | 1.309X10⁻⁴ |
| Ore Dryer (125 tons/hour and 25 MMBtu/hour) | 0.055 | 5.47 | 8.76 | 0.55 | 27.92 | 27.92 | 5.4x10 ⁻⁵ |
| Subtotal Stack 1003 | 0.055 | 5.47 | 8.76 | 0.55 | 27.92 | 27.92 | 5.4x10⁻⁵ |
| Railcar Unloading (165 tons/hour) | -- | -- | -- | -- | 12.93 | 12.93 | -- |
| Subtotal Stack 1004 | -- | -- | -- | -- | 12.93 | 12.93 | -- |
| Fugitive Baghouse #2 | -- | -- | -- | -- | 19.52 | 19.52 | -- |
| Subtotal Stack 1005 | -- | -- | -- | -- | 19.52 | 19.52 | -- |
| Material transfer and conveying (200 tons/hour) | -- | -- | -- | -- | 12.75 | 12.75 | -- |
| Storage piles/Transfer Paves and Unpaved roadways | -- | -- | -- | -- | 19.162 | 5.86 | -- |
| Subtotal | -- | -- | -- | -- | 31.91 | 18.61 | -- |
| | 988.605 | 900.44 | 456.53 | 110.32 | 498.90 | 485.6 | 5.85 |

| Table 1 - - Total PTE After Control (tons/year) | | | | | | | |
|---|-----------------|-----------------|----|-----|----|------------------|----|
| Unit/Process | SO ₂ | NO _x | CO | VOC | PM | PM ₁₀ | Pb |
| TOTAL | | | | | | | |

| Table 2 - - Emissions from the Rotary Hearth Furnace (RHF) (exhausting through Stack 1001) | | | |
|---|------------------------------|----------------------------------|---|
| Pollutant | Emission Factor (lbs/ton) | PTE After Control (tons/year) | Wet Scrubber Control Efficiency (%) |
| SO ₂ | 2.981 | 986.07 | 90 |
| NO _x | 2.561 | 847.13 | Low NO _x Burners |
| CO | 0.770 | 254.7 | -- |
| VOC | 0.074 | 23.15 | -- |
| PM/PM ₁₀ | 0.521 | 172.34 | 91.3 |
| Sulfuric Acid Mist | 1.609 | 531.91 | 80 |
| Fluorides | 0.354 | 117.21 | 97 |
| Lead | 0.018 | 5.85 | 90 |
| Beryllium | 0.003 | 1.14 | 90 |
| Mercury | 0.001 | 0.21 | 6 |
| Manganese | 0.478 | 158.01 | 90 |
| Phosphorous | 0.00121 | 0.404 | 89 |
| Benzene | 0.000318 | 0.105 | -- |
| Chromium | 0.000286 | 0.0946 | 95 |
| Toluene | 0.000273 | 0.0902 | -- |
| Nickel | 0.000242 | 0.0802 | 98 |
| Styrene | 0.000158 | 0.0521 | -- |
| Arsenic | 0.0000868 | 0.0288 | 93 |
| Selenium | 0.0000852 | 0.0282 | 94 |
| Acetaldehyde | 0.000621 | 0.205 | -- |
| Acetonitrile | 0.0000494 | 0.0163 | -- |
| Cadmium | 0.00000771 | 0.011 | 97 |
| Cobalt | 0.0000155 | 0.00512 | 99 |

Methodology and Assumptions

- (a) Nominal Process Capacity = 75.521 tons/hour
= 661,563.96 tons/year at 8,760 hours/year
- (b) Nominal Heat Capacity = 219 MMBtu/hour
- (c) Emission rates were based on the highest sulfur content of coal used as feedstock.
- (d) Emissions due to the process (coal as feedstock) were based on a pilot study conducted by Mesabi Nugget LLC in Mesabi Nugget Pilot Demonstration Plant, Silver Bay Minnesota.
- (e) Emissions due to combustion of natural gas as fuel have been incorporated.
- (f) Control Device = Wet scrubber at 209,000 acfm and 0.030 grain/acfm outlet loading.
Control Device for NO_x emissions only = Low NO_x Burners
- (g) These controlled emissions exhaust through Stack 1001.
See Table 5 for emissions exhausting through the roof monitor.
- (h) PTE After Control = (Nominal Process Capacity tons/hour)*(EF lbs/ton *(8760 hours/year)
*(1 tons/2000 lbs) (1- control efficiency %).
= tons/year
- (i) The table shown above does not indicate all the hazardous air pollutants that will be emitted. Only the highest emitted pollutants are indicated.
- (j) The proposed plant is subject to PSD major review for PM, PM₁₀, SO₂, NO_x, VOC, CO, Lead, Mercury, Beryllium, and Fluorides.

| Table 3 --- Emissions from the Green Ball Dryers (exhausting through Stack 1001) | | |
|---|-------------------------------|-------------------------------|
| Pollutant | Emission Factor (EF) | PTE After Control (tons/year) |
| SO ₂ | 0.0001 lb/ton | 0.21 |
| NO _x | 0.044 lb/ton | 29.53 |
| CO | 0.242 lb/ton | 162.44 |
| VOC | 0.126 lb/ton | 84.57 |
| PM/PM ₁₀ | 0.226 lb/ton | 151.70 |
| Lead | 5x10 ⁻⁸ lb/MMBtu | 4.49 x 10 ⁻⁴ |
| Beryllium | 1.2x10 ⁻⁸ lb/MMBtu | 1.08 x 10 ⁻⁵ |
| Mercury | 2.6x10 ⁻⁷ lb/MMBtu | 2.34 x 10 ⁻⁴ |
| Fluorides | -- | -- |
| Sulfuric Acid Mist | -- | -- |

Methodology and Assumptions:

(a) These controlled emissions exhaust through Stack 1001.

See Table 5 for emissions exhausting through the roof monitor.

(b) Nominal Process Capacity = 153.248 tons/hour
 = 1,342,452.48 tons/year at 8,760 hours/year

(c) Nominal Heat Capacity = 205.2 MMBtu/hour

(d) Control Device for PM/PM₁₀ = Baghouses at 98.3% control efficiency.

Control Device for NO_x = Low NO_x Burners

There are no add-on control devices for the other pollutants.

(e) Normal operations are based on the usage of the RHF offgas as fuel.

(f) Emissions due to the process (coal as feedstock) from this dryer were based on a pilot study conducted by Mesabi Nugget LLC in Mesabi Nugget Pilot Demonstration Plant, Silver Bay Minnesota. Where pilot plant data was not available, AP-42 emission factors were used.

(g) PTE after control
 = (Nominal Process Capacity tons/hour)*(EF lbs/ton)*(8760 hours/year)
 (1 ton/2000 lbs) (1- control efficiency %)
 = tons/year

Table 4 --- Emissions from the Product Separator/Dryer
 (exhausting through Stack 1001)

| Pollutant | Emission Factor (EF) | | PTE After Control (tons/year) |
|---------------------|----------------------|----------|-------------------------------|
| SO ₂ | 0.0001 | lb/ton | 0.006 |
| NO _x | 0.037 | lb/ton | 5.35 |
| CO | 0.062 | lb/ton | 8.96 |
| VOC | 0.004 | lb/ton | 0.578 |
| PM/PM ₁₀ | 0.067 | lb/ton | 9.68 |
| Lead | 5x10 ⁻⁸ | lb/MMBtu | 5.48x10 ⁻⁵ |
| Beryllium | 1.2x10 ⁻⁸ | lb/MMBtu | 1.31x10 ⁻⁶ |
| Mercury | 2.6x10 ⁻⁷ | lb/MMBtu | 2.85x10 ⁻⁵ |
| Fluorides | -- | | -- |
| Sulfuric Acid Mist | -- | | -- |

Methodology and Assumptions:

(a) These controlled emissions exhaust through Stack 1001.

See Table 5 for emissions exhausting through the roof monitor.

(b) Nominal heat Capacity of the dryer = 25.0 MMBtu/hour

(c) Nominal Process Capacity = 33 tons/hour
 = 289,080 tons/year at 8,760 hours/year

(d) Control Device for PM/PM₁₀ = Baghouse at 95.0% control efficiency.

Control Device for NO_x = Low NO_x Burners

There are no add-on control devices for the other pollutants.

(e) Combustion emissions are due to natural gas. Combustion emissions are already incorporated to the process emissions.

(f) Emissions due to the process from this dryer were based on AP-42 emission factors.

(g) PTE after control = (Nominal Process Capacity tons/hour)*(EF lbs/ton)*(8760 hours/year)
 *(1 ton/2000 lbs) = tons/year

(h) PTE after control = (Nominal Heat Input MMBtu/hour)*(EF lbs/MMBtu)*(8760 hours/year)
 (1 tons/2000 lbs)(1 - control efficiency %) = tons/year

Table 5 --- Emissions Before Control from the RHF, Green Ball Dryers and Product Separator/Dryer Exhausting Through the Roof Monitor

| Pollutant | RHF (tons/year) | Green Ball Dryer (tons/year) | Product Separator/Dryer (tons/year) | PTE (tons/year) Roof Monitor |
|---------------------|--------------------|---------------------------------|--|---------------------------------|
| SO ₂ | 9,860.7 | 0.67 | 0.0144 | 1.97 |
| NO _x | 847.13 | 147.67 | 5.35 | 0.218 |
| CO | 254.7 | 221.51 | 8.96 | 0.085 |
| VOC | 23.15 | 88.60 | 0.578 | 0.022 |
| PM/PM ₁₀ | 1,975.22 | 8,925.60 | 195.22 | 2.22 |
| Sulfuric Acid Mist | 2,659.55 | -- | -- | 0.532 |
| Fluorides | 3,907.0 | -- | -- | 0.781 |
| Lead | 58.5 | 4.49x10 ⁻⁵ | 5.48x10 ⁻⁶ | 0.00117 |
| Beryllium | 11.44 | 1.08x10 ⁻⁵ | 1.31x10 ⁻⁶ | 0.0023 |
| Mercury | 0.222 | 2.34x10 ⁻⁴ | 2.85x10 ⁻⁵ | 4.44x10 ⁻⁵ |

Methodology and Assumptions:

- (a) The RHF, Green Ball Dryer, and Product Separator/Dryer also exhaust to a roof monitor. The emissions exhausting to the roof monitor are uncontrolled.
- (b) The PTE after control of the RHF, Green Ball Dryers, and Product Separator Dryer are shown in Tables 2, 3, and 4.
- (c) $PTE\ before\ control = (PTE\ after\ control) / (1 - \%control\ efficiency) = tons/year$
- (d) For pollutants without add-on control devices, the PTE after control = PTE before control
- (e) Approximately 0.02% of the Stack 1001 uncontrolled emissions exhaust through the roof monitor.
 $PTE\ Roof\ Monitor = (PTE\ Before\ Control) * (0.0002) = tons/year$
- (f) $PTE\ roof\ monitor = (PTE\ before\ control\ of\ RHF,\ Green\ Ball\ Dryer\ and\ Product\ Separator) * (0.0002)$

Table 6 --- Emissions from the Coal #1 Pulverizer/Dryer
 (exhausting through Stack 1002)

| Pollutant | Emission Factor (EF) | | PTE After Control (tons/year) |
|---------------------|----------------------|----------|-------------------------------|
| SO ₂ | 0.001 | lb/ton | 0.144 |
| NO _x | 0.053 | lb/ton | 7.66 |
| CO | 0.090 | lb/ton | 13.01 |
| VOC | 0.006 | lb/ton | 0.867 |
| PM/PM ₁₀ | 0.301 | lb/ton | 43.51 |
| Lead | 5x10 ⁻⁸ | lb/MMBtu | 7.88x10 ⁻⁵ |
| Beryllium | 1.2x10 ⁻⁸ | lb/MMBtu | 1.89x10 ⁻⁶ |
| Mercury | 2.6x10 ⁻⁷ | lb/MMBtu | 4.1x10 ⁻⁵ |
| Fluorides | -- | | -- |
| Sulfuric Acid Mist | -- | | -- |

Methodology and Assumptions:

- (a) The Coal #1/Pulverizer Dryer is also sometimes referred to as Reductant Pulverizer.
- (b) These controlled emissions exhaust through Stack 1002.
- (c) Nominal Heat Capacity = 36.0 MMBtu/hour
- (d) Nominal Process Capacity = 33 tons/hour
 = 289,080 tons/year at 8,760 hours/year
- (e) Combustion emissions from this dryer are due to natural gas fuel used during start up periods and when the RHF off gas is not available. Combustion emissions are already incorporated to the process emissions.
- (f) Emissions from this dryer due to the process are mainly particulate emissions.
- (g) Control Device for PM/PM₁₀ = Baghouse at 95.0% control efficiency.
 Control Device for NO_x = Low NO_x Burners
 There are no add-on control devices for the other pollutants.
- (h) PTE After Control = (Nominal Process Capacity tons/hour)*(EF lbs/ton)*(8760 hours/year)
 (1 ton/2000 lbs)(1 - control efficiency %) = tons/year
- (i) PTE after control = (Nominal Heat Input MMBtu/hour)*(EF lbs/MMBtu)*(8760 hours/year)
 (1 tons/2000 lbs)(1 - control efficiency %) = tons/year

| Table 7 --- Emissions from the Coal #2 Pulverizer/Dryer (exhausting through Stack 1002) | | | |
|--|----------------------|----------|-------------------------------|
| Pollutant | Emission Factor (EF) | | PTE After Control (tons/year) |
| SO ₂ | 0.001 | lb/ton | 0.039 |
| NO _x | 0.051 | lb/ton | 2.01 |
| CO | 0.086 | lb/ton | 3.39 |
| VOC | 0.006 | lb/ton | 0.236 |
| PM/PM ₁₀ | 0.246 | lb/ton | 9.69 |
| Lead | 5x10 ⁻⁸ | lb/MMBtu | 2.02x10 ⁻⁵ |
| Beryllium | 1.2x10 ⁻⁸ | lb/MMBtu | 4.85x10 ⁻⁷ |
| Mercury | 2.6x10 ⁻⁷ | lb/MMBtu | 1.05x10 ⁻⁵ |
| Fluorides | -- | | -- |
| Sulfuric Acid Mist | -- | | -- |

Methodology and Assumptions:

- (a) These controlled emissions exhaust through Stack 1002.
- (b) Nominal Heat Capacity = 9.23 MMBtu/hour
- (c) Nominal Process Capacity = 9 tons/hour
= 78,840 tons/year at 8,760 hours/year
- (d) Combustion emissions from this dryer are due to natural gas fuel used during start up periods and when the RHF off gas is not available.
- (e) Combustion emissions are already incorporated to the process emissions.
- (f) Emissions due to the process (coal as feedstock) from this dryer were based on a pilot study conducted by Mesabi Nugget LLC in Mesabi Nugget Pilot Demonstration Plant, Silver Bay Minnesota. Where pilot plant data was not available, AP-42 emission factors were used. Emissions from this dryer due to the process are mainly particulate emissions.
- (g) Control Device for PM/PM₁₀ = Baghouse at 95.0% control efficiency.

Control Device for NO_x = Low NO_x Burners

There are no add-on control devices for the other pollutants.
- (h) PTE After Control = (Nominal Process Capacity tons/hour)*(EF lbs/ton)*(8760 hours/year)
*(1 ton/2000 lbs) = tons/year
- (i) PTE After Control = (Nominal Heat Input MMBtu/hour)*(EF lbs/MMBtu)*(8760 hour/year)
*(1 ton/2000 lbs) = tons/year

Auburn Nugget LLC
Butler, Indiana
Permit Writer: Iryn Calilung

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| Table 8 --- Emissions from the Flux Pulverizer(s)/Dryer(s) (exhausting through Stack 1002) | | |
|---|-------------------------------|-------------------------------|
| Pollutant | Emission Factor (EF) | PTE After Control (tons/year) |
| SO ₂ | 0.001 b/ton | 0.057 |
| NO _x | 0.054 lb/ton | 3.07 |
| CO | 0.091 lb/ton | 5.18 |
| VOC | 0.006 lb/ton | 0.342 |
| PM/PM ₁₀ | 0.307 lb/ton | 17.48 |
| Lead | 5x10 ⁻⁸ lb/MMBtu | 3.19x10 ⁻⁵ |
| Beryllium | 1.2x10 ⁻⁸ lb/MMBtu | 7.66 x 10 ⁻⁷ |
| Mercury | 2.6x10 ⁻⁷ lb/MMBtu | 1.66 x 10 ⁻⁵ |
| Fluorides | -- | -- |
| Sulfuric Acid Mist | -- | -- |

Methodology and Assumptions:

- (a) These controlled emissions exhaust through Stack 1002.
- (b) Nominal Heat Capacity = 14.58 MMBtu/hour.
- (c) Nominal Process Capacity = 13 tons/hour
= 113,880 tons/year at 8,760 hours/year
- (d) Combustion emissions from this dryer are due to natural gas fuel used during start up periods and when the RHF off gas is not available.
- (e) Combustion emissions are already incorporated to the process emissions.
- (f) Emissions from this dryer due to the process are mainly particulate emissions AP-42 emission factors.
- (g) Control Device for PM/PM₁₀ = Baghouse at 95.0% control efficiency.
Control Device for NO_x = Low NO_x Burners
There are no add-on control devices for the other pollutants.
- (h) PTE After Control = (Nominal process capacity tons/hour)*(EF lbs/ton)*(8760 hours/year)
(1 ton/2000 lbs)(1 - control efficiency %) = tons/year
- (i) PTE After Control = (Nominal Heat Input MMBtu/hour)*(EF lbs/MMBtu)*(8760 hours/year)
(1 ton/2000 lbs)(1 - control efficiency %) = tons/year

| Table 9 --- Emissions from the Ore Dryer (exhausting through Stack 1003) | | | |
|---|----------------------|----------|-------------------------------|
| Pollutant | Emission Factor (EF) | | PTE After Control (tons/year) |
| SO ₂ | 0.0001 | lb/ton | 0.055 |
| NO _x | 0.010 | lb/ton | 5.47 |
| CO | 0.016 | lb/ton | 8.76 |
| VOC | 0.001 | lb/ton | 0.55 |
| PM/PM ₁₀ | 0.051 | lb/ton | 27.92 |
| Lead | 5x10 ⁻⁸ | lb/MMBtu | 5.4 x 10 ⁻⁵ |
| Beryllium | 1.2x10 ⁻⁸ | lb/MMBtu | 1.31 x 10 ⁻⁶ |
| Mercury | 2.6x10 ⁻⁷ | lb/MMBtu | 2.85 x 10 ⁻⁵ |
| Fluorides | -- | | -- |
| Sulfuric Acid Mist | -- | | -- |

Methodology and Assumptions:

- (a) These controlled emissions exhaust through Stack 1003.
- (b) Nominal Heat Capacity = 25.0 MMBtu/hour
- (c) Nominal Process Capacity = 125 tons/hour
= 1,095,000 tons/year at 8,760 hours/year
- (d) Combustion emissions from this dryer are due to natural gas fuel used during start up periods and when the RHF off gas is not available.
- (e) Combustion emissions are already incorporated to the process emissions.
- (f) Emissions from this dryer due to the process were based on AP-42 emission factors.
- (g) Control Device for PM/PM₁₀ = Baghouse at 95.0% control efficiency.

Control Device for NO_x = Low NO_x Burners

There are no add-on control devices for the other pollutants.
- (h) PTE After Control = (Nominal Process Capacity tons/hour)*(EF lbs/ton)*(8760 hours/year)
(1 ton/2000 lbs)(1 - control efficiency %) = tons/year
- (i) PTE After Control = (Nominal Heat Input MMBtu/hour)*(EF lbs/MMBtu)*(8760 hours/year)
(1 ton/2000 lbs)(1 - control efficiency %) = tons/year

| Table 10 - - Emissions from Railcar Unloading and Fugitive Dust Baghouses | | | |
|---|-------------------------|----------------------|-------------------------------------|
| Operation | Grain Loading (gr/dscf) | Flow Rate (dscf/min) | PM/PM ₁₀ PTE (tons/year) |
| Fugitive Baghouse #1 (Stack 1001) | 0.0052 | 100,000 | 19.52 |
| Railcar Unloading (Stack 1004) | 0.0052 | 66,225 | 12.93 |
| Fugitive Baghouse #2 (Stack 1005) | 0.0052 | 100,000 | 19.52 |
| <p>Methodology and Assumptions:</p> <p>(a) PM = PM₁₀</p> <p>(b) PM/PM₁₀ PTE after control = (grain/dscf)*(flow rate dscf/min)*(1 lb/7,000 grains) *(60 min/hr)*(8760 hr/yr) *(1 ton/2000 lb)</p> <p>(c) The grain loading used to calculate PTE is also considered the PSD BACT limit.</p> | | | |

| Table 11 - - Material Storage | | | |
|---|----------------------|-------------|------------------------------|
| Bin Vent ID | Operation | Bin Vent ID | Operation |
| 1006 | Raw Ore Silo | 1022 | Flux Silo #3 |
| 1010 | Raw Flux Silo | 1023 | Flux Silo #4 |
| 1011 | Binder Silo | 1024 | Recycle Silo |
| 1014 | Raw Coal Silo | 1025 | Flux Silo #5 |
| 1015 | Recycle Fines Silo | 1027 | EAF Dust Silo |
| 1018 | Raw Coal Silo | 1037 | Product Silo |
| 1019 | Pulverized Coal Silo | 1038 | Raw Flux Silo |
| 1020 | Pulverized Coal Silo | 1040 | Slag Separator Baghouse Silo |
| 1021 | Pulverized Coal Silo | Total | 17 |
| These silos are controlled by bin vent filters. | | | |

| Table 12 - - Emissions from the Material Storage | | | |
|--|-------------------------|----------------------|-------------------------------------|
| Operation | Grain Loading (gr/dscf) | Flow Rate (dscf/min) | PM/PM ₁₀ PTE (tons/year) |
| Each Bin Vent | 0.01 | 2,000 | 0.75 |
| Total | | | 12.75 |

Methodology and Assumptions:

- (a) Total Number of Bin Vents = 17
- (b) PM = PM₁₀
- (c) PM/PM₁₀ PTE after control = (grain/dscf)*(flow rate dscf/min)*(1 lb/7,000 grains)
 (60 min/hr)(8760 hr/yr) *(1 ton/2000 lb)
- (d) Total PM/PM₁₀ PTE after control = (PM/PM₁₀ PTE after control)*(17)
- (e) The grain loading used to calculate PTE is also considered the PSD BACT limit.

| Table 13 --- Miscellaneous Particulate Emitting Facilities | | | | |
|--|----------|----------------|--------------------|----------------------------------|
| Operation | Capacity | | PM PTE (tons/year) | PM ₁₀ PTE (tons/year) |
| Material Transfer and Conveying | 200 | tons/hour | 0.5 | 0.5 |
| Storage Piles Wind Erosion | 7,109.3 | m ² | 0.092 | 0.0569 |
| Paved Roads | 0.99 | miles | 18.57 | 5.3 |
| Unpaved Roads | 0.51 | miles | | |
| Total | | | 19.162 | 5.86 |

Methodology and Assumptions:

- (a) PM/PM₁₀ PTE from material transfer and conveying are based from the emission factors from AP-42, Section 11.18.2 (Crushed Stone Processing).
 PM = 0.00054 pounds per ton
- (b) PM/PM₁₀ PTE from the wind erosion are based from the emission Factors from AP-42, Section 13.2.5 (Industrial Wind Erosion).
- (c) PM/PM₁₀ PTE from paved roads are based from the emission factors from AP-42, Section 13.2.1.1.
- (d) PM/PM₁₀ PTE from unpaved paved roads are based from the emission factors from AP-42, Section 13.2.2.2

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

Appendix B - - Best Available Control Technology (BACT) Analysis
New Source Review (NSR), Prevention of Significant Deterioration (PSD)
And Part 70 Operating Permit

| |
|--|
| Source Background and Description |
|--|

| | |
|-----------------------|---|
| Source Name: | Auburn Nugget LLC |
| Source Location: | County Road 55 and 42, Butler, IN 46721 |
| Mailing Address: | 221 South Main Street, Auburn, IN 46706 |
| Responsible Official: | Manager |
| County: | Dekalb |
| SIC Code: | 3312 (Steel Mill) |
| NAICS Code: | 331111 |
| Source Categories: | 1 of 28 Listed Source Categories Major PSD Source Major Source under Section 112 of the CAA Part 70 Source |
| Permit Number: | PSD 033-19475-00092 |
| Permit Writer: | Iryn Calilung 317/233-5692 icalilun@dem.state.in.us |

| |
|---|
| PSD BACT Overview and General Discussion |
|---|

The Prevention of Significant Deterioration (PSD) Program (326 IAC 2-2) requires a best available control technology (BACT) review and air quality modeling to be performed on the proposed iron nugget production plant. BACT is a mass emission limitation based on the maximum degree of reduction of each pollutant that is subject to the PSD requirements. BACT analysis takes into account the energy, environmental, and economic impacts on the source. These reductions may be determined through the application of available control techniques, process design, work practices, and operational limitations. Such reductions are necessary to demonstrate that the emissions remaining after application of BACT will not cause or contribute to air pollution, thereby protecting public health and the environment.

The Office of Air Quality (OAQ) makes BACT determinations by following these steps.

- (1) Determine the pollutants that will undergo major review.
- (2) Identify all control technologies and eliminate technically infeasible options.
- (3) Rank the technically feasible control technologies by effectiveness.
- (4) Evaluate the most effective controls and document results.
- (5) Select the BACT control and mass emission limit(s).

Once the technically feasible control technology has been identified, they are ranked in order of control effectiveness, with the most effective control alternative on top. The ranked alternatives are reviewed in terms of environmental, energy, and economic impacts specific to the proposed iron nugget production plant. If the analysis determines that the evaluated alternative is not appropriate as BACT due to any of the impacts, then the next most effective is evaluated. This process is repeated until a control alternative is chosen as BACT. The proposed BACT must provide emission limitations, which are at least as stringent as the federally approved State Implementation Plan (SIP) or the federal New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAP).

In going through the feasible controls, there may be several different limits that have been set as BACT for the same control technology. The Office of Air Quality (OAQ) has to choose the most stringent limit as BACT unless the applicant demonstrates in a convincing manner why that limit is not feasible. The final BACT determination would be the technology with the most stringent corresponding limit that is technically and economically feasible.

There is no requirement in the State or Federal regulations to require innovative control to be used as BACT. Innovative control means a control that has not been demonstrated in a commercial application on similar units. Innovative controls are normally given a waiver from the BACT requirements due to the uncertainty of actual control efficiency. PSD BACT requires that the applicant install the best available control technology, not create new ones. Based on this, the OAQ will not evaluate or require any innovative controls for this BACT analysis. Only available and proven control technologies are evaluated. A control technology is considered available when there are sufficient data indicating that the technology results to a reduction in emissions of regulated pollutants.

The following BACT determinations are based on information obtained from the PSD permit application submitted by Auburn Nugget LLC, the EPA RACT/BACT/LAER (RBLC) Clearinghouse and electronic data from other permitting agencies websites. The RBLC is a database system that provides emission limit data for industrial processes throughout the United States. It will be obvious that there are wide ranges of existing BACT limits and controls even for similar sources or units. Due to some factors that cannot be found in the RBLC, permitting agencies have been contacted to discuss review process. This is in addition to using available information in the permitting agency's web sites.

Based upon the emissions calculations (see Appendix A - - Potential to Emit Calculations), the proposed plant exceeds the PSD significant threshold levels stated in 326 IAC 2-2-1 for PM, PM₁₀, NO_x, CO, SO₂, VOC, Lead, Mercury, Sulfuric Acid Mist, Beryllium, and Fluorides. Therefore, these pollutants were reviewed under the PSD Program (326 IAC 2-2).

Description of the Operation

Auburn Nugget is proposing to construct a 600,000 tons per year iron nugget production plant. This process is the first full scale operation of its kind. This process involves the direct production of iron nuggets from iron ore and coal fines on a rotary hearth furnace in a single step. This iron nugget conversion process uses less than the former direct reduced iron (DRI) process to create the product, which will be approximately 96 to 98% iron, and can be fed directly to electric arc furnaces (EAFs). Raw materials involved in the production are iron ore concentrate, various coals, flux, and binders.

The process consists of the following three (3) primary steps:

- (1) **Raw Material Delivery and Preparation**
The raw materials consist of iron ore concentrate, coals, fluxes, and binders. These raw materials are delivered by rail, pneumatic truck, or in bulk super sacks with all materials in storage piles and/or storage bins. The coals and fluxes are pulverized on-site. The fluxes and binders do not contain any volatile organic compounds.
- (2) **Iron Nugget Production and Product Separation**
The raw materials (iron ore concentrate, coals, fluxes, and binders) will be mixed and formed into green balls. The balls will be placed in a rotary hearth furnace, where they are converted to metallic iron and slag material. The iron and slag are cooled and separated.
- (3) **Product Handling and Shipping**
The iron nuggets and slag products will either be directly loaded into rail cars, or stored in on-site piles for shipment at a later date.

This new technology was initially developed in Japan. It turns iron ore fines and pulverized coal into iron nuggets, which are of similar quality as pig iron. This iron nugget production plant produces a similar product that is the result of the following major traditional operations involved in iron making: coke plant, sinter plant, iron ore pellet plant, and blast furnace and auxiliaries.

Rotary Hearth Furnace (RHF)

Auburn Nugget LLC is proposing to construct and operate a natural gas fueled Rotary Hearth Furnace, identified as RHF, nominally rated at 75.521 tons/hour. The rotary hearth furnace (RHF) is one of the significant emission units of the proposed iron nugget production plant. The RHF is a flat circular refractory hearth, which is rotated like a tire on its side. The green balls/pellets are heated by the burners located in the sidewalls of the RHF. These burners are also used to maintain the temperature of the RHF. Natural gas is the primary fuel, with propane as a back up fuel in the event that natural gas pipeline supply is disrupted. The RHF is operated at a high temperature (greater than 2,000 °F) and with very low oxygen levels to create a chemically reducing atmosphere in the furnace, thus carbon and hydrogen in the coal chemically react with oxygen in the iron ore. This reaction reduces iron oxide to metallic iron. The bottom of the RHF is sealed to prevent air from entering the RHF. The seal design of the RHF allows continuous addition and removal of green pellets and removal of iron nuggets to or from the RHF.

A cooler, identified as Product Cooler is used to cool the iron nuggets and slag coming out of the RHF prior to product separation. This cooler is located downstream of the RHF and the emissions are routed to the control devices of the RHF.

Detailed control technology evaluations are in the subsequent pages.

IDEM is aware of only one source in Indiana (Iron Dynamics, Inc., with a rotary hearth furnace (RHF). However, the RHF cannot be used for direct comparison to the proposed RHF of Auburn Nugget, LLC. The RHF proposed by Auburn Nugget is a single step process that is similar to the combined operation of the RHF and submerged arc furnace (SAF) of IDI.

The table below summarizes the comparisons between Iron Dynamics, Inc., and Auburn Nugget LLC.

| Table 1 - - Comparison Between IDI and ANC | | |
|--|---|---|
| | Iron Dynamics, Inc., IN | Auburn Nugget LLC, IN |
| Capacity | 96 tons/hour and 376 MMBtu/hour (RHF) 106 tons/hour (SAF) | 75.521 tons/hour and 217 MMBtu/hour (RHF) |
| Emission Units | - - Rotary Hearth Furnace (RHF) with lime injection, - - Submerged Arc Furnace (SAF) with scrubber, - - Pulverizer/dryer | - - Rotary hearth Furnace (RHF) with wet scrubber and low NO _x burners - - Pulverizers/dryers |
| Process | A 2-step process to produce pig iron. Direct Reduced Iron (DRI) is produced from the RHF, then processed further in the SAF to produce the final product (Liquid Pig Iron) | A one-step process to produce iron nuggets. Solid Iron Nuggets are produced by RHF. |
| Raw Material Feed | RHF Feedstock Briquettes - - no pre-drying | RHF Feedstock Pellets - - predrying of green balls prior to RHF |
| Product | DRI - - briquettes - - hot and molten - - 80% total Fe content | Iron Nuggets - - 100% metallized - - solid nuggets - - cold - - 97% total Fe content |
| Energy Used | Electrical | Chemical |
| RHF Operating Temperature | 2,350 °F | 2,400 2,750 °F |
| Slag | No slag Separation in the DRI process | Slag Separation Exists in the Iron Nuggets process |
| Pulverize Flux | No | Yes |
| No. of pulverizers/dryers | 1 | Minimum of 4 |

SO₂ Control Technology Feasibility Study - - RHF

SO₂ emissions are mainly emitted as byproducts of the iron production process. Sulfur compounds primarily in the coal feedstock are released to the RHF flue gas and oxidized as the ore is reduced to metallic iron. SO₂ emissions are also emitted due to combustion of natural gas in the RHF.

The following control alternatives were evaluated to control SO₂ emissions from the RHF. All of the add-on controls evaluated are technically feasible, therefore the BACT determination was concentrated on the efficiency of the control devices.

The control technologies evaluated are arranged in descending order in terms of feasibility and efficiency.

Table 2 - - SO₂ BACT Control technology Analysis

| Technology | BACT Evaluation |
|---|---|
| <p>Wet Scrubber</p> <p>Technically Feasible –Yes</p> <p>BACT - Yes</p> | <p>Wet scrubber is technically feasible for this operation because based on the pilot study conducted at the Mesabi Nugget Pilot Demonstration Plant, Silver Bay, Minnesota, the SO₂ removal by the wet scrubber was measured above 90%. High efficiency scrubbers have typical range of 90 to 95%.</p> <p>Wet scrubbers are regenerative processes, which are designed to maximize contact between the exhaust gas and the absorbing liquid. SO₂ is removed by transferring the materials from a gas to a liquid sorbent (gas absorption process). The types of scrubbers, which can adequately disperse the scrubbing liquid, include packed towers, plat or tray towers, spray chambers, and venturi scrubbers. In addition to lime and limestone, numerous other absorbents are available including sodium solutions and ammonia-based solutions.</p> <p>Auburn Nugget LLC has chosen this control device as the SO₂ control technology. Even though this is the top SO₂ option, cost effectiveness analysis was conducted for this control technology. The control cost is \$522/ton of SO₂ removed.</p> <p>Wet scrubber will be considered as BACT for this operation.</p> |
| <p>Spray Dryer Absorption (SDA)</p> <p>Technically Feasible -Yes</p> <p>BACT - No</p> | <p>SDA is technically feasible for this operation, however, the typical efficiency of SDA systems range (70 to 90%) is lower than the efficiency tested of the wet scrubber for the pilot plant.</p> <p>As in wet scrubbing, spray dryer absorption (SDA), also known as dry scrubbing, the gas phase SO₂ is removed by intimate contact with a suitable absorbing solution. Typically, this may be a solution of sodium carbonate or lime. Lime slurry is sprayed into an absorption tower where SO₂ is absorbed by the slurry.</p> <p>It also has limited feasibility due to the high moisture content of the exhaust gas.</p> <p>Vendors contacted by Auburn Nugget LLC provided no actual guarantees. No available existing facilities can be used as reference.</p> <p>SDA will not be considered as BACT for this operation.</p> |
| <p>Wet Electrostatic Precipitator (ESP)</p> | <p>Wet ESP technology is feasible for this operation; however, the typical efficiency of wet ESP system is 80%, which is lower than the efficiency tested of the wet scrubber for the pilot plant.</p> |

| Table 2 - - SO ₂ BACT Control technology Analysis | |
|--|--|
| Technology | BACT Evaluation |
| <p>Technically Feasible –Yes BACT - No</p> | <p>Caustic is added to the water spray system, allowing the spray system to function as an SO₂ scrubber.</p> <p>Wet ESP will not be considered as BACT for this operation.</p> |
| <p>Dry Sorbent Injection Technically Feasible –Yes BACT - No</p> | <p>Dry sorbent injection is feasible for this operation, however, the maximum efficiency for DSI is 50%, which is lower than the efficiency tested of the wet scrubber for the pilot plant.</p> <p>Dry sorbent injection involves the injection of dry powders (pulverized lime or limestone) into either the furnace or post-furnace region of utility-sized boilers. This process was developed as a lower cost option to conventional FGD technology. Since the sorbent is injected directly into the exhaust gas stream, the mixing offered by the dry scrubber tower is not realized.</p> <p>Dry sorbent injection will not be considered as BACT for this operation.</p> |

The table below summarizes the efficiency comparison of these add-on control devices.

| Table 3 - - SO ₂ Add-on Control Device Efficiency Summary | | |
|--|------------------------------|---|
| SO ₂ Add on Control Device | Typical Efficiency Range (%) | Comment |
| Wet Scrubber | 90 to 95 | Wet scrubber is determined to be the BACT control technology for the control of SO ₂ emissions from the RHF. |
| Spray Dryer Absorption (SDA) | 70 to 90 | |
| Wet Electrostatic Precipitator (ESP) | 80 | |
| Dry Sorbent Injection | 50 | |

SO₂ Existing BACT Emission Limitations - - RHF

Search of the RACT/BACT/LAER Clearinghouse resulted in the following list of sources for SO₂ BACT limits for RHF. Limits are arranged in an ascending order.

| Table 4 - - SO ₂ BACT Limits for RHF | | | |
|--|---|-----------------|--------------------|
| Company Name | SO ₂ Limit | | Control Technology |
| Iron Dynamics, Inc. (IDI), IN (96 tons/hour) | 0.75 lbs/ton of charged material | 78 lb/hour | Lime Injection |
| Auburn Nugget LLC (ANC), IN (75.521 tons/hour) <i>(proposed)</i> | 2.981 lbs/ton of iron nugget product | 225.13 lbs/hour | Wet Scrubber |
| Northshore Mining, Silver Bay, MN Mesabi Nugget Pilot Demonstration Plant | 4.0 lbs/MMBtu (coal) 2.0 lbs/MMBtu (oil) | 32 tons/year | Wet Scrubber |
| Timken Company Faircrest, OH | 0.00054 lbs/MMBtu | 0.02 lbs/hour | - - |

- (1) Iron Dynamics, Inc. (IDI), IN
The RHF in IDI used different feedstock and produced different intermediate products from the RHF proposed by Auburn Nugget. Due to the differences in raw materials used and product produced, the PSD BACT limit of IDI's RHF will not be used for the BACT evaluations (See Table 1 for the comparison).
- (2) Northshore Mining, Silver Bay, MN
The limits for Northshore Mining Silver Bay, MN were not indicated in the RACT/BACT/LAER Clearinghouse. The limits were specified in their Title V Operating Permit. Northshore Mining, Silver Bay, MN operates a taconite processing plant. This was the first taconite operator in Minnesota. In December 2001, the Minnesota Air Pollution issued an approval for the Mesabi Nugget Pilot Demonstration Plant for an iron nugget technology. The rotary hearth furnace was limited to 7,500 hours per year of operation.

The tests conducted in this pilot plant were the basis for the proposed PSD BACT limits for Auburn Nugget LLC.
- (3) Timken Company Faircrest, OH
This unit was never installed.

| |
|---|
| Proposed SO₂ BACT Limit for RHF - - Auburn Nugget LLC, IN |
|---|

Based on the information provided above, the BACT standards and mass limitations are as follows:

- (1) Wet Scrubber as add-on control will be used to control SO₂ emissions from the RHF.
- (2) The emissions from the Product Cooler will also be controlled by the wet scrubber system.
- (3) The SO₂ BACT mass emission limits are 2.981 pounds per ton of iron nugget product and 225.13 pounds per hour, based on a 3-hour block average.
 - (a) $SO_2 = (75.521 \text{ tons/hour}) \cdot (2.981 \text{ lbs/ton}) = 225.13 \text{ lbs/hour}$
 - (b) These SO₂ BACT mass emission limits cover both the emissions from the natural gas combustion and nugget production.
- (4) These rates were based on 90% SO₂ removal by the wet scrubber.

Sulfuric Acid Mist and Fluoride Control Technology Feasibility Study - - RHF

- (1) **Sulfuric Acid Mist**
 Since sulfuric acid mist is an acid gas and a surrogate of SO₂ emissions, the same add-on control device (wet scrubbers) chosen for SO₂ emissions will also be used to control sulfuric acid mist emissions from the RHF.
- Based on the pilot study conducted at the Mesabi Nugget Pilot Demonstration Plant, Silver Bay, MN, the sulfuric acid mist emissions removal by the wet scrubber was **80%**.
- (2) **Fluoride**
 Since Fluoride is an acid gas and the chemical reactions used to control SO₂ and Fluoride are similar, the add-on control device (wet scrubbers) used for SO₂ emissions will also be used to control fluoride emissions from the RHF.
- Based on the pilot study conducted at the Mesabi Nugget Pilot Demonstration Plant, Silver Bay, MN, the fluoride emissions removal by the wet scrubber was **97%**.
- (3) **SO₂, Sulfuric Acid Mist and Fluoride**
 With the cost effectiveness of \$522 per ton of SO₂ removed, the wet scrubbers will also be used to control sulfuric acid mist emissions and fluoride emissions.

Sulfuric Acid Mist Existing BACT Emission Limitations - - RHF

Search of the RACT/BACT/LAER Clearinghouse resulted in the following list of sources with acid mist limits. Based on a review of the database, the limits listed in the database do not refer to similar industry or emission unit. Therefore, no source was used for direct comparison as BACT.

| Table 5 - - Sources With Sulfuric Acid Mist Limits | |
|--|-----------------------------|
| Company Name | Operations |
| Guardian Industries, NY | Glass Manufacturing |
| Millennium Power Partner, MA | Turbine |
| U.S. Sugar Corporation, FL | Sugar Mill |
| Sunoco Inc., NJ | Petroleum Refinery |
| IMC Agrico, FL | Chemical Plant |
| IMC Phosphates Mp, Inc, FL | Agricultural Chemical Plant |
| Tenaska Virginia Partners, VA | Turbine |
| US Sugar Corporation, FL | Sugar Mill |

Proposed Sulfuric Acid Mist BACT Limit for RHF - - Auburn Nugget LLC, IN

Based on the information provided above, the BACT standards and mass limitations are as follows:

- (1) Wet Scrubber will be used to control Sulfuric Acid Mist emissions from the RHF.
- (2) The Sulfuric Acid Mist BACT mass emission limits are 1.609 pounds per ton of iron nugget product and 121.49 pounds per hour, based on a 3-hour block average.

Sulfuric acid mist = (75.521 tons/hour)*(1.609 lbs/ton) = 121.49 lbs/hour.

- (3) These rates were based on 80% sulfuric acid mist removal by the wet scrubber.

Fluoride Existing BACT Emission Limitations - - RHF

Search of the RACT/BACT/LAER Clearinghouse resulted in the following list of sources with fluoride limits. Based on a review of the database, the limits listed in the database do not refer to a similar industry or emission unit. Therefore, no source was used for direct comparison as BACT.

| Table 6 - - Sources With Fluorides Limits | |
|---|---------------------------------------|
| Company Name | Operations |
| Alumax of South Carolina, SC | Anode Bake Plant |
| American Video Glass, PA | Glass Melting For Picture Tube Panels |
| Archer Daniels, IA | Coal Fired Boiler |
| Cargill Fertilizer, FL | Phosphoric Acid Production |
| Energy Bedford, MA | Fluidized Bed Boiler |
| Johns Manville, OH | Insulation And Building Products |
| Minergy Detroit, MI | Sludge Incinerator |
| Roanoke Cement, VA | Cement Kiln |
| SF Phosphates Limited, WY | Phosphate Fertilizer Production |
| Steel Dynamics (SDI), Whitley, IN | Electric Arc Furnace |
| Timken Faircrest, OH | Electric Arc Furnace |
| US Agri-Chemicals, FL | Phosphate Fertilizer Production |
| White Springs Agricultural | Phosphate Fertilizer Production |

Proposed Fluoride BACT Limit for RHF - - Auburn Nugget LLC, IN

Based on the information provided above, the BACT standards and mass limitations are as follows:

- (1) Wet Scrubber will be used to control Fluoride emissions from the RHF.
- (2) The Fluoride BACT mass emission limits are 0.3543 pounds per ton of iron nugget product and 26.76 pounds per hour, based on a 3-hour block average.

Fluoride = (75.521 tons/hour)*(0.3543 lbs/ton) = 26.76 lbs/hour.

- (3) These rates were based on 97% fluoride removal by the wet scrubber.

NO_x Control Technology Feasibility Study - - RHF

NO_x emissions are emitted from the combustion of natural gas as fuel and as byproducts of the iron production process.

The following control alternatives were evaluated to control NO_x emissions from the RHF. The technologies are arranged in a descending order in terms of feasibility and efficiency. Majority of the add on control technologies are not technically feasible because of the difference in operating temperature ranges of the RHF and the control devices' operating temperature requirements. The RHF needs to operate from 2,400 and 2,750 °F to produce iron nuggets.

| Table 7 - - NO _x BACT Control Analysis | |
|---|--|
| Control technology | Evaluation |
| Low NO _x Burner (LNB) Technically Feasible –Yes BACT - Yes | Low NO _x burner (LNB) technology utilizes advanced burner design to reduce NO _x formation through the restriction of oxygen, flame temperature and/or residence time. Low NO _x burners will be considered as BACT for this operation. |
| Low Excess Air (LEA) Technically Feasible –Yes BACT - Yes | LEA is technically feasible for this operation because it is used to reduce the amount of oxygen in the combustion zone of the furnace. This limits the amount of oxygen available for the formation of NO _x . LEA can be employed for some of the zones of the RHF. LEA was the design used in the Mesabi Nugget Pilot Demonstration Plant, Silver Bay, MN. LEA will also be considered as BACT for this operation in addition to the use of Low NO _x burners. |
| Selective Catalytic Reduction (SCR) Technically Feasible – No BACT - No | (a) Operating Temperature SCR is a post combustion technology that uses a catalyst and ammonia injection to promote the removal of NO _x at certain exhaust stream parameters such as inlet NO _x concentration, volumetric flow, and temperature range. SCR requires an operating temperature range 500 ⁰ F to 800 ⁰ F for normal catalyst. The optimum operating temperature range is 700 ⁰ F to 750 ⁰ F. The temperatures of the outlet of the RHF, evaporative cooler and primary heat exchanger are from 2,400 ⁰ F to 2,750 ⁰ F. Based on this, SCR is not technically feasible for this operation because the SCR must be located within the process where the SCR's operating temperature ranges occur. Due to catalyst poisoning SCR is also not technically feasible to be located at the outlet of the secondary cooler, where this is the only possible location of the process when the operating temperature of the SCR exist. Process temperatures downstream of a wet scrubber are too cold for SCR. SCR operates best when inlet NO _x concentrations and exhaust temperatures are in the range specified for the particular catalyst. (b) Catalyst Poisoning Another parameter that can affect the performance of the catalyst is poisoning due to certain metals or chemicals (ammonium sulfate) in the exhaust stream and fouling or masking due to particulate matter plugging or covering the catalyst. In SCR systems, ammonia usually |

| Table 7 - - NO _x BACT Control Analysis | |
|---|--|
| Control technology | Evaluation |
| <p>Selective Catalytic Reduction (SCR)</p> <p>Technically Feasible – No</p> <p>BACT - No</p> | <p>diluted with air or steam, is injected through a grid system into the exhaust gas stream upstream of a catalyst bed. On the catalyst surface, the ammonia reacts with NO_x to form molecular nitrogen and water. The function of the catalyst is to effectively lower the activation energy of the NO_x decomposition reactions.</p> <p>SCR systems are highly susceptible to catalyst poisoning due to contamination of the catalyst. Other problems with catalysts are their propensities to fouling and masking. Fouling occurs when the catalyst's cell openings are plugged with a solid material. Masking occurs when the catalyst surfaces are covered with residues, which prevent their contact with the flue gas.</p> <p>(c) With Baghouse SCR in conjunction with a baghouse is also not technically feasible because of the difference in the operating temperature range for the SCR and can also result in the potential blinding of the bags with ammonium sulfate.</p> <p>SCR will not be considered as BACT for this operation.</p> |
| <p>Selective Non-Catalytic Reduction (SNCR) options</p> <p>Technically Feasible – No</p> <p>BACT - No</p> | <p>SNCR is not technically feasible for this operation because of the difference in operating temperature. The operating temperature range for SNCR is 1,600⁰F to 2,000⁰F. The operating temperature of the RHF will be between 2,400⁰F and 2,750⁰F.</p> <p>SNCR is not feasible for this operation because the ammonia reacts with the sulfur of the RHF offgas stream to produce ammonium sulfate. This compound is sticky and corrosive.</p> <p>In addition, construction of a SNCR at different downstream location would inhibit necessary steps of the operation (preheat combustion air, green ball dryers, and pulverizers).</p> <p>SNCR will not be considered as BACT for this operation.</p> |
| <p>Non-Selective Catalytic Reduction (NSCR)</p> <p>Technically Feasible – No</p> <p>BACT - No</p> | <p>A NSCR is not technically feasible for this operation because in order to operate properly, the combustion process must be near-stoichiometric. It is a post combustion add-on exhaust gas treatment system. It is often referred to as "three-way conversion" catalyst since it reduces NO_x, unburdened hydrocarbons, and CO simultaneously. Under this condition, in the presence of a catalyst, NO_x is reduced by CO, resulting in nitrogen and carbon dioxide. This typically employed in clean gas services such as natural gas fired turbines. The exhaust gas of the RHF is not considered near-stoichiometric due to the operating requirements of the process.</p> <p>NSCR will not be considered as BACT for this operation.</p> |

NO_x Existing BACT Emission Limitations - - RHF

The use of the low excess air design of the RHF is determined to be the BACT control technology for the control of NO_x emissions from the RHF.

Search of the RACT/BACT/LAER Clearinghouse resulted in the following list of sources for NO_x BACT limits for RHF's. Limits are arranged in an ascending order.

| Table 8 - - NO _x BACT Limits for RHF's | | | |
|--|--------------------------------------|-----------------|--|
| Company Name | NO _x Limits | | Control Technology |
| Iron Dynamics, Inc., (IDI), IN (96 tons/hour) | 1.25 lbs/ton of charged material | 120 lbs/hour | Low NO _x Burners |
| Auburn Nugget, IN (75.521 tons/hour) <i>(proposed)</i> | 2.561 lbs/ton of iron nugget product | 193.41 lbs/hour | Low Excess Air (RHF Inherent Design) and Low NO _x Burners |
| Northshore Mining, Silver Bay, MN Mesabi Nugget Pilot Demonstration Plant | -- | 32.4 tons/year | -- |
| Timken Company Faircrest, OH | 0.14 lbs/MMBtu | 5.16 lbs/hour | Low NO _x Burners |

- (1) Iron Dynamics, Inc., (IDI), IN
 The RHF in IDI used different feedstock and produced different intermediate products from the RHF proposed by Auburn Nugget. Due to the differences in raw materials used and product produced, the PSD BACT limit of IDI's RHF will not be used for the BACT evaluations. (See Table 1 for the comparison).
- (2) Northshore Mining, Silver Bay, MN
 The limits for Northshore Mining Silver Bay, MN were not indicated in the RACT/BACT/LAER Clearinghouse. The limits were specified in their Title V Operating Permit. Northshore Mining, Silver Bay, MN operates a taconite processing plant. This was the first taconite operator in Minnesota. In December 2001, the Minnesota Air Pollution issued an approval for the Pilot Demonstration Research and Demonstration Plant for an iron nugget technology. The rotary hearth furnace was limited to 7,500 hours per year of operation. The tests conducted in this pilot plant were the basis for the proposed PSD BACT limits for Auburn Nugget LLC.
- (3) Timken Company Faircrest, OH - - This unit was never installed.

Proposed NO_x BACT Limit for RHF - - Auburn Nugget LLC, IN

Based on the information provided above, the BACT standards and mass limitations are as follows:

- (1) Low NO_x burners will be used to control NO_x emissions from the RHF.
- (2) The NO_x BACT mass emission limits are 2.561 pounds per ton of iron nugget product and 193.41 pounds per hour, based on a 3-hour block average.
 - (a) NO_x = (75.521 tons/hour)*(2.561 lbs/ton) = 193.41 lbs/hour.
 - (b) These NO_x BACT mass emission limits cover both the emissions from the natural gas combustion and nugget production.

CO and VOC Control Technology Feasibility Study - - RHF

CO and VOC emissions are emitted as byproduct of the iron reduction process and incomplete combustion. The fluxes and binders used in the process contain no volatile organic compounds.

The following control alternatives were evaluated to control CO and VOC emissions from the RHF. The technologies are arranged in a descending order in terms of feasibility and efficiency.

| Table 9 - - CO and VOC Control Technology Evaluations | |
|--|---|
| Technology | BACT Evaluations |
| <p>Thermal Oxidation by Infiltration Air</p> <p>Technically Feasible - Yes BACT - Yes</p> | <p>Air infiltration works by allowing air into the ductwork at the exit of the furnace to provide oxygen for sustained combustion of CO and VOC in the RHF's exhaust. This technology performs the same function as an afterburner without the use of an actual burner because the RHF's flue gases are already above the auto ignition temperature. This technology is feasible for this operation.</p> <p>This technology will be inherently part of the design of the RHF. Based on the pilot study conducted in Mesabi Nugget Pilot Demonstration Plant, Silver Bay, MN, the design can reduced CO and VOC emissions as much as 99% or greater.</p> <p>Auburn Nugget LLC has chosen the thermal oxidation by infiltration air as CO and VOC control technology. Since the control alternative chosen as BACT is the top option, no cost effectiveness analysis is necessary to be conducted.</p> <p>This inherent design control will be considered as BACT for this operation.</p> |
| <p>Thermal Oxidizer</p> <p>Technically Feasible - Yes BACT - No</p> | <p>A thermal oxidizer uses high temperature and residence time to oxidize CO and VOC to carbon dioxide and water vapor. This may be accomplished using an add-on control device or with a duct burner. If a duct burner is used, the ductwork must be designed to provide sufficient residence time for complete oxidization to occur.</p> <p>This technology is feasible for this operation. Since this technology is also feasible, cost analysis was conducted to verify the feasibility of adding this control device in conjunction with the inherent design control of the RHF. It was determined that thermal oxidation by infiltration air is just as effective as and less costly than an add-on thermal oxidizer.</p> <p>Thermal oxidizer will not be considered as BACT for this operation.</p> |
| <p>Catalytic Oxidizer</p> <p>Technically Feasible - No BACT - No</p> | <p>Catalytic oxidizer uses a bed of catalyst that facilitates the oxidation of combustible gases. The catalyst increases the reaction rate and allows the conversion of CO and VOC at lower temperature than a thermal incinerator.</p> <p>This technology is not technically feasible for this operation because the catalyst will become plugged if operated at the particulate matter concentrations found at the outlet of the RHF and the catalyst gets poison.</p> <p>Catalytic oxidizer will not be considered as BACT for this operation.</p> |
| <p>Good Combustion Practices</p> <p>Technically Feasible - No BACT - No</p> | <p>Good combustion practices limit the formation of CO and VOC by providing sufficient oxygen in the combustion zone of a furnace for complete combustion to occur.</p> <p>This technology is not technically feasible for this operation because the RHF must be operated with low levels of oxygen to create the reducing atmosphere necessary to convert the iron ore to metallic iron.</p> <p>Good combustion practices will not be considered as BACT for this operation.</p> |

The use of the Thermal Oxidation by Infiltration Air Design of the RHF is determined to be the BACT control technology for the control of CO and VOC emissions from the RHF.

CO and VOC Existing BACT Emission Limitations - - RHF

Search of the RACT/BACT/LAER Clearinghouse resulted in the following list of sources CO and VOC BACT limits for RHF's. Limits are arranged in an ascending order.

| Table 10 - - CO BACT Limits for RHF's | | | |
|--|---|----------------|---|
| Company Name | CO Limits | | Control Technology |
| Iron Dynamics, Inc. (IDI), IN (96 tons/hour) | 0.654 lbs/ton of charged material | 146.8 lbs/hour | Afterburner |
| Auburn Nugget, IN (75.521 tons/hour) <i>(proposed)</i> | 0.77 lbs/ton of iron nugget product | 58.15 lbs/hour | Thermal Oxidation by Infiltration Air (RHF Inherent Design) |
| Northshore Mining, Silver Bay, MN Mesabi Nugget Pilot Demonstration Plant | -- | -- | -- |
| Timken Company Faircrest, OH | 0.0084 lbs/MMBtu | 3.1 lbs/hour | -- |

| Table 11 - - VOC BACT Limits for RHF's | | | |
|---|--|---------------|---|
| Company Name | VOC Limits | | Control Technology |
| Iron Dynamics, Inc. (IDI), IN (96 tons/hour) | 0.06 lbs/ton of charged material | 6.23 lbs/hour | Afterburner |
| Auburn Nugget, IN (75.521 tons/hour) <i>(proposed)</i> | 0.074 lbs/ton of iron nugget product | 5.59 lbs/hour | Thermal Oxidation by Infiltration Air (RHF Inherent Design) |
| Northshore Mining, Silver Bay, MN Pilot Demonstration R&D Plant | -- | -- | -- |
| Timken Company Faircrest, OH | 0.0050 lbs/MMBtu | 0.2 lbs/hour | -- |

- (1) Iron Dynamics, Inc. (IDI), IN
 The RHF in IDI used different feedstock and produced different intermediate products from the RHF proposed by Auburn Nugget. Due to the differences in raw materials used and product produced, the PSD BACT limit of IDI's RHF will not be used for the BACT evaluations (See Table 1 for the comparison).
- (2) Northshore Mining, Silver Bay, MN
 No limits were specified in their Title V Operating Permit.

Northshore Mining, Silver Bay, MN operates a taconite processing plant. This was the first taconite operator in Minnesota. In December 2001, the Minnesota Air Pollution issued an approval for the Mesabi Nugget Pilot Demonstration Plant for an iron nugget technology. The rotary hearth furnace was limited to 7,500 hours per year of operation.

The tests conducted in this pilot plant were the basis for the proposed PSD BACT limits for Auburn Nugget LLC.

- (3) Timken Company Faircrest, OH
This unit was never installed.

| |
|---|
| Proposed CO BACT Limit for RHF - - Auburn Nugget LLC, IN |
|---|

Based on the information provided above, the BACT standards and mass limitations are as follows:

- (1) Thermal Oxidation by Infiltration Air Design of the RHF will be used to control CO emissions from the RHF.
- (2) The CO BACT mass emission limits are 0.77 pounds per ton of iron nugget product and 58.15 pounds per hour, based on a 3-hour block average.
 - (a) $CO = (75.521 \text{ tons/hour}) \times (0.77 \text{ lbs/ton}) = 58.15 \text{ lbs/hour}$.
 - (b) These CO BACT mass emission limits covered both the emissions from the natural gas combustion and nugget production.

| |
|--|
| Proposed VOC BACT Limit for RHF - - Auburn Nugget LLC, IN |
|--|

Based on the information provided above, the BACT standards and mass limitations are as follows:

- (1) Thermal Oxidation by Infiltration Air Design of the RHF will be used to control VOC emissions from the RHF.
- (2) The VOC BACT mass emission limits are 0.074 pounds per ton of iron nugget product and 5.59 pounds per hour, based on a 3-hour block average.
 - (a) $VOC = (75.521 \text{ tons/hour}) \times (0.074 \text{ lbs/ton}) = 5.59 \text{ lbs/hour}$.
 - (b) These VOC BACT mass emission limits cover both the emissions from the natural gas combustion and nugget production.

PM and PM₁₀ Control Technology Feasibility Study - - RHF

Particulate is emitted from the RHF due to entrainment of fines in the feed, iron and slag fines. It is also emitted as combustion byproducts.

The following control alternatives were evaluated to control particulate emissions from the RHF. The technologies are arranged in a descending order in terms of feasibility and efficiency.

| Table 12 - - PM and PM ₁₀ Control Technology | |
|---|--|
| Technology | BACT Evaluation |
| <p>Wet Scrubber</p> <p>Technically Feasible - Yes</p> <p>BACT - Yes</p> | <p>Wet scrubber is technically feasible for this operation. Particles from waste gas are removed by capturing the particles liquid droplets and separating the droplets from the gas stream. The droplets transport the particulate out of the gas stream.</p> <p>The typical efficiency of a wet scrubber for this type of operation ranges from 90 to 92%.</p> <p>Wet scrubber technology is chosen because:</p> <p>(a) Based on the Mesabi Nugget Pilot Demonstration Plant, Silver Bay, MN, the wet scrubber reduced the filterable particulate emissions up to 92% efficiency.</p> <p>(b) The wet scrubber is also expected to provide better control of the condensible fraction of particulate matter and acid gases.</p> <p>Wet scrubber will be considered as BACT for this operation.</p> |
| <p>Wet Walled Electrostatic Precipitator (WWESP)</p> <p>Technically Feasible – Yes</p> <p>BACT - No</p> | <p>WWESP is technically feasible for this operation. Particulates are separated from the flue gas stream by the application of electrical forces. The charged particles are attracted to and collected oppositely charged collector plates. Water is used to remove the particulate matter from the collection plate.</p> <p>The typical efficiency of WWESP ranges from 91 to 93%; however, there is no actual or pilot data that can be used for evaluation for this type of operation.</p> <p>Since a wet scrubber has already been proven to operate efficiently for this type of operation, WWESP will not be considered as BACT for this operation.</p> |
| <p>Baghouse (Fabric Filter)</p> <p>Technically Feasible – Yes</p> <p>BACT - No</p> | <p>Baghouse is technically feasible for this operation . Particulate Matter is collected on the surface of the bags (fabric filters) as the gas stream passes through them.</p> <p>The typically control efficiency of baghouses range from 98 to 99%, however, due to high moisture content of the exhaust gas of the RHF, the filters would be saturated with moisture, thus lowering the control efficiency. There is no actual or pilot data that can be used for evaluation for this type of operation. Based on the theoretical analysis of the data gathered from the pilot plant, a baghouse would likely provide better control of the filterable fraction of particulate matter emissions, but less efficient for the condensible fraction of the particulate matter. Based on the Mesabi Nugget Pilot Demonstration Plant, Silver Bay, MN, a baghouse would reduce the particulate emissions up to 49% efficiency.</p> <p>Since a wet scrubber has already been proven to operate efficiently for this type of operation, a baghouse will not be considered as BACT for this operation.</p> |

| Table 12 - - PM and PM ₁₀ Control Technology | |
|--|--|
| Technology | BACT Evaluation |
| Centrifugal Separation (cyclones) Technically Feasible – Yes BACT - No | Cyclones are technically feasible for this operation. Particles are removed by causing the exhaust gas stream to flow in a spiral pattern inside a tube. The larger particles slide down the wall and drop to the bottom of the cyclone where they are removed. Typical emission control rate for multiclones is 50 to 80%. In addition to the There is no actual or pilot data that can be used for evaluation for this type of operation. Since wet scrubber is more effective at controlling emissions, cyclones will not be considered as BACT for this operation. |
| Electrostatic Precipitator (ESP) Technically Feasible – No BACT - No | Particulates are separated from the flue gas stream by the application of electrical forces. The charged particles are attracted to oppositely charged collector plates. Particles on the collector pales are released by rapping and fall into hoppers for collection and removal. ESP is not technically feasible for this operation because the RHF exhaust contains iron, and other conductive materials, which cannot be readily removed from the ESP collector plates. ESP will not be considered as BACT for this operation. |

PM and PM₁₀ Existing BACT Emission Limitations - - RHF

The use of a Wet Scrubber is determined to be the BACT control technology for the control of PM and PM₁₀ emissions from the RHF.

Search of the RACT/BACT/LAER Clearinghouse resulted in the following list of sources for PM and PM₁₀ BACT limits for RHF's. Limits are arranged in an ascending order.

| Table 13 - - PM and PM ₁₀ BACT Limits for RHF's | | | |
|--|--|----------------|--------------------|
| Company Name | PM and PM ₁₀ Limits | | Control Technology |
| Iron Dynamics, Inc. (IDI), IN (96 tons/hour) | 0.0052 gr/dscf | 13.4 lbs/hour | Baghouse |
| Auburn Nugget, IN (75.521 tons/hour) <i>(proposed)</i> | 0.521 lbs/ton of iron nugget product (0.030 gr/dscf) | 39.35 lbs/hour | Wet Scrubber |
| Northshore Mining, Silver Bay, MN Mesabi Nugget Pilot Demonstration Plant | 0.015 gr/dscf | - - | Wet Scrubber |
| Timken Company Faircrest, OH | 0.0080 lbs/MMBtu | 0.28 lbs/hour | - - |

- (1) Iron Dynamics, Inc. (IDI), IN
 The RHF in IDI used different feedstock and produced different intermediate products from the RHF proposed by Auburn Nugget. Due to the differences in raw materials used and product produced, the PSD BACT limit of IDI's RHF will not be used for the BACT evaluations (See Table 1 for the comparison).

- (2) Northshore Mining, Silver Bay, MN
The limits for Northshore Mining Silver Bay, MN were not indicated in the RACT/BACT/LAER Clearinghouse. The limits were specified in their Title V Operating Permit.

Northshore Mining, Silver Bay, MN operates a taconite processing plant. This was the first taconite operator in Minnesota. In December 2001, the Minnesota Air Pollution issued an approval for the Pilot Demonstration Research and Demonstration Plant for an iron nugget technology. The rotary hearth furnace was limited to 7,500 hours per year of operation.

The tests conducted in this pilot plant and taking into account that the scale up of gas volume is not linear with the feed rate were the basis for the proposed PSD BACT limits for Auburn Nugget LLC.

- (3) Timken Company Faircrest, OH
This unit was never installed.

| |
|---|
| Proposed PM and PM₁₀ BACT Limit for RHF - - Auburn Nugget LLC, IN |
|---|

Based on the information provided above, the BACT standards and mass limitations are as follows:

- (1) Wet Scrubber as add-on control will be used to control particulate matter emissions from the RHF.
- (2) The filterable and condensable particulate matter (PM/PM₁₀) BACT mass emission limits are 0.521 pounds per ton of iron nugget product and 39.35 pounds per hour, based on a 3-hour block average.
- (a) $PM/PM_{10} = (75.521 \text{ tons/hour}) \times (0.521 \text{ lbs/ton}) = 39.35 \text{ lbs/hour}$
- (b) These rates were based on overall 91% particulate removal by the wet scrubber at 0.03 grains/dscf.
- $PM/PM_{10} = (153,027 \text{ scfm}) \times (0.03 \text{ gr/dscf}) \times (60 \text{ mins/hour}) \times (1 \text{ lb}/7000 \text{ gr}) = 39.35 \text{ lbs/hour}$
- (c) These particulate BACT mass emission limits cover both the emissions from the natural gas combustion and nugget production.
- (3) The visible emissions from Stack 1001 shall not exceed 3 % opacity.

Lead, Mercury and Beryllium Control Technology Feasibility Study - - RHF

(1) Lead

Lead is emitted from the RHF due to entrainment of fines in the feed, iron and slag fines. It is also emitted as combustion byproducts.

Since lead is metal and surrogate of particulate, the same add-on control device (wet scrubber) chosen for particulate emissions will also be used to control Lead emissions from the RHF. Based on the pilot study conducted at the Mesabi Nugget Pilot Demonstration Plant, Silver Bay, MN, the Lead removal by the wet scrubber was **90%**.

(2) Mercury

Mercury is emitted from the RHF due to entrainment of fines in the feed, iron and slag fines. Mercury emissions are directly related to the amount of mercury contained in the raw materials. Mercury emissions are also emitted as combustion byproducts.

The following control technologies have been evaluated:

- (a) Fuel-related alternatives
- (b) Wet lime or wet limestone scrubber,
- (c) Dry flue gas desulfurization,
- (d) Electrostatic precipitator,
- (e) Fabric filter,
- (f) Wet scrubber, and
- (g) Activated carbon injection.

Since mercury is metal and surrogate of particulate, the same add-on control device (wet scrubber) for particulate emissions will also be used to control mercury emissions from the RHF. The main factor considered in evaluating the add-on control for mercury control was the speciation of mercury.

(a) Elemental mercury

Elemental mercury is difficult to capture in a control device due to its relatively high vapor pressure. Based on the Mesabi Nugget Pilot Demonstration Plant, Silver Bay, MN, 90% of the uncontrolled mercury emissions are in the form of elemental mercury emissions. Neither carbon injection nor any other technology has been shown to be economically feasible to control mercury emissions in its elemental or gaseous form.

(b) Oxidized mercury

Oxidized mercury, when exposed to an elevated pH solution similar to a scrubber water, is readily removed.

Based on the Mesabi Nugget Pilot Demonstration Plant, Silver Bay, MN, the oxidized mercury removed by the wet scrubber was approximately **95%**.

(c) Particle bound mercury

Particle bound mercury is captured in a similar manner as filterable particulate matter. A baghouse is expected to control particle bound mercury, however, baghouses are not effective in controlling elemental and oxidized forms of mercury. Based on Mesabi Nugget Pilot Demonstration Plant, Silver Bay, MN, less than 1% of the mercury entering the scrubber will be in the form of particle bound mercury.

Based on the Mesabi Nugget Pilot Demonstration Plant, Silver Bay, MN, the particle bound mercury removed by the wet scrubber was approximately 65%.

Based on the Mesabi Nugget Pilot Demonstration Plant, Silver Bay, MN, the overall mercury removal by the wet scrubber was 6%.

- (3) Beryllium
 Beryllium is emitted from the RHF due to entrainment of fines in the feed, iron and slag fines. It is also emitted as combustion byproducts.

Since beryllium is metal and surrogate of particulate, the same add-on control device (wet scrubber) for particulate emissions will also be used to control beryllium emissions from the RHF. Based on the pilot study conducted at the Mesabi Nugget Pilot Demonstration Plant, Silver Bay, MN, the beryllium emissions removed by the wet scrubber was 90%.

- (4) Particulate, Lead, Mercury, and Beryllium
 In addition to controlling the particulate emissions from the RHF, the wet scrubber will also control the lead, mercury and beryllium emissions from the RHF.

Lead, Mercury, and Beryllium Existing BACT Emission Limitations - - RHF

- (1) Lead
 Search of the RACT/BACT/LAER Clearinghouse resulted in the following list of sources for lead BACT limits for RHF's. Limits are arranged in an ascending order.

| Table 14 - - Lead BACT Limits for RHF's | | | |
|---|---|-----------------|--------------------|
| Company Name | Lead Limits | | Control Technology |
| Iron Dynamics, Inc. (IDI), IN (96 tons/hour) | 0.00058 lbs/ton of charged material | 0.0557 lbs/hour | Baghouse |
| Auburn Nugget, IN (75.521 tons/hour) <i>(proposed)</i> | 0.018 lbs/ton of iron nugget product | 1.36 lbs/hour | Wet Scrubber |

The RHF in IDI used different feedstock and produced different intermediate products from the RHF proposed by Auburn Nugget. Due to the differences in raw materials used and product produced, the PSD BACT limit of IDI's RHF will not be used for the BACT evaluations (See Table 1 for the comparison).

- (2) Mercury
 Search of the RACT/BACT/LAER Clearinghouse resulted in the following list of sources with mercury limits. Based on a review of the database, the limits listed in the database do not refer to similar emission unit (RHF). Therefore, no source was used for direct comparison as BACT.

| Table 15 - - Steel Mills with Mercury Limits | |
|--|----------------------|
| Source Name | |
| Beta Steel, IN | Nucor Yamato, AR |
| Chaparral Steel, TX | Qualitech, IN |
| Harrison Steel, IN | SDI Dekalb, IN |
| Inland Steel, IN | SDI, Whitley, IN |
| North Star Steel, MI | SDI, Hendricks, IN |
| Nucor Steel, IN | Timken Faircrest, OH |

- (3) Beryllium
Search of the RACT/BACT/LAER Clearinghouse resulted in no source with beryllium limits. Based on this, no source was used for direct comparison as BACT

| |
|--|
| Proposed Lead, Mercury and Beryllium BACT Limit for RHF - - Auburn Nugget LLC, IN |
|--|

Based on the information provided above, the BACT standards and mass limitations are as follows:

- (1) Control Technology
Wet Scrubber will be used to control lead, mercury and beryllium emissions from the RHF.
- (2) Lead
The Lead BACT mass emission limits are 0.018 pounds per ton of iron nugget product and 1.36 pounds per hour, based on a 3-hour block average.
- (a) $\text{Lead} = (75.521 \text{ tons/hour}) \times (0.018 \text{ lbs/ton}) = 1.36 \text{ lbs/hour}$.
- (b) These lead BACT mass emission limits cover both the emissions from the natural gas combustion and nugget production.
- (c) These rates were based on 90% lead removal by the wet scrubber.
- (3) Mercury
The Mercury BACT mass emission limits are 0.001 pounds per ton of iron nugget product and 0.076 pounds per hour, based on a 3-hour block average.
- (a) $\text{Mercury} = (75.521 \text{ tons/hour}) \times (0.001 \text{ lbs/ton}) = 0.076 \text{ lbs/hour}$.
- (b) These Mercury BACT mass emission limits cover both the emissions from the natural gas combustion and nugget production.
- (c) These rates were based on 6% mercury removal by the wet scrubber.
- (4) Beryllium
The Beryllium BACT mass emission limits are 0.003 pounds per ton of iron nugget product and 0.226 pounds per hour, based on a 3-hour block average.
- (a) $\text{Beryllium} = (75.521 \text{ tons/hour}) \times (0.003 \text{ lbs/ton}) = 0.226 \text{ lbs/hour}$.
- (b) These Beryllium BACT mass emission limits cover both the emissions from the natural gas combustion and nugget production.
- (c) These rates were based on 90% beryllium removal by the wet scrubber.

Emissions from the Green Ball Dryer, Product Separator/Dryer, Coal #1 Pulverizer/Dryer, Coal #2 Pulverizer/Dryer, Flux Pulverizer/Dryer, and Ore Dryer

There are at least six (6) dryers in this proposed iron nugget production plant. These dryers are used to remove the moisture from the green pellets, raw materials and products. These dryers will be equipped with Low NO_x burners. When available, preheated air will be used to dry materials from the Green Ball Dryers.

| Table 16 - - Dryers | | |
|-----------------------------|--------------------|-------------|
| Dryer ID | Capacity | |
| | (million Btu/hour) | (tons/hour) |
| Green Ball Dryers | 205.2 | 153.248 |
| Product Separator/Dryer | 25.0 | 33.0 |
| Coal #1 Pulverizer/Dryer | 36.0 | 33.0 |
| Coal #2 Pulverizer/Dryer | 9.23 | 9.0 |
| Flux Pulverizer(s)/Dryer(s) | 14.58 | 13.0 |
| Ore Dryer | 25.0 | 125.0 |

Emissions will be from combustion of natural gas and processing of the iron ores. In addition to the emissions from combustion of natural gas fuel, particulate matter emissions will be emitted from these dryers.

Add-on control is considered infeasible due to the potential to emit, capacity, and size of the burners, and lack of exhaust gas capture systems.

Search of the RACT/BACT/LAER Clearinghouse resulted in the following list of sources for particulate matter limits for dryers. Limits are arranged in an ascending order.

Based on a review of the RBLC database, the majority of dryers listed in the database do not refer to similar industry applications. Most of the listed dryers are applications in other industries such as the chemical industry, pulp and paper industry, printing industry, sewage sludge dryers, and various agricultural product dryers for grain, starch, gluten, germ, fibers etc. These listed dryers are not coal or ore dryers and are therefore, not applicable for direct comparison with the present application.

| Table 17 - - PM/PM ₁₀ PSD BACT Limits in the RBLC | | | |
|--|--------------------------|------------------------------|-------------------|
| Company Name | Emission Unit | PSD BACT Limit (grains/dscf) | Pollution Control |
| Iron Dynamics Inc, IN | Coal dryer | 0.0052 | Baghouse |
| Iron Dynamics Inc, IN | Ore dryer | 0.0052 | Baghouse |
| Cargill, IA | Meal dryer 1 | 0.006 | Cyclones |
| Encoal Corp, WY | Dryer | 0.01 | Scrubber |
| Cargill, IA | Meal dryer 2 | 0.01 | Scrubber |
| GCC Dakota, SD | Coal dryer | 0.01 | Baghouse |
| Bungee Corp, IA | Grain dryer | 0.013 | Settling chamber |
| Nucor Steel, UT | Fertilizer dryer | 0.016 | Fabric filter |
| Tarmac America, FL | Blast furnace slag dryer | 0.02 | Baghouse |
| Consolidated Penn, PA | Thermal coal dryer 2 | 0.02 | Scrubber |
| Consolidated Penn, PA | Thermal coal dryer 1 | 0.031 | Scrubber |

(1) Coal Dryers

The table below lists the PSD BACT limits of similar dryers after eliminating the dryers not used for direct comparison.

| Table 18 - - PM/PM ₁₀ PSD BACT Limits in the RBLC for Coal Dryer | | | |
|---|-----------------------------|--|-------------------|
| Company Name | Emission Unit | PSD BACT Limit (grains/dscf) | Pollution Control |
| Iron Dynamics, Inc. IN (existing) | Coal dryer | 0.0052 | Baghouse |
| Iron Dynamics, Inc. IN (pending) (2004) | | 0.01 | |
| GCC Dakota, SD | Coal dryer | 0.01 | Baghouse |
| Auburn Nugget LLC, IN <i>(BACT determined by IDEM)</i> | Coal #1 Pulverizer/Dryer | 0.01 (Filterable only PM) | Baghouse |
| | Coal #2 Pulverizer/Dryer | 0.01 (Filterable only PM) | Baghouse |
| Auburn Nugget LLC, IN <i>(proposed by Auburn Nugget)</i> | Coal #1 Pulverizer/Dryer | 0.015 (Filterable and Condensible (PM/PM ₁₀)) | Baghouse |
| | Coal #2 Pulverizer/Dryer | 0.015 (Filterable and Condensible) (PM/PM ₁₀) | Baghouse |
| Consolidated Penn, PA | Thermal coal dryer 2 | 0.02 | Scrubber |
| Consolidated Penn, PA | Thermal coal dryer 1 | 0.031 | Scrubber |

- (a) Iron Dynamics, Inc., IN
 A pending application is under review for the revision of the particulate emission limits for the coal dryer, based on the compliance stack tests conducted by Iron Dynamics. The limit is being revised from 0.0052 grains/dscf to 0.01 grains/dscf.
- (b) GCC Dakota, SD
 The PSD BACT limit of the coal dryer in GCC Dakota, SC is 0.01 grains/dscf.
- (c) Auburn Nugget LLC, IN
 Based on the two (2) above sources, the filterable particulate matter (PM) emission limit for Auburn Nugget will be 0.01 grains/dscf.

 Auburn Nugget's proposal (0.015 grains/dscf) was considered as PSD BACT for the filterable and condensible fraction PM/PM₁₀.
- (d) Consolidated Pennsylvania Coal, PA
 There are two (2) thermal coal dryers with particulate emission limits of 0.02 gr/dscf and 0.031 gr/dscf and venturi scrubber as control.

Since these PSD BACT limits are less stringent the proposed BACT limits for Auburn Nugget LLC, they were not considered BACT for this proposed plant.

(2) Ore Dryers

The table below lists the PSD BACT limits of similar dryers after eliminating the PSD BACT limits for dryers not used for direct comparison.

| Table 19 - - PM/PM ₁₀ PSD BACT Limits in the RBLC for Ore Dryers | | | |
|---|---------------|---|-------------------|
| Company Name | Emission Unit | PSD BACT Limit (grains/dscf) | Pollution Control |
| Iron Dynamics, Inc. IN (existing) (2002) | Ore dryer | 0.0052 | Baghouse |
| Iron Dynamics, Inc. IN (pending) 2004 | | 0.01 | |
| Auburn Nugget LLC, IN (<i>BACT determined by IDEM</i>) | Ore Dryer | 0.01 (Filterable only PM) | Baghouse |
| Auburn Nugget LLC, IN (<i>BACT determined by IDEM</i>) | Ore Dryer | 0.015 (Filterable and Condensible) (PM/PM ₁₀) | Baghouse |
| Auburn Nugget LLC, IN (<i>proposed by Auburn Nugget</i>) | Ore Dryer | 0.03 | Baghouse |

(a) Iron Dynamics, Inc., IN

A pending application for Iron Dynamics, Inc., is under review for the revision of the particulate emission limits of the ore dryer, based on the compliance stack tests conducted by Iron Dynamics. The limit is being revised from 0.0052 gr/dscf to 0.01 gr/dscf. Since the new filterable and condensible particulate (PM/PM₁₀) PSD BACT limit for IDI was based on actual stack tests, this will be considered the BACT for Auburn Nugget.

Auburn Nugget's proposal (0.03 grains/dscf) was not considered as PSD BACT.

(b) The RBLC did not indicate other sources with ore dryers.

Proposed BACT Limit for the Dryers - - Auburn Nugget LLC, IN

Based on the information provided above, the BACT standards and mass limitations are as follows:

- (1) The Green Ball Dryers shall use natural gas during start up and shutdown periods only or when sufficient preheater air is not available.
- (2) The Product Separator/Dryer, Coal #1 Pulverizer/Dryer, Coal #2 Pulverizer/Dryer Flux Pulverizer(s)/Dryer(s), and Ore Dryer shall use natural gas.
- (3) Each dryer shall be equipped with low-NO_x burners.
- (4) The visible emissions from Stack 1001 shall not exceed 3 % opacity.
- (5) The visible emissions from Stack 1002 shall not exceed 3 % opacity.

(6) The visible emissions from Stack 1003 shall not exceed 3 % opacity.

| Table 20 - - PSD BACT Limits | | | | | | | | |
|---|-----------------|----------|-----------------|----------|---------|----------|---------|----------|
| Dryer ID | SO ₂ | | NO _x | | CO | | VOC | |
| | lbs/ton | lbs/hour | lbs/ton | lbs/hour | lbs/ton | lbs/hour | lbs/ton | lbs/hour |
| Green Ball Dryers (153.248 tons/hour) When using preheated air | 0.0001 | 0.115 | 0.044 | 6.74 | 0.242 | 37.09 | 0.126 | 19.31 |
| Green Ball Dryers (153.248 tons/hour) When using natural gas | 0.001 | 0.14 | 0.22 | 33.76 | 0.33 | 50.65 | 0.132 | 20.23 |
| Product Separator/Dryer (33 tons/hour) | 0.001 | 0.033 | 0.037 | 1.22 | 0.062 | 2.05 | 0.004 | 0.132 |
| Coal #1 Pulverizer/Dryer (33 tons/hour) | 0.001 | 0.033 | 0.053 | 1.75 | 0.090 | 2.97 | 0.006 | 0.198 |
| Coal #2 Pulverizer/Dryer (9 tons/hour) | 0.001 | 0.009 | 0.051 | 0.459 | 0.086 | 0.774 | 0.006 | 0.054 |
| Flux Pulverizer(s)/Dryer(s) (13 tons/hour) | 0.001 | 0.013 | 0.054 | 0.702 | 0.091 | 1.18 | 0.006 | 0.078 |
| Ore Dryer (125 tons/hour) | 0.0001 | 0.0125 | 0.010 | 1.25 | 0.016 | 2.0 | 0.001 | 0.125 |
| <p>Pollutant = (Nominal Process Capacity of the Dryer tons/hour)*(Emission Rate lbs/ton) = lbs/hour</p> <p>These emission rates were based on the pilot study conducted at the Mesabi Nugget Pilot Demonstration Plant, Silver Bay, Minnesota.</p> | | | | | | | | |

Each dryer will be equipped with a baghouse for particulate control. The specifications of the baghouses are summarized in the table below.

| Table 21 - - Dryer's Baghouses | | | | |
|--------------------------------|---|----------------------------|----------------------|--------------------------------|
| Stack ID | Baghouse ID | Grain Loading (grain/dscf) | Flow Rate (dscf/min) | PM/PM ₁₀ (lbs/hour) |
| 1001 | Green Ball Dryers Baghouses | 0.015 (F and C) | 282,017 | 36.26 |
| | Product Separator Baghouse | 0.0052 (F and C) | 49,500 | 2.21 |
| 1002 | Coal #1 Pulverizer/Dryer Baghouse | 0.01 (F only) | 77,468 | 6.64 |
| | | 0.015 (F and C) | | 9.96 |
| | Coal #2 Pulverizer/Dryer Baghouse | 0.01 (F only) | 16,890 | 1.45 |
| | | 0.015 (F and C) | | 2.17 |
| | Flux Pulverizer(s)/Dryer(s) Baghouse(s) | 0.015 (F and C) | 31,572 | 4.06 |
| 1003 | Ore Dryer Baghouse | 0.01 (F only) | 50,000 | 4.29 |
| | | 0.015 (F and C) | | 6.43 |

PM/PM₁₀ = (grain loading grain/dscf)*(flow rate dscf/min)*(1 lb/7000 grains)*(60 mins/1 hour) = lbs/hour

Railcar Unloading and Material Handling

The raw materials consist of iron ore concentrate, coals, fluxes, and binders. These raw materials are delivered by rail, pneumatic truck, or in bulk super sacks with all materials in storage piles and/ or storage bins. The coals and fluxes are pulverized on-site. The only pollutant created and emitted from the material handling operation is particulate matter.

| Table 22 - - Particulate Matter BACT Control technology Analysis | |
|--|---|
| Technology | BACT Evaluation |
| <p>Baghouse (Fabric Filter)</p> <p>Technically Feasible – Yes BACT - Yes</p> | <p>Particulate Matter is collected on the surface of the bags (fabric filters) as the gas stream passes through them.</p> <p>Since particulate matter emitted from this operation are mainly due to abrasion and pulverization, and there is little condensible particulate expected to be emitted, baghouses are the most efficient (99% or greater) in terms of control and energy usage of the control devices that are technically feasible.</p> <p>Baghouse will be considered as BACT for this operation.</p> |
| <p>Wet Scrubber</p> <p>Technically Feasible - Yes BACT - No</p> | <p>Particles from waste gas are removed by capturing the particles liquid droplets and separating the droplets from the gas stream. The droplets transport the particulate out of the gas stream.</p> <p>Wet scrubber is feasible for this operation, however, the BACT chosen is already the top ranking control device, therefore, wet scrubber will not be considered as BACT for this operation.</p> |
| <p>Wet Walled Electrostatic Precipitator (WWESP)</p> <p>Technically Feasible – Yes BACT - No</p> | <p>Particulates are separated from the flue gas stream by the application of electrical forces. The charged particles are attracted to oppositely charged collector plates. Water is used to remove the particulate matter from the collection plate.</p> <p>WWESP is feasible for this operation, however, the BACT chosen is already the top ranking control device, therefore, WWESP will not be considered as BACT for this operation.</p> |
| <p>Centrifugal Separation (cyclones)</p> <p>Technically Feasible – Yes BACT - No</p> | <p>Particles are removed by causing the exhaust gas stream to flow in a spiral pattern inside a tube. The larger particles slide down the wall and drop to the bottom of the cyclone where they are removed.</p> <p>Cyclone is feasible for this operation, however, the BACT chosen is already the top ranking control device, therefore, cyclones will not be considered as BACT for this operation.</p> |
| <p>Electrostatic Precipitator (ESP)</p> <p>Technically Feasible – No BACT - No</p> | <p>Particulates are separated from the flue gas stream by the application of electrical forces. The charged particles are attracted to oppositely charged collector plates. Particles on the collector pales are released by rapping and fall into hoppers for collection and removal.</p> <p>ESP is not feasible for this operation due to the conductive nature of the particulate matter emitted.</p> <p>ESP will not be considered as BACT for this operation.</p> |

PM Existing BACT Emission Limitations - - Material Handling

The following are the PSD BACT standards applicable to Iron Dynamics, Inc., Indiana for their coal and iron ore material handling operations. These will be used as the basis for the PSD BACT standards for Auburn Nugget LLC, Indiana.

- (1) The coal and iron ore receiving shall be conducted in a shed. The air pressure in the shed shall be maintained at a level to ensure that particulate matter does not escape through the doors.
- (2) The front-end loader dropping distance to the material reclaim hoppers shall be less than six (6) feet.
- (3) Water or chemical suppressant shall be applied to the storage piles to minimize fugitive dust as needed. Water shall be applied continuously during stacking, as necessary. The material dropping distance shall be maintained at less than ten (10) feet.
- (4) The opacity of fugitive particulate emissions from the storage piles shall not exceed 10% opacity, based on a 6-minute average.
- (5) The opacity of fugitive particulate emissions from all transfer and discharge points shall not exceed 3% opacity, based on a 6-minute average.

Proposed PM BACT Limit for Material Handling - - Auburn Nugget LLC, IN

Based on the information provided above, the BACT standards and mass limitations are as follows:

- (1) The coal and iron ore receiving shall be conducted in a shed. The air pressure in the shed shall be maintained at a level to ensure that particulate matter does not escape through the doors. The drop point and shed shall each have capture system for particulate matter, which are exhausted to a baghouse for control.
- (2) The front-end loader dropping distance to the material reclaim hoppers shall be less than six (6) feet.
- (3) Water or chemical suppressant shall be applied to the storage piles to minimize fugitive dust as needed. Water shall be applied continuously during stacking, as necessary. The material dropping distance shall be maintained at less than ten (10) feet.
- (4) The opacity of fugitive particulate emissions from the storage piles shall not exceed 10% opacity, based on a 6-minute average.
- (5) The opacity of fugitive particulate emissions from all transfer and discharge points shall not exceed 3% opacity, based on a 6-minute average.
- (6) The filterable particulate matter (PM) BACT for the material handling operations is the use of baghouse with a limit of 0.0052 grains per dry standard cubic feet.

Emergency Generators BACT Analysis

Auburn Nugget LLC is proposing to install emergency generator(s).

An emergency generator is a generator whose sole function is to provide back up power when electric power from the local utility is interrupted. Pursuant to a US EPA memo dated September 6, 1995, potential to emit (PTE) of an emergency generator can be determined on a limited 500 hours per year of operation because inherent physical limitations and operational design can be taken into account. This limited hours of operation is an appropriate default assumption for an emergency generator that is expected to operate under worst-case condition.

The table below shows the emergency generators in the RBLC with their hours of operations. Shorter hours of operations are taken voluntarily by the Permittee. It is clearly shown that most of the recently issued PSD permits in Indiana specified the limited hours of operation as BACT. This is in addition to performing good combustion practice and using low sulfur fuel.

| Table 23 - - Emergency Generators | | | |
|-----------------------------------|--------------------|----------------------|--------------------|
| Source | Limits (hour/year) | Source | Limits (hour/year) |
| Mantua, NJ | 100 | AES, NJ | 500 |
| AES, PR | 200 | Arcadia, IN | 500 |
| Tenaska, IN | 250 | Cogentrix, IN | 500 |
| | | Duke, IN | 500 |
| | | SDI Bar Products, IN | 500 |
| | | Auburn Nugget, LLC | 500 |

Proposed PM BACT Limit for Emergency Generator(s) - - Auburn Nugget LLC, IN

Based on the information provided above, the BACT standards and mass limitations are as follows:

- (1) An emergency generator is a generator whose sole function is to provide back up power when electric power from the local utility is interrupted.
- (2) Each emergency generator shall not operate more than 500 hours per year.
- (3) Good combustion practices shall be performed.

Cooling Towers BACT Analysis

(1) Cooling Towers Design

The theory behind cooling towers is that heat is transferred from water drops to the surrounding air by the transfer of sensible and latent heat. Cooling towers fall into two main sub-divisions:

- (a) Natural draft designs use very large concrete chimneys to introduce air through the media. Due to the tremendous size of these towers (500 feet high and 400 feet in diameter at the base) they are generally used for water flow rates above 200,000 gal/min. Usually these types of towers are only used by utility power stations in the United States.
- (b) Mechanical draft cooling towers are much more widely used. These towers utilize large fans to force air through circulated water. The water falls downward over fill surfaces, which help increase the contact time between the water and the air. This helps maximize heat transfer between the two.

Most cooling towers are designed as simple wet cooling towers, but upon occasion, a tower will be designed to operate as a wet-dry cooling tower. A wet-dry cooling tower adds heat to the airflow prior to discharge through the cooling tower fan stack. The discharge air is warmed above the ambient dew point to eliminate any visible plume that could cause local environmental concerns or hazards to local roadways.

Cooling tower may be the most overlooked piece of equipment at a source. A cooling tower uses a combination of heat and mass transfer to cool process water. If improperly selected or poorly maintained, it will add financial costs, cause a loss in production due to increases in circulation water temperature, and increase electrical operating costs. Emphasis must be placed on properly specified and designed cooling towers that require minimal maintenance. Factors in proper performance of cooling towers are water flow rate, air flow rate, water inlet/outlet temperatures, and ambient bulb temperature.

(2) Auburn Nugget LLC is proposing to install two (2) cooling towers:

- (a) Identified as Cooling Tower 743, with nominal capacity of 23,450 gallons per minute and 0.005% drift rate.
- (b) Identified as Cooling Tower 726, with nominal capacity of 10,350 gallons per minute and 0.005% drift rate.

(3) Existing Cooling Towers with Drift Eliminators in the RACT/BACT/LAER Clearinghouse

The search of the RACT/BACT/LAER Clearinghouse was not limited to steel mills only. There are few sources with cooling towers with no control specified in the RBLC. There is also a wide range of limits of particulates because of the different capacity and numbers of cooling towers in a specific source. PM limits range from 0.0009 pounds per hours to 1.6 pounds per hour. Some BACT limits are also indicated in terms of percent of drifts (0.0005% to 0.01%). Since the emissions from the cooling towers are minimal, and there have been no compliance methods required to demonstrate compliance with the PSD BACT limits, the BACT standards for the cooling towers are usually the manufacturer's specifications that are provided by the applicant.

(4) IDEM's PSD Permits Recently Issued for Similar Cooling Towers

The Best Available Control Technology (BACT) evaluations made for the most recent PSD permits issued in the State of Indiana have gone through extensive analysis. The Office of Air Quality (OAQ) determined that it is not necessary to perform such extensive similar analysis because there have been no changes in the BACT determinations due to the short period of time between evaluations.

- (a) On November 21, 2003, Nucor Steel was permitted under the PSD program to install numerous cooling towers, ranging from 2,400 to 5,000 gallons per minute.

The visible emissions of these cooling towers were limited to 20% opacity, based on a 6-minute average.

- (b) On August 29, 2003, Steel Dynamics, Inc. (SDI), Hendricks County was permitted under the PSD program to install numerous cooling towers, ranging from 2,000 to 26,700 gallons per minute.

The visible emissions of these cooling towers were limited to 20% opacity, based on a 6-minute average.

SDI was required to submit the drift design of the cooling towers upon initial start up of the towers.

| |
|--|
| Proposed PM BACT Limit for the Cooling Towers - - Auburn Nugget LLC, IN |
|--|

Based on the information provided above, the BACT standards and mass limitations are as follows:

- (1) The drift rate from each cooling tower shall not exceed 0.005%.
- (2) The opacity BACT for the cooling towers shall not exceed 20%.

These limits are comparable to the drift rate and opacity limits specified for the most recently issued PSD permits in Indiana with cooling towers in their operations. Auburn Nugget LLC will be required to submit the drift design of the cooling towers upon initial start up of the towers.

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

Appendix C - - Air Quality Analysis
Technical Support Document (TSD)
New Source Review (NSR), Prevention of Significant Deterioration (PSD)
and Part 70 Operating Permit

| Source Background and Description |
|--|
|--|

| | |
|-----------------------|---|
| Source Name: | Auburn Nugget LLC |
| Source Location: | County Road 55 and 42, Butler, IN 46721 |
| Mailing Address: | 221 South Main Street, Auburn, IN 46706 |
| Responsible Official: | Manager |
| County: | DeKalb |
| SIC Code: | 3312 (Steel Mill) |
| NAICS Code: | 331111 |
| Source Categories: | 1 of 28 Listed Source Categories Major PSD Source Major Source under Section 112 of the CAA Part 70 Source |
| Permit Number: | NSR/PSD/Part 70 Permit 033-19475-00092 |
| Air Permit Modeler: | Michael Mosier 317/232-8247 |

| Proposed Project |
|-------------------------|
|-------------------------|

Auburn Nugget proposes to construct and operate a facility to produce iron nuggets in DeKalb County. The facility will produce up to 600,000 metric tons per year of iron nuggets. Principle components will consist of a rotary hearth furnace with off gas treatment system, raw material dryers and pulverizers, reclaim hoppers and conveyor belts, and storage piles.

Keramida Environmental prepared the permit application for Auburn Nugget. The Modeling Section in the Office of Air Quality (OAQ) received the permit application in September 2004. A revised air quality analysis was submitted on January 14, 2005, for PM₁₀ by Keramida. This technical support document provides the air quality analysis review of the permit application.

| Analysis Summary |
|-------------------------|
|-------------------------|

Based on the potential emissions after controls, a PSD air quality analysis was triggered for PM₁₀, SO₂, NO_x, VOC, CO, Lead, Fluorides, Mercury, Beryllium, and Sulfuric Acid Mist. The significant impact analysis determined that modeling concentrations for all pollutants did exceed significant impact levels except for CO. A refined analysis was required for all other criteria pollutants and showed no violation of the NAAQS and the PSD increment. The pre-and post-construction monitoring requirements are not necessary. A Hazardous Air Pollutant (HAP) analysis was performed since they were above the 10 and 25 tons per year thresholds. An additional impact analysis was conducted and showed no significant impact. Based on the modeling results, the source will not have a significant impact upon federal air quality standards.

Air Quality Impact Objectives

The purpose of the air quality impact analysis in the permit application is to accomplish the following objectives. Each objective is individually addressed in this document in each section outlined below.

- Part A Pollutants Analyzed for Air Quality Impact
Establish which pollutants require an air quality analysis based on PSD significant emission rates.
- Part B Good Engineering Practice (GEP), Met Data, Model Used, Receptor Grid
Provide analyses of actual stack heights with respect to Good Engineering Practice (GEP), the meteorological data used, a description of the model used in the analysis, and the receptor grid utilized for the analyses.
- Part C Significant Impact Level/Area (SIA) and Background Air Quality Levels
Determine the significant impact level, the area impacted by the source's emissions and background air quality levels.
- Part D NAAQS and PSD Increment
Demonstrate that the source will not cause or contribute to a violation of the National Ambient Air Quality Standard (NAAQS) or PSD increment if the applicant exceeds significant impact levels.
- Part E Hazardous Air Toxics Analysis and Results
Perform an analysis of any air toxic compound with a health risk factor on the general population.
- Part F Qualitative Analysis
Perform a qualitative analysis of the source's impact on general growth, soils, vegetation and visibility in the impact area with emphasis on any Class I areas.

The nearest Class I area is Kentucky's Mammoth Cave National Park.
- Part G Summarize the Air Quality Analysis
-
- Table 1 -- Significant Emission Rates for PSD
Table 2 -- Significant Impact Analysis
Table 3 -- Preconstruction Monitoring Analysis
Table 4 -- Existing Monitoring Data Used For Background Concentrations
Table 5 -- NAAQS Analysis
Table 6 -- Increment Analysis
Table 7 -- Hazardous Air Pollutant Modeling Results

Part A - Pollutants Analyzed for Air Quality Impact

Applicability

The PSD requirements, 326 IAC 2-2, apply in attainment and unclassifiable areas and require an air quality impact analysis of each regulated pollutant emitted in significant amounts by a major stationary source or modification. Significant emission levels for each pollutant are defined in 326 IAC 2-2-1.

Proposed Project Emissions

Particulate Matter less than 10 microns (PM₁₀), Sulfur Dioxide (SO₂), Nitrogen Dioxide (NO₂), Volatile Organic Compound (VOC)(an Ozone (O₃) precursor), and Carbon Monoxide (CO), Lead, Beryllium, Fluorides, Mercury, and Sulfuric Acid Mist are the pollutants that will be emitted from the proposed project. Therefore, an air quality analysis is required for these pollutants which exceeded their significant emission rates, except as noted, as shown in Table 1:

| Table 1 - - Significant Emission Rates for PSD | | | |
|--|--|---------------------------------------|----------------------------------|
| Pollutant | Total Source Emission Rate (Tons/Year) | Significant Emission Rate (Tons/Year) | Preliminary AQ Analysis Required |
| PM ₁₀ | 484 ³ | 15.0 | Yes |
| NO ₂ | 1110.93 | 40.0 | Yes |
| VOCs (O ₃) ¹ | 114.39 | 40.0 | Yes |
| CO | 516.3 | 100.0 | Yes |
| SO ₂ | 988.93 | 40.0 | Yes |
| Lead | 5.88 | .6 | Yes |
| Beryllium ² | 1.14 | .0004 | Yes –See Footnote Below |
| Fluorides ² | 117.99 | 3 | Yes – See Footnote Below |
| Mercury ² | .21 | .1 | Yes – See Footnote Below |
| Sulfuric Acid Mist ² | 532.44 | 7 | N/A - See Footnote Below |

¹ An air quality analysis is not performed for VOCs because it is a photochemically reactive pollutant and did not exceed an emission threshold of 250 tons per year. A cursory review is performed when the threshold is exceeded but does not involved modeling.

² Beryllium, Fluorides, and Mercury have monitoring concentration thresholds listed in 326 IAC 2-2-4. There is no National Ambient Air Quality Standard for these pollutants. Sulfuric Acid Mist has no monitoring threshold or National Ambient Air Quality Standard. No AQ analysis is required for Sulfuric Acid Mist under the PSD regulations.

³ The original emission rate was 1155.2 tons per year. The new modeled emission rates came from the modeling submitted on January 14, 2005. A reduction of 484 tons per year was identified.

Modeled emission rates came from Table 3-1, pages 9, 10, and 11 of the permit application.

| |
|--|
| Part B – Good Engineering Practice (GEP), Met Data, Model Used, Receptor Grid |
|--|

Stack Height Compliance with Good Engineering Practice (GEP) - Applicability

Stacks should comply with GEP requirements established in 326 IAC 1-7-1. If stacks are lower than GEP, excessive ambient concentrations due to aerodynamic downwash may occur. Stacks taller than 65 meters (213 feet) are limited to GEP, the stack height for establishing emission limitations. The GEP stack height takes into account the distance and dimensions of nearby structures, which would affect the downwind wake of the stack. The downwind wake is considered to extend five times the lesser of the structure's height or width. A GEP stack height is determined for each nearby structure by the following formula:

$$H_g = H + 1.5L$$

Where: H_g is the GEP stack height
 H is the structure height
 L is the structure's lesser dimension (height or width)

Proposed Project Stack

Since the stack height of the modification were below GEP stack height the effect of aerodynamic downwash will be accounted for in the air quality analysis for the project.

Meteorological Data

The meteorological data used in the Industrial Source Complex Short Term (ISCST3) model consisted of 1990 through 1994 surface data from the Fort Wayne Airport Weather Service station merged with the mixing heights from Dayton, Ohio Airport National Weather Service station. The meteorological data was purchased through the National Oceanic and Atmospheric Administration (NOAA) and National Climatic Data Center (NCDC) and preprocessed into ISCST3 ready format using U.S.EPA's PCRAMMET.

Model Description

Keramida Environmental used an older version of ISC3, Version 00101. OAQ used ISC3 Version 02035 to determine maximum off-property concentrations or impacts for each pollutant. All regulatory default options were utilized in the U.S. EPA approved model, as listed in the 40 Code of Federal Register Part 51, Appendix W "Guideline on Air Quality Models".

The Auer Land Use Classification Scheme was used to determine the land use in the area. The area is considered primarily rural; therefore, a rural classification was used.

Receptor Grid

OAQ modeling utilized the same receptor grids generated by Keramida Environmental. The receptor grid extended to approximately 10 kilometers from the plant. OAQ did add discrete receptors on the south side of the property for certain model runs. These receptors sit on an adjoining property line with SDI/IDI. Since all of the proposed emission sources have stack heights less than GEP stack height, receptors were closely spaced (100 meters) near the plant boundary to identify the influence of aerodynamic building downwash.

Part C - Significant Impact Level/Area (SIA) and Background Air Quality Levels

A significant impact analysis is conducted to determine whether a more refined analysis is required.

A significant impact analysis was conducted to determine if the source exceeded the PSD significant impact levels (concentrations). If the source's concentrations exceed these levels, further air quality analysis is required. Modeling for PM₁₀, SO₂, and NO_x was required because the results did exceed significant impact levels. CO did not exceed significant impact levels and refined modeling was not necessary. Significant impact levels are defined by the following time periods in Table 2 below with all maximum-modeled concentrations from the worst case operating scenarios.

| Pollutant | Time Averaging Period | Maximum Modeled Impacts (Ug/M ³) | Significant Impact Level (Ug/M ³) | Refined AQ Analysis Required |
|------------------|-----------------------|--|---|------------------------------|
| PM ₁₀ | 24 Hour | 25.2 | 5 | Yes |
| PM ₁₀ | Annual | 4.3 | 1 | Yes |
| SO ₂ | 3 Hour | 186.7 | 25 | Yes |
| SO ₂ | 24 Hour | 44.9 | 5 | Yes |
| SO ₂ | Annual | 1.21 | 1 | Yes |
| CO | 1 Hour | 117.3 | 2000 | No |
| CO | 8 Hour | 47.2 | 500 | No |
| NO _x | Annual | 1.13 | 1 | Yes |
| Lead | Quarter | 0.009 | None | N/A |

Pre-construction Monitoring Analysis

A comparison of the preliminary modeling results was compared to the PSD preconstruction monitoring thresholds. The results are shown in the table below.

| Pollutant | Time Averaging Period | Maximum Modeled Impact (Ug/M ³) | Demimis Level (Ug/M ³) | Above De Minimis Level |
|------------------|-----------------------|---|------------------------------------|------------------------|
| PM ₁₀ | 24 Hour | 25.2 | 10 | Yes |
| SO ₂ | 24 Hour | 44.9 | 13 | Yes |
| NO ₂ | Annual | 1.13 | 14 | No |
| CO | 8 Hour | 47.2 | 575 | No |
| Lead | 3 Month | 0.009 | 0.1 | No |
| Mercury* | 24 Hour | 0.0060 | 0.25 | No |
| Beryllium* | 24 Hour | .03387 | 0.001 | Yes |
| Fluorides* | 24 Hour | 3.789 | 0.25 | Yes |

* No ambient air quality standard for these pollutants.

For the criteria pollutants, PM₁₀ and SO₂ did trigger the preconstruction monitoring. Auburn Nugget can satisfy the preconstruction monitoring requirement for PM₁₀ and SO₂ since there is an existing air quality monitoring data representative of the area. Even though beryllium and fluorides exceed the preconstruction monitoring deminimis levels, there are no ambient air quality standards for either beryllium or fluorides in Indiana. The Ambient Monitoring Guidelines for Prevention of Significant Deterioration [EPA 450/4-87-007, May 1987] states that as a general rule, modeling impacts are preferred and ambient monitoring for non-criteria pollutants should not be required. More recent guidance from EPA, including the 1990 New Source Review Workshop Manual, reiterates this guidance.

| |
|----------------------------------|
| Background Concentrations |
|----------------------------------|

Applicability

EPA's "Ambient Monitoring Guidelines for Prevention of Significant Deterioration" (EPA-450/4-87-007) Section 2.4.1 is cited for approval of the regional monitoring sites for this area.

Background Monitors

The results from this monitoring site is considered conservative since they are on-site. For all 24-hour background concentrations, the averaged second highest monitoring values were used. Annual background concentrations were taken from the maximum annual values.

It was agreed between Auburn Nugget and IDEM that a conservative approach be taken in place of the preconstruction monitoring requirement.

Table 4 - - Existing Monitoring Data Used For Background Concentrations *

| Pollutant/Year of Data | Monitoring Site | Approximate Distance From Site | Averaging Period | Concentration ug/m3 |
|----------------------------|------------------------|--------------------------------|------------------|---------------------|
| SO ₂ - '95/'96 | Butler SDI | On-site | H2H 3 Hour | 91.7 |
| SO ₂ - '95/'96 | Butler SDI | On-site | H2H 24 Hour | 41.9 |
| SO ₂ - '01/'03 | Michigan City, LaPorte | 165 km | Annual | 13.1 |
| PM ₁₀ - '01/'03 | Butler SDI | On-site | Annual | 29 |
| PM ₁₀ - '01/'03 | Butler SDI | On-site | H2H 24 Hour | 51.7 |
| CO - '01/03 | Fort Wayne, Allen | 37.5 km | H2H 8 Hour | 3664 |
| CO - '01/03 | Fort Wayne, Allen | 37.5 km | H2H 1 Hour | 5805 |
| NOx - '01/03 | Gary, Lake | 195 km | Annual | 37.6 |
| Lead - '95/96 | Butler SDI | On-site | Highest Quarter | 0.01 |

* OAQ used the most conservative values for the air quality analysis. It is standard policy to use the latest 3 years of data.

Part D - NAAQS and PSD Increment

NAAQS Compliance Analysis and Results

IDEM supplied all emission inventories of sources within a 50-kilometer radius of Auburn Nugget. Inventories were taken from IDEM air quality web site.

NAAQS modeling for the appropriate time-averaging periods for SO₂, PM₁₀, NO_x, and lead was conducted and compared to the respective NAAQS limit. OAQ modeling results are shown in Table 5. All maximum-modeled concentrations were conducted and compared to the respective NAAQS limit. All maximum-modeled concentrations during the five years were below the NAAQS limits and further modeling was not required.

| Table 5 - - NAAQS Analysis | | | | | | | |
|----------------------------|------|-----------------------|--|---|-------------------------|-------------------------------|-----------------|
| Pollutant | Year | Time-Averaging Period | Maximum Concentration (ug/m ³) | Background Concentration (ug/m ³) | Total ug/m ³ | NAAQS Limit ug/m ³ | NAAQS Violation |
| SO ₂ | 1994 | 3 Hour (H2H) | 129.6 | 91.7 | 221.3 | 1300 | No |
| SO ₂ | 1993 | 24 hour (H2H) | 32.7 | 41.9 | 74.6 | 365 | No |
| SO ₂ | 1990 | Annual | 1.5 | 13.1 | 14.6 | 80 | No |
| PM ₁₀ * | 1994 | 24 Hour (H2H) | 29.8* | 51.7 | 81.5 | 150 | No |
| PM ₁₀ * | 1991 | Annual (H2H) | 6.4* | 29 | 35.4 | 50 | No |
| NO _x | 1990 | Annual | 10.0 | 37.6 | 47.6 | 100 | No |
| Lead | 1994 | Quarter | 0.009 | 0.01 | 0.019 | 1.5 | No |

* The PM10 modeling provided by the consultant was above NAAQS. This was due to one receptor that was less than a 100 meter distance from DeKalb Agra (an inventory source). This receptor was possibly on DeKalb plant property. OAQ moved that receptor away from DeKalb Agra. All other receptors in that area around DeKalb Agra have concentrations 10-20 times less which are all below the NAAQS.

Analysis and Results of Source Impact on the PSD Increment

Applicability

Maximum allowable increases (PSD increments) are established by 326 IAC 2-2 for PM₁₀. This rule also limits a source to no more than 80 percent of the available PSD increment to allow for future growth.

Source Impact

Since the impacts for SO₂, PM₁₀, NO_x from Auburn Nugget modeled above significant impact levels, a PSD increment analysis for the existing major sources in DeKalb County and its surrounding counties was required.

Results of the increment modeling are summarized in Table 6 below.

| Table 6 - - Increment Analysis | | | | | | |
|--------------------------------|-----------|-----------------------|--|------------------------------------|-------------------------------------|---------------------|
| Pollutant | Year | Time-Averaging Period | Maximum Concentration (ug/m ³) | PSD Increment (Ug/m ³) | Percent Impact on the PSD Increment | Increment Violation |
| SO ₂ | 1994 | 3 Hour (H2H) | 129.6 | 512 | 25.3% | No |
| SO ₂ | 1993 | 24 Hour (H2H) | 32.7 | 91 | 36% | No |
| SO ₂ | 1990 | Annual | 1.5 | 20 | 7.5% | No |
| PM ₁₀ | 1990/1994 | 24 Hour (H2H) | 23.8 | 30 | 79.3% | No |
| PM ₁₀ | 1990/1991 | Annual | 6.0 | 20 | 30% | No |
| NO _x | 1990 | Annual | 10 | 25 | 40% | No |

* The PM₁₀ modeling provided by the consultant showed violations of 80% of the available increment. A culpability study they performed showed Auburn Nugget did not exceed the 80% of the available increment and was not culpable. Different ISC modeling versions were used in the increment analysis. OAQ used ISC version 02035 and the consultant used ISC version 00101. This may explain the differences in concentrations between OAQ and the consultant. Both analyses showed no violations of the increment for PM₁₀.

The results of the increment analysis shows all pollutants for all averaging periods were below 80% of the available increment.

Part E - Hazardous Air Toxics Analysis and Results

The OAQ presently requests data concerning the emission of 189 HAPs listed in the 1990 Clean Air Act Amendments (CAAA) which are either carcinogenic or otherwise considered toxic and may be used by industries in the State of Indiana. These substances are listed as air toxic compounds on the State of Indiana, Department of Environmental Management, Office of Air Quality's construction permit application Form Y.

Potential emissions of any single HAP from the proposed project are estimated to be greater than 10 tons per year. Potential emissions of aggregate HAPs are estimated to be greater than 25 tons per year. As such, an analysis will be required to have a HAPs analysis.

OAQ performed toxic modeling using the ISCST3 model for all HAPs.

Maximum 8-hour concentrations were determined and the concentrations were recorded as a percentage of each HAP Permissible Exposure Limit (PEL). The PELs were established by the Occupational Safety and Health Administration (OSHA) and represent a worker's exposure to a pollutant over an 8-hour work day or a 40-hour work week.

In Table 7 below, the results of the HAP analysis with the modeled concentrations, 0.5% of the PEL and the CEP benchmarks for each HAP are listed.

All HAPs concentrations were modeled below 0.5% of their respective PELs except for Beryllium. The 0.5% of the PEL represents a safety factor of 200 taken into account when determining the health risk of the general population.

Beryllium and Manganese was above the one in a million cancer risk but below the one in ten thousand cancer risk considered a level of concern.

| Table 7 - - Hazardous Air Pollutant Modeling Results | | | | |
|--|---|----------------------------------|---|---|
| HAP | Maximum 8-hour Concentration (ug/m ³) | 0.5% of PEL (ug/m ³) | Maximum Annual Concentration (ug/m ³) | NATA/CEP Benchmark (ug/m ³) |
| Acetaldehyde | 0.01205 | 1800 | 0.00016 | 0.45 |
| Acetonitrile | 0.00096 | 350 | 0.00001 | 60 |
| Arsenic | 0.00170 | 0.05 | 0.00002 | 0.00023 |
| Benzene | 0.00629 | 16 | 0.00009 | 0.13 |
| Benzo(a)anthracene | 0.00000 | -- | 0.00000 | 0.0091 |
| Benzo(a)pyrene | 0.00000 | -- | 0.00000 | 0.00091 |
| Benzo(b)fluoranthene | 0.00000 | -- | 0.00000 | 0.0091 |
| Benzo(k)fluoranthene | 0.00000 | -- | 0.00000 | 0.0091 |
| Beryllium | 0.06897 | .01 | 0.00140 | 0.00042 |
| Cadmium | 0.00072 | .025 | 0.00001 | 0.00056 |
| Chromium | 0.00562 | 2.5 | 0.00008 | * |
| Chrysene | 0.00000 | -- | 0.00000 | 0.091 |
| Cobalt | 0.00031 | 0.5 | 0.00000 | 0.005 |
| Dibenz(ah)anthracene | 0.00000 | -- | 0.00000 | 0.00083 |
| Dichlorobenzene | 0.00011 | 2250 | 0.00000 | 0.091 |
| 7,12-Dimethylbenz(a)anthracene | 0.00001 | -- | 0.00000 | 0.00014 |
| Formaldehyde | 0.01094 | 4.65 | 0.00038 | 0.077 |
| Hexane | 0.26299 | 9000 | 0.00904 | 200 |
| Hydrogen Fluoride | 8.23860 | 2000 | 0.34980 | -- |
| Indeno(1,2,3-cd)pyrene | 0.00000 | -- | 0.00000 | 0.0091 |
| Manganese | 9.56395 | 25 | 0.19402 | 0.05 |
| Mercury | 0.01236 | 0.5 | 0.00017 | 0.3 |
| Naphthalene | 0.00009 | 250 | 0.00000 | 3 |
| Nickel | 0.00483 | 5 | 0.00007 | 0.0038 |
| Phosphorus | 0.02358 | 0.5 | 0.00032 | -- |
| Selenium | 0.00165 | 1 | 0.00002 | 20 |
| Styrene | 0.00306 | 2100 | 0.00004 | 1000 |
| Toluene | 0.00550 | 3750 | 0.00008 | 400 |

* This NATA/CEP Benchmark applies to chromium VI and not chromium.

Part F – Qualitative Analysis

Additional Impact Analysis

All PSD permit applicants must prepare additional impacts analysis for each pollutant subject to regulation under the Act. This analysis assesses the impacts on soils and vegetation, caused by any increase in emissions of any regulated pollutant from the source. The Auburn Nugget PSD permit application provided an additional impact analysis performed by Keramida Environmental.

Economic Growth

The project did not create a significant need for new housing for employees during installation and operation of the facility. During a meeting with the company, 100 permanent jobs and 400 construction jobs will be created. Most employees will be drawn from the nearby population, so that additional housing is not required. Given the employees required by Auburn Nugget will be drawn from the present work force, staffing and operation of this project did not have a negative impact on regional residential trends.

Soils and Vegetation Analysis

A list of soil types present in the general area was determined. Soil types include the following: Silty and Clayey Lacustrine deposits, and Clayey Glacial Till.

Vegetation in the vicinity of the proposed facility consists mainly of grasses. No sensitive aspects of the soil and vegetation in the area surrounding the facility have been identified. The secondary NAAQs, which establish the ambient concentration levels to protect soil or vegetation, will not be violated.

Federal Endangered Species Analysis

Federally endangered or threatened species are listed by the U.S. Fish and Wildlife Service; Division of Endangered Species for Indiana and includes 12 species of mussels, 4 species of birds, 2 species of bat and butterflies and 1 specie of snake. The mussels and birds listed are commonly found along major rivers and lakes while the bats are found near caves. The facility is not expected to have any additional adverse effects on the habitats of the species than what has already occurred from the industrial and residential activities in the area.

Federally endangered or threatened plants as listed by the U.S. Fish and Wildlife Service, Division of Endangered Species for Indiana list two threatened and one endangered species of plants. The endangered plant is found along the sand dunes in northern Indiana while the two threatened species do not thrive in industrialized and residential areas. The facility is not expected to impact the area.

Additional Analysis Conclusions

The nearest Class I area to the proposed facility is Mammoth Cave National Park in Kentucky outside the 100 km Class I range. Thus no visibility analysis is required.

Finally, the results of the additional impact analysis conclude the operation of the proposed facility will have no significant impact on economic growth, soils, or vegetation in the immediate vicinity or on any Class I area.

Part G - Summary of Air Quality Analysis

Auburn Nugget has applied for a PSD construction permit to construct a facility in DeKalb County. Keramida Environmental Incorporated of Indianapolis, Indiana prepared the PSD application.

DeKalb County is designated as attainment for all criteria.

PM₁₀, SO₂, NO_x, VOCs, CO, Lead, Beryllium, Fluorides, Mercury, and Sulfuric Acid Mist emission rates associated with the proposed facility exceeded the respective significant emission rates.

Modeling results taken from the latest version of the ISC3 model showed PM₁₀, SO₂, and NO_x impacts were predicted to be greater than the significant impact levels.

The NAAQS and increment modeling for those three pollutants showed no violations of the standards.

An air toxic analysis was performed because they were above the thresholds required to do an analysis.

The nearest Class I area is Mammoth Cave National Park in Kentucky over 100 kilometers away from the source.

Additional impact analysis was required but the operation of the proposed facility will have no significant impact.

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

Addendum to the Technical Support Document (TSD)
New Source Review (NSR), Prevention of Significant Deterioration (PSD)
and Part 70 Operating Permit

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| Source Background and Description |
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|-----------------------|--|
| Source Name: | Auburn Nugget LLC |
| Source Location: | County Road 55 and 42, Butler, IN 46721 |
| Mailing Address: | 221 South Main Street, Auburn, IN 46706 |
| Responsible Official: | Manager |
| County: | Dekalb |
| SIC Code: | 3312 (Steel Mill) |
| NAICS Code: | 331111 |
| Source Categories: | 1 of 28 Listed Source Categories Major PSD Source Major Source under Section 112 of the CAA Part 70 Source Clean Unit Source |
| Permit Number: | NSR/PSD/Part 70 Permit 033-19475-00092 |
| Permit Writer: | Iryn Calilung 317/233-5692 |

| |
|--|
| Public Notification and Participation |
|--|

On March 11, 2005, the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) had a notice published in the Auburn Evening Star, stating that Auburn Nugget LLC had applied for an air approval to construct and operate an iron nugget production plant. The public comment period ended on April 11, 2005. The purpose of the 30-day public comment period is to allow anyone the opportunity to review and provide comments regarding the draft permit and its supporting documents. Comments regarding this permit do not demonstrate that the draft permit failed to meet the requirements for a PSD permit.

The IDEM does not amend the Technical Support Document (TSD) and Appendices of the draft permit. They are maintained to document the original review. This addendum to the TSD documents the comments, responses, and revisions made from the time the permit was drafted until a final decision is made. This TSD addendum will address those concerns, and if necessary, amend or deny the draft permit. In many instances, the IDEM has amended the permit and has satisfied both State and Federal regulations.

On April 8, 2005, Auburn Nugget LLC (ANC) submitted comments. On April 11, 2005, Mr. Charles L. Berger on behalf of the Plumbers and Steamfitters, Local 166 submitted comments. In addition to these comments, the Environmental Protection Agency (EPA) Region 5 also submitted comments.

Supplemental information has been submitted by ANC on April 11, 2005.

Appendix A of this TSD addendum documents the revisions made to the draft permit as a result of the comments received.

Auburn Nugget LLC (ANC) Comments

The following summarizes the comments submitted by Steel Dynamics, Inc. (SDI), on behalf of Auburn Nugget LLC (ANC) with the IDEM corresponding responses. The comments with similar subject matter have been combined. The numbering of the comments does not correspond to the numbering of the comments provided ANC. Comments that are administrative or grammatical corrections in nature were not specified, IDEM reviewed the entire draft permit and when appropriate either made the changes or added an explanation.

ANC Comment 1. Part 70 Operating Permit

ANC takes exception that this is the Part 70 permit subject to the full Part 70 rules and regulations. While this plant is a Part 70 source, the Title V application is not due until 12 months after the plant has been operational, as allowed under 326 IAC 2-7-4-(1)(A). ANC, therefore, should not be required to abide by all of the Part 70 permit requirements until such time that the application has been submitted and reviewed. All references to Part should be removed.

Auburn Nugget LLC recommends that Section A.4 (Part 70 Applicability) be clarified to add the Part 70 applicability.

ANC recommends that Condition B.17 (Annual Compliance Certification) be deleted because this is not a Part 70 permit.

IDEM Response 1.

The proposed permit for ANC is an approval to construct and to operate. The Indiana state rules have been revised such that IDEM has the authority to incorporate operating conditions and issue an operating approval with the initial construction permit at the same time, as specified in 326 IAC 2-5.1-4(a).

This rule 326 IAC 2-7-4-(1)(A), mentioned by ANC, is applicable for first time Part 70 permit applicants that have been permitted to construct prior to the revision of the Indiana state rules.

There are no changes to the draft permit due to these comments.

ANC Comment 2. Cover Page

ANC recommends changes to the cover page of the permit to clarify when permit conditions are applicable.

IDEM Response 2.

IDEM made the changes to the cover pages as necessary (see Cover Page of the proposed permit in Appendix A of this document).

ANC Comment 3. Identification of the Sections or Conditions Referenced

When citing Sections or Conditions of the permit, ANC asks that the section/condition numbers be included and properly referenced. This will provide clarity and ease in finding the proper sections/conditions that are referenced.

IDEM Response 3.

IDEM agrees and made the changes throughout the permit as applicable (see cover page of the proposed permit, Conditions B.21, C.18, C.19, C.22, D.1.4, D.1.6, D.1.9, D.1.11, D.1.12, D.2.6, D.2.8, D.2.9, D.2.11, D.2.12, D.2.13, D.3.7, D.3.9, D.3.11, D.3.12, D.3.14, D.3.15, D.3.16, D.4.3, D.4.5, D.4.6, D.4.7, D.4.9, D.4.10, D.4.11, D.5.3, D.5.5, D.5.6, D.5.8, D.5.9, D.6.2, D.6.4, D.6.5, D.6.7, D.6.8, D.7.3, D.8.5, D.9.3, and D.9.4 in Appendix A of this document).

ANC Comment 4. Descriptions of the Section D and Emission Units

The descriptions of the unit should be provided for each Section D title.

Section A.1 (General Information) should be revised to indicate that the BACT determinations also fulfill the case-by-case MACT.

Section A.2 is identified as the Emission Unit and Pollution Control Equipment Summary. The compliance monitoring methodologies are incomplete for the RHF emission unit and are not included for other emission units. They should be excluded from this section. Auburn Nugget recommended changes in the description of the emission units.

IDEM Response 4.

IDEM agrees to provide each Section D a title (see the Table of Contents of the proposed permit in Appendix A).

Section A.1 (General Information) was not revised as recommended because the acknowledgement that BACT determinations may fulfill the case by case MACT is not considered general description of the source.

Section A.2 (Emission Unit and Pollution Control Equipment Summary) and description of the emission units in Section Ds of the proposed permit in Appendix A have been revised by changing the word "minimize" to "reduce" (see Section A.2 and Section D description of the emission units in Appendix A of this document).

IDEM did not remove the nominal ratings and compliance monitoring descriptions of the emission units (such as continuous emission monitors).

ANC Comment 5. Responsible Official

The responsible official in Section A.1 (General Information) and supporting documents should be revised to provide flexibility as indicated in 326 IAC 2-7-1(34).

IDEM Response 5.

The general information regarding who is the responsible official of the source has been revised (see Section A.1 in Appendix A of this document). This provides flexibility to the Permittee as long as the responsible official is authorized under 326 IAC 2-7-1(34).

ANC Comment 6. Permit Defense and Permit Shield

ANC recommends that Condition B.1 (Permit No Defense) be specified with a rule cite.

Condition B.1 (Permit No Defense) contradicts the Permit Shield Provision (Condition B.20) and should be removed.

IDEM Response 6.

Condition B.1 (Permit No Defense) has been revised to include the applicable rule cites (see Condition B.1 in Appendix A of this document).

Condition B.1 was not deleted because Condition B.1 pertains to the construction requirements portion of the approval, while Condition B.20 pertains to the operation requirements portion of the approval.

ANC Comment 7. Certification

ANC recommends that Condition B.15 (Duty to Provide Information) be revised because this condition makes nearly every submittal subject to certification (e.g. onsite record searches by inspectors).

ANC recommends that Condition B.16 (Certification) be revised such that certification only covers what is specified in the permit.

IDEM Response 7.

Since the permit being issued is also a Part 70 Operating Permit, the applicable requirements to provide certification will not be deleted. The draft permit has clearly identified submittals or reports that are subject to the responsible official's certification.

There are no changes to the draft permit due to this comment.

ANC Comment 8. Emergency Provisions

Condition B.19(h) (Emergency Provisions) should be deleted because the requirement to report emergencies in the Quarterly Deviation and Compliance Monitoring Report contradicts 326 IAC 2-7-5(3)(C)(i).

IDEM Response 8.

The requirement to report emergencies on a quarterly basis does not contradict 326 IAC 2-7-5(3)(C)(i) because this rule provides IDEM's authority to require submittal of reports at least every 6 months. IDEM has determined that actual emergencies and deviations from the permit's applicable requirements are information that the Permittee should report often. This provides the department and its staff (especially the inspector assigned to the source) updated information to verify as soon as possible the compliance status of the source.

There are no changes to the draft permit due to this comment.

ANC Comment 9. Operational Flexibility

Condition B.26(a)(2)(Operational Flexibility), which requires any preconstruction approval required by 326 IAC 2-7-10.5 to be obtained, should be deleted to be consistent with the rule.

IDEM Response 9.

Condition B.26(a)(2) was not deleted because it is necessary to clarify that changes that are described in 326 IAC 2-7-20(b), 326 IAC 2-7-20(c), or 326 IAC 2-7-20(e) have to obtain preconstruction approvals to satisfy the operation flexibility provided in 326 IAC 2-7-10.

There are no changes to the draft permit due to this comment.

ANC Comment 10. Process Weight Rate (PWR)

Condition C.1(a)(Particulate Emission Limitations For Processes with PWR less than 100 pounds per hour) should be deleted because the 326 IAC 6-3-2 citation is no longer applicable.

IDEM Response 10.

ANC's comment regarding the non-applicability of the rule 326 IAC 6-3-2 is incorrect. This rule is in effect, although, it has not been approved into the Indiana State Implementation Plan (SIP). Since this is the case, the permit identified the requirement to be state enforceable only.

There are no changes to the draft permit due to this comment.

ANC Comment 11. Fugitive Dust Control Plan (FDCP)

The Fugitive Dust Control Plan (FDCP) mentioned in Condition C.5 should be a living document that can be changed without permit modification. The FDCP should be a living document that can be adapted to dynamic operations and, thus, should not be attached to the permit.

Condition D.7.1(b) through (e) (Material Storage, Handling, Transfer and Conveying PSD BACT Limits) should be part of the FDCP.

IDEM Response 11.

Implementing and maintaining the FDCP is part of the BACT requirement under 326 IAC 2-2 for this source, therefore, the requirements of the plan must be included in the permit. This is in addition to the 326 IAC 6-4 requirements. To accommodate the dynamic nature of the FDCP, it was incorporated into the permit as Section E (see Condition C.5 and Appendix E in Appendix A of this document).

ANC Comment 12. Add-on Controls Requirement to be Operated at All Times

Condition C.7 (Operation of Equipment) should be revised to clarify that only necessary and applicable requirements within the scope of regulatory authority are requested by this permit.

Conditions requiring add on controls to operate all times should be removed in each Section D because the requirements are already stated in Condition C.7 (Operation of Equipment).

- Condition D.1.5 (Operation of Add-on Control Devices)
- Condition D.2.7 (Operation of Add-on Control Devices)
- Condition D.3.8 (Operation of Add-on Control Devices)
- Condition D.4.4 (Operation of Add-on Control Device)
- Condition D.5.4 (Operation of Add-on Control Device)
- Condition D.6.3 (Operation of Add-on Control Devices)
- Condition D.7.5 (now D.7.4) (Particulate Matter)

IDEM Response 12.

Condition C.7 is a general overall requirement to operate air pollution control equipment. Each Section D of the permit contains conditions which identify the air pollution control devices applicable to the emission units specified in that Section D. These conditions provide clarity such that each Section D can be used independently.

There are no changes to the draft permit due to these comments.

ANC Comment 13. Submission to US EPA

All references to approval or submittal to US EPA should be eliminated since IDEM has full authority to administer and enforce applicable EPA requirements. If USEPA issues an information request to ANC under its CAA authority, then ANC will respond to that, but such authority does not need to be reflected as a permit condition.

IDEM Response 13.

Condition B.11 (Enforceability) indicates that all terms and conditions in the permit are enforceable by IDEM, US EPA and by citizens in accordance of the Clean Air Act (CAA). Based on this, the US EPA may request additional information or reports regardless of whether it is specified in this source's permit. IDEM determined that specifying the US EPA, where applicable, provides clarity.

There are no changes to the draft permit due to this comment.

ANC Comment 14. No Authority

The following conditions should be deleted because authority is lacking for these provisions even for Part 70 permits:

- Condition B.21 (Deviations from Permit Requirements and Conditions)
- Condition C.15 (Pressure Gauge and Other Instrument Specifications)
- Condition C.18 (CRP)
- Condition D.2.9 (Baghouse Parametric Monitoring)
- Condition D.2.10 (Baghouse Inspections)
- Condition D.2.11 (Broken or Failed Bag Detection)
- Condition D.2.13(a) (Reporting Requirements)
- Condition D.3.12 (Baghouse Parametric Monitoring)
- Condition D.3.13 (Baghouse Inspections)
- Condition D.3.14 (Broken or Failed Bag Detection)
- Condition D3.16 (Baghouse Inspections)
- Condition D.4.7 (Baghouse Parametric Monitoring)
- Condition D.4.8 (Baghouse Inspections)
- Condition D.4.9 (Broken or Failed Bag Detection)
- Condition D.4.11 (Reporting Requirements)
- Condition D.5.6 (Baghouse Parametric Monitoring)
- Condition D.5.7 (Baghouse Inspections)
- Condition D.5.8 (Broken or Failed Bag Detection)
- Condition D.6.5 (Baghouse Parametric Monitoring)
- Condition D.6.6 (Baghouse Inspections)
- Condition D.6.7 (Broken or Failed Bag Detection)
- Condition D.8.1 (Paved Roadways)
- Condition D.9.4 (Reporting Requirements)

IDEM Response 14.

There are no changes to the following conditions due to these comments because applicable rule cites have already been specified: Conditions B.21, C.15, and C.18.

Additional recommended changes in Condition B.21 were not accommodated because they were not consistent with the rule language.

Each of the conditions that ANC claims are lacking authority has been identified with the following proper rule cites: 326 IAC 2-2, 326 IAC 2-7-5(3), and 326 IAC 2-7-19 (see Conditions D.2.9, D.2.10, D.2.11, D.2.13(a), D.3.12, D.3.13, D.3.14, D3.16, D.4.7, D.4.8, D.4.9, D.4.11, D.5.6, D.5.7, D.5.8, D.6.5, D.6.6, D.6.7, D.8.1, and D.9.4 in Appendix A of this document).

The Part 70 permit program has the authority to specify and require compliance monitoring, reporting and recordkeeping to make sure the Permittee complies with applicable requirements on a continuous basis. The above mentioned conditions were not deleted.

ANC Comment 15. Consistency and Clarity

The following conditions should be revised to be consistent with the rule, simplify the permit language or clarify permit applicability.

- Condition B.6 (Significant Source Modification)
- Condition B.19 (Emergency Provisions)
- Condition C.19 (Actions Related to Noncompliance Demonstrated by a Stack Test)
- Condition C.20 (Emission Statement)

- . Condition C.21 (General Record Keeping Requirements)
- Condition C.22 (General Reporting Requirements)
- Condition C.23 (Compliance with 40 CFR Part 82 and 326 IAC 22-1)

IDEM Response 15.

IDEM evaluated the recommended changes and have made them as necessary (see Appendix A of this document):

- (a) Condition B.6 (Significant Source Modification) was revised to clarify that the Permittee shall attach the Operation Permit Validation Letter received from the OAQ to this permit.
- (b) Condition B.19 (Emergency Response) was revised to clarify that the PMP required to be revised is the PMP for the emission unit that experienced the emergency. Other recommended changes were not made because they are not consistent with the rule language.
- (c) Condition C.19 (Actions Related to Noncompliance Demonstrated by a Stack test) has been revised to clarify that the response actions taken by the Permittee are the appropriate actions.

IDEM did not add the following recommended language because Condition C.19 already provides the flexibility that the recommendation provides.

"The Permittee is not required to follow the specific procedures set out in (a) and (b) above if it and IDEM, OAQ agree to a different schedule of activities."

- (d) No changes were made to C.20 (Emission Statement), because the recommended changes were not consistent with the rule language.
- (e) Condition C.21 (General Record Keeping Requirements) has been revised by adding the following rule cite: 326 IAC 2-2-8(b)
- (f) The recommended additional conditions for Condition C.22 (General Reporting Requirements) have not been added because deviations from the permit are required to be reported.
- (g) Condition C.23 (Compliance with 40 CFR Part 82 and 326 IAC 22-1) has been revised by deleting the itemized requirements since it will be specified that the Permittee shall comply with applicable requirements.

ANC Comment 16. Post Construction Monitoring

As demonstrated by IDEM modeling, ambient air quality will be protected under the most extreme conditions. As such monitoring for more than 2 years is unjustified and unreasonable. Condition C.24 (Post Construction Monitoring) should also provide closure to the petition request.

IDEM Response 16.

The ambient monitoring sites will provide useful information regarding the impact of ANC on local air quality. The ambient monitoring sites provide a "real world check" and verification on the theoretical computer modeling that demonstrated that ANC will not cause or contribute to a violation of any NAAQS or PSD maximum allowable increase. However, several years of data

may be enough to provide that check, and it would then be appropriate to discontinue the monitoring.

There are several factors that would be considered in any decision to reduce the level of monitoring. Among the factors that would be considered are:

- (a) the production and emissions levels at the plant,
- (b) the compliance history of the plant,
- (c) the margin between the measured concentrations and the applicable National Ambient Air Quality Standards (these are the health-based air quality standards adopted by the U.S. EPA and applicable across the country),
- (d) a comparison of upwind versus downwind concentrations, and
- (e) a comparison of the ambient monitoring data with the predictions of the air quality modeling study.

There are no changes to the draft permit due to this comment.

ANC Comment 17. Permit Re-Opening Clause

ANC recommends that due to the uncertainty of actual operations and emissions, a provision is needed to allow the permit to be modified based on stack test information. This is applicable to each Section D of the permit.

IDEM Response 17.

IDEM agrees to add permit re-opening clauses to the BACT limits as applicable (see Conditions D.1.1, D.2.1, D.2.2, D.3.1, D.3.2, D.3.3, and D.4.1 in Appendix A of this document). These clauses were added because there are no other plants of this type and size in the nation, thus the information on emissions is scarce.

There are several factors that IDEM would consider in reviewing and making any decision to revise the emission limits and standards. Among the factors that would be considered, but not limited to, are: validity of the stack test results, comparison of these results with the limits specified in the permit, and compliance history of the plant. Generally, the revised BACT limits will be established with safety factors taken into consideration. As indicated in the permit, the public also has the opportunity to review and provide comments for such revisions.

ANC Comment 18. PSD BACT Limits In Terms of Pounds Per Ton

The pounds per ton BACT limits for the RHF (Condition D.1.1) should be removed because they are not practical under lower production rates or idling conditions. This is applicable to each Section D of this permit.

IDEM Response 18.

IDEM re-evaluated the PSD BACT limits for the RHF and determined that the limits specified as pounds per ton for the RHF are necessary for VOC, CO and NOx. However, the numerical mass limits have been revised based on the latest and updated information provided by ANC. The averaging periods for these pollutants have also been changed from 3-hour block to 8-hour block or 24-hour block (see Condition D.1.1 in Appendix A of this document).

ANC Comment 19. PSD BACT Limits In Terms of Lbs/MMBtu or Lbs/ton

Since the dryers and other processes may use preheated air, which has no combustion Btu associated with it, the emission limits for pounds per million Btu should be removed and the pounds per hour retained.

IDEM Response 19.

IDEM re-evaluated the PSD BACT limits for the dryers. There are no dryers with limits expressed in pounds per million Btu. The PSD BACT limits were expressed in pounds per ton and pounds per hour.

IDEM determined that the PSD BACT limits expressed in pounds per ton for the dryers for the SO₂ and VOC limits are not necessary and have been removed (see Conditions D.2.1, D.2.2, D.3.1, D.3.2, and D.4.1 in Appendix A of this document).

The averaging period for the PSD BACT limits expressed in pounds per ton have not been revised because they are consistent with the averaging period of approved testing methods.

ANC Comment 20. NO₂ as the Criteria Pollutant

According to the NAAQS under the Clean Air Act (CAA), NO_x is not a criteria pollutant. Throughout the permit, NO_x should be changed to NO₂ to reflect the actual pollutant listed in the regulation.

IDEM Response 20.

The Indiana state rules specify NO_x as the regulated pollutant.

The potential to emit NO_x were originally calculated using the assumptions that NO_x emissions consist of 25% NO and 75% NO₂. This is different from the assumptions used for NO_x CEMS certifications, which is 100% NO₂. To address this inconsistency, the NO_x potential to emit and PSD BACT limits were adjusted and assumed to be 100% NO₂ (see Condition D.1.1 in Appendix A of this document).

ANC Comment 21. Opacity as PSD BACT Limit

Condition D.1.1(n) (Stack 1001 Opacity PSD BACT Limit) should not be part of BACT. In addition US EPA has recognized through recent rule modification to allow bag leak detection in lieu of opacity monitoring because opacity readings below 10% opacity are not reliable. Thus 10% limits are proposed for all appropriate Section D opacity limits. With the recent US EPA rulemaking COM for the Subpart AAa NSPS, Auburn Nugget LLC does not feel that additional baghouse monitoring and inspection provisions are warranted.

The following conditions should not be part of BACT. Method 9 is not the appropriate methods for roof monitor since compliance is based on visible emission notations:

- Condition D.1.1(o) (Roof Monitor)
- Condition D.2.3(a) (Stack 1001 and Roof Monitor Opacity PSD BACT Limit)
- Condition D.2.3(b) (Opacity Roof Monitor)
- Condition D.3.4 (Stack 1002 Opacity PSD BACT Limit)
- Condition D.4.1(j) (Ore Dryer Opacity PSD BACT Limit)
- Condition D.5.1(c) (Railcar Unloading Opacity PSD BACT Limit)
- Condition D.6.1(c) (Stack 1001 Fugitive Dust Collection Opacity PSD BACT Limit)
- Condition D.6.1(f) (Stack 1005 Fugitive Dust Collection Opacity PSD BACT Limit)
- Condition D.7.1(d) (Storage Piles Opacity PSD BACT Limit)
- Condition D.7.1(e) (Transfer and Discharge Points PSD BACT Limit)

- - Condition D.8.2 (now (D.8.1) (Roadways Opacity PSD BACT Limits)
- - Condition D.9.1(a) (Cooling Towers Opacity PSD BACT Limits)

IDEM Response 21.

According to 326 IAC 2-2-1(i), BACT means an emissions limitation, including a visible emission standard, based on the maximum degree of reduction for each regulated NSR pollutant that would be emitted from the proposed major stationary source. Opacity is part of BACT because it is a surrogate of particulate matter and it is a reliable compliance indicator. The opacity limit of Stack 1001 has been changed from 3% to 5% to account for realistic readings of the continuous opacity monitor (see Condition D.1.1 in Appendix A of this document).

Method 9 was not specified in the permit as the compliance method to verify compliance for emission units not relying the use of continuous opacity monitors. The Permittee was required to show compliance with the opacity BACT limits by conducting visible emission notations.

ANC Comment 22. Opacity and COM

Due to the uncertainty and interference from moisture from the wet scrubber, ANC suggests the option to employ a COM or to use Method 9 observations to comply with the opacity BACT limit.

- - Condition D.1.9 (Maintenance of COM)
- - Condition D.2.8 (Stack 1001 COM)
- - Condition D.2.9(f) to(g) (Stack 1001 Continuous Opacity Monitoring (COM))

IDEM Response 22.

IDEM retained the requirement for ANC to install, calibrate and use a continuous opacity monitor to comply with the opacity PSD BACT limit for Stack 1001 because a continuous opacity monitor is an excellent compliance tool to show compliance on a continuous basis.

Similar conditions for the use and maintenance of COM specified Section D.2 for the same stack has been deleted to avoid duplication. The new conditions referenced the same conditions in Section D.1 (see Conditions D.2.8 and D.2.12 in Appendix A of this document).

ANC Comment 23. Hazardous Air Pollutants (HAPs)

ANC does not agree there is a relationship in emissions with tons of material produced. Also ANC believes it is beyond mathematical precision and accuracy to take emission numbers beyond 2 or 3 significant digits. Finally, HAPs emissions from trace elements and raw materials are not needed for a HAP minor determination and serve no purpose in this permit. Condition D.1.3 (HAPs Major Limits) should only deal with Manganese.

IDEM Response 23.

Condition D.1.3 (Hazardous Air Pollutants Major Limits) was specified because of the maximum achievable control technology requirements. Since Manganese is the hazardous air pollutant with the most emissions, the condition has been revised by deleting the other hazardous air pollutants with minimal emissions.

To avoid duplication, hazardous air pollutants that are also PSD criteria pollutants (Lead, Mercury, Fluoride and Beryllium) were removed from Condition D.1.3, while Condition D.1.1 has been revised to clarify that the PSD BACT limits for these hazardous air pollutants are also required under the maximum achievable technology requirements (see Conditions D.1.1 and D.1.3 in Appendix A of this document).

ANC Comment 24. Preventive Maintenance Plan (PMP)

Condition B.18(b) (PMP) should be deleted because this language has no legal basis and is impossible to certify in an annual compliance certification.

The rule citation 326 IAC 1-6-3 for PMP should be revised to be consistent with the rule cites specified in the TSD or should be removed for small sources of the plant.

- Condition D.1.4 (PMP)
- Condition D.2.6 (PMP)
- Condition D.3.7 (PMP)
- Condition D.4.3 (PMP)
- Condition D.5.3 (PMP)
- Condition D.6.2 (PMP)
- Condition D.7.3 (PMP)

IDEM Response 24.

IDEM added the rule cite 326 IAC 1-6-3 as mentioned by ANC (see Conditions D.1.4, D.2.6, D.3.7, D.4.3, D.5.3, D.6.2, and D.7.3 in Appendix A of this document).

IDEM determines that the implementation and maintenance of the PMPs even for small emission units of the plant are vital to the proper operation of the entire plant and are part of good operating practices. Preventive maintenance plans are necessary because they serve the purpose of maintaining the equipment to prevent an exceedance of an emission limit or violation of other permit requirements, such as additional NOx emissions may be emitted if burners are not properly maintained. Based on these, the PMP requirements in the above mentioned conditions were not removed.

ANC Comment 25. Testing Schedule

Given the uncertainty of the start up and reaching near maximum production, the testing time periods should be changed from 180 days to 365 days.

- Condition D.1.6 (RHF Testing Requirement)
- Condition D.4.5 (Ore Dryer Baghouse Testing Requirement)

IDEM Response 25.

The testing schedules specified in the draft permit were not changed because IDEM determined that due to the unique design of the plant and since this is the first plant of its kind in full scale production, the Permittee's compliance with the mass emissions limits need to be verified as soon as possible.

There are no changes to the draft permit due to this comment.

ANC Comment 26. Stacks With Multiple Operations

Since each emission unit has its own limit, the requirement with multiple processes which exhaust to the same stack should be deleted.

- Condition D.1.6(h) (RHF Testing Requirements)
- Condition D.2.8(c) (Green Ball Dryers Baghouses Testing Requirements)
- Condition D.3.9(c) (Coal #1 Pulverizer/Dryer Baghouse and Coal #2 Pulverizer/Dryer Baghouse Testing Requirements)
- Condition D.4.5(c) (Ore Dryer Baghouse Testing Requirements)

IDEM Response 26.

IDEM agrees and deleted the above mentioned portions of the conditions (see Conditions D.1.6, D.2.8, D.3.9 and D.4.5 in Appendix A of this document).

ANC Comment 27 RHF VOC Emissions and Compliance

The VOC emissions from the RHF account for less than 25 tons per year. There are no practical methods for continuous emission monitoring of regulated VOC in a high iron environment. Thus a VOC CEM is not warranted.

ANC does not agree with the monitoring provisions for VOC for the RHF because the total VOC is less than 25 tons per year.

IDEM Response 27.

The VOC emissions from the RHF are less than 25 tons per year due to the implementation of the air infiltration inherent design of the rotary hearth furnace. In order to verify the efficiency of this design, the use of VOC CEM is warranted. ANC may apply for a permit modification and request to remove the VOC CEMS if sufficient and reliable data has been gathered to confirm that CO emissions can be used a surrogate parameter to determine compliance with the VOC emission limit.

There are no changes to the draft permit due to this comment.

ANC Comment 28

Condition D.1.10(e) (Maintenance of CEMS Equipment) should be deleted because it is not applicable since CEMS are already required.

IDEM Response 28.

Condition D.1.10(e) of the draft permit was not deleted because this portion of the condition is necessary to clarify that nothing in this permit shall excuse the Permittee from complying with the requirements to operate a continuous emission monitoring system pursuant to 326 IAC 3-5, 326 IAC 2-2, and 40 CFR Part 64.

There are no changes to the draft permit due to this comment.

ANC Comment 29. Scrubber's Additional Compliance Monitoring

The CEMS for the RHF exhaust ensures compliance and proper operation of the control equipment. As such additional requirements under Condition D.1.11 (Scrubber Operation) including parametric monitoring are not justified.

IDEM Response 29.

The requirement to monitor the operation of the wet scrubbers has not been removed because IDEM realizes that observations of the parameters of add on controls are vital to the continuous compliance verification of the plant. However, the frequency has been changed from "once per shift" to "once per day". IDEM also agrees to remove the pressure drop as one of the scrubber's parameters to be monitored (see Condition D.1.11 in Appendix A of this document).

ANC Comment 30. Additional Compliance Monitoring of the Add-on Control Devices

The COM for Stack 1001 ensures compliance and proper operation of the control equipment. As such additional requirements including parametric monitoring are not justified. The following conditions should be deleted:

-- Condition D.2.9 (Baghouse Parametric Monitoring)

- Condition D.2.10 (Baghouse Inspections)
- Condition D.2.11 (Broken or Failed Bag Detection)

IDEM Response 30.

IDEM agrees that the COM is an excellent compliance tool to show compliance, however, supplemental compliance methods are necessary to assure that the add-on control devices (baghouses) are operating properly at all times.

IDEM re-evaluated the frequency of the parametric monitoring and baghouse inspections and decided that instead of once per shift, the parametric monitoring can be conducted on a once per day basis, and the inspection frequency was changed to annually (see Conditions D.2.9 and D.2.10 in Appendix A of this document).

ANC Comment 31. PM and PM₁₀ Distinctions

- (a) There is no relevance to distinguish filterable PM from filterable and condensible PM/PM₁₀. Because filterable and condensible PM₁₀ are not separate criteria pollutants, ANC does not see the need to provide separate limits for filterable PM, and filterable and condensible PM/PM₁₀.

The following conditions should be deleted:

- Condition D.3.1(c) (Coal #1 Pulverizer/Dryer Baghouse Filterable PM)
- Condition 3.2(c) (Coal #2 Pulverizer/Dryer Baghouse Filterable PM)
- Condition D.3.3(b) (Pulverizer(s)/Dryer(s) Baghouse(s) Filterable PM)

- (b) Auburn Nugget opposes the baghouse requirements of 0.0052 gr/dscf for particulate matter unless this requirement specifies filterable particulate matter only (Condition D.2.2(c) (Product Separator/Dryer Baghouse Filterable and Condensible PM/PM₁₀)).

IDEM Response 31.

- (a) According to 326 IAC 2-2-1(i), BACT means an emissions limitation based on the maximum degree of reduction for each regulated NSR pollutant that would be emitted from the proposed major stationary source. PM and PM₁₀ are both regulated NSR pollutants. IDEM distinguishes between filterable PM and Filterable/Condensible PM₁₀, therefore separate limits have to be specified. IDEM itemizes the key points as to why both the filterable and condensible fractions are critical and need to be taken into account for PSD:

- (1) 1 of 28 Source Categories
A permitting agency, such as IDEM, has the obligation to account for all emissions (fugitive and non-fugitive emissions) from a source that is categorized as 1 of the 28 listed source categories undergoing PSD review. ANC belongs to one of these source categories.
- (2) Particulate Matter as the Regulated NSR Pollutant
According to 326 IAC 2-2-1(uu)(5), particulate matter is a regulated pollutant because it is also one of the listed pollutants in 326 IAC 2-2-1(xx).
- (3) PM₁₀ as the Part 70 Regulated Pollutant
PM₁₀ is the particulate fraction that is also considered in the Part 70 program.

For such major source as ANC, condensible PM₁₀ should always be included in the emission inventory when ever the source has the potential to emit PM₁₀.

326 IAC 2-2 and 326 IAC 2-7 both clearly take into account the PM10 condensible fraction.

(4) Test Methods

Method 202 (Determination of Condensible Particulate Emissions from Stationary Sources) is the method to determine the condensible particulate matter emissions from stationary sources. It is intended to represent condensible matter as material that condenses after passing through a filter and as measured by this method. This method may be used in conjunction with Method 201 or 201A if the probes are glass-lined. Using Method 202 in conjunction with Method 201 or 201A, only the train configuration and analysis is addressed by this method. The sample train operation and front end recovery and analysis shall be conducted according to Method 201 or 201A. This method may also be modified to measure material that condenses at other temperatures by specifying the filter and probe temperature. A heated Method 5 out-of-stack filter may be used instead of the in-stack filter to determine condensible emissions at wet sources.

- (b) Upon further evaluation of the application, Condition D.2.2(c) has been clarified that the grain loading limit of 0.0052 gr/dscf is filterable PM only and a separate filterable and condensible PM/PM₁₀ limit has been specified (see Condition D.2.2 in Appendix A of this document).

ANC Comment 32. Railcar Unloading

The Railcar Unloading information in Condition D.7.1 should be moved to Section D.5 which describes the same process.

IDEM Response 32.

IDEM agrees and made the changes as recommended (see Condition D.5.1 in Appendix A of this document).

ANC Comment 33. Small Sources with PSD BACT limits

There are onerous requirements for inconsequential small sources that should be removed, such as locomotives and cooling towers. In addition, the limits can not be certified. The following conditions should be removed:

- Condition D.7.2 (now D.7.1) Silos PSD BACT Limits)
- Condition D.8.2 (Roadways Opacity PSD BACT Limits)
- Condition D.9.1 (Cooling Towers PSD BACT Limits)

IDEM Response 33.

These comments deal with emissions units that have limitations and minimal compliance monitoring, record keeping or reporting, if none at all. IDEM determines that these emission units may not be the main and significant operations but are vital part of the PSD source. These emission units are necessary to operate the entire plant. In addition, the PSD program requires that BACT be determined for each emission unit involved in the proposed major stationary source.

For clarification, there are no locomotives specified in the draft permit.

There are no changes to the draft permit due to these comments.

ANC Comment 34. Clean Units

Requirements for Clean Units are onerous and appear to go beyond federal regulations. Since 3312 is an endangered SIC Code as specified in 326 IAC 2-2.6 (Endangered Industries), these requirements should be removed.

- Condition C.25 (Clean Unit)
- Condition D.1.2 (RHF Clean Unit)
- Condition D.2.4 (Green Ball Dryers Clean Unit)
- Condition D.2.5 (Product Separator/Dryer Clean Unit)
- Condition D.3.5 (Clean Units)
- Condition D.4.2 (Ore Dryer Clean Unit)
- Condition D.5.2 (Railcar Unloading Clean Unit)
- Condition D.7.3 (now D.7.2) (Silos Clean Unit)
- Condition D.8.3 (Paved Roadways Clean Unit)

IDEM Response 34.

It is correct that the SIC Code 3312 is one of the industrial categories indicated in 326 IAC 2-2.6. However this rule (326 IAC 2-2.6) does not apply to ANC because ANC is a new source and did not experience at least 10% decline in production during the calendar year 2001 and 2002.

There are no changes to the draft permit due to these comments.

ANC Comment 35. RHF Revised Potential to Emit

Based on the additional information submitted by Auburn Nugget LLC during the public comment period, the potential to emit of the Rotary Hearth Furnace has changed as follows:

| Table 1 - - Emissions from the Rotary Hearth Furnace (RHF) | | | |
|--|--|---|------------------------------|
| Pollutant | PTE After Control (tons/year) PTE determined during the review of the application prior to public notice. | PTE After Control (tons/year) Revised PTE determined after the public notice of the draft. | |
| SO ₂ | 986.07 | 811.1 | Decrease of 174.97 tons/year |
| NO _x | 847.13 | 928.0 | Increase of 80.87 tons/year |
| CO | 254.7 | 254.7 | No Change |
| VOC | 23.15 | 23.15 | No Change |
| PM/PM ₁₀ | 172.34 | 172.34 | No Change |
| Sulfuric Acid Mist | 531.91 | 218.9 | Decrease of 313.01 tons/year |
| Fluorides | 117.21 | 107.6 | Decrease of 9.61 tons/year |
| Lead | 5.85 | 5.85 | No Change |
| Beryllium | 1.14 | 0.09 | Decrease of 1.05 tons/year |
| Mercury | 0.21 | 0.21 | No Change |
| Manganese | 158.01 | 158.01 | No Change |

IDEM Response 35.

Revisions to the draft permit have been made due to this comment.

| Table 2 - - Revised Emissions from the Rotary Hearth Furnace (RHF) | | | |
|--|--|-------------------------|------------------|
| Pollutant | Revised PTE After Control (tons/year) | Revised PSD BACT Limits | |
| | | (pounds per hour) | (pounds per ton) |
| SO ₂ | 811.1 | 185.18 | 2.45 |
| NO _x | 928.0 | 211.87 | 2.81 |
| Sulfuric Acid Mist | 218.9 | 49.98 | 0.66 |
| Fluorides | 107.6 | 24.57 | 0.33 |
| Beryllium | 0.09 | 0.02 | 0.00026 |
| Pounds per hour = (PTE tons/year)*(2000 lbs/1 ton)*(1 year/8760 hours) Pounds per ton = (Pounds/hour)/(75.521 tons/hour) | | | |

ANC Comment 36.

ANC recommended that the term " within" be changed to" not later than" throughout the permit.

IDEM Response 36.

Unless otherwise specified in the rule, the term "within" has been changed to "no later than" (see Conditions B.7, B.18, C.13, C.16, C.18, C.21, C.22, D.1.6, D.1.12, D.2.8, D.3.9, D.3.10, D.3.15, D.4.5, D.4.10, D.5.9, D.6.8, D.8.5, and D.9.3 and Emergency Occurrence Report in Appendix A of this document).

The Table of Contents has been revised according to the changes made.

Plumbers and Steamfitters, Local 166 Comments

The following re-states the comments submitted by Mr. Charles L. Berger, on behalf of the Plumbers and Steamfitters (PS), Local 166 with the Indiana Department of Environmental Management (IDEM) corresponding responses. The comments with similar subject matter have been combined. The numbering of the comments does not correspond to the sequence of the comments provided by Plumbers and Steamfitters (PS), Local 166.

PS, Local 166 Comment 1. Economic Development

The Plumbers and Steamfitters, Local 166 represents construction workers and their families who are employed in the construction trades in the geographical area of Butler, Indiana. These individuals perform plumbing, pipefitting and steamfitters work in conjunction with construction work including the type of work necessary to construct and install an iron nugget construction plant in Butler, Indiana known as Auburn Nugget. The members of this Union are interested in maintaining a sustainable economy and sustainable economic development that can only be done when sound environmental policies and practices are followed. The proposed permit will result in environmental degradation in the Butler, Indiana area that may very well jeopardize future jobs by making the environment less desirable for anyone to live and derive an income in this area. More importantly, the proposed permit will create a less favorable environmental condition to allow for future economic development. The continued degradation of air quality can and has caused construction moratoriums and other restrictions on growth, which have reduced future employment opportunities for citizens in this state.

The individuals and their families who are represented by Plumbers and Steamfitters, Local 166 work in this community and will suffer the impact of projects that detrimentally affect the environment. All citizens, including the members of our client, breathe the same polluted air that is created and suffer the same health and safety impacts as all other citizens. The Plumbers and Steamfitters, Local 166 and its members have a significant interest in forcing Environmental Laws to protect its members as well as all other workers who are employed in the area, and the project at issue should receive close scrutiny. A project such as this will cause serious environmental harm without providing countervailing economic benefits such as decent wages and benefits and will result in further degradation of the environment in this area. The comments contained herein set out the significant deviations that are contained in the draft permit and application of Auburn Nugget from the actual impact that will occur if the permit is granted in its present form. The applicant's attempt to prevent this draft permit from being reviewed on the basis of a prevention of significant deterioration requirements under Federal Regulations is done without providing the Department of Environmental Management with all of the necessary information and facts. As demonstrated herein, there are significant deviations from accepted calculations and practices that bring into question the fundamental soundness of the application itself. We trust that after a full review of these comments, your department will deny the final permit as requested by the applicant and issue a cease and desist order in the construction and operation of this facility.

IDEM Response 1.

The Clean Air Act (CAA) established requirements and a process for states to improve air quality and preserve healthy air. That process involves regional assessments, planning and reduction strategies as well as strict and rigorous air permitting requirements for all new significant sources of emissions. The CAA does not prohibit the construction of new sources in order to preserve air quality. In fact, one of the premises of the CAA is that, over time, new industries and technologies will become less polluting. The permitting requirements help accomplish this goal, by requiring new sources to use the most up to date pollution control technology. If a source

shows in its permit application that it will meet the strict requirements, it will be issued a permit. That permit will ensure that the source's emissions will be restricted as required by law to protect air quality.

Determining the risk to public health from a particular facility is extremely difficult. IDEM has conducted appropriate analysis of the impacts of the proposed plant on human health and concludes that this plant will not threaten the health of citizens living or working in the vicinity of the plant.

IDEM seriously considers comments from the public and interested parties and as a result has made changes to the permit in response to valid points that have been raised. IDEM does not have a legal basis to deny the permit. The permit was written to assure that ANC will comply with all state and federal applicable requirements.

Federal and State air permitting programs have been established to ensure that new or existing plants will emit air pollutants at a rate that protects the environment and the citizens.

There are no changes to the draft permit due to this comment.

PS, Local 166 Comment 2. Public Notification

As set out above, we object to the issuance of the proposed New Source Review (NSR), Prevention of Significant Deterioration (PSD) and Part 70 Operating Permit ("Permit") for the Auburn Nugget LLC facility in Dekalb County. As a preliminary matter, we note that we were impermissibly denied notice of the submission of the permit application for public comment, despite our specific written request that we be provided with such notice. The Indiana Department of Environmental Management has represented on numerous occasions and in numerous places, including but not limited to its website, official documents and correspondence, that persons interested in being placed on a notice list for permit applications need only write and request placement thereon. Both we and our client took precisely that action, and wrote IDEM on at least two occasions requesting placement on the notice list for the Auburn Nugget permit application. Nonetheless, neither we nor our client received any notice from IDEM regarding the opening of the public comment period on the Auburn Nugget permit application, thereby unlawfully denying us due process and the opportunity to object. By denying us the notice we specifically requested, IDEM has unlawfully deprived us of due process.

IDEM Response 2.

Both Berger and Berger and the Plumbers and Steamfitters, Local 166 are listed in IDEM's list of interested parties for this specific source. However, due to a computer error, both parties were not directly notified of the public comment period for the draft permit. Other forms of public notifications such as newspaper announcement, electronic accessibility of the draft permit in the IDEM website and hardcopy available in the public library, were made by IDEM.

There are no changes to the draft permit due to this comment.

PS, Local 166 Comment 3. Part 70 Applicable Requirements

The proposed permit does not contain the conditions and provisions required by 326 IAC 2-7 or 40 CFR Part 70.

IDEM Response 3.

The proposed permit contains conditions and provisions required under the Part 70 permit program, such as Condition B.9 (Permit Term), Condition C.13 (Compliance Monitoring), and all

the Compliance Determination and Monitoring requirements specified in each Section D of the permit. The appropriate compliance monitoring and testing have been specified in the permit and these are sufficient to assure compliance with state and federal regulations. Significant emission units are monitored once per day; continuous opacity monitor and continuous emission monitors for carbon monoxide (CO), volatile organic compound (VOC), nitrogen oxides (NO_x) and sulfur dioxide (SO₂) have been specified for the rotary hearth furnace (RHF).

There are no changes to the draft permit due to this comment.

PS, Local 166 Comment 4. Preconstruction Monitoring
Preconstruction monitoring should be required before the Permit is issued.

IDEM Response 4.

IDEM has the authority to waive preconstruction monitoring requirement. For this case, preconstruction monitoring is not required because sufficient data are available to be used for the air quality analysis and the air quality impact analysis has shown no significant impact to the national air quality standards.

The Indiana state rules also provide the flexibility to waive the preconstruction monitoring in lieu of post construction monitoring, which is required in this permit.

There are no changes to the draft permit due to this comment.

PS, Local 166 Comment 5. Permit Enforceability, Monitoring and Record Keeping
The permit limits are not enforceable as a practical matter because they do not require adequate monitoring and recordkeeping.

IDEM Response 5.

The appropriate compliance monitoring and testing have been specified in the permit and these are sufficient to assure compliance with state and federal regulations. Significant emission units and their add-on controls, as applicable, are monitored once per day and continuous opacity monitor and continuous emission monitors for CO, VOC, NO_x, and SO₂ have been specified for the RHF. IDEM has also specified stack tests to be performed by the Permittee on a routine basis.

The IDEM, also included the federal requirements 40 CFR Part 64 (Compliance Assurance Monitoring) in the permit. Monitoring and testing requirements are evaluated based on the specific pollutant, if there is a control device, the potential to emit (PTE) before and after control, and attainment status of the source location.

There are no changes to the draft permit due to this comment.

PS, Local 166 Comment 6. RHF PSD BACT
The permit does not require Best Available Control Technology ("BACT") for SO₂, sulfuric acid mist, NO_x, PM/PM10, VOC, CO, fluorides, mercury, lead, or beryllium emissions from the rotary hearth furnace.

IDEM Response 6.

Section D.1 of the proposed permit specifies the PSD BACT limits for the RHF for the regulated pollutants. Appendix A of the Technical Support Document (TSD) documented the steps and process for how these limits and control technologies were determined. Due to the unique design of the proposed operation and due to it being the first of its kind to be constructed in full

scale production, PSD BACT limits were established based on the information available on hand. IDEM has added re-opening clauses for the PSD BACT limits to revise these limits when sufficient and reliable test results are available to use (see Conditions D.1.1, D.2.1, D.2.2, D.3.1, D.3.2, D.3.3, and D.4.1 in Appendix A of this document).

PS, Local 166 Comment 7. Dryers, Cooling Towers and Emergency Generator PSD BACT

The permit does not require BACT for NO_x or PM/PM₁₀ emissions from the dryers, PM/PM₁₀ emissions from the cooling towers, or NO_x, PM/PM₁₀ and SO₂ emissions from the emergency generator.

IDEM Response 7.

Sections D.2, D.3, D.4, and D.9 specify the PSD BACT limits and compliance monitoring requirements for the dryers, cooling towers and emergency generator. Appendix A of the Technical Support Document (TSD) documented the steps and process on how these were determined. IDEM conducted the proper PSD analysis and established the limits and standards per the federal PSD guidance.

There are no changes to the draft permit due to this comment.

PS, Local 166 Comment 8. Air Quality Impacts

The air quality analysis underestimated ambient air quality impacts. It did not include all emission sources, used an improper baseline, did not evaluate construction impacts, did not evaluate visibility, and used incorrect emission estimates. It also failed to evaluate the impact of the project on Mammoth Cave National Park, the nearest Class I area. The Technical Support Document underestimated emissions, failed to include an alternatives analysis, failed to perform an additional impacts analysis, and failed to evaluate ozone transport.

IDEM Response 8.

The air quality analysis conducted for this source is consistent with Indiana's rules and federal requirements for review of proposed sources. The analysis also used the correct potential to emit estimates. Therefore, IDEM properly evaluated the predicted impacts of the proposed source against the ozone standard that was in effect and found that it would not cause or contribute to an exceedance of that standard.

IDEM does not see the need for local visibility impact assessments. A visibility analysis (Level 1) must be done if the proposed source is within 100 kilometers (62 miles) of a Class I area. The very southern portions of Spencer, Perry, and Harrison Counties fall within 100 kilometers of Mammoth Cave, Kentucky, which is a Class I area. (Mammoth Cave's UTM coordinates for the point that is closest to Indiana is Northing 4124.526, Easting 566.448, zone 16.) A source more than 100 kilometers from a Class I area may also be included for analysis if that source is of such a size that the State or Federal Land Manager is concerned about potential emission impacts on a Class I area. ANC is located in an area that is more than 100 kilometers from any Class 1 area.

IDEM has evaluated the impact of this plant during its construction period and the emissions during the construction period are not expected to cause significant impact.

Because of the complex way ozone is formed, it is unlikely that any single source will significantly contribute to an air quality violation. Estimating the impacts on ozone values of an individual source is extremely difficult. Ozone is formed from a wide variety of sources over a broad geographic area. The precise mix of ozone precursors (VOC and NO_x) and meteorology will determine ozone levels under given conditions, and available air quality modeling tools are

of limited accuracy. For this reason, IDEM's analysis of the likely impact of a proposed source on ozone begins with a determination of how much VOC and NO_x the source will contribute to the region-wide inventory.

Ozone chemistry is non-linear and complex, and is dependent upon many factors including:

- Meteorology – sunny, hot days with stagnant or slow moving air masses.
- Mix of VOC/NO_x
- Reactivity of VOC
- Regional Transport of ozone and ozone precursors
- Biogenic VOC – can represent a significant fraction of VOC loading in a rural area. On a reactivity-weighted basis, biogenic VOC plays a major role in ozone formation (see Smokey Mountains and some southern Indiana counties within Hoosier National Forest.)

In general, ozone is a regional pollutant significantly influenced by pollutant transport.

The role of VOC in ozone depends on both the species of VOC and the local mix of ozone precursors.

Studies, performed by US EPA and the Lake Michigan Air Directors Consortium (LADCO), indicate NO_x is a far more potent ozone precursor than CO. Additionally, ambient levels of NO_x are significantly greater than ambient levels of CO.

Ozone transport (ozone and its precursors of NO_x and VOC carried from upwind sources) is considered a large portion of the elevated ozone concentrations during hot, sunny summer days. IDEM modeling computer programs indicates increased ozone with southerly winds and decreased ozone concentrations with a northerly wind. The general nature of ozone production in the area and reductions in emissions from upwind areas will ultimately reduce ozone formation downwind.

There are no changes to the draft permit due to this comment.

PS, Local 166 Comment 9. PM2.5

The impact of the Project on the PM2.5 ambient air quality standard also was not evaluated.

IDEM Response 9.

Dekalb County has been classified as attainment for PM2.5. U.S. EPA has not yet established the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 for PM2.5 emissions. Therefore, until the U.S.EPA adopts specific provisions for PSD review for PM2.5 emissions, it has directed states to regulate PM10 emissions as surrogate for PM2.5 emissions. This permit has properly regulated PM10 emissions.

There are no changes to the draft permit due to this comment.

US EPA Region 5 Comments

The following summarizes the comments submitted by Ethan Chatfield, on behalf of the United States Environmental Protection Agency (US EPA) Region 5, with the Indiana Department of Environmental Management (IDEM) corresponding responses. The comments with similar subject matter have been combined. The numbering of the comments does not correspond to the numbering of the comments as provided by US EPA Region 5.

EPA Comment 1. Major Source Determination

TSD Page 6 of 24: Under the Major Source Determination section IDEM has made the determination that Steel Dynamics Inc. (SDI) and Auburn Nugget LLC (ANC) are separate sources. It is unclear however; the distance between the two sources (i.e. if the properties are connected), if a rail or common haul road will connect both facilities, and the percentage of nuggets produced at ANC that the facility is intending (with or without a contract) to supply to SDI. Please provide more information.

IDEM Response 1.

The ANC's plant will be on land that is contiguous with SDI. The land will be owned by each respective company. A rail spur or conveyor will likely be constructed to deliver nuggets from ANC to SDI. Rail connections will also be constructed that will allow ANC to deliver nugget products to other customers besides SDI.

The actual percentage of nuggets produced at ANC that will be supplied to SDI is not yet finalized and will depend upon factors (such as world metallic prices, actual nugget produced and quality achieved after start up, and other commercial issues) but ANC expects that 70% to 90% of ANC's total production will be sold to SDI. This will vary substantially over the life of the ANC's plant. Based on this, SDI and ANC are considered as two (2) separate sources.

There are no changes to the draft permit due to this comment.

EPA Comment 2. Control Technology

BACT Analysis Page 6 of 31: Has the use of dry sorbent injection been considered in conjunction with the wet scrubbers as a possible best available control technology (BACT)?

IDEM Response 2.

IDEM has evaluated the use of sorbent injection in conjunction with the wet scrubbers for sulfur dioxide (SO₂) emissions control. After taking into account economical, energy and environmental impact of adding a control with minimal additional SO₂ control, IDEM determined that the use of wet scrubbers for SO₂ emissions control is BACT.

There are no changes to the draft permit due to this comment.

EPA Comment 3. RHF SO₂, CO, and NO_x PSD BACT Limits

- (a) BACT Analysis Page 6 of 31: Based on recent sulfur stack test results, the Northshore Mining plant in Silver Bay only emitted an average of 0.24 lbs/hr. Why is BACT for the RHF at this facility being set at 225.13 pounds per hour, over a 1000 times increase? Please provide adequate justification as to why this emission limit is being set so much higher.
- (b) Condition D.1.1 (RHF PSD BACT Limits): Since the SO₂ BACT on the rotary hearth furnace (RHF) is based on a 90% sulfur removal efficiency and the sulfur content of coal

feedstock can vary greatly depending on the source of the coal, it is strongly recommended that a removal efficiency requirement be added to the permit in addition to the emission limitation to ensure maximum sulfur reductions with varied fuel inputs.

- (c) BACT Analysis Page 14 of 31: Based on recent stack test results, the Northshore Mining plant only emitted an average of 0.94 pounds per hour of carbon monoxide (CO) and 0.011 pounds per hour of volatile organic compound (VOC). Even when these emission limits are scaled up for higher production at this facility, the proposed emission limits of 58.15 pounds per hour of CO and 5.59 pounds per hour of VOC seem too high? Please provide adequate justification as to how these limits were set.

IDEM Response 3.

IDEM agrees with the recommendation to add control efficiency for SO₂ for the wet scrubbers (see Condition D.1.1 in Appendix A of this document). The same continuous emission monitor for SO₂ emissions will be used to verify compliance with the control % efficiency by calculating the 24-hour daily geometric average percent reduction using EPA Method Reference 19 or other approved methods and determining the inlet and outlet data.

IDEM's analysis is consistent with the top down BACT methodology laid out in the US EPA New Source Review (NSR) Workshop Manual. This BACT guidance also allows a margin when setting up numerical BACT limits. The pounds per hour emission rates mainly depend on the maximum production rate of the plant. The Northshore Mining Plant is a pilot plant that is a much smaller in production scale and limited hours of operation. The CO and VOC emissions are not only due to incomplete combustion of fuel. They are also emitted as byproducts of the iron reduction processes. Therefore a linear scale up can not be used in such a complicated process with innovative technology. Emissions have been scaled up depending on the sulfur content of the coal, gas flow of the rotary hearth furnace, volatility variability, pellet feed mix and alternate raw materials. There is no specific fixed safety factor that can be used as reference point for establishing emission rates. A safety factor of 25% has been used.

It has to be noted that SO₂, CO, and VOC continuous emission monitoring systems will be installed and used to measure SO₂, CO, and VOC emissions. These will provide accurate emissions rates that can be used and relied upon in future permit actions for this plant.

EPA Comment 4. RHF Mercury PSD BACT Limits and CEMS

BACT Analysis Page 19 of 31: Why was a complete top-down BACT analysis not completed for Lead and Mercury? Although, US EPA Region 5 agrees that elemental mercury is much more difficult to capture in a control device, research has shown that some control devices, such as a wet scrubber are especially poor at collecting elemental mercury. A complete BACT analysis should be completed for mercury, to justifiably remove other control technologies from the BACT analysis. Also, US EPA Region 5 does not necessarily agree with the statement that "neither carbon injection nor any other technology has been shown to be economically feasible to control mercury emissions in its elemental or gaseous form". There is a considerable wealth of research currently being completed on mercury removal. Has IDEM researched the feasibility of other mercury technologies?

Condition D.1.6(d): Mercury continuous emission monitoring systems (CEMS) are currently available and could potentially be used for this application. Given the poor mercury collection efficiency, it may be beneficial to have the facility monitor mercury emissions to ensure compliance and explore ways mercury output can be reduced.

IDEM Response 4.

A complete top-down BACT for mercury was conducted, as documented in Appendix A of the technical support document. BACT is based on the best achievable controls, in practice for similar operations. The BACT determinations for ANC are as strict as any found by, or presented to, IDEM. The use of carbon injection for mercury emissions control has been evaluated. Since there are no other similar operations, either in a full scale or pilot plant, which can be used for comparison, there is not sufficient information to prove the theoretical effectiveness of carbon injection for mercury control for this type of operation. After taking into account the chemistry of the flue gas, which primarily dictates the speciation of mercury emitted, IDEM determined that the use of wet scrubbers for mercury emissions control is BACT.

IDEM agrees that CEMS are the best compliance tools, however, outside of the Part 70 permitting program and 40 CFR Part 75 (Compliance Assurance Monitoring), there are a limited number of State and Federal rules which require a CEMS. IDEM found no application of mercury CEMS technology for steel mills. In lieu of a mercury monitor, the permit was established with the compliance monitoring and reporting that would sufficiently enforce and document the mercury PSD BACT limits. The permit also requires mercury annual stack testing, which is a direct measurement of the amount of mercury being emitted from the stack.

There are no changes to the draft permit due to this comment.

EPA Comment 5. Permit Re-Opener Clause

Condition D.1.1 (RHF PSD BACT Limits): If feasible, it is suggested that IDEM place a permit re-opener in the permit to allow Indiana to decrease an emission limitation after stack testing has been completed at the proposed facility.

IDEM Response 5.

IDEM agrees with the recommendation. Permit re-opener clauses have been added to the permit (see Conditions D.1.1, D.2.1, D.2.2, D.3.1, D.3.2, D.3.3, and D.4.1 in Appendix A of this document).

EPA Comment 6. Wet Scrubber Operation

Condition D.1.1(b) (RHF PSD BACT Limits): The phrase "up to 4 wet scrubbers" is not enforceable. It is suggested that this requirement be changed to state that just "The wet scrubbers shall capture and control the SO₂, ... at all times."

IDEM Response 6.

IDEM agrees with the recommended change and made the changes to the permit (see Condition D.1.1 in Appendix A of this document).

EPA Comment 7. PM and PM10 Distinctions

Conditions D.1.1 (RHF PSD BACT Limits): Why isn't there a separate emission limit for PM in addition to the PM/PM10 condensible/filterable limit, as in other Indiana PSD permits (such as the recent Steel Dynamics Inc. - draft permit no. 183-18426-00030)?

IDEM Response 7.

Since the add-on controls (wet scrubbers) to be installed for the RHF can reliably and efficiently control both the filterable and condensible fractions of the particulate emissions, separate limits are not necessary to be specified.

There are no changes to the draft permit due to this comment.

EPA Comment 8. Testing Methods and Frequency

- (a) Conditions D.1.6, D.2.8 (a-c), D.4.5: There are no test methods specified. Test methods should be specified for all testing requirements to allow the public an opportunity to comment and to allow an accurate comparison of BACT emission limitations with any future proposed limitations.
- (b) Condition D.2.8(b): It is suggested that the testing frequency for the Green Ball Dryers Baghouses be increased to at least once every 2 1/2 years, as required for the RHF.
- (c) Condition D.3.9(a): The NSPS testing requirement specified in 60.254(b)(1) for the Coal Dryers should be explicitly stated in the permit or directly incorporated by reference.
- (d) Condition D.3.10: Since the requirement to perform opacity testing in accordance with Method 9 is explicitly stated in the NSPS without an allowance for alternative methodologies, the phrase "or other methods as approved by the Commissioner" should be removed from the permit condition.

IDEM Response 8.

IDEM agrees with the recommendations and revised the conditions by listing the test methods specific for the pollutant to be tested (see Conditions D.1.6, D.2.8, D.3.9, D.3.10 and D.4.5 in Appendix A of this document). Stack testing is required to be conducted according to EPA approved methodologies. IDEM has staff that are experts in these methodologies. IDEM staff are responsible for reviewing ANC's testing protocols, observing the actual stack tests, and reviewing the results of the stack tests. If IDEM staff do not agree that the testing has been conducted properly, IDEM will require ANC to conduct another test.

IDEM re-evaluated the frequency of the PM and PM10 testing for the Green Ball Dryers Baghouses and has concluded that testing once every 5 years is sufficient. The permit requires numerous requirements for compliance-related monitoring to ensure compliance on a day to day basis, such as the use of a continuous opacity monitor (COM) and baghouse parametric monitoring.

Even though a specific time frame for testing schedule is specified in the permit, IDEM has the authority to request a test earlier than the scheduled time if IDEM sees that there is sufficient reason to warrant a test.

EPA Comment 9. Green Ball Dryers PSD BACT Limits

Conditions D.2.1(b)(2), D.2.1(c), and D.2.1(d): Do the emission limits, in pounds per hour, apply to each individual Green Dryer Baghouse or is this a total? What if only one baghouse is in operation at a time?

IDEM Response 9.

The above mentioned conditions were revised to indicate that the limits in terms of pounds per hour specified in the permit are intended to be the combined total emissions of all of the Green Ball Dryers (see Condition D.2.1 in Appendix A of this document). The PSD BACT limits for the particulate emissions for the Green Ball Dryers are also expressed in grain loading.

EPA Comment 10. Compliance Monitoring

Condition D.6.1 (Fugitive Dust Collection Systems PSD BACT Limits):
How will compliance with the opacity and PM emission limits specified in this condition be demonstrated? Why are there no opacity testing requirements?

IDEM Response 10.

Compliance is sufficiently demonstrated by the fugitive dust collection systems by operating the baghouses at all times when the collection systems are in operation. The Permittee also has to monitor the operating parameters of these baghouses on a routinely basis. The Permittee is not required to conduct opacity testing, however, IDEM staff (such as inspector assigned to the plant) will perform Method 9 or other approved methods to verify compliance. IDEM also has the authority to require testing in the future if it is necessary.

IDEM staff also perform inspections of the plant and other types of surveillance to ensure compliance with the permit limits. Inspections are unannounced. IDEM is also responsible for resolving any noncompliance issues that may arise.

There are no changes to the draft permit due to this comment.

EPA Comment 11. Modeling Data

Why are the high, second high 24 hour and annual averages used for PM10, instead of high, sixth high 24 hour and 5 year annual average?

IDEM Response 11.

The IDEM has always used the high second high 24 hour value and the highest annual average for PM10. For the high second high 24 hour value provided in the Technical Support Document (TSD), it was 29.8 ug/m³. This value was actually not the high second high 24 hour value for the five year period. After reviewing the modeling data, a mistake was made and the correct value is 31.2 ug/m³. IDEM reran the PM10 modeling using the high sixth high 24 hour value and calculated a concentration of 26.3 ug/m³. The high sixth high 24 hour value is 4.9 ug/m³ less than the high second high 24 hour value. It is IDEM's opinion reporting the high second high 24 hour value provides a more conservative modeling analysis than using the high sixth high. This also applies to using a 5 year annual average. IDEM takes the highest annual value over the 5 year period instead of an average. (There is a typo for the PM10 annual in the TSD. OAQ used the highest annual not the high second high.) Again, this provides a more conservative modeling analysis. IDEM has not had problems with applicants meeting this standard for PSD modeling analysis.

There are no changes to the draft permit due to this comment.

EPA Comment 12. Visibility Analysis

The visibility analysis should address local visibility impacts as well as Class I area impacts.

IDEM Response 12.

IDEM does not see the need for local visibility impact assessments. A visibility analysis (Level 1) must be done if the proposed source is within 100 kilometers (62 miles) of a Class I area. The very southern portions of Spencer, Perry, and Harrison Counties fall within 100 km of Mammoth Cave, Kentucky, which is a Class I area. (Mammoth Cave's UTM coordinates for the point that is closest to Indiana is Northing 4124.526, Easting 566.448, zone 16.) A source more than 100 kilometers from a Class I area may also be included for analysis if that source is of such a size that the State or Federal Land Manager is concerned about potential emission impacts on a Class I area. ANC is located in an area that is more than 100 kilometers from any Class 1 area.

There are no changes to the draft permit due to this comment.

EPA Comment 13. Receptors

The write-up talks about moving a receptor. Please provide more detail (how close it was to the nearest source, how close the neighboring receptors were, etc).

IDEM Response 13.

The high receptor in question is at UTM 671600 meters and UTM 4588200 meters. The problem inventory source is DeKalb Agra. DeKalb Agra is at UTM 671496 meters and UTM 4588204 meters. This puts the inventory source within 104 meters of the receptor. Some of the next closest receptors are 696 meters, 796 meters, and 904 meters from Dekalb Agra.

IDEM remodeled the high receptor at UTM 671600 meters and UTM 4588200 meters and made two source groups using the high 6th high 24 hour value.

| Year | 1990 | 1991 | 1992 | 1993 | 1994 |
|--|-------|-------|-------|-------|-------|
| All (ug/m ³) | 162.9 | 167.5 | 173.7 | 175.1 | 218.5 |
| Dekalb Agra only (ug/m ³) | 161.5 | 167.5 | 172.5 | 173.7 | 217.9 |
| Applicant and Other Sources (ug/m ³) | 1.4 | 0 | 1.2 | 1.4 | 0.6 |

This shows extremely high concentrations for this receptor that is 104 meters away from Dekalb Agra. The high concentrations could be due to the receptor being on plant property and Dekalb Agra is characterized as an area source. The contribution for ANC and other sources in the area for those high concentration days is minimal as can be seen by the modeling results.

There are no changes to the draft permit due to this comment.

Recommendation and Conclusion

- (1) Based on the facts, conditions and evaluations made, OAQ recommends to the IDEM Commissioner that the PSD/NSR/Part 70 Permit 033-19475-00092 be approved.
- (2) A copy of the preliminary findings is also available on the Internet at: www.IN.gov/idem/air/permits/Air-Permits-Online.
- (3) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.IN.gov/idem/guides.

IDEM Contact

Questions regarding this proposed PSD permit can be directed to Iryn Calilung at the Indiana Department Environmental Management, Office of Air Quality, 100 North Senate Avenue, Indianapolis, Indiana 46204 or by telephone at (317) 233-5692 or toll free at 1-800-451-6027 extension 3-5692.

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

Appendix A of the Addendum to the Technical Support Document (TSD)
New Source Review (NSR),
Prevention of Significant Deterioration (PSD)
and Part 70 Operating Permit

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| Source Background and Description |
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|-----------------------|--|
| Source Name: | Auburn Nugget LLC |
| Source Location: | County Road 55 and 42, Butler, IN 46721 |
| Mailing Address: | 221 South Main Street, Auburn, IN 46706 |
| Responsible Official: | Manager or designee |
| County: | Dekalb |
| SIC Code: | 3312 (Steel Mill) |
| NAICS Code: | 331111 |
| Source Categories: | 1 of 28 Listed Source Categories Major PSD Source Major Source under Section 112 of the CAA Part 70 Source Clean Unit Source |
| Permit Number: | NSR/PSD/Part 70 Permit 033-19475-00092 |
| Permit Writer: | Iryn Calilung 317/233-5692 |

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| Revisions Made to the Draft Permit |
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This Appendix A to the TSD Addendum documents the revisions made from the time the permit was drafted until a final decision is made.

Changes made to the draft permit are shown in ~~strikeout~~ or **bold** fonts to show the differences.

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**NEW SOURCE REVIEW (NSR)
PREVENTION OF SIGNIFICANT DETERIORATION (PSD)
PART 70 OPERATING PERMIT**

OFFICE OF AIR QUALITY

**Auburn Nugget LLC
County Road 55 and 42
Butler, IN 46721**

(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.

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 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

This permit is issued in accordance with 326 IAC 2-2 Prevention of Significant Deterioration (PSD).

Except as otherwise stated in 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. **Except as otherwise stated in this permit,** ¶ noncompliance with any provision of this permit, except any provision specifically designated as not federally enforceable, constitutes a violation of the Clean Air Act. 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.19** - Emergency Provisions.

| | |
|--|---|
| NSR/PSD/Part 70 Permit 033-19475-00092 | |
| Issued by: DRAFT Paul Dubenetzky, Branch Chief Office of Air Quality | Issuance Date: DRAFT Expiration Date: |

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- D.4.1 Ore Dryer PSD BACT Limits [326 IAC 2-2]
- D.4.2 Ore Dryer Clean Unit [326 IAC 2-2.2]
- D.4.3 Preventive Maintenance Plan (PMP) [326 IAC 2-7-5(13)] [326 IAC 1-6-3]
- Compliance Determination Requirements**
- D.4.4 Operation of Add-on Control Device
Exhausting Through Stack 1003 [326 IAC 2-2]
- D.4.5 Ore Dryer Baghouse Testing Requirements [326 IAC 2-7-6(1) and (6)] [326 IAC 2-2]
- Compliance Monitoring Requirements** [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]
- D.4.6 Visible Emissions Notations [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]
- D.4.7 Baghouse Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]
- D.4.8 Baghouse Inspections [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]
- D.4.9 Broken or Failed Bag Detection [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]
- Record Keeping and Reporting Requirement** [326 IAC 2-7-5(3)] [326 IAC 2-7-19]
- D.4.10 Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]
- D.4.11 Reporting Requirements [326 IAC 2-1-11] [326 IAC 2-2]
[326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.5 FACILITY CONDITIONS -- Railcar Unloading (Stack 1004)

- Emission Limitations and Standards** [326 IAC 2-7-5(1)]
- D.5.1 Railcar Unloading PSD BACT Limits [326 IAC 2-2]
- D.5.2 Railcar Unloading Clean Unit [326 IAC 2-2.2]
- D.5.3 Preventive Maintenance Plan (PMP) [326 IAC 2-7-5(13)] [326 IAC 1-6-3]
- Compliance Determination Requirements**
- D.5.4 Operation of Add-on Control Device
Exhausting Through Stack 1004 [326 IAC 2-2]
- Compliance Monitoring Requirements** [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]
- D.5.5 Visible Emissions Notations [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]
- D.5.6 Baghouse Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]
- D.5.7 Baghouse Inspections [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]
- D.5.8 Broken or Failed Bag Detection [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]
- Record Keeping and Reporting Requirement** [326 IAC 2-7-5(3)] [326 IAC 2-7-19]
- D.5.9 Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.6 FACILITY CONDITIONS -- Fugitive Dust Collection Systems (Stack 1001 and Stack 1005)

- Emission Limitations and Standards** [326 IAC 2-7-5(1)]
- D.6.1 Fugitive Dust Collection Systems PSD BACT Limits [326 IAC 2-2]
- D.6.2 Preventive Maintenance Plan (PMP) [326 IAC 2-7-5(13)] [326 IAC 1-6-3]
- Compliance Determination Requirements**
- D.6.3 Operation of Add-on Control Devices [326 IAC 2-2]
- Compliance Monitoring Requirements** [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]
- D.6.4 Visible Emissions Notations [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]
- D.6.5 Baghouse Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]
- D.6.6 Baghouse Inspections [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]
- D.6.7 Broken or Failed Bag Detection [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]
- Record Keeping and Reporting Requirement** [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

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- D.6.8 Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]
- D.7 FACILITY OPERATION CONDITIONS - - Material Storage handling, transfer, conveying**
 - Emission Limitations and Standards** [326 IAC 2-7-5(1)]
 - ~~D.7.1 Material storage, handling, transfer, and conveying PSD BACT Limits~~ [326 IAC 2-2]
 - D.7.2 **1** Silos PSD BACT Limits [326 IAC 2-2]
 - D.7.3 **2** Silos Clean Unit [326 IAC 2-2.2]
 - D.7.4 **3** Preventive Maintenance Plan (PMP) [326 IAC 1-6-3] [326 IAC 1-6-3]
 - Compliance Determination Requirements** [326 IAC 2-1.1-11]
 - D.7.5 **4** Particulate Matter (PM) [326 IAC 2-2]
 - Compliance Monitoring Requirements** [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]
 - None
 - Record Keeping and Reporting Requirement** [326 IAC 2-7-5(3)] [326 IAC 2-7-19]
 - None
- D.8 FACILITY OPERATION CONDITIONS - - Paved and Unpaved Roadways**
 - Emission Limitations and Standards** [326 IAC 2-7-5(1)]
 - D.8.1 Paved Roadways [326 IAC 2-2]
 - D.8.2 Opacity PSD BACT Limit [326 IAC 2-2]
 - D.8.3 Paved Roadways Clean Unit [326 IAC 2-2.2]
 - Compliance Determination Requirements**
 - D.8.4 Fugitive Dust Control Plan (FDCP) [326 IAC 2-2]
 - Compliance Monitoring Requirements** [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]
 - None
 - Record Keeping and Reporting Requirements** [326 IAC 2-7-5(3)] [326 IAC 2-7-19]
 - D.8.5 Record Keeping Requirements [326 IAC 2-2] [326 IAC 2-7-5(3)]
[326 IAC 2-7-19]
- D.9 FACILITY OPERATION CONDITIONS - - Cooling Towers and Emergency Generator(s)**
 - Emission Limitations and Standards** [326 IAC 2-7-5(1)]
 - D.9.1 Cooling Towers PSD BACT Limit [326 IAC 2-2]
 - D.9.2 Emergency Generator(s) PSD BACT Limit [326 IAC 2-2]
 - Compliance Determination Requirements**
 - None
 - Compliance Monitoring Requirements** [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]
 - None
 - Record Keeping and Reporting Requirement** [326 IAC 2-7-5(3)] [326 IAC 2-7-19]
 - D.9.3 Record Keeping Requirements [326 IAC 2-2] [326 IAC 2-7-5(3)]
[326 IAC 2-7-19]
 - D.9.4 Reporting Requirements [326 IAC 2-1.1-11] [326 IAC 2-2]
[326 IAC 2-7-5(3)] [326 IAC 2-7-19]
- E Fugitive Dust Control Plan**

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Affidavit of Construction

Part 70 Permit Certification

Part 70 Permit Emergency Occurrence Report

Part 70 Permit Usage Report

Part 70 Permit Quarterly Report

Part 70 Permit Quarterly Deviation and Compliance Monitoring Report

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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 2-7-4(c)] [326 IAC 2-7-5(15)] [326 IAC 2-7-1(22)]

The Permittee owns and operates a stationary iron nugget production plant.

| | |
|------------------------------|---|
| Responsible Official: | Manager or Designee pursuant to 326 IAC 2-7-1(34) |
| Source Location: | County Road 55 and 42, Butler, IN 46721 |
| Mailing Address: | 221 South Main Street, Auburn, IN 46706 |
| General Source Phone Number: | 218-349-1277 |
| County: | Dekalb |
| SIC Code: | 3312 (Steel Mill) |
| NAICS Code: | 331111 |
| Source Location Status: | Attainment for all criteria pollutants |
| Source Status: | 1 of 28 Source Categories Part 70 Permit Program Major Source, under PSD Rules Major Source, Section 112 of the Clean Air Act Clean Unit Source |

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)]
[326 IAC 2-7-5(15)]

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

SECTION D.1 and SECTION D.2

(a) Stack 1001 and Roof Monitor

- (1) One (1) Rotary Hearth Furnace, identified as RHF, nominally rated at 75.521 tons per hour of iron nugget product and 217 million (MM) Btu per hour. This RHF uses natural gas as the primary fuel, and propane as a back up fuel.

The sulfur dioxide (SO₂), particulate matter, lead, mercury, fluorides, and acid gases emissions from the RHF are controlled by up to four (4) wet scrubbers, identified as Wet Scrubber 1, Wet Scrubber 2, Wet Scrubber 3, and Wet Scrubber 4. These wet scrubbers exhaust to a common duct and then to Stack 1001.

The nitrogen oxides (NO_x) emissions from the RHF are ~~minimized~~ **reduced** by low NO_x burners, in addition to the low excess air (LEA) design.

The volatile organic compound (VOC), carbon monoxide (CO), and organic

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hazardous air pollutants (HAPs) emissions from the RHF are controlled by the air infiltration inherent design of the RHF.

The RHF is equipped with the following continuous emission monitoring systems (CEMSs): SO₂, VOC, NO_x and CO.

- (2) Three (3) Agglomerate Dryers, identified as Green Ball Dryer 1, Green Ball Dryer 2, and Green Ball Dryer 3, with a total nominal rating of 153.248 tons of dried green balls per hour and 205.2 million (MM) Btu per hour.

During normal operations, these dryers operate using the air preheated by the RHF exhaust. These dryers use natural gas during start up periods and when sufficient preheated air is not available. Low NO_x burners are used to ~~minimize~~ **reduce** the NO_x emissions from these three (3) Green Ball Dryers when they are using natural gas as fuel.

Each Green Ball Dryer is controlled by a baghouse, identified as Green Ball Dryer Baghouse 1, Green Ball Dryer Baghouse 2, and Green Ball Dryer Baghouse 3. These baghouses exhaust to a common duct and then to Stack 1001.

- (3) One (1) Product Separator/Dryer, nominally rated at 33 tons of dry product per hour, and 25 MMBtu per hour. This dryer uses natural gas and is equipped with low NO_x burners to ~~minimize~~ **reduce** the NO_x emissions.

The particulate matter emissions from the Product Separator/Dryer are controlled by a baghouse, identified as Product Separator/Dryer Baghouse.

The controlled emissions from the RHF, Green Ball Dryers, and Product Separator/Dryer exhaust through a stack, identified as Stack 1001.

The remaining uncontrolled emissions exhaust through the Roof Monitor.

Stack 1001 is equipped with a continuous opacity monitor (COM) to measure the visible emissions.

SECTION D.3

(b) Stack 1002

- (1) One (1) Coal #1 Pulverizer/Dryer, nominally rated at 33 tons per hour, and 36.0 million (MM) Btu per hour.

The particulate matter emissions from the Coal #1 Pulverizer/Dryer are controlled by a baghouse, identified as Coal #1 Pulverizer/Dryer Baghouse.

- (2) One (1) Coal #2 Pulverizer/Dryer, nominally rated at 9 tons per hour, and 9.23 MMBtu per hour.

The particulate matter emissions from the Coal #2 Pulverizer/Dryer are controlled by a baghouse, identified as Coal #2 Pulverizer/Dryer Baghouse.

- (3) Flux Pulverizer(s)/Dryer(s), nominally rated **at a total of** 13 tons per hour and

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14.58 MMBtu per hour.

Due to design uncertainty at this time of the review, the numbers of flux pulverizers/dryers **and associated pieces of control equipment** ~~is~~ **are** permitted to change, however, the total heat input and process capacity will remain the same.

The particulate matter emissions from the Flux Pulverizer(s)/Dryer(s) are controlled by baghouse(s), identified as Flux Pulverizer(s)/Dryer(s) Baghouse(s).

These dryers use natural gas and are equipped with ~~L~~ low NO_x burners.

The controlled emissions from the:

- Coal #1 Pulverizer/Dryer,
 - Coal #2 Pulverizer/Dryer, and
 - Flux Pulverizer(s)/Dryer(s)
- exhaust through a stack, identified as Stack 1002.

SECTION D.4

(c) Stack 1003

One (1) Ore Dryer, nominally rated at 125 tons per hour and 25 million (MM) Btu per hour.

The particulate matter emissions from the Ore Dryer are controlled by a baghouse, identified as Ore Dryer Baghouse and exhaust through a stack, identified as Stack 1003.

SECTION D.5

(d) Stack 1004

Coal Railcar Unloading, nominally rated at 165 tons per hour, with a baghouse, identified as **Coal** Railcar Unloading Baghouse, for particulate control and exhaust through a stack, identified as Stack 1004.

SECTION D.6

(e) Fugitive Dust Collection Systems

- (1) Fugitive Dust Collection #1, with baghouse(s), identified as Fugitive Baghouse #1, for particulate control and exhaust through a stack, identified as Stack 1001.
- (2) Fugitive Dust Collection #2, with baghouse(s), identified as Fugitive Baghouse #2, for particulate control and exhaust through a stack, identified as Stack 1005.

Due to design uncertainty at this time of the review, the number of fugitive dust collection baghouses is permitted to change, however, the total dust collection volume and emissions will remain the same.

SECTION D.7

(f) Material storage, handling, transfer, and conveying, **each** nominally rated at 200 tons per hour.

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| Summary of Bin Vents and Corresponding Operations | | | |
|---|----------------------|-------------|------------------------------|
| Bin Vent ID | Operation | Bin Vent ID | Operation |
| 1006 | Raw Ore Silo | 1022 | Flux Silo #3 |
| 1010 | Raw Flux Silo | 1023 | Flux Silo #4 |
| 1011 | Binder Silo | 1024 | Recycle Silo |
| 1014 | Raw Coal Silo | 1025 | Flux Silo #5 |
| 1015 | Recycle Fines Silo | 1027 | EAF Dust Silo |
| 1018 | Raw Coal Silo | 1037 | Product Silo |
| 1019 | Pulverized Coal Silo | 1038 | Raw Flux Silo |
| 1020 | Pulverized Coal Silo | 1040 | Slag Separator Baghouse Silo |
| 1021 | Pulverized Coal Silo | Total | 17 |
| These silos are controlled by bin vent filters. | | | |

SECTION D.8

- (g) Paved and Unpaved Roadways

Roadways used by the semi-tractor trailers, employee vehicles, and support vehicles are **either** paved **or** ; and the rest are unpaved stone or gravel.

Fugitive dust emissions are controlled by the implementation of the Fugitive Dust Control Plan (FDCP).

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

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

SECTION D.9

- (a) Two (2) Cooling Towers:

- (1) Identified as Cooling Tower 743, with nominal capacity of 23,450 gallons per minute and 0.005% drift rate.
- (2) Identified as Cooling Tower 726, with nominal capacity of 10,350 gallons per minute and 0.005% drift rate.

- (b) Emergency Generator(s)

A.4 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability), because:

- (a) It is a major source, as defined in 326 IAC 2-7-1(22).
- (b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

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SECTION B GENERAL CONDITIONS

Part 1 General Construction Conditions

B.1 Permit No Defense [IC 13-11 through 13-20][IC 13-22 through 13-25] [IC 13-17]

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

B.2 Effective Date of the Permit [IC 13-15-5-3]

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

B.3 Revocation of Permits [326 IAC 2-2-8]

Pursuant to 326 IAC 2-2-8(a)(1), this permit to construct shall expire if construction is not commenced within eighteen (18) months after receipt of this approval, if construction is discontinued for a period of eighteen (18) months or more, or if construction is not completed within a reasonable time. The IDEM may extend the eighteen (18) month period upon satisfactory showing that an extension is justified.

B.4 Modification to Construction Conditions [326 IAC 2]

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

B.5 Advanced Source Modification Approval [326 IAC 2-7-5(16)] [326 IAC 2-7-10.5]

The requirements to obtain a source modification approval under 326 IAC 2-7-10.5 or a permit modification under 326 IAC 2-7-12 are satisfied by this permit for the proposed emission units, control equipment or insignificant activities in Sections A.2 and A.3.

B.6 Significant Source Modification [326 IAC 2-7-10.5(h)]

This document shall also become the approval to operate pursuant to 326 IAC 2-7-10.5(h) when, prior to start of operation, the following requirements are met:

- (a) The attached Affidavit of Construction shall be submitted to the Office of Air Quality (OAQ), verifying that the emission units were constructed or modified as proposed in the application or the permit. The emissions units covered in ~~the Significant Source Modification approval~~ **this permit** may begin operating on the date the affidavit of construction is postmarked or hand delivered to IDEM if constructed as proposed.

If construction is completed in phases: i.e.: the entire construction is not done continuously, a separate affidavit must be submitted for each phase of construction. Any permit conditions associated with operation start up dates such as stack testing for NSPS shall be applicable ~~for~~ to each individual phase.

- (b) If actual construction of the emissions units differs from the construction or modification proposed in the application or the permit in a manner that is regulated under the provisions of 326 IAC 2-2, the Permittee may not begin operation until the source

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modification has been revised pursuant to the provisions of that rule and an Operation Permit Validation Letter is issued.

- (c) If actual construction of the emissions units differs from the construction proposed in the application or the permit in a manner that is not regulated under the provisions of 326 IAC 2-2, the Permittee may not begin operation until the source modification has been revised pursuant to the provisions of that rule and the provisions of 326 IAC 2-7-11 or 326 IAC 2-7-12 and an Operation Permit Validation Letter is issued.
- (d) The Permittee shall attach the Operation Permit Validation Letter received from the OAQ **to this permit.**

B.7 General Provisions and NSPS Reporting [326 IAC 12-1][40 CFR Part 60, Subpart A]

- (a) The provisions of 40 CFR Part 60, Subpart A (General Provisions), which are incorporated by reference in 326 IAC 12-1, apply to the Coal #1 Dryer and Coal #2 Dryer.
-
- (b) Pursuant to the New Source Performance Standards (NSPS), 40 CFR Part 60 Subpart Y, the Permittee shall report the following at the appropriate times:
 - (1) Notification of the commencement of construction date of the affected units (postmarked no later than 30 days after such date) [40 CFR 60.7a(1)];
 - (2) Notification of the actual initial start-up date of the affected units (postmarked ~~within~~ **no later than** 15 days after such date) [40 CFR 60.7a(3)];
 - (3) Date of performance testing (at least 30 days prior to such date), when required by a condition elsewhere in this permit; and
 - (4) Notification of the anticipated date for conducting opacity observations (postmarked no later than 15 days after such date) [40 CFR 60.7a(6)].

Reports are to be sent to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue
Indianapolis, IN 46204

The application and enforcement of these standards have been delegated to the IDEM, OAQ. The requirements of 40 CFR Part 60 are also federally enforceable.

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SECTION B GENERAL CONDITIONS

Part 2 General Operating Conditions

B.8 Definitions [326 IAC 2-7-1]

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.9 Permit Term [326 IAC 2-7-5(2)] [326 IAC 2-1.1-9.5] [326 IAC 2-7-4(a)(1)(D)]
~~[IC 15-13-6(a)]~~ [IC 13-15-3-6(a)]

- (a) This permit, T033-19475-00092, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.
- (b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, including any permit shield provided in 326 IAC 2-7-15, until the renewal permit has been issued or denied.

B.10 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.11 Enforceability [326 IAC 2-7-7]

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.12 Termination of Right to Operate [326 IAC 2-7-10] [326 IAC 2-7-4(a)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-7-3 and 326 IAC 2-7-4(a).

B.13 Severability [326 IAC 2-7-5(5)]

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.

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B.14 Property Rights or Exclusive Privilege [326 IAC 2-7-5(6)(D)]

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

B.15 Duty to Provide Information [326 IAC 2-7-5(6)(E)]

- (a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ, may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The submittal by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34). Upon request, the Permittee shall also furnish to IDEM, OAQ, copies of records required to be kept by this permit.
- (b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

B.16 Certification [326 IAC 2-7-4(f)] [326 IAC 2-7-6(1)] [326 IAC 2-7-5(3)(C)]

- (a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by a responsible official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) One (1) certification shall be included, using the attached Certification Form or its equivalent, with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.
- (c) A responsible official is defined at 326 IAC 2-7-1(34).

B.17 Annual Compliance Certification [326 IAC 2-7-6(5)]

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

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

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Air Enforcement Branch - Indiana (AE-17J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

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- (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 2-7-5(3); and
 - (5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ, may require to determine the compliance status of the source.

The submittal by the Permittee does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

B.18 Preventive Maintenance Plan (PMP) [326 IAC 2-7-5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)] [326 IAC 1-6-3]

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) ~~within~~ **not later than** ninety (90) days after issuance of this permit, including the following information on each facility:
- (1) Identification of the individual(s) by **job title or classification** responsible for inspecting, maintaining, and repairing emission control devices;
 - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
 - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

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

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

The PMP extension notification does not require the certification by the “responsible

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official” as defined by 326 IAC 2-7-1(34).

- (b) The Permittee shall implement the PMPs, including any required record keeping as necessary to ensure that failure to implement a PMP does not cause or contribute to an exceedance of any limitation on emissions or potential to emit.
- (c) A copy of the PMPs shall be submitted to IDEM, OAQ, upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ, may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions or potential to emit. The PMP does not require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).
- (d) To the extent the Permittee is required by 40 CFR Part 60~~/or 40 CFR Part~~ 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.19 Emergency Provisions [326 IAC 2-7-16]

- (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 otherwise provided in 326 IAC 2-7-16.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a 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, 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 Section), or
Telephone Number: 317-233-5674 (ask for Compliance Section)
Facsimile Number: 317-233-5967
 - (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:

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

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 2-7-5(3)(C)(ii) and must contain the following:

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

The notification which shall be submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (6) The Permittee immediately took all reasonable steps to correct the emergency.
- (c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
- (d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.
- (e) IDEM, OAQ, may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4(c)(9) **for the emission unit that experienced an emergency** 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 2-7 and any other applicable rules.
- (g) 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.
- (h) The Permittee shall include all emergencies in the Quarterly Deviation and Compliance Monitoring Report.

B.20 Permit Shield [326 IAC 2-7-15] [326 IAC 2-7-20] [326 IAC 2-7-12]

- (a) Pursuant to 326 IAC 2-7-15, the Permittee has been granted a permit shield. The permit shield provides that compliance with the conditions of this permit shall be deemed in compliance with any applicable requirements as of the date of permit issuance, provided that either the applicable requirements are included and specifically identified in this

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permit or the permit contains an explicit determination or concise summary of a determination that other specifically identified requirements are not applicable. The Indiana statutes from IC 13 and rules from 326 IAC, referenced 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 Part 70 permit under 326 IAC 2-7 or for applicable requirements for which a permit shield has been granted.

This permit shield does not extend to applicable requirements which are promulgated after the date of issuance of this permit unless this permit has been modified to reflect such new requirements.

- (b) If, after issuance of this permit, it is determined that the permit is in nonconformance with an applicable requirement that applied to the source on the date of permit issuance, IDEM, OAQ, shall immediately take steps to reopen and revise this permit and issue a compliance order to the Permittee to ensure expeditious compliance with the applicable requirement until the permit is reissued. The permit shield shall continue in effect so long as the Permittee is in compliance with the compliance order.
- (c) No permit shield shall apply to any permit term or condition that is determined after issuance of this permit to have been based on erroneous information supplied in the permit application. Erroneous information means information that the Permittee knew to be false, or in the exercise of reasonable care should have been known to be false, at the time the information was submitted.
- (d) Nothing in 326 IAC 2-7-15 or in this permit shall alter or affect the following:
 - (1) The provisions of Section 303 of the Clean Air Act (emergency orders), including the authority of the U.S. EPA under Section 303 of the Clean Air Act;
 - (2) The liability of the Permittee for any violation of applicable requirements prior to or at the time of this permit's issuance;
 - (3) ~~The~~ **Any** applicable requirements of the acid rain program, consistent with Section 408(a) of the Clean Air Act; and
 - (4) The ability of U.S. EPA to obtain information from the Permittee under Section 114 of the Clean Air Act.
- (e) This permit shield is not applicable to any change made under 326 IAC 2-7-20(b)(2) (Sections 502(b)(10) of the Clean Air Act changes) and 326 IAC 2-7-20(c)(2) (trading based on State Implementation Plan (SIP) provisions).
- (f) This permit shield is not applicable to modifications eligible for group processing until after IDEM, OAQ, has issued the modifications. [326 IAC 2-7-12(c)(7)]
- (g) This permit shield is not applicable to minor Part 70 permit modifications until after IDEM, OAQ, has issued the modification. [326 IAC 2-7-12(b)(8)]

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B.21 Deviations from Permit Requirements and Conditions [326 IAC 2-7-5(3)(C)(ii)]

- (a) Deviations from any permit requirements (for emergencies see Section **B.19** - Emergency Provisions), the probable cause of such deviations, and any response steps or preventive measures taken shall be reported to:

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

using the attached Quarterly Deviation and Compliance Monitoring Report, or its equivalent. A deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report.

The Quarterly Deviation and Compliance Monitoring Report does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

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

B.22 Permit Modification, Reopening, Revocation and Reissuance, or Termination
[326 IAC 2-7-5(6)(C)] [326 IAC 2-7-8(a)] [326 IAC 2-7-9]

- (a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Part 70 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 2-7-5(6)(C)] The notification by the Permittee does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).
- (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 2-7-9(a)(3)]
- (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 2-7-9(b)]
- (d) The reopening and revision of this permit, under 326 IAC 2-7-9(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 2-7-9(c)]

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B.23 Permit Renewal [326 IAC 2-7-3] [326 IAC 2-7-4]

- (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 2-7-4. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

Request for renewal shall be submitted to:

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

- (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 2-7 until IDEM, OAQ, to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by IDEM, OAQ, any additional information identified as being needed to process the application.

B.24 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]

- (a) Permit amendments and modifications are governed by the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this permit.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:
- Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204
- Any such application shall be certified by the “responsible official” as defined by 326 IAC 2-7-1(34).
- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request.

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[326 IAC 2-7-11(c)(3)]

- (d) No permit amendment or modification is required for the addition, operation or removal of a nonroad engine, as defined in 40 CFR 89.2.

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**B.25 Permit Revision Under Economic Incentives and Other Programs [326 IAC 2-7-5(8)]
[326 IAC 2-7-12 (b)(2)]**

- (a) No Part 70 permit revision shall be required under any approved economic incentives, marketable Part 70 permits, emissions trading, and other similar programs or processes for changes that are provided for in a Part 70 permit.
- (b) Notwithstanding 326 IAC 2-7-12(b)(1) and 326 IAC 2-7-12(c)(1), minor Part 70 permit modification procedures may be used for Part 70 modifications involving the use of economic incentives, marketable Part 70 permits, emissions trading, and other similar approaches to the extent that such minor Part 70 permit modification procedures are explicitly provided for in the applicable State Implementation Plan (SIP) or in applicable requirements promulgated or approved by the U.S. EPA.

B.26 Operational Flexibility [326 IAC 2-7-20] [326 IAC 2-7-10.5]

- (a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-7-20(b), (c), or (e), 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 preconstruction approval required by 326 IAC 2-7-10.5 has been obtained;
 - (3) The changes do not result in emissions which exceed the emissions allowable under this permit (whether expressed herein as a rate of emissions or in terms of total emissions);
 - (4) The Permittee notifies the:

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

and

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

in advance of the change by written notification at least ten (10) days in advance of the proposed change. The Permittee shall attach every such notice to the Permittee's copy of this permit; and
 - (5) The Permittee maintains records on-site which document, on a rolling five (5) year basis, all such changes and emissions trading that are subject to 326 IAC 2-7-20(b), (c), or (e) and makes such records available, upon reasonable request, for public review.

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Such records shall consist of all information required to be submitted to IDEM, OAQ, in the notices specified in 326 IAC 2-7-20(b)(1), (c)(1), and (e)(2).

- (b) The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(36)) without a permit revision, subject to the constraint of 326 IAC 2-7-20(a). For each such Section 502(b)(10) of the Clean Air Act change, the required written notification shall include the following:
- (1) A brief description of the change within the source;
 - (2) The date on which the change will occur;
 - (3) Any change in emissions; and
 - (4) Any permit term or condition that is no longer applicable as a result of the change.

The notification which shall be submitted is not considered an application form, report or compliance certification. Therefore, the notification by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (c) Emission Trades [326 IAC 2-7-20(c)]
The Permittee may trade increases and decreases in emissions in the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-7-20(c).
- (d) Alternative Operating Scenarios [326 IAC 2-7-20(d)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-7-5(9). No prior notification of IDEM, OAQ, or U.S. EPA is required.
- (e) 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.27 Source Modification Requirement [326 IAC 2-7-10.5] [326 IAC 2-2-2]

- (a) A modification, construction, or reconstruction is governed by the **applicable** requirements of 326 IAC 2 and 326 IAC 2-7-10.5.
- (b) Any **major** modification at an existing major source is governed by the requirements of 326 IAC 2-2-2.

B.28 Inspection and Entry [326 IAC 2-7-6] [IC 13-14-2-2] [IC 13-30-3-1] [IC 13-17-3-2]

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:

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- (a) Enter upon the Permittee's premises where a Part 70 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 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 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 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.29 Transfer of Ownership or Operational Control [326 IAC 2-7-11]

- (a) The Permittee must comply with the requirements of 326 IAC 2-7-11 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.
- (b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

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

The application which shall be submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

B.30 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-7-5(7)][326 IAC 2-1.1-7]

- (a) The Permittee shall pay annual fees to IDEM, OAQ, within thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ, the applicable fee is due April 1 of each year.
- (b) Except as provided in 326 IAC 2-7-19(e), 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-

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4230 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

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B.31 Credible Evidence [326 IAC 2-7-5(3)][326 IAC 2-7-6][62 FR 8314] **[326 IAC 1-1-6]**

~~Notwithstanding the conditions of this permit that state specific methods that may be used to demonstrate compliance with, or a violation of, applicable requirements, any person (including the Permittee) may also use other credible evidence to demonstrate compliance with, or a violation of, any term or condition of this permit.~~

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.

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SECTION C

SOURCE OPERATION CONDITIONS

Entire Source

Emission Limitations and Standards [326 IAC 2-7-5(1)]

C.1 Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) Pounds per Hour [40 CFR Part 52 Subpart P] [326 IAC 6-3-2]

- (a) Pursuant to 40 CFR 52 Subpart P, particulate matter emissions from any process not already regulated by 326 IAC 6-1 or any New Source Performance Standard, and which has a maximum process weight rate less than 100 pounds per hour shall not exceed 0.551 pounds per hour.
- (b) Pursuant to 326 IAC 6-3-2(e)(2), particulate emissions from any process not exempt under 326 IAC 6-3-1(b) or (c) which has a maximum process weight rate less than 100 pounds per hour and the methods in 326 IAC 6-3-2(b) through (d) do not apply shall not exceed 0.551 pounds per hour.

This condition is not federally enforceable.

C.2 Opacity [326 IAC 5-1]

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

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

C.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.

326 IAC 4-1-3 (a)(2)(A) and (B) are not federally enforceable.

C.4 Incineration [326 IAC 4-2] [326 IAC 9-1-2]

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

326 IAC 9-1-2 is not federally enforceable.

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

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property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions).

326 IAC 6-4-2(4) is not federally enforceable.

C.6 Fugitive Particulate Matter Emission Limitations [326 IAC 6-5]

Pursuant to 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations), fugitive particulate matter emissions shall be controlled according to the fugitive dust control plan (**Section E of this permit**) ~~included as Attachment A.~~

C.7 Operation of Equipment [326 IAC 2-7-6(6)]

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

C.8 Motor Vehicle Fugitive Dust Sources [326 IAC 6-4-4]

Pursuant to 326 IAC 6-4-4, no vehicle shall be driven or moved on any public street, road, alley, highway, or other thoroughfare, unless such vehicle is so constructed as to prevent its contents from dripping, sifting, leaking, or otherwise escaping there from so as to create conditions which result in fugitive dust. This section applies only to the cargo any vehicle may be conveying and mud tracked by the vehicle.

C.9 Stack Height [326 IAC 1-7]

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

The provisions of 326 IAC 1-7-1(3), 326 IAC 1-7-2, 326 IAC 1-7-3(c) and (d), 326 IAC 1-7-4, and 326 IAC 1-7-5(a), (b), and (d) are not federally enforceable.

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

The Permittee shall comply with the applicable requirements of 326 IAC 14-10, 326 IAC 18, and 40 CFR 61.140.

Testing Requirements [326 IAC 2-7-6(1)]

C.11 Performance Testing [326 IAC 3-6]

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

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

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

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

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

- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (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.12 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 **applicable** methods approved by the commissioner or the U. S. EPA.

Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]

C.13 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

Unless otherwise specified in this permit, all monitoring and record keeping requirements not already legally required shall be implemented when operation begins.

~~If required by Section D,~~ The Permittee shall be responsible for installing any necessary equipment **listed in Section D of this permit** and initiating any required monitoring related to that equipment.

If due to circumstances beyond its **reasonable** control, that equipment cannot be installed and operated ~~within~~ **not later than** ninety (90) days, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

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

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

The notification which shall be submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

C.14 Monitoring Methods [326 IAC 3] [40 CFR Part 60] [40 CFR Part 63]

Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR Part 60, Appendix A, 40 CFR Part 60 Appendix B, 40 CFR Part

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63, or other approved methods as specified in this permit.

C.15 Pressure Gauge and Other Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)]
[326 IAC 2-7-6(1)]

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

Corrective Actions and Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]

C.16 Emergency Reduction Plans (ERPs) [326 IAC 1-5-2] [326 IAC 1-5-3]
Pursuant to 326 IAC 1-5-2 (Emergency Reduction Plans; Submission):

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

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

~~within~~ **not later than** 180 days from the date on which this source commences operation.

The ERP does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).
- (c) If the ERP is disapproved by IDEM, OAQ, the Permittee shall have an additional thirty (30) days to resolve the differences and submit an approvable ERP.
- (d) These ERPs shall state those actions that will be taken, when each episode level is declared, to reduce or eliminate emissions of the appropriate air pollutants.
- (e) Said ERPs shall also identify the sources of air pollutants, the approximate amount of reduction of the pollutants, and a brief description of the manner in which the reduction will be achieved.
- (f) Upon direct notification by IDEM, OAQ, that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level. [326 IAC 1-5-3]

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C.17 Risk Management Plan (RMP) [326 IAC 2-7-5(12)] [40 CFR Part 68.215]

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 Part 68.

C.18 Compliance Response Plan (CRP) - Preparation, Implementation, Records, and Reports
[326 IAC 2-7-5] [326 IAC 2-7-6]

- (a) The Permittee is required to prepare a Compliance Response Plan (CRP) for each compliance monitoring condition **specified in Section D** of this permit.

If a Permittee is required to have an:

- Operation, Maintenance and Monitoring (OMM) Plan; or
- Parametric Monitoring Plan; or
- Start-up, Shutdown, and Malfunction (SSM) Plan

under 40 CFR 60 or 40 CFR Part 63, such plans shall be deemed to satisfy the requirements for a CRP for those compliance monitoring conditions

A CRP shall be submitted to IDEM, upon request. The CRP shall be prepared **within not later than** ninety (90) days after issuance of this permit by the Permittee, supplemented from time to time by the Permittee, maintained on site, and comprised of:

- (1) Reasonable response steps that may be implemented in the event that a response step is needed pursuant to the requirements of Section D of this permit; and an expected timeframe for taking reasonable response steps.
- (2) If, at any time, the Permittee takes reasonable response steps that are not set forth in the Permittee's current:
 - Compliance Response Plan; or
 - Operation, Maintenance and Monitoring (OMM) Plan; or
 - Parametric Monitoring Plan; and
 - Start-up, Shutdown, and Malfunction (SSM) Plan;and the Permittee documents such response in accordance with subsection (e) below, the Permittee shall amend its Compliance Response Plan or Operation, Maintenance and Monitoring (OMM) Plan or Parametric Monitoring Plan and Start-up, Shutdown, and Malfunction (SSM) Plan to include such response steps taken.

The OMM Plan or Parametric Monitoring and SSM Plan shall be submitted within the time frames specified by the applicable 40 CFR Part 60 or 40 CFR Part 63 requirement.

- (b) For each compliance monitoring condition of this permit, reasonable response steps shall be taken when indicated by the provisions of that compliance monitoring condition as follows:
- (1) Reasonable response steps shall be taken as set forth in the Permittee's current Compliance Response Plan or Operation, Maintenance and Monitoring (OMM) Plan or Parametric Monitoring Plan and Start-up, Shutdown, and Malfunction (SSM) Plan; or
 - (2) If none of the reasonable response steps listed in the Compliance Response Plan or Operation, Maintenance and Monitoring (OMM) Plan or Parametric Monitoring

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Plan and Start-up, Shutdown, and Malfunction (SSM) Plan is applicable or responsive to the excursion, the Permittee shall devise and implement additional **appropriate** response steps as expeditiously as practical. Taking such additional **appropriate** response steps shall not be considered a deviation from this permit so long as the Permittee documents such response steps in accordance with this condition.

- (3) If the Permittee determines that additional response steps would necessitate that the emissions unit or control device be shut down, and it will be **ten** (10) days or more until the unit or device will be shut down, then the Permittee shall promptly notify the IDEM, OAQ of the expected date of the shut down. The notification shall also include the status of the applicable compliance monitoring parameter with respect to normal, and the results of the response actions taken up to the time of notification.
 - (4) Failure to take reasonable response steps shall be considered a deviation from the permit.
- (c) The Permittee is not required to take any further response steps for any of the following reasons:
- (1) A false reading occurs due to the malfunction of the monitoring equipment and prompt action was taken to correct the monitoring equipment.
 - (2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for a minor permit modification to the permit, and such request has not been denied.
 - (3) An automatic measurement was taken when the process was not operating.
 - (4) The process has already returned or is returning to operating within "normal" parameters and no response steps are required.
- (d) When implementing reasonable steps in response to a compliance monitoring condition, if the Permittee determines that an exceedance of an emission limitation has occurred, the Permittee shall report such deviations pursuant to Section **B.21**-Deviations from Permit Requirements and Conditions.
- (e) The Permittee shall record all instances when, in accordance with Section D, response steps are taken. In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.
- (f) Except as otherwise provided by a rule or provided specifically in Section D, all monitoring as required in Section D shall be performed when the emission unit is operating, except for time necessary to perform quality assurance and maintenance activities.

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- (a) When the results of a stack test performed in conformance with Section **C.11** - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the **appropriate** response actions are being implemented.
- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The response action documents submitted pursuant to this condition do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

C.20 Emission Statement [326 IAC 2-7-5(3)(C)(iii)][326 IAC 2-7-5(7)][326 IAC 2-7-19(c)] [326 IAC 2-6]

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- (a) Pursuant to 326 IAC 2-6-3(a)(1), the Permittee shall submit by July 1 of each year an emission statement covering the previous calendar year. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4(c) and shall meet the following requirements:
 - (1) Indicate estimated actual emissions of all pollutants listed in 326 IAC 2-6-4(a);
 - (2) Indicate estimated actual emissions of regulated pollutants as defined by 326 IAC 2-7-1 (32) ("Regulated pollutant, which is used only for purposes of Section 19 of this rule") from the source, for purpose of fee assessment.

The statement must be submitted to:

Indiana Department of Environmental Management
Technical Support and Modeling Section, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204

The emission statement does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) The emission statement 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.

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C.21 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [326 IAC 2-2]

- (a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented ~~within~~ **no later than** ninety (90) days of permit issuance.
- (c) **Pursuant to 326 IAC 2-2-8(b)**, if there is a reasonable possibility that a “project” (as defined in 326 IAC 2-2-1 (qq)) at a major source other than projects at a Clean Unit which is not part of a “major modification” (as defined in 326 IAC 2-2-1 (ee)) may result in significant emissions increase and the Permittee elects to utilize the “projected actual emissions” (as defined in 326 IAC 2-2-1 (rr)), the Permittee shall comply with following:
 - (1) Before beginning actual construction of the “project” (as defined in 326 IAC 2-2-1 (qq)) document and maintain the following records:
 - (A) A description of the project;
 - (B) Identification of any emissions unit whose emissions of a regulated new source review pollutant could be affected by the project;
 - (C) A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including:
 - (i) Baseline actual emissions;
 - (ii) Projected actual emissions;
 - (iii) Amount of emissions excluded under section 326 IAC 2-2-1(rr)(2)(A)(iii); and
 - (iv) An explanation for why the amount was excluded, and any netting calculations, if applicable.
 - (2) Monitor the emissions of any regulated NSR pollutant that could increase as a result of the project and that is emitted by any emissions unit identified in (1)(B) above; and
 - (3) Calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of five (5) years following resumption of regular operations after the change, or for a period of ten (10) years following resumption of regular operations after the change if the project increases the design capacity of or the potential to emit that regulated NSR pollutant at the emissions unit.

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C.22 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11] [326 IAC 2-2]

(a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the **reasonable** response steps taken must be reported. This report shall be submitted **within no later than thirty** (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

(b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

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

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

(d) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted **within no later than** thirty (30) days of the end of the reporting period. All reports do require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

(e) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period. Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit “calendar year” means the twelve (12) month period from January 1 to December 31 inclusive.

(f) If the Permittee is required to comply with the recordkeeping provisions of (c) in Section **C.21 - General Record Keeping Requirements** for any “project” (as defined in 326 IAC 2-2-1 (qq)) and the project meets the following criteria, then the Permittee shall submit a report to IDEM, OAQ:

(1) The annual emissions, in tons per year, from the project identified in (c)(1) in Section **C.21 - General Record Keeping Requirements** exceed the baseline actual emissions, as documented and maintained under Section **C.21 - General Record Keeping Requirements** (c)(1)(C)(i), by a significant amount, as defined in 326 IAC 2-2-1 (xx), for that regulated NSR pollutant, and

(2) The emissions differ from the preconstruction projection as documented and maintained under Section **C.21 - General Record Keeping Requirements** (c)(1)(C)(ii).

(g) The report shall be submitted **within not later than** sixty (60) days after the end of the

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year and contain the following:

- (1) The name, address, and telephone number of the major stationary source.
- (2) The annual emissions calculated in accordance with (c)(2) and (3) in Section **C.21** - General Record Keeping Requirements.
- (3) The emissions calculated under the actual-to-projected actual test stated in 326 IAC 2-2-2(d)(3).
- (4) Any other information that the Permittee deems fit to include in this report,

Reports required in this part shall be submitted to:

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

- (h) The Permittee shall make the information required to be documented and maintained in accordance with (c) in Section **C.21**- General Record Keeping Requirements available for review upon a request for inspection by IDEM, OAQ. The general public may request this information from the IDEM, OAQ under 326 IAC 17.1.

Stratospheric Ozone Protection

C.23 Compliance with 40 CFR Part 82 and 326 IAC 22-1

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

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

Post Construction Ambient Monitoring

C.24 Post Construction Ambient Monitoring [326 IAC 2-2-4]

Pursuant to 326 IAC 2-2-4, the Permittee shall comply with the following:

- (a) The Permittee shall establish two (2) ambient monitoring sites at locations approved by IDEM.
- (b) All monitors shall meet the operating and maintenance criteria outlined in the IDEM, OAQ

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Quality Assurance Manual.

- (i) Each monitoring site shall monitor PM₁₀, SO₂, NO_x, CO and ozone.
- (ii) Based on the prevailing winds, one of the two (2) sites shall also monitor the following meteorological parameters:
 - - wind speed,
 - - wind directions, and
 - - outdoor temperature.
- (c) The Permittee shall operate the monitors for at least thirty six (36) months from the initial start of the plant and conduct a minimum of thirty six (36) months of post-construction monitoring at each site.
- (d) The monitoring must be performed using US EPA approved methods, procedures, and quality assurance programs and be in accordance with plan and protocol approved by IDEM, OAQ.
- (e) A monitoring and quality assurance plan shall be submitted to the:

Indiana Department of Environmental Management
Office of Air Quality, Ambient Monitoring Section
2525 North Shadeland Avenue, Indianapolis, IN

no later than 90 calendar days in advance of the start of the monitoring. The plan must be approved by OAQ prior to commencement of monitoring.
- (f) Ambient data along with precision and accuracy data from the monitors shall be submitted on a quarterly basis in a format approved by IDEM, OAQ, no later than 60 days after the end of the quarter being reported.
- (g) The quarterly summary of monitoring shall be submitted to IDEM, OAQ, Ambient Monitoring Section, in the same address mentioned above.
- (h) No sooner than 6 months prior to the end of the minimum monitoring period, the Permittee may submit an application to modify the permit to discontinue one or more of the monitoring sites.

The application shall include the air quality and meteorological monitoring data collected, actual emissions of PM₁₀, SO₂, NO_x, CO, ozone, and actual iron nuggets production and any addition information that would support a request to discontinue the monitoring site(s).
- (i) The commissioner shall review the information submitted by the Permittee and other available information to determine whether the proper operation of the source could potentially cause or contribute to a violation of any National Ambient Air Quality Standard or maximum allowable increase under 326 IAC 1-3-4 or 326 IAC 2-2-6.
- (j) Any decision regarding the application shall proceed in accordance with the significant permit modifications provisions of 326 IAC 2-7-12(d).

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Clean Unit General Requirements

C.25 Clean Unit [326 IAC 2-2.2]

Pursuant to 326 IAC 2-2.2, emission units designated as Clean Units are subject to the following requirements:

- (a) Clean Units shall comply with all applicable requirements per 326 IAC 2-7 contained in this permit. No physical change or change in the method of operation shall be undertaken at these emissions units that would allow them to operate in a manner inconsistent with the physical or operational characteristics of the emission units.
- (b) Any project at the Clean Units for which actual construction begins after the effective date of the clean unit designations and before the expiration date shall be considered to have occurred while the emissions units were clean units.
- (c) If a project at the Clean Units does not cause the need for a change in the emission limitations or work practice requirements in this permit for these units that were adopted in conjunction with BACT and the project would not alter any physical or operational characteristics that formed the basis for the BACT determination, the clean unit designations remain unchanged.
- (d) If a project causes the need for a change in the emission limitations or work practice requirements in this permit for the Clean Unit that were adopted in conjunction with BACT or the project would alter any physical or operational characteristics that formed the basis for the BACT determination, then the clean unit designations shall expire upon issuance of the necessary permit modifications, unless the units re-qualify as clean units. If the Permittee begins actual construction on the project without first applying to modify the emissions unit's permit, the clean unit designations shall expire immediately prior to the time when actual construction of this project begins.
- (e) A project that causes emissions units to lose their clean unit designations shall be subject to the applicability requirements of 326 IAC 2-2-2(d)(1) through 326 IAC 2-2-2(d)(4) and 326 IAC 2-2-2(d)(6).

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SECTION D.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

Stack 1001 and Roof Monitor

One (1) Rotary Hearth Furnace, identified as RHF, nominally rated at 75.521 tons per hour of iron nugget product and 217 million (MM) Btu per hour. This RHF uses natural gas as the primary fuel, and propane as a back up fuel.

The sulfur dioxide (SO₂), particulate matter, lead, mercury, fluorides, and acid gases emissions from the RHF are controlled by up to four (4) wet scrubbers, identified as Wet Scrubber 1, Wet Scrubber 2, Wet Scrubber 3, and Wet Scrubber 4. These wet scrubbers exhaust to a common duct and then to Stack 1001.

The nitrogen oxides (NO_x) emissions from the RHF are ~~minimized~~ **reduced** by low NO_x burners, in addition to the low excess air (LEA) design.

The volatile organic compound (VOC), carbon monoxide (CO), and organic hazardous air pollutants (HAPs) emissions from the RHF are controlled by the air infiltration inherent design of the RHF.

The RHF is equipped with the following continuous emission monitoring systems (CEMSs): SO₂, VOC, NO_x and CO.

The controlled emissions from the RHF exhaust through a stack, identified as Stack 1001.

The remaining uncontrolled emissions exhaust through the Roof Monitor.

Stack 1001 is equipped with a continuous opacity monitor (COM) to measure the visible emissions.

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

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 Rotary Hearth Furnace (RHF) PSD BACT Limits [326 IAC 2-2] [326 IAC 2-4.1]

Pursuant to 326 IAC 2-2 Prevention of Significant Deterioration (PSD), the Permittee shall comply with the following PSD Best Available Control Technology (BACT) standards:

If the stack test required under Condition D.1.6 demonstrates that these emission limits are less stringent than what is achieved in practice, the Department may, at its discretion, use the authority under IC 13-15-7-2 and 326 IAC 2-2 to reopen and revise the emission limit(s) to more closely reflect the actual stack test results.

Because a best available control technology (BACT) level has not previously been established for an iron nugget production plant, if the stack test required under Condition D.1.6 demonstrates that the emission limit initially established in this permit is not

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achievable in practice, the Permittee may submit to the Department an application for a revision to the permit to reflect the emission level achieved in the stack test. The Permittee has the burden of demonstrating that it took all steps necessary to ensure that the emissions levels achieved in the stack test were the lowest achievable.

Any revisions of the emissions limits made as the result of this provision shall be subject to the best available control technology (BACT) review and air quality analysis, specified in 326 IAC 2-2.

The Department will provide an opportunity for public notice and comment under 326 IAC 2-7-10.5(f)(1) prior to finalizing any permit modification. IC 13-15-7-3 (Revocation or Modification of a Permit: Appeal to Board) shall apply to the permit modification.

This provision does not have any impact on current or future enforcement actions.

- (a) Fuel
The rotary hearth furnace (RHF) **burners** shall use natural gas as fuel and propane as back up fuel.

- (b) Wet Scrubbers
~~Up to four (4)~~ **The** wet scrubbers shall capture and control the Sulfur dioxide (SO₂), Sulfuric acid mist (H₂SO₄), Fluoride, filterable and condensable particulate matter (PM/PM₁₀), Lead, Mercury, and Beryllium emissions from the rotary hearth furnace (RHF).

- (c) The SO₂ emissions after control from the RHF shall not exceed ~~2.984 pounds per ton iron nugget product and 225.13~~ **185.2** pounds per hour based on a 3-hour block average. **The overall control efficiency of each wet scrubber shall be at least 90% when controlling the SO₂ emissions from the RHF.**

- (d) The Sulfuric Acid Mist (H₂SO₄) emissions after control from the RHF shall not exceed ~~4.609~~ **0.66** pounds per ton **of** iron nugget product and ~~424.49~~ **50.0** pounds per hour, based on a 3-hour block average.

The Permittee's compliance with these Sulfuric acid mist (H₂SO₄) limits is also required pursuant to 326 IAC 2-4.1 (Major Source of Hazardous Air Pollutants (HAPs)).

- (e) The Fluoride emissions after control from the RHF shall not exceed ~~0.3543~~ **0.33** pounds per ton **of** iron nugget product and ~~26.76~~ **24.57** pounds per hour, based on a 3-hour block average.

The Permittee's compliance with these Fluoride limits is also required pursuant to 326 IAC 2-4.1 (Major Source of Hazardous Air Pollutants (HAPs)).

- (f) The filterable and condensable particulate matter (PM/PM₁₀) emissions after control from the RHF shall not exceed ~~0.521 pounds per ton of iron nugget product~~ **0.03 grains per dry standard cubic feet** and 39.35 pounds per hour, based on a 3-hour block average.

- (g) The Lead emissions after control from the RHF shall not exceed ~~0.048~~ **0.02** pounds per ton **of** iron nugget product and 1.36 pounds per hour, based on a 3-hour block average.

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The Permittee's compliance with these Lead limits is also required pursuant to 326 IAC 2-4.1 (Major Source of Hazardous Air Pollutants (HAPs)).

- (h) The Mercury emissions after control from the RHF shall not exceed 0.001 pounds per ton **of** iron nugget product and ~~0.076~~ **0.05** pounds per hour, based on a 3-hour block average.

The Permittee's compliance with these Mercury limits is also required pursuant to 326 IAC 2-4.1 (Major Source of Hazardous Air Pollutants (HAPs)).

- (l) The Beryllium emissions after control from the RHF shall not exceed ~~0.003~~ **0.00027** pounds per ton **of** iron nugget product and ~~0.226~~ **0.02** pounds per hour, based on a 3-hour block average.

The Permittee's compliance with these Beryllium limits is also required pursuant to 326 IAC 2-4.1 (Major Source of Hazardous Air Pollutants (HAPs)).

Thermal Oxidation by Infiltration Air Design

- (j) The Thermal Oxidation by Infiltration Air Design of the RHF shall capture and control the carbon monoxide (CO) and Volatile organic compound (VOC) emissions from the RHF.
- (k) The CO emissions from the RHF shall not exceed 0.77 pounds per ton **of** iron nugget product, **based on a 24-hour block average** and 58.15 pounds per hour, based on a ~~3~~ **24**-hour block average.
- (l) The VOC emissions from the RHF shall not exceed 0.074 pounds per ton **of** iron nugget product, **based on a 24-hour block average** and 5.59 pounds per hour, based on an ~~3~~ **8**-hour block average.

Low NO_x Burners and Low Excess Air

- (m) Low NO_x burners shall be installed and utilized to reduce the Nitrogen Oxides (NO_x) emissions from the RHF. The use of Low Excess Air (LEA) will also be used in addition to ~~1~~ **low** NO_x burners.
- (n) The NO_x emissions from the RHF shall not exceed ~~2.564~~ **2.8** pounds per ton **of** iron nugget product, **based on a 24-hour block average** and ~~193.44~~ **211.9** pounds per hour, based on a ~~3~~ **24**-hour block average.

Stack 1001

- (o) The visible emissions from Stack 1001 shall not exceed ~~3~~ **5**% opacity, based on a 6-minute average ~~as determined in 326 IAC 5-1-4~~. Compliance will be demonstrated through the use of a continuous opacity monitor (COM) system.

Roof Monitor

- (p) The visible emissions from the Roof Monitor shall not exceed 3% opacity, based on a 6-minute average ~~as determined in 326 IAC 5-1-4~~.

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D.1.2 Rotary Hearth Furnace (RHF) Clean Unit [326 IAC 2-2.2]

- (a) Pursuant to 326 IAC 2-2.2 (Clean Unit), the Rotary Hearth Furnace (RHF) is classified as Clean Unit for:
- (1) Sulfur dioxide (SO₂),
 - (2) NO_x,
 - (3) VOC,**
 - (4) CO,**
 - ~~(3)~~ **(5)** Sulfuric acid mist (H₂SO₄)
 - ~~(4)~~ **(6)** Fluoride,
 - ~~(5)~~ **(7)** Filterable and condensible particulate matter (PM/PM₁₀),
 - ~~(6)~~ **(8)** Lead,
 - ~~(7)~~ **(9)** Mercury, and
 - ~~(8)~~ **(10)** Beryllium.
- (b) The Clean Unit designations for the RHF are in effect for ten (10) years from the initial start up of the RHF.
- (c) In order to maintain the clean unit designations for the RHF, the Permittee shall comply with the RHF's Sulfur dioxide (SO₂), NO_x, **VOC, CO**, Sulfuric acid mist (H₂SO₄) Fluoride, Filterable and condensible particulate matter (PM/PM₁₀), Lead, Mercury, Beryllium, and Opacity PSD BACT limits.

D.1.3 Hazardous Air Pollutants Major Limits [326 IAC 2-4.1-1]

- (a) Pursuant to 326 IAC 2-4.1-1, the rotary hearth furnace (RHF) shall use natural gas as fuel and propane as back up fuel.
- (b) Pursuant to 326 IAC 2-4.1-1, the wet scrubbers shall control the **Manganese** following ~~hazardous air pollutants~~ emitted from the rotary hearth furnace (RHF).

| Hazardous Air Pollutants (HAPs) | Pounds per Ton | Pounds per Hour (based on a 3-hour block average) |
|---------------------------------|----------------|--|
| Sulfuric Acid Mist | 1.609 | 121.49 |
| Fluoride | 0.3543 | 26.76 |
| Lead | 0.018 | 1.36 |
| Mercury | 0.001 | 0.076 |
| Beryllium | 0.003 | 0.226 |

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| Hazardous Air Pollutants (HAPs) | Pounds per Ton | Pounds per Hour (based on a 3-hour block average) |
|---------------------------------|----------------|---|
| Manganese | 4.78 | 36.1 |
| Phosphorous | 0.00111 | 0.0923 |
| Chromium | 0.00573 | 0.0216 |
| Nickel | 0.0121 | 0.0183 |
| Arsenic | 0.00124 | 0.00657 |
| Cadmium | 0.000257 | 0.00252 |
| Cobalt | 0.00155 | 0.00117 |
| Selenium | 0.00142 | 0.00644 |

D.1.4 Preventive Maintenance Plan (PMP) [326 IAC 2-7-5(13)] **[326 IAC 1-6-3]**

A Preventive Maintenance Plan (PMP), in accordance with Section **B.18** - Preventive Maintenance Plan (PMP), of this permit, is required for the RHF and its emission control devices.

Compliance Determination Requirements

D.1.5 Operation of Add-on Control Devices Exhausting Through Stack 1001 [326 IAC 2-2] **[326 IAC 2-4.1]**

- (a) Wet Scrubbers
 Pursuant to 326 IAC 2-2 Prevention of Significant Deterioration (PSD) and **326 IAC 2-4.1 (Major Source of Hazardous Air Pollutants (HAPs))**, the wet scrubbers for Sulfur dioxide (SO₂), Sulfuric acid mist (H₂SO₄), Fluoride, filterable and condensable particulate matter (PM/PM₁₀), Lead, Mercury, Beryllium, and hazardous air pollutants emissions control shall be in operation and control the emissions from the Rotary Hearth Furnace (RHF) at all times when the RHF is in operation.
- (b) Low NO_x Burners
 Pursuant to 326 IAC 2-2 Prevention of Significant Deterioration (PSD), the Rotary Hearth Furnace (RHF) shall utilize low NO_x burners at all times when the RHF is in operation.

D.1.6 Rotary Hearth Furnace (RHF) Testing Requirements [326 IAC 2-7-6(1) and (6)] [326 IAC 2-2] **[326 IAC 2-1.1-11] [326 IAC 2-4.1]**

- (a) Pursuant to 326 IAC 2-2, **326 IAC 2-4.1**, and 326 IAC 2-7, **within not later than** 60 days after achieving maximum production rate, but no later than 180 days after initial start-up of the RHF, the Permittee shall perform compliance testing for the following:
 - (1) **Total** Filterable and condensable particulate matter (PM/PM₁₀),
 - (2) Lead,
 - (3) Sulfuric acid mist (H₂SO₄),
 - (4) Mercury,

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- (5) Fluoride, and
- (6) Beryllium

using 40 CFR Part 60, Appendix A, Method 5, Method 8, Method 12, Method 13A, Method 13B, Method 29, Method 201, Method 201A, Method 202, or methods as approved by the Commissioner.

- (b) Pursuant to 326 IAC 2-1.1-11, ~~within~~ **not later than** 60 days after achieving maximum production rate, but no later than 180 days after initial start-up of the RHF, the Permittee shall perform compliance tests to demonstrate compliance with Condition D.1.3, utilizing methods as approved by the Commissioner.
- (c) The filterable and condensable particulate matter (PM/PM₁₀), Lead and Sulfuric acid mist (H₂SO₄) tests shall be repeated at least once every 2.5 years from the date of the last valid compliance demonstration.
- (d) The Mercury tests shall be repeated at least once a year from the date of the last valid compliance demonstration.
- (e) The Fluoride and Beryllium tests shall be repeated at least once every five (5) years from the date of the last valid compliance demonstration.
- (f) ~~Any stack which has multiple processes which exhaust to the same stack shall operate all of the processes simultaneously in accordance with 326 IAC 3-6 (Source Sampling Procedures).~~
- ~~(g)~~ These tests shall be performed using methods as approved by the Commissioner.
- ~~(h)~~ **g**) Testing shall be conducted in accordance with Section **C.11** - Performance Testing.

D.1.7 Rotary Hearth Furnace (RHF) CO, VOC, NO_x, and SO₂ Continuous Emission Rate Monitoring Requirement [326 IAC 2-2] [326 IAC 3-5] [40 CFR Part 64]

SO₂ CEMS

- (a) Pursuant to 326 IAC 2-2, 326 IAC 3-5-1(d) and 40 CFR Part 64, the Permittee shall install, calibrate, certify, operate, and maintain continuous emission monitoring system(s) (CEMSs) and related equipment for measuring **inlet and outlet** SO₂ emissions rates (in pounds per hour) from the RHF exhaust in accordance with 326 IAC 3-5-2 and 326 IAC 3-5-3.

The control efficiency of the wet scrubbers is determined by calculating the 24-hour daily geometric average percent reduction using EPA Method Reference 19 or other approved methods and determining the inlet and outlet data.

CO, VOC, and NO_x CEMS

- (b) Pursuant to 326 IAC 2-2 and 326 IAC 3-5-1(d), the Permittee shall install, calibrate, certify, operate, and maintain continuous emission monitoring systems (CEMSs) and related equipment for measuring CO, VOC, and NO_x emissions rates (in pounds per hour) from the RHF exhaust in accordance with 326 IAC 3-5-2 and 326 IAC 3-5-3.

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D.1.8 Stack 1001 Continuous Opacity Monitoring (COM) [326 IAC 2-2] [326 IAC 3-5] [40 CFR Part 64]

Pursuant to 326 IAC 2-2, 326 IAC 3-5 and 40 CFR Part 64, the Permittee shall install, calibrate, certify, operate, and maintain a continuous opacity monitoring (COM) system and related equipment to measure opacity from Stack 1001 in accordance with 326 IAC 3-5-2 and 326 IAC 3-5-3.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.1.9 Maintenance of Continuous Opacity Monitoring (COM) Equipment [326 IAC 2-7-5(3)(A)(iii)]

- (a) The continuous opacity monitoring (COM) system shall meet the performance specifications of 40 CFR Part 60, Appendix B, Performance Specification No. 1, and ~~are~~ **is** subject to monitor system certification requirements pursuant to 326 IAC 3-5.
- (b) In the event that a breakdown of a continuous opacity monitoring system occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem.
- (c) ~~Whenever a continuous opacity monitor (COM) is malfunctioning or will be down for calibration, maintenance, or repairs for a period of one (1) hour or more, compliance with the applicable opacity limits shall be demonstrated by the following:~~
 - ~~(1) Visible emission (VE) notations shall be performed once per hour during daylight operations following the shutdown or malfunction of the primary COM. A trained employee shall record whether emissions are normal or abnormal for the state of operation of the emission unit at the time of the reading.~~
 - (A) ~~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.~~
 - (B) ~~If abnormal emissions are noted during two consecutive emission notations, the Permittee shall begin Method 9 opacity observations within four hours of the second abnormal notation.~~
 - (C) ~~VE notations may be discontinued once a COM is online or formal Method 9 readings have been implemented.~~
- (2 c)** If a COM is not online within twenty-four (24) hours of shutdown or malfunction of the primary COM **and the RHF is in operation**, the Permittee shall provide certified opacity reader(s), who may be employees of the Permittee or independent contractors, to self-monitor the emissions from the emission unit stack.
 - (A 1)** Visible emission readings shall be performed in accordance with 40 CFR 60, Appendix A, Method 9, for a minimum of five (5) consecutive six (6) minute averaging periods beginning not more than twenty-four (24) hours after the start of the malfunction or down time.
 - (B 2)** Method 9 opacity readings shall be repeated for a minimum of five (5) consecutive six (6) minute averaging periods at least once every four (4) hours during daylight operations, until such time that a COM is in operation.

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- (G 3) Method 9 readings may be discontinued once a COM is online.
- (D 4) Any opacity exceedances determined by Method 9 readings shall be reported with the Quarterly Opacity Exceedances Reports.
- (3 d) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section **C.18** - Compliance Response Plan - Preparation, Implementation, Records, and Reports. Observation of abnormal emissions that do not violate an applicable opacity limit is not a deviation from this permit. Failure to take response steps in accordance with Section **C.18** - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.
- (d e) Nothing in this permit shall excuse the Permittee from complying with the requirements to operate a continuous opacity monitoring system pursuant to 326 IAC 3-5, 326 IAC 2-2, and 40 CFR Part 64.

D.1.10 Maintenance of Continuous Emission Monitoring (CEM) Equipment [326 IAC 2-7-5(3)(A)(iii)]
[326 IAC 2-7-6]

- (a) The continuous emission monitoring systems (CEMs) shall meet the performance specifications of 40 CFR Part 60, Appendix B, and are subject to monitor system certification requirements pursuant to 326 IAC 3-5.
- (b) In the event that a breakdown of the SO₂, CO, VOC, and NO_x continuous emission monitoring system (CEMS) occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem.
- (c) SO₂ CEMS
Whenever the SO₂ CEMS is malfunctioning or down for repairs or adjustments **for a period of four (4) hours or more and the rotary hearth furnace (RHF) is in operation**, the Permittee shall monitor and record the pH, **and** flow rate ~~and pressure drop~~ of the wet scrubbers.
 - (1) Scrubber parametric monitoring readings shall be recorded at least once per hour until the primary CEMS or a backup CEMS is brought online.
 - (2) **When for any one reading, the pH or flow rate is outside the normal range or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C.18- Compliance Response Plan (CRP) - Preparation, Implementation, Records, and Reports.**
 - (3) **The instrument used for determining the pH and flow rate to comply with Section C.15 - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.**
 - (4) **Failure to take response steps in accordance with Section C.18 - Compliance Response Plan (CRP) – Preparation, Implementation, Records and Reports shall be considered a deviation from this permit.**

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- (d) CO, NO_x, and VOC CEMS
Whenever the CO, NO_x or VOC CEMS is malfunctioning or down for repairs or adjustments **for a period of four (4) hours or more and the rotary hearth furnace (RHF) is in operation**, the Permittee shall continuously monitor and record the operating temperature of the rotary hearth furnace (RHF).

The RHF parametric monitoring readings shall be recorded continuously until the primary CEMS or a backup CEMS is brought online.

- (e) Nothing in this permit shall excuse the Permittee from complying with the requirements to operate a continuous emission monitoring system pursuant to 326 IAC 3-5, 326 IAC 2-2, and 40 CFR Part 64.

D.1.11 Scrubbers Operation [326 IAC 2-2] [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

Scrubber Inspection

- (a) An inspection of the wet scrubbers shall be performed at least once every two (2) years, in accordance with the Preventive Maintenance Plan (PMP) prepared in accordance with Section **B.18** - Preventive Maintenance Plan (PMP).

Defective parts shall **be repaired or** replaced.

A record shall be kept of the results of the inspection and the part(s) **repaired or** replaced.

- (b) Inspections shall be made whenever there is an outage of any nature lasting more than three (3) days unless such measurements have been taken within the past twelve (12) months.
- (c) Reasonable response steps shall be taken in accordance with Section **C.18** - Compliance Response Plan (CRP) - Preparation, Implementation, Records, and Reports for any improper or abnormal conditions found during an inspection.

Discovery of an abnormal or improper condition is not a deviation from this permit.

- (d) Scrubber Parametric Monitoring

The Permittee shall record the pH, **and** flow rate ~~and pressure drop~~ of the wet scrubbers, at least once per ~~shift~~ **day**, when the rotary hearth furnace (RHF) is in operation when venting to the atmosphere.

- (e) When for any one reading, the pH, **or** flow rate ~~or pressure drop~~ is outside the normal range or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section **C.18**- Compliance Response Plan (CRP) - Preparation, Implementation, Records, and Reports.
- (f) The instrument used for determining the ~~pressure~~ **pH and flow rate** shall comply with Section **C.15** - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

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(g) Response Steps

Failure to take response steps in accordance with Section **C.18** - Compliance Response Plan (CRP) – Preparation, Implementation, Records and Reports shall be considered a deviation from this permit.

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.1.12 Record Keeping Requirements [326 IAC 2-2] [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

- (a) The Permittee shall maintain records required under 326 IAC 3-5-6 at the source in a manner that they may be inspected by the IDEM, OAQ, or the US EPA, if so requested or required.
- (b) The Permittee shall record the output (in pounds per hour) of the CO, VOC, NO_x and SO₂ continuous emission monitoring systems (CEMSs), and shall perform the required record keeping and reporting, pursuant to 326 IAC 3-5-6, 326 IAC 3-5-7 and 40 CFR Part 64, that includes, but not limited to, the following:
- (1) All documentation relating to:
 - (A) Design, installation, and testing of all elements of the monitoring system.
 - (B) Required corrective action or compliance plan activities.
 - (2) All maintenance logs, calibration checks, and other required quality assurance activities.
 - (3) All records of corrective and preventive action.
 - (4) A log of plant operations, including the following:
 - (A) Date of facility downtime.
 - (B) Time of commencement and completion of each downtime.
 - (C) Reason for each downtime.
 - (5) Records that describe ~~the~~ **any** supplemental monitoring implemented during the downtime to assure compliance with applicable emission limitations.
- (c) The Permittee shall record the output of the continuous opacity monitoring (COM) system and shall perform the required record keeping and reporting, pursuant to 326 IAC 3-5-6 and 326 IAC 3-5-7, that includes, but not limited to, the following:
- (1) All documentation relating to:
 - (A) Design, installation, and testing of all elements of the monitoring system.
 - (B) Required corrective action or compliance plan activities.
 - (2) All maintenance logs, calibration checks, and other required quality assurance

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activities.

- (3) All records of corrective and preventive action.
 - (4) A log of plant operations, including the following:
 - (A) Date of facility downtime.
 - (B) Time of commencement and completion of each downtime.
 - (C) Reason for each downtime.
 - (5) Records that describe ~~the~~ **any** supplemental monitoring implemented during the downtime to assure compliance with applicable emission limitations.
- (d) The Permittee shall record the scrubber's inspections and part(s) replaced, and make such records available upon request to IDEM, OAQ, and the US EPA.
 - (e) The Permittee shall maintain the following records, and make such records available upon request to IDEM, OAQ, and the US EPA:
 - (1) Records of the once per ~~shift~~ **day** readings of the pH, **and** flow rate ~~and pressure drop~~ of the wet scrubbers, during normal operation when venting to the atmosphere.
 - (2) Records of the results of the wet scrubbers inspections.
 - (f) The Permittee shall maintain records of any additional inspections prescribed by the Preventive Maintenance Plan (PMP) and make such records available upon request to IDEM, OAQ, and the US EPA.
 - (g) Records necessary to demonstrate compliance shall be available ~~within~~ **no later than** 30 days of the end of each compliance period.
 - (h) All records shall be maintained in accordance with Section **C.21** - General Record Keeping Requirements of this permit.

D.1.13 Reporting Requirements ~~[326 IAC 2-1.1-11]~~ **[326 IAC 2-2] [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

- (a) The Permittee shall maintain and submit with the Affidavit of Construction (Section **B.6**), the final design specifications and vendor guarantees of the RHF.
- (b) The Permittee shall maintain and submit to IDEM, OAQ, upon initial start up, a complete written continuous monitoring standard operating procedure (CMSOP) for the COM and CEMS, in accordance with the requirements of 326 IAC 3-5-4.
- (c) The Permittee shall maintain and submit a quarterly report of excess emissions, using the Quarterly Deviation and Compliance Monitoring Report or equivalent, of the following:
 - (1) CO, VOC, NO_x, and SO₂ readings from the CEMS.

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- (2) Opacity readings from the COM.
- (d) In accordance with 326 IAC 3-5-7(5), the Permittee shall submit reports of continuous monitoring system instrument downtime **when the rotary hearth furnace (RHF) was in operation**, except for zero (0) and span checks, which shall be reported separately.

The reports shall include the following:

- (1) Date of downtime.
- (2) Time of commencement.
- (3) Duration of each downtime.
- (4) Reasons for each downtime.
- (5) Nature of system repairs and adjustments.
- (e) These reports shall be submitted no later than thirty (30) calendar days following the end of each ~~calendar quarter~~ **reporting period** and in accordance with Section **C.22** - General Reporting Requirements of this permit.
- (f) These reports do require the certification by the responsible official, as defined by 326 IAC 2-7-1(34).

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SECTION D.2 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

Stack 1001 and Roof Monitor

- (1) Three (3) Agglomerate Dryers, identified as Green Ball Dryer 1, Green Ball Dryer 2, and Green Ball Dryer 3, with a total nominal rating of 153.248 tons of dried green balls per hour and 205.2 million (MM) Btu per hour.

During normal operations, these dryers operate using the air preheated by the RHF exhaust. These dryers use natural gas during start up periods and when sufficient preheated air is not available. Low NO_x burners are used to ~~minimize~~ **reduce** the NO_x emissions from these three (3) Green Ball Dryers when they are using natural gas as fuel.

Each Green Ball Dryer is controlled by a baghouse, identified as Green Ball Dryer Baghouse 1, Green Ball Dryer Baghouse 2, and Green Ball Dryer Baghouse 3. These baghouses exhaust to a common duct and then to Stack 1001.

- (2) One (1) Product Separator/Dryer, nominally rated at 33 tons of dry product per hour, and 25 MMBtu per hour. This dryer uses natural gas and is equipped with low NO_x burners to ~~minimize~~ **reduce** the NO_x emissions.

The particulate matter emissions from the Product Separator/Dryer are controlled by a baghouse, identified as Product Separator/Dryer Baghouse.

The controlled emissions from the Green Ball Dryers and Product Separator/**Dryer** exhaust through a stack, identified as Stack 1001.

The remaining uncontrolled emissions exhaust through the Roof Monitor.

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

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.2.1 Green Ball Dryers PSD BACT Limits [326 IAC 2-2]

Pursuant to 326 IAC 2-2 Prevention of Significant Deterioration (PSD), the Permittee shall comply with the following PSD Best Available Control Technology (BACT) standards:

If the stack test required under Condition D.2.8 demonstrates that these emission limits are less stringent than what is achieved in practice, the Department may, at its discretion, use the authority under IC 13-15-7-2 and 326 IAC 2-2 to reopen and revise the emission limit(s) to more closely reflect the actual stack test results.

Because a best available control technology (BACT) level has not previously been established for an iron nugget production plant, if the stack test required under Condition D.2.8 demonstrates that the emission limit initially established in this permit is not achievable in practice, the Permittee may submit to the Department an application for a

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revision to the permit to reflect the emission level achieved in the stack test. The Permittee has the burden of demonstrating that it took all steps necessary to ensure that the emissions levels achieved in the stack test were the lowest achievable.

Any revisions of the emissions limits made as the result of this provision shall be subject to the best available control technology (BACT) review and air quality analysis, specified in 326 IAC 2-2.

The Department will provide an opportunity for public notice and comment under 326 IAC 2-7-10.5(f)(1) prior to finalizing any permit modification. IC 13-15-7-3 (Revocation or Modification of a Permit: Appeal to Board) shall apply to the permit modification.

This provision does not have any impact on current or future enforcement actions.

- (a) Fuel
- (1) The Green Ball Dryers shall use the air preheated by the RHF exhaust.
 - or**
 - (2) The Green Ball Dryers shall use natural gas as fuel:
 - during start up and shut down periods only, or
 - when sufficient preheated air is not available.
- (b) When the Green Ball Dryers are using either preheated air or natural gas:
- (1) The filterable ~~and condensible~~ particulate matter (PM/PM₁₀) emissions from the Green Ball Dryers shall be captured and controlled by three (3) baghouses (identified as Green Ball Dryer Baghouse 1, Green Ball Dryer Baghouse 2, and Green Ball Dryer Baghouse 3).
 - (2) The filterable particulate matter (PM) emissions exhausting through the Green Ball Dryer Baggouses shall not exceed 0.013 grains per dry standard cubic foot of exhaust air, and a total of 30.94 pounds per hour, based on a 3-hour block average.**
 - ~~(2 3)~~ The filterable and condensible particulate matter (PM/PM₁₀) emissions exhausting through the Green Ball Dryer Baggouses shall not exceed 0.015 grains per dry standard cubic foot of exhaust air, and **a total of 36.26 pounds per hour**, based on a 3-hour block average.
- (c) When the Green Ball Dryers are using preheated air only:
- (1) The **combined** NO_x emissions from the Green Ball Dryers shall not exceed 0.044 pounds per ton **of iron nugget product** and **a total of 6.74 pounds per hour**, based on a 3-hour block average.
 - (2) The **combined** CO emissions from the Green Ball Dryers shall not exceed 0.242 pounds per ton **of iron nugget product** and **a total of 37.09 37.1 pounds per hour**, based on a 3-hour block average.
 - (3) The VOC emissions from the Green Ball Dryers shall not exceed ~~0.126 pounds per ton and~~ **a total of 19.34 pounds per hour**, based on a 3-hour block average.
 - (4) The SO₂ emissions from the Green Ball Dryers shall not exceed ~~0.0001 pounds~~

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~~per ton and 0.115~~ **a total of 0.05** pounds per hour, based on a 3-hour block average.

- (d) When the Green Ball Dryers are using natural gas only:
- (1) Low NO_x burners shall be installed and utilized to reduce the NO_x emissions from the Green Ball Dryers when they are using natural gas **as fuel** ~~or when sufficient preheated air is not available.~~
 - (2) The **combined** NO_x emissions from the Green Ball Dryers shall not exceed 0.22 pounds per ton **of iron nugget product** and ~~33.76~~ **a total of 33.8** pounds per hour, based on a 3-hour block average.
 - (3) The **combined** CO emissions from the Green Ball Dryers shall not exceed 0.33 pounds per ton **of iron nugget product** and ~~50.65~~ **a total of 58.2** pounds per hour, based on a 3-hour block average.
 - (4) The VOC emissions from the Green Ball Dryers shall not exceed ~~0.132 pounds per ton and~~ **a total of 20.23** pounds per hour, based on a 3-hour block average.
 - (5) The SO₂ emissions from the Green Ball Dryers shall not exceed ~~0.0001 pounds per ton and~~ **a total of 0.14** pounds per hour, based on a 3-hour block average.

D.2.2 Product Separator/Dryer PSD BACT Limits [326 IAC 2-2]

Pursuant to 326 IAC 2-2 Prevention of Significant Deterioration (PSD), the Permittee shall comply with the following PSD Best Available Control Technology (BACT) standards:

If the stack test required under Condition D.2.8 demonstrates that these emission limits are less stringent than what is achieved in practice, the Department may, at its discretion, use the authority under IC 13-15-7-2 and 326 IAC 2-2 to reopen and revise the emission limit(s) to more closely reflect the actual stack test results.

Because a best available control technology (BACT) level has not previously been established for an iron nugget production plant, if the stack test required under Condition D.2.8 demonstrates that the emission limit initially established in this permit is not achievable in practice, the Permittee may submit to the Department an application for a revision to the permit to reflect the emission level achieved in the stack test. The Permittee has the burden of demonstrating that it took all steps necessary to ensure that the emissions levels achieved in the stack test were the lowest achievable.

Any revisions of the emissions limits made as the result of this provision shall be subject to the best available control technology (BACT) review and air quality analysis, specified in 326 IAC 2-2.

The Department will provide an opportunity for public notice and comment under 326 IAC 2-7-10.5(f)(1) prior to finalizing any permit modification. IC 13-15-7-3 (Revocation or Modification of a Permit: Appeal to Board) shall apply to the permit modification.

This provision does not have any impact on current or future enforcement actions.

- (a) The Product Separator/Dryer shall use natural gas as fuel.

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- (b) The filterable and condensible particulate matter (PM/PM₁₀) emissions from the Product Separator/Dryer shall be captured and controlled by a baghouse (identified as Product Separator/Dryer Baghouse).
- (c) The filterable and condensible particulate matter (PM/PM₁₀) emissions from the Product Separator/Dryer Baghouse shall not exceed 0.0052 grains per dry standard cubic foot of exhaust air, and 2.21 pounds per hour, based on a 3-hour block average.
- (d) The filterable and condensible particulate matter (PM/PM₁₀) emissions from the Product Separator/Dryer Baghouse shall not exceed 0.015 grains per dry standard cubic foot of exhaust air, and 7.65 pounds per hour, based on a 3-hour block average.**
- ~~(e)~~ Low NO_x burners shall be installed and utilized to reduce the NO_x emissions from the Product Separator/Dryer.
- ~~(e)~~ f) The NO_x emissions from the Product Separator/Dryer shall not exceed 0.037 pounds per ton of iron nugget product and 1.22 pounds of NO_x per hour based on a 3-hour block average.
- ~~(f)~~ g) The CO emissions from the Product Separator/Dryer shall not exceed 0.062 pounds per ton of iron nugget product and 2.05 pounds of CO per hour based on a 3-hour block average.
- ~~(g)~~ h) The VOC emissions from the Product Separator/Dryer shall not exceed ~~0.004 pounds per ton~~ and 0.132 pounds of VOC per hour based on a 3-hour block average.
- ~~(h)~~ i) The SO₂ emissions from the Product Separator/Dryer shall not exceed ~~0.001 pounds per ton~~ and 0.033 pounds of SO₂ per hour based on a 3-hour block average.

D.2.3 Stack 1001 and Roof Monitor Opacity PSD BACT Limit [326 IAC 2-2]

Pursuant to 326 IAC 2-2 Prevention of Significant Deterioration (PSD):

- (a) The visible emissions from Stack 1001 shall not exceed ~~3~~ **5**% opacity, based on a 6-minute average. ~~as determined in 326 IAC 5-1-4.~~ Compliance will be demonstrated through the use of a continuous opacity monitor (COM) system.
- (b) The visible emissions from the Roof Monitor shall not exceed 3% opacity, based on a 6-minute average ~~as determined in 326 IAC 5-1-4.~~

D.2.4 Green Ball Dryers Clean Unit [326 IAC 2-2.2]

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- (a) Pursuant to 326 IAC 2-2.2 (Clean Unit), the Green Ball Dryers ~~is~~ **are** classified as Clean Units for:
 - filterable and condensible particulate matter (PM/PM₁₀), and
 - NO_x.
 - (b) The Clean Unit designations for the Green Ball Dryers are in effect for ten (10) years from the initial start ups of the Green Ball Dryers.

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- (c) In order to maintain the clean unit designations for the Green Ball Dryers, the Permittee shall comply with the Green Ball Dryer's' filterable and condensible particulate matter (PM/PM₁₀), NO_x and Opacity PSD BACT limits.

D.2.5 Product Separator/Dryer Clean Unit [326 IAC 2-2.2]

- (a) Pursuant to 326 IAC 2-2.2 (Clean Unit), the Product Separator/Dryer is classified as Clean Unit for:
- filterable and condensible particulate matter (PM/PM₁₀), and
 - NO_x.
- (b) The Clean Unit designation for the Product Separator/Dryer is in effect for ten (10) years from the initial start up of the Product Separator/Dryer.
- (c) In order to maintain the clean unit designations for the Product Separator/Dryer, the Permittee shall comply with the Product Separator/Dryer's filterable particulate matter (PM), NO_x and Opacity PSD BACT limits.

D.2.6 Preventive Maintenance Plan (PMP) [326 IAC 2-7-5(13)] [326 IAC 1-6-3]

A Preventive Maintenance Plan (PMP), in accordance with Section **B.18** - Preventive Maintenance Plan (PMP), of this permit, is required for these facilities and their emission control devices.

Compliance Determination Requirements

D.2.7 Operation of Add-on Control Devices Exhausting Through Stack 1001 [326 IAC 2-2]

Pursuant to 326 IAC 2-2 Prevention of Significant Deterioration (PSD):

Baghouse

- (a) The Green Ball Dryers Baghouses for particulate control shall be in operation and control the emissions at all times from the Green Ball Dryers when the Green Ball Dryers are in operation.
- (b) The Product Separator/Dryer Baghouse for particulate control shall be in operation and control the emissions at all times from the Product Separator/Dryer when the Product Separator/Dryer is in operation.

Low NO_x Burners

- (c) The Green Ball Dryers shall be equipped and operated with low NO_x burners when using natural gas or when sufficient preheated air is not available.
- (d) The Product Separator/Dryer shall be equipped and operated with low NO_x burners.

D.2.8 Green Ball Dryers Baghouses Testing Requirements and Stack 1001 Continuous Opacity Monitoring (COM) [326 IAC 2-7-6(1) and (6)] [326 IAC 2-2] [326 IAC 3-5] [40 CFR Part 64]

Testing Requirements

- (a) Pursuant to 326 IAC 2-2 Prevention of Significant Deterioration (PSD), 326 IAC 2-7 Part 70 Permit and 40 CFR Part 64, ~~with~~ **no later than** 60 days after achieving maximum production rate, but no later than 180 days after initial start-up of the Green Ball Dryers, the Permittee shall perform filterable and condensible particulate matter (PM/PM₁₀) compliance tests at the Green Ball Dryer Baghouses common duct/exhaust, **using 40 CFR Part 60, Appendix A, Method 5, Method 201 or 201A, Method 202 or methods**

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as approved by the Commissioner.

- (b) The filterable and condensable particulate matter (PM/PM₁₀) tests shall be repeated at least once every five (5) years from the date of the last valid compliance demonstration.
- (c) ~~Any stack which has multiple processes which exhaust to the same stack shall operate all of the processes simultaneously in accordance with 326 IAC 3-6 (Source Sampling Procedures).~~
- (d) These tests shall be performed using methods as approved by the Commissioner.
- (e d) Testing shall be conducted in accordance with Section **C.11** - Performance Testing.

Stack 1001 Continuous Opacity Monitoring (COM)

- (f) **Refer to Conditions D.1.8 and D.1.9 for the Stack 1001 Continuous Opacity Monitor (COM) compliance requirements.**

~~Pursuant to 326 IAC 2-2, 326 IAC 3-5 and 40 CFR Part 64, the Permittee shall install, calibrate, certify, operate, and maintain a continuous opacity monitoring (COM) system and related equipment to measure opacity from Stack 1001 in accordance with 326 IAC 3-5-2 and 326 IAC 3-5-3.~~

- (g) ~~The continuous opacity monitoring (COM) system shall meet the performance specifications of 40 CFR Part 60, Appendix B, Performance Specification No. 1, and are subject to monitor system certification requirements pursuant to 326 IAC 3-5.~~
- (h) ~~In the event that a breakdown of a continuous opacity monitoring system occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem.~~
- (i) ~~Whenever a continuous opacity monitor (COM) is malfunctioning or will be down for calibration, maintenance, or repairs for a period of one (1) hour or more, compliance with the applicable opacity limits shall be demonstrated by the following:~~
 - (1) ~~Visible emission (VE) notations shall be performed once per hour during daylight operations following the shutdown or malfunction of the primary COM. A trained employee shall record whether emissions are normal or abnormal for the state of operation of the emission unit at the time of the reading.~~
 - (A) ~~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.~~
 - (B) ~~If abnormal emissions are noted during two consecutive emission notations, the Permittee shall begin Method 9 opacity observations within four hours of the second abnormal notation.~~
 - (C) ~~VE notations may be discontinued once a COM is online or formal Method 9 readings have been implemented.~~
 - (2) ~~If a COM is not online within twenty four (24) hours of shutdown or malfunction of~~

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~~the primary COM, the Permittee shall provide certified opacity reader(s), who may be employees of the Permittee or independent contractors, to self-monitor the emissions from the emission unit stack.~~

~~(A) Visible emission readings shall be performed in accordance with 40 CFR 60, Appendix A, Method 9, for a minimum of five (5) consecutive six (6) minute averaging periods beginning not more than twenty-four (24) hours after the start of the malfunction or down time.~~

~~(B) Method 9 opacity readings shall be repeated for a minimum of five (5) consecutive six (6) minute averaging periods at least once every four (4) hours during daylight operations, until such time that a COM is in operation.~~

~~(C) Method 9 readings may be discontinued once a COM is online.~~

~~(D) Any opacity exceedances determined by Method 9 readings shall be reported with the Quarterly Opacity Exceedances Reports.~~

~~(3) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C—Compliance Response Plan (CRP)—Preparation, Implementation, Records, and Reports. Observation of abnormal emissions that do not violate an applicable opacity limit is not a deviation from this permit. Failure to take response steps in accordance with Section C—Compliance Response Plan (CRP)—Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.~~

~~(j) Nothing in this permit shall excuse the Permittee from complying with the requirements to operate a continuous opacity monitoring system pursuant to 326 IAC 3-5, 326 IAC 2-2, and 40 CFR Part 64.~~

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.2.9 Baghouse Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)] [40 CFR Part 64]

- (a) Green Ball Dryers Baghouses
Pursuant to 326 IAC 2-7-6(1), 326 IAC 2-7-5(1) and 40 CFR Part 64, the Permittee shall record the total static pressure drop across the Green Ball Dryers Baghouses, used in conjunction with the Green Ball Dryers, at least once per shift **day** when the process is in operation when venting to the atmosphere.
- (b) Product Separator/Dryer Baghouse
Pursuant to 326 IAC 2-7-6(1) and 326 IAC 2-7-5(1), the Permittee shall record the total static pressure drop across the Product Separator/Dryer Baghouse, used in conjunction with the Product Separator/Dryer, at least once per shift **day** when the process is in operation when venting to the atmosphere.
- (c) Normal Range
When for any one reading, the pressure drop across the baghouse is outside the normal range of 6.0 and 12.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section **C.18** -

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Compliance Response Plan (CRP) - Preparation, Implementation, Records, and Reports.

A pressure reading that is outside the above mentioned range is not a deviation from this permit.

- (d) Response Steps
Failure to take response steps in accordance with Section **C.18** - Compliance Response Plan (CRP) – Preparation, Implementation, Records and Reports shall be considered a deviation from this permit.
- (d) Instrumentation
The instrument used for determining the pressure shall comply with Section **C.15** - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.2.10 Baghouse Inspections [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)] [40 CFR Part 64]

- (a) An inspection shall be performed each calendar ~~quarter~~ **year** of all bags controlling the:
- (1) Green Ball Dryers, and
 - (2) Product Separator/Dryer,
- when venting to the atmosphere.
- (b) Inspections required by this condition shall not be performed in consecutive months.
- (c) All defective bags shall be replaced.

D.2.11 Broken or Failed Bag Detection [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)] [40 CFR Part 64]

In the event that bag failure has been observed:

- (a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan (CRP) shall be initiated.

For any failure with corresponding response steps and timetable not described in the Compliance Response Plan (CRP), response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion.

Failure to take response steps in accordance with Section **C.18** - Compliance Response Plan (CRP) - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

If operations continue after bag failure is observed and it will be 10 days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

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- (b) For single compartment baghouses, if failure is indicated by a significant drop in the baghouse's pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, then failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced.

Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section **B.19** - Emergency Provisions).

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.2.12 Record Keeping Requirements [326 IAC 2-2] [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

- (a) The Permittee shall maintain records required under 326 IAC 3-5-6 at the source in a manner that they may be inspected by the IDEM, OAQ, or the US EPA, if so requested or required.
- (b) The Permittee shall maintain the following records, and make such records available upon request to IDEM, OAQ, and the US EPA:
- (1) Records of the dates when preheated air or **and** natural gas is used by the Green Ball Dryers.
 - (2) Records of the once per ~~shift~~ **day** readings of the baghouses' total static pressure drop during normal operation when venting to the atmosphere.
 - (3) Records of the results of the baghouse inspections.
- (c) **Refer to Condition D.1.12(c) for the Stack 1001 Continuous Opacity Monitor (COM) record keeping requirements.**

~~The Permittee shall record the output of the continuous opacity monitoring (COM) system and shall perform the required record keeping and reporting, pursuant to 326 IAC 3-5-6 and 326 IAC 3-5-7, that includes, but not limited to, the following:~~

- (1) ~~All documentation relating to: —~~
 - ~~(A) Design, installation, and testing of all elements of the monitoring system.~~
 - ~~(B) Required corrective action or compliance plan activities.~~
- (2) ~~All maintenance logs, calibration checks, and other required quality assurance activities.~~
- (3) ~~All records of corrective and preventive action.~~
- (4) ~~A log of plant operations, including the following:~~

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- (A) ~~Date of facility downtime.~~
- (B) ~~Time of commencement and completion of each downtime.~~
- (C) ~~Reason for each downtime.~~
- (5) ~~Records that describe the supplemental monitoring implemented during the downtime to assure compliance with applicable emission limitations.~~
- (d) The Permittee shall maintain records of any additional inspections prescribed by the Preventive Maintenance Plan (PMP) and make such records available upon request to IDEM, OAQ, and the US EPA.
- (e) Records necessary to demonstrate compliance shall be available ~~within~~ **no later than** 30 days of the end of each compliance period.
- (f) All records shall be maintained in accordance with **Section C.21** - General Record Keeping Requirements of this permit.

D.2.13 Reporting Requirements ~~[326 IAC 2-1.1-14]~~ **[326 IAC 2-2]** **[326 IAC 2-7-5(3)]** **[326 IAC 2-7-19]**

- (a) The Permittee shall maintain and submit with the Affidavit of Construction (Section **B.6**), the final design specifications and vendor guarantees of the Green Ball Dryers and Product Separator Dryer.
- (b) **Refer to Conditions D.1.13(b), D.1.13(c)(2) and D.1.13(d) for the Stack 1001 Continuous Opacity Monitor (COM) reporting requirements.**

~~The Permittee shall maintain and submit to IDEM, OAQ, upon initial start up, a complete written continuous monitoring standard operating procedure (CMSOP) for the COM and CEMS, in accordance with the requirements of 326 IAC 3-5-4.~~
- (c) ~~The Permittee shall maintain and submit a quarterly report of excess emissions, using the Quarterly Deviation and Compliance Monitoring Report or equivalent, of the opacity readings from the COM.~~
- (d) In accordance with 326 IAC 3-5-7(5), the Permittee shall submit reports of continuous monitoring system instrument downtime, except for zero (0) and span checks, which shall be reported separately.

~~The reports shall include the following:~~

- (1) ~~Date of downtime.~~
- (2) ~~Time of commencement.~~
- (3) ~~Duration of each downtime.~~
- (4) ~~Reasons for each downtime.~~
- (5) ~~Nature of system repairs and adjustments.~~

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- (e c) These reports shall be submitted no later than thirty (30) calendar days following the end of each calendar quarter and in accordance with Section **C.22** - General Reporting Requirements of this permit.
- (f d) These reports shall be submitted in accordance with Section **C.22** - General Reporting Requirements of this permit.
- (g e) These reports do require the certification by the responsible official, as defined by 326 IAC 2-7-1(34).

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SECTION D.3 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

Stack 1002

(1) One (1) Coal #1 Pulverizer/Dryer, nominally rated at 33 tons per hour, and 36.0 million (MM) Btu per hour.

The particulate matter emissions from the Coal #1 Pulverizer/Dryer are controlled by a baghouse, identified as Coal #1 Pulverizer/Dryer Baghouse.

(2) One (1) Coal #2 Pulverizer/Dryer, nominally rated at 9 tons per hour, and 9.23 MMBtu per hour.

The particulate matter emissions from the Coal #2 Pulverizer/Dryer are controlled by a baghouse, identified as Coal #2 Pulverizer/Dryer Baghouse.

(3) Flux Pulverizer(s)/Dryer(s), nominally rated **at a total of** 13 tons per hour and 14.58 MMBtu per hour.

Due to design uncertainty at this time of the review, the numbers of flux pulverizers/dryers **and associated pieces of control equipment** ~~is~~ **are** permitted to change, however, the total heat input and process capacity will remain the same.

The particulate matter emissions from the Flux Pulverizer(s)/Dryer(s) are controlled by baghouse(s), identified as Flux Pulverizer(s)/Dryer(s) Baghouse(s).

These dryers use natural gas and are equipped with ~~L~~ low NO_x burners.

The controlled emissions from the:

- Coal #1 Pulverizer/Dryer,
- Coal #2 Pulverizer/Dryer, and
- Flux Pulverizer(s)/Dryer(s)

exhaust through a stack identified as Stack 1002.

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

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.3.1 Coal #1 Pulverizer/Dryer PSD BACT Limits [326 IAC 2-2]

Pursuant to 326 IAC 2-2 Prevention of Significant Deterioration (PSD), the Permittee shall comply with the following PSD Best Available Control Technology (BACT) standards.:

If the stack test required under Condition D.3.9 demonstrates that these emission limits are less stringent than what is achieved in practice, the Department may, at its discretion, use the authority under IC 13-15-7-2 and 326 IAC 2-2 to reopen and revise the emission limit(s) to more closely reflect the actual stack test results.

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Because a best available control technology (BACT) level has not previously been established for an iron nugget production plant, if the stack test required under Condition D.3.9 demonstrates that the emission limit initially established in this permit is not achievable in practice, the Permittee may submit to the Department an application for a revision to the permit to reflect the emission level achieved in the stack test. The Permittee has the burden of demonstrating that it took all steps necessary to ensure that the emissions levels achieved in the stack test were the lowest achievable.

Any revisions of the emissions limits made as the result of this provision shall be subject to the best available control technology (BACT) review and air quality analysis, specified in 326 IAC 2-2.

The Department will provide an opportunity for public notice and comment under 326 IAC 2-7-10.5(f)(1) prior to finalizing any permit modification. IC 13-15-7-3 (Revocation or Modification of a Permit: Appeal to Board) shall apply to the permit modification.

This provision does not have any impact on current or future enforcement actions.

- (a) The Coal #1 Pulverizer/Dryer shall use natural gas as fuel **with propane as backup fuel**.
- (b) The filterable particulate matter (PM) and filterable and condensable particulate matter (PM/PM₁₀) emissions from the Coal #1 Pulverizer/Dryer shall be captured and controlled by a baghouse (identified as Coal #1 Pulverizer/Dryer Baghouse).
- (c) The filterable particulate matter (PM) emissions exhausting through the Coal #1 Pulverizer/Dryer Baghouse shall not exceed 0.01 grains per dry standard cubic foot of exhaust air and 6.64 pounds per hour, based on a 3-hour block average.
- (d) The filterable and condensable particulate matter (PM/PM₁₀) emissions exhausting through the Coal #1 Pulverizer/Dryer Baghouse shall not exceed 0.015 grains per dry standard cubic foot of exhaust air and 9.96 pounds per hour, based on a 3-hour block average.
- (e) Low NO_x burners shall be installed and utilized to reduce the NO_x emissions from the Coal #1 Pulverizer/Dryer.
- (f) The NO_x emissions from the Coal #1 Pulverizer/Dryer shall not exceed 0.053 pounds per ton and 1.75 pounds per hour, based on a 3-hour block average.
- (g) The CO emissions from the Coal #1 Pulverizer/Dryer shall not exceed 0.090 pounds per ton and 2.97 pounds per hour, based on a 3-hour block average.
- (h) The VOC emissions from the Coal #1 Pulverizer/Dryer shall not exceed ~~0.006 pounds per ton and 0.198~~ **0.20** pounds per hour, based on a 3-hour block average.
- (i) The SO₂ emissions from the Coal #1 Pulverizer/Dryer shall not exceed ~~0.001 pounds per ton and 0.033~~ pounds per hour, based on a 3-hour block average.

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D.3.2 Coal #2 Pulverizer/Dryer PSD BACT Limits [326 IAC 2-2]

Pursuant to 326 IAC 2-2 Prevention of Significant Deterioration (PSD), the Permittee shall comply with the following PSD Best Available Control Technology (BACT) standards:.

If the stack test required under Condition D.3.9 demonstrates that these emission limits are less stringent than what is achieved in practice, the Department may, at its discretion, use the authority under IC 13-15-7-2 and 326 IAC 2-2 to reopen and revise the emission limit(s) to more closely reflect the actual stack test results.

Because a best available control technology (BACT) level has not previously been established for an iron nugget production plant, if the stack test required under Condition D.3.9 demonstrates that the emission limit initially established in this permit is not achievable in practice, the Permittee may submit to the Department an application for a revision to the permit to reflect the emission level achieved in the stack test. The Permittee has the burden of demonstrating that it took all steps necessary to ensure that the emissions levels achieved in the stack test were the lowest achievable.

Any revisions of the emissions limits made as the result of this provision shall be subject to the best available control technology (BACT) review and air quality analysis, specified in 326 IAC 2-2.

The Department will provide an opportunity for public notice and comment under 326 IAC 2-7-10.5(f)(1) prior to finalizing any permit modification. IC 13-15-7-3 (Revocation or Modification of a Permit: Appeal to Board) shall apply to the permit modification.

This provision does not have any impact on current or future enforcement actions.

- (a) The Coal #2 Pulverizer/Dryer shall use natural gas as fuel **with propane as backup fuel**.
- (b) The filterable particulate matter (PM) and ~~filterable and condensible~~ particulate matter (PM/PM₁₀) emissions from the Coal #2 Pulverizer/Dryer shall be captured and controlled by a baghouse (identified as Coal #2 Pulverizer/Dryer Baghouse).
- (c) The filterable particulate matter (PM) emissions exhausting through the Coal #2 Pulverizer/Dryer Baghouse shall not exceed 0.01 grains per dry standard cubic foot of exhaust air and 1.45 pounds per hour, based on a 3-hour block average.
- (d) The filterable and condensible particulate matter (PM/PM₁₀) emissions exhausting through the Coal #2 Pulverizer/Dryer Baghouse shall not exceed 0.015 grains per dry standard cubic foot of exhaust air and 2.17 pounds per hour, based on a 3-hour block average.
- (e) Low NO_x burners shall be installed and utilized to reduce the NO_x emissions from the Coal #2 Pulverizer/Dryer.
- (f) The NO_x emissions from the Coal #2 Pulverizer/Dryer shall not exceed 0.051 pounds per ton and ~~0.459~~ **0.46** pounds per hour, based on a 3-hour block average.
- (g) The CO emissions from the Coal #2 Pulverizer/Dryer shall not exceed 0.086 pounds per ton and 0.774 pounds per hour, based on a 3-hour block average.

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- (h) The VOC emissions from the Coal #2 Pulverizer/Dryer shall not exceed ~~0.006 pounds per ton and~~ 0.054 pounds per hour, based on a 3-hour block average.
- (i) The SO₂ emissions from the Coal #2 Pulverizer/Dryer shall not exceed ~~0.001 pounds per ton and 0.009~~ **0.01** pounds per hour, based on a 3-hour block average.

D.3.3 Flux Pulverizer(s)/Dryer(s) PSD BACT Limits [326 IAC 2-2]

Pursuant to 326 IAC 2-2 Prevention of Significant Deterioration (PSD), the Permittee shall comply with the following PSD Best Available Control Technology (BACT) standards:

If the stack test required under Condition D.3.9 demonstrates that these emission limits are less stringent than what is achieved in practice, the Department may, at its discretion, use the authority under IC 13-15-7-2 and 326 IAC 2-2 to reopen and revise the emission limit(s) to more closely reflect the actual stack test results.

Because a best available control technology (BACT) level has not previously been established for an iron nugget production plant, if the stack test required under Condition D.3.9 demonstrates that the emission limit initially established in this permit is not achievable in practice, the Permittee may submit to the Department an application for a revision to the permit to reflect the emission level achieved in the stack test. The Permittee has the burden of demonstrating that it took all steps necessary to ensure that the emissions levels achieved in the stack test were the lowest achievable.

Any revisions of the emissions limits made as the result of this provision shall be subject to the best available control technology (BACT) review and air quality analysis, specified in 326 IAC 2-2.

The Department will provide an opportunity for public notice and comment under 326 IAC 2-7-10.5(f)(1) prior to finalizing any permit modification. IC 13-15-7-3 (Revocation or Modification of a Permit: Appeal to Board) shall apply to the permit modification.

This provision does not have any impact on current or future enforcement actions.

- (a) The Flux Pulverizer(s)/Dryer(s) shall use natural gas as fuel **with propane as backup fuel.**
- (b) The filterable and condensable particulate matter (PM/PM₁₀) emissions from the Flux Pulverizer(s)/Dryer(s) shall be captured and controlled by baghouse(s) (identified as Flux Pulverizer(s)/Dryer(s) Baghouse(s)).
- (c) The **total** filterable and condensable particulate matter (PM/PM₁₀) emissions exhausting through the Flux Pulverizer(s)/Dryer(s) Baghouse(s) shall not exceed 0.015 grains per dry standard cubic foot of exhaust air and 4.06 pounds per hour, based on a 3-hour block average.
- (d) Low NO_x burners shall be installed and utilized to reduce the NO_x emissions from the Flux Pulverizer(s)/Dryer(s).
- (e) The NO_x emissions from the Flux Pulverizer(s)/Dryer(s) shall not exceed 0.054 pounds

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per ton and 0.702 pounds per hour, based on a 3-hour block average.

- (f) The CO emissions from the Flux Pulverizer(s)/Dryer(s) shall not exceed 0.091 pounds per ton and 1.18 pounds per hour, based on a 3-hour block average.
- (g) The VOC emissions from the Flux Pulverizer(s)/Dryer(s) shall not exceed ~~0.006 pounds per ton and 0.078~~ **0.08** pounds per hour, based on a 3-hour block average.
- (h) The SO₂ emissions from the Flux Pulverizer(s)/Dryer(s) shall not exceed ~~0.004 pounds per ton and 0.013~~ pounds per hour, based on a 3-hour block average.

D.3.4 Stack 1002 Opacity PSD BACT Limit [326 IAC 2-2]

Pursuant to 326 IAC 2-2 Prevention of Significant Deterioration (PSD), the visible emissions from Stack 1002 shall not exceed 3% opacity, based on a 6-minute average ~~as determined in 326 IAC 5-1-4.~~

D.3.5 Clean Units [326 IAC 2-2.2]

- (a) Pursuant to 326 IAC 2-2.2 (Clean Unit):
 - (1) The Coal #1 Pulverizer/Dryer is classified as Clean Unit for:
 - filterable particulate matter (PM),
 - filterable and condensible particulate matter (PM/PM₁₀), and
 - NO_x.
 - (2) The Coal #2 Pulverizer/Dryer is classified as Clean Unit for:
 - filterable particulate matter (PM),
 - filterable and condensible particulate matter (PM/PM₁₀), and
 - NO_x.
 - (3) The Flux Pulverizer(s)/Dryer(s) ~~is~~ **are** classified as Clean Unit(s) for:
 - **filterable particulate matter (PM),**
 - filterable and condensible particulate matter (PM/PM₁₀), and
 - NO_x.
- (b) The Clean Unit designations for these pulverizers/dryers are in effect for ten (10) years from their initial start-ups.
- (c) In order to maintain the clean unit designations for the:
 - (1) Coal #1 Pulverizer/Dryer:
The Permittee shall comply with the Coal #1 Pulverizer/Dryer's filterable particulate matter (PM), filterable and condensible particulate matter (PM/PM₁₀), NO_x and Opacity PSD BACT limits.
 - (2) Coal #2 Pulverizer/Dryer:
The Permittee shall comply with Coal #2 Pulverizer/Dryer's filterable particulate matter (PM), filterable and condensible particulate matter (PM/PM₁₀), NO_x and Opacity PSD BACT limits.
 - (3) Flux Pulverizer(s)/Dryer(s):

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The Permittee shall comply with Flux Pulverizer/Dryer's **filterable particulate matter (PM)**, filterable and condensible particulate matter (PM/PM₁₀), NO_x and Opacity PSD BACT limits.

D.3.6 General Provisions Relating to NSPS [326 IAC 12-1][40 CFR Part 60, Subpart A] [40 CFR Part 60, Subpart Y]

- (a) The provisions of 40 CFR Part 60, Subpart A (General Provisions), which are incorporated by reference in 326 IAC 12-1, apply to the Coal #1 Dryer and Coal #2 Dryer, except when otherwise specified in 40 CFR Part 60, Subpart Y (Standards of Performance for Coal Preparation Plants).
- (b) Pursuant 40 CFR Part 60.252(a)(1), the filterable particulate emissions from the Coal #1 Dryer and Coal #2 Dryer shall not exceed 0.031 grains per dry standard cubic foot of exhaust air.
- (c) Pursuant 40 CFR Part 60.252(a)(2), the visible emissions from the Coal #1 Dryer and Coal #2 Dryer shall not exceed 20% opacity.

D.3.7 Preventive Maintenance Plan (PMP) [326 IAC 2-7-5(13)] [326 IAC 1-6-3]

A Preventive Maintenance Plan (PMP), in accordance with Section **B.18** - Preventive Maintenance Plan (PMP), of this permit, is required for these pulverizers/dryers and their emission control devices.

Compliance Determination Requirements

D.3.8 Operation of Add-on Control Devices Exhausting Through Stack 1002 [326 IAC 2-2]

Pursuant to 326 IAC 2-2 Prevention of Significant Deterioration (PSD):

- (a) The Coal #1 Pulverizer/Dryer Baghouse for particulate control shall be in operation and control the emissions at all times from the Coal #1 Pulverizer/Dryer when the Coal #1 Pulverizer/Dryer is in operation.
- (b) The Coal #2 Pulverizer/Dryer Baghouse for particulate control shall be in operation and control the emissions at all times from the Coal #2 Pulverizer/Dryer when the Coal #2 Pulverizer/Dryer is in operation.
- (c) The Flux Pulverizer(s)/Dryer(s) Baghouses for particulate control shall be in operation and control the emissions at all times from the Flux Pulverizer(s)/Dryer(s) when the Flux Pulverizer(s)/Dryer(s) are in operation.

D.3.9 Coal #1 Pulverizer/Dryer Baghouse and Coal #2 Pulverizer/Dryer Baghouse Testing Requirements [326 IAC 2-7-6(1) and (6)] [326 IAC 2-2] [40 CFR Part 60 Subpart Y]

- (a) Pursuant to 326 IAC 2-2 Prevention of Significant Deterioration (PSD) and 40 CFR Part 60, Subpart Y, ~~within~~ **no later than** 60 days after achieving maximum production rate, but no later than 180 days after initial start-up of the:
 - Coal #1 Pulverizer/Dryer, and
 - Coal #2 Pulverizer/Dryer,

the Permittee shall perform filterable particulate matter (PM) and filterable and condensible particulate matter (PM/PM₁₀) compliance tests at the:

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- Coal #1 Pulverizer/Dryer Baghouse exhaust, and
- Coal #2 Pulverizer/Dryer Baghouse exhaust

using 40 CFR Part 60, Appendix A, Method 5, Method 201 or 201A, Method 202 or methods as approved by the Commissioner.

- (b) The filterable particulate matter (PM) and filterable and condensable particulate matter (PM/PM₁₀) tests shall be repeated at least once every five (5) years from the date of the last valid compliance demonstration.
- (c) ~~Any stack which has multiple processes which exhaust to the same stack shall operate all of the processes simultaneously in accordance with 326 IAC 3-6 (Source Sampling Procedures).~~
- (d) These tests shall be performed using methods as approved by the Commissioner.
- (e d) Testing shall be conducted in accordance with Section **C.11** - Performance Testing.

D.3.10 Coal #1 Pulverizer/Dryer and Coal #2 Pulverizer/Dryer Opacity Testing Requirement
[40 CFR Part 60 Subpart Y]

Pursuant to 40 CFR Part 60, Subpart Y, the Permittee shall perform an initial compliance test for opacity on the Coal #1 Pulverizer/Dryer and Coal #2 Pulverizer/Dryer exhaust stack ~~within no~~ **later than** 60 days after achieving maximum capacity, but no later than 180 days after initial start up, utilizing 40 CFR Part 60, Appendix A, Method 9, ~~or other methods as approved by the Commissioner.~~

Testing shall be conducted in accordance with Section **C.11** - Performance Testing.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.3.11 Visible Emissions Notations [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

-
- (a) Visible emission notations of **Stack 1002, consisting of** the:

- (1) Coal #1 Pulverizer/Dryer Baghouse ~~stack exhaust,~~
- (2) Coal #2 Pulverizer/Dryer Baghouse ~~stack exhaust,~~
- (3) Flux Pulverizer(s)/Dryer(s) Baghouse(s) ~~stack exhaust,~~

shall be performed once per shift during normal daylight operations when exhausting to the atmosphere.

A trained employee shall record whether emissions are normal or abnormal.

- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

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- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan (CRP) for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section **C.18** - Compliance Response Plan (CRP) - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

D.3.12 Baghouse Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

The Permittee shall record the total static pressure drop across the:

- (a) Coal #1 Pulverizer/Dryer Baghouse, used in conjunction with the Coal #1 Pulverizer/Dryer;
- (b) Coal #2 Pulverizer/Dryer Baghouse, used in conjunction with the Coal #2 Pulverizer/Dryer;
- (c) Flux Pulverizer(s)/Dryer(s) Baghouse(s), used in conjunction with the Flux Pulverizer(s)/Dryer(s);

at least once per shift when the process is in operation when venting to the atmosphere.

When for any one reading, the pressure drop across the baghouse is outside the normal range of 6.0 and 12.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section **C.18**- Compliance Response Plan (CRP) - Preparation, Implementation, Records, and Reports.

A pressure reading that is outside the above mentioned range is not a deviation from this permit.

Failure to take response steps in accordance with Section **C.18** - Compliance Response Plan (CRP) – Preparation, Implementation, Records and Reports shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section **C.15** - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.3.13 Baghouse Inspections [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

- (a) An inspection shall be performed each calendar quarter of all bags controlling the:
 - (1) Coal #1 Pulverizer/Dryer,
 - (2) Coal #2 Pulverizer/Dryer, and
 - (3) Flux Pulverizer(s)/Dryer(s),when venting to the atmosphere.
- (b) Inspections required by this condition shall not be performed in consecutive months.
- (c) All defective bags shall be **repaired or** replaced.

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D.3.14 Broken or Failed Bag Detection [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

In the event that bag failure has been observed:

- (a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan (CRP) shall be initiated.

For any failure with corresponding response steps and timetable not described in the Compliance Response Plan (CRP), response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion.

Failure to take response steps in accordance with Section **C.18** - Compliance Response Plan (CRP) - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

If operations continue after bag failure is observed and it will be 10 days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

- (b) For single compartment baghouses, if failure is indicated by a significant drop in the baghouse's pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, then failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced.

Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section **B.19** - Emergency Provisions).

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.3.15 Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

- (a) The Permittee shall maintain records required under 326 IAC 3-5-6 at the source in a manner that they may be inspected by the IDEM, OAQ, or the US EPA, if so requested or required.
- (b) The Permittee shall maintain the following records, and make such records available upon request to IDEM, OAQ, and the US EPA:
- (1) Records of the once per shift visible emission notations.
 - (2) Records of the once per shift readings of the baghouses' total static pressure drop during normal operation when venting to the atmosphere.

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- (3) Records of the results of the baghouse inspections.
- (c) The Permittee shall maintain records of any additional inspections prescribed by the Preventive Maintenance Plan (PMP) and make such records available upon request to IDEM, OAQ, and the US EPA.
- (d) Records necessary to demonstrate compliance shall be available within **no later than** 30 days of the end of each compliance period.
- (e) All records shall be maintained in accordance with Section **C.21** - General Record Keeping Requirements of this permit.

D.3.16 Reporting Requirements ~~[326 IAC 2-1-1-11]~~ [326 IAC 2-2] [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

The Permittee shall submit with the Affidavit of Construction (Section **B.6**), the final design specifications and vendor guarantees of the Coal #1 Pulverizer/Dryer, Coal #2 Pulverizer/Dryer, and Flux Pulverizer(s)/Dryer(s).

These reports shall be submitted in accordance with Section **C.22** - General Reporting Requirements of this permit and do require the certification by the responsible official, as defined by 326 IAC 2-7-1(34).

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SECTION D.4 FACILITY OPERATION CONDITIONS

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| Facility Description [326 IAC 2-7-5(15)] |
| Stack 1003 |
| One (1) Ore Dryer, nominally rated at 125 tons per hour and 25 million (MM) Btu per hour. |
| The particulate matter emissions from the Ore Dryer are controlled by a baghouse, identified as Ore Dryer Baghouse and exhaust through a stack, identified as Stack 1003. |
| (The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.) |

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.4.1 Ore Dryer PSD BACT Limits [326 IAC 2-2]

Pursuant to 326 IAC 2-2 Prevention of Significant Deterioration (PSD), the Permittee shall comply with the following PSD Best Available Control Technology (BACT) standards.:

If the stack test required under Condition D.4.5 demonstrates that these emission limits are less stringent than what is achieved in practice, the Department may, at its discretion, use the authority under IC 13-15-7-2 and 326 IAC 2-2 to reopen and revise the emission limit(s) to more closely reflect the actual stack test results.

Because a best available control technology (BACT) level has not previously been established for an iron nugget production plant, if the stack test required under Condition D.4.5 demonstrates that the emission limit initially established in this permit is not achievable in practice, the Permittee may submit to the Department an application for a revision to the permit to reflect the emission level achieved in the stack test. The Permittee has the burden of demonstrating that it took all steps necessary to ensure that the emissions levels achieved in the stack test were the lowest achievable.

Any revisions of the emissions limits made as the result of this provision shall be subject to the best available control technology (BACT) review and air quality analysis, specified in 326 IAC 2-2.

The Department will provide an opportunity for public notice and comment under 326 IAC 2-7-10.5(f)(1) prior to finalizing any permit modification. IC 13-15-7-3 (Revocation or Modification of a Permit: Appeal to Board) shall apply to the permit modification.

This provision does not have any impact on current or future enforcement actions.

- (a) The Ore Dryer shall use natural gas as fuel **with propane as backup fuel.**
- (b) The filterable ~~particulate matter (PM) and filterable and condensable~~ particulate matter (PM/PM₁₀) emissions from the Ore Dryer shall be captured and controlled by a baghouse (identified as Ore Dryer Baghouse).
- (c) The filterable particulate matter (PM) emissions exhausting through the Ore Dryer

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Baghouse shall not exceed 0.01 grains per dry standard cubic foot of exhaust air and 4.29 pounds per hour, based on a 3-hour block average.

- (d) The filterable and condensible particulate matter (PM/PM₁₀) emissions exhausting through the Ore Dryer Baghouse shall not exceed 0.015 grains per dry standard cubic foot of exhaust air and 6.43 pounds per hour, based on a 3-hour block average.
- (e) Low NO_x burners shall be installed and utilized to reduce the NO_x emissions from the Ore Dryer.
- (f) The NO_x emissions from the Ore Dryer shall not exceed 0.010 pounds per ton and 1.25 pounds per hour, based on a 3-hour block average.
- (g) The CO emissions from the Ore Dryer shall not exceed 0.016 pounds per ton and 2.0 pounds per hour, based on a 3-hour block average.
- (h) The VOC emissions from the Ore Dryer shall not exceed ~~0.001 pounds per ton and 0.125~~ **0.13** pounds per hour, based on a 3-hour block average.
- (i) The SO₂ emissions from the Ore Dryer shall not exceed ~~0.0001 pounds per ton and 0.0425~~ **0.013** pounds per hour, based on a 3-hour block average.
- (j) The visible emissions from Stack 1003 shall not exceed 3% opacity, based on a 6-minute average ~~as determined in 326 IAC 5-1-4.~~

D.4.2 Ore Dryer Clean Unit [326 IAC 2-2.2]

- (a) Pursuant to 326 IAC 2-2.2 (Clean Unit), the Ore Dryer is classified as Clean Unit for:
 - filterable particulate matter (PM),
 - filterable and condensible particulate matter (PM/PM₁₀), and
 - NO_x.
- (b) The Clean Unit designation for the Ore Dryer is in effect for ten (10) years from its initial start up.
- (c) In order to maintain the clean unit designations for the Ore Dryer, the Permittee shall comply with the Ore Dryer's filterable particulate matter (PM), filterable and condensible particulate matter (PM/PM₁₀), NO_x, and Opacity PSD BACT limits.

D.4.3 Preventive Maintenance Plan (PMP) [326 IAC 2-7-5(13)] [326 IAC 1-6-3]

A Preventive Maintenance Plan (PMP), in accordance with Section **B.18** - Preventive Maintenance Plan (PMP), of this permit, is required for the Ore Dryer and its emission control devices.

Compliance Determination Requirements

D.4.4 Operation of Add-on Control Device Exhausting Through Stack 1003 [326 IAC 2-2]

Pursuant to 326 IAC 2-2 Prevention of Significant Deterioration (PSD), the Ore Dryer Baghouse for particulate control shall be in operation and control the emissions at all times from the Ore Dryer when the Ore Dryer is in operation.

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D.4.5 Ore Dryer Baghouse Testing Requirements [326 IAC 2-7-6(1) and (6)] [326 IAC 2-2]

- (a) Pursuant to 326 IAC 2-2 Prevention of Significant Deterioration (PSD), **within no later than** 60 days after achieving maximum production rate, but no later than 180 days after initial start-up of the Ore Dryer, the Permittee shall perform:
- (1) Filterable particulate matter (PM) compliance tests, and
 - (2) Filterable and condensible (PM/PM₁₀) particulate matter compliance tests
- at the Ore Dryer Baghouse stack (Stack 1003), **using 40 CFR Part 60, Appendix A, Method 5, Method 201 or 201A, Method 202 or methods as approved by the Commissioner.**
- (b) The particulate matter tests shall be repeated at least once every five (5) years from the date of the last valid compliance demonstration.
- (c) ~~Any stack which has multiple processes which exhaust to the same stack shall operate all of the processes simultaneously in accordance with 326 IAC 3-6 (Source Sampling Procedures).~~
- (d) These tests shall be performed using methods as approved by the Commissioner.
- (e d) Testing shall be conducted in accordance with Section **C.11** - Performance Testing.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.4.6 Visible Emissions Notations [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

- (a) Visible emission notations of the Ore Dryer Baghouse stack exhaust (Stack 1003) shall be performed once per shift during normal daylight operations when exhausting to the atmosphere.
- A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan (CRP) for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section **C.18** - Compliance Response Plan (CRP) - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

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D.4.7 Baghouse Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

The Permittee shall record the total static pressure drop across the Ore Dryer Baghouse, used in conjunction with the Ore Dryer, at least once per shift when the process is in operation when venting to the atmosphere.

When for any one reading, the pressure drop across the baghouse is outside the normal range of 6.0 and 12.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section **C.18**- Compliance Response Plan (CRP) - Preparation, Implementation, Records, and Reports.

A pressure reading that is outside the above mentioned range is not a deviation from this permit.

Failure to take response steps in accordance with Section **C.18** - Compliance Response Plan (CRP) – Preparation, Implementation, Records and Reports shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section **C.15** - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.4.8 Baghouse Inspections [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

- (a) An inspection shall be performed each calendar quarter of all bags controlling the Ore Dryer when venting to the atmosphere.
- (b) Inspections required by this condition shall not be performed in consecutive months.
- (c) All defective bags shall be **repaired or** replaced.

D.4.9 Broken or Failed Bag Detection [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

In the event that bag failure has been observed:

- (a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan (CRP) shall be initiated.

For any failure with corresponding response steps and timetable not described in the Compliance Response Plan (CRP), response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion.

Failure to take response steps in accordance with Section **C.18** - Compliance Response Plan (CRP) - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

If operations continue after bag failure is observed and it will be 10 days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

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- (b) For single compartment baghouses, if failure is indicated by a significant drop in the baghouse's pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, then failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced.

Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section **B.19** - Emergency Provisions).

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.4.10 Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

- (a) The Permittee shall maintain records required under 326 IAC 3-5-6 at the source in a manner that they may be inspected by the IDEM, OAQ, or the US EPA, if so requested or required.
- (b) The Permittee shall maintain the following records, and make such records available upon request to IDEM, OAQ, and the US EPA:
- (1) Records of the once per shift visible emission notations.
 - (2) Records of the once per shift readings of the baghouses' total static pressure drop during normal operation when venting to the atmosphere.
 - (3) Records of the results of the baghouse inspections.
- (c) The Permittee shall maintain records of any additional inspections prescribed by the Preventive Maintenance Plan (PMP) and make such records available upon request to IDEM, OAQ, and the US EPA.
- (d) Records necessary to demonstrate compliance shall be available ~~within~~ **no later than** 30 days of the end of each compliance period.
- (e) All records shall be maintained in accordance with Section **C.21** - General Record Keeping Requirements of this permit.

D.4.11 Reporting Requirements ~~[326 IAC 2-1-1-11]~~ [326 IAC 2-2] [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

The Permittee shall submit with the Affidavit of Construction (Section **B.6**), the final design specifications and vendor guarantees of the Ore Dryer.

These reports shall be submitted in accordance with Section **C.22** - General Reporting Requirements of this permit and do require the certification by the responsible official, as defined by 326 IAC 2-7-1(34).

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SECTION D.5 FACILITY OPERATION CONDITIONS

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| <p>Facility Description [326 IAC 2-7-5(15)]</p> <p style="text-align: center;">Stack 1004</p> <p>Coal Railcar Unloading, nominally rated at 165 tons per hour, with a baghouse, identified as Coal Railcar Unloading Baghouse, for particulate control and exhaust through a stack, identified as Stack 1004.</p> <p>(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)</p> |
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Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.5.1 Railcar Unloading PSD BACT Limits [326 IAC 2-2]

Pursuant to 326 IAC 2-2 Prevention of Significant Deterioration (PSD), the Permittee shall comply with the following PSD Best Available Control Technology (BACT) standards:

- (a) The filterable particulate matter (PM) emissions from the **Coal** Railcar Unloading shall be captured and controlled by a baghouse (identified as Railcar Unloading Baghouse).
- (b) The filterable particulate matter (PM) emissions exhausting through the **Coal** Railcar Unloading Baghouse shall not exceed 0.0052 grains per dry standard cubic foot of exhaust air.
- (c) The visible emissions from Stack 1004 shall not exceed 3% opacity, based on a 6-minute average as determined in 326 IAC 5-1-4.
- (d) The Coal Railcar Unloading operation shall be conducted in a shed. The air pressure or water spray system in the shed shall be maintained at a level to reduce particulate matter emissions escaping through the doors while the unloading process is taking place.**

D.5.2 Railcar Unloading Clean Unit [326 IAC 2-2.2]

- (a) Pursuant to 326 IAC 2-2.2 (Clean Unit), the **Coal** Railcar Unloading is classified as Clean Unit for filterable particulate matter (PM).
- (b) The Clean Unit designation for the Railcar Unloading is in effect for ten (10) years from its initial start up.
- (c) In order to maintain the clean unit designations for the **Coal** Railcar Unloading, the Permittee shall comply with the Railcar Unloading's filterable particulate matter (PM) and opacity PSD BACT limits.

D.5.3 Preventive Maintenance Plan (PMP) [326 IAC 2-7-5(13)] [326 IAC 1-6-3]

A Preventive Maintenance Plan (PMP), in accordance with Section **B.18** - Preventive Maintenance Plan (PMP), of this permit, is required for the **Coal** Railcar Unloading Baghouse.

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Compliance Determination Requirements

D.5.4 Operation of Add-on Control Device Exhausting Through Stack 1004 [326 IAC 2-2]

Pursuant to 326 IAC 2-2 Prevention of Significant Deterioration (PSD), the **Coal** Railcar Unloading Baghouse for particulate control shall be in operation and control the emissions at all times from the Railcar Unloading when the Railcar Unloading is in operation.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.5.5 Visible Emissions Notations [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

- (a) Visible emission notations of the **Coal** Railcar Unloading Baghouse stack (Stack 1004) exhaust shall be performed once per shift during normal daylight operations **when the railcar unloading is in operation and** exhausting to the atmosphere.

A trained employee shall record whether emissions are normal or abnormal.

- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan (CRP) for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section **C.18** - Compliance Response Plan (CRP) - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

D.5.6 Baghouse Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

The Permittee shall record the total static pressure drop across the **Coal** Railcar Unloading Baghouse, used in conjunction with the Railcar Unloading, at least once per shift when the process is in operation when venting to the atmosphere.

When for any one reading, the pressure drop across the baghouse is outside the normal range of 6.0 and 12.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section **C.18** - Compliance Response Plan (CRP) - Preparation, Implementation, Records, and Reports.

A pressure reading that is outside the above mentioned range is not a deviation from this permit.

Failure to take response steps in accordance with Section **C.18** - Compliance Response Plan (CRP) – Preparation, Implementation, Records and Reports shall be considered a deviation from this permit.

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The instrument used for determining the pressure shall comply with Section **C.15** - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.5.7 Baghouse Inspections [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

- (a) An inspection shall be performed ~~each calendar quarter~~ **annually** of all bags controlling the **Coal** Railcar Unloading when venting to the atmosphere.
- (b) Inspections required by this condition shall not be performed in consecutive months.
- (c) All defective bags shall be **repaired or** replaced.

D.5.8 Broken or Failed Bag Detection [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

In the event that bag failure has been observed:

- (a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan (CRP) shall be initiated.

For any failure with corresponding response steps and timetable not described in the Compliance Response Plan (CRP), response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion.

Failure to take response steps in accordance with Section **C.18** - Compliance Response Plan (CRP) - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

If operations continue after bag failure is observed and it will be 10 days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

- (b) For single compartment baghouses, if failure is indicated by a significant drop in the baghouse's pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, then failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced.

Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section **B .19** - Emergency Provisions).

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Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.5.9 Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

- (a) The Permittee shall maintain records required under 326 IAC 3-5-6 at the source in a manner that they may be inspected by the IDEM, OAQ, or the US EPA, if so requested or required.
- (b) The Permittee shall maintain the following records, and make such records available upon request to IDEM, OAQ, and the US EPA:
 - (1) Records of the once per shift visible emission notations.
 - (2) Records of the once per shift readings of the baghouses' total static pressure drop during normal operation when venting to the atmosphere.
 - (3) Records of the results of the baghouse inspections.
- (c) The Permittee shall maintain records of any additional inspections prescribed by the Preventive Maintenance Plan (PMP) and make such records available upon request to IDEM, OAQ, and the US EPA.
- (d) Records necessary to demonstrate compliance shall be available ~~within~~ **not later than** 30 days of the end of each compliance period.
- (e) All records shall be maintained in accordance with Section **C.21** - General Record Keeping Requirements of this permit.

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SECTION D.6 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

Fugitive Dust Collection Systems

- (1) Fugitive Dust Collection #1, with baghouse(s), identified as Fugitive Baghouse #1, for particulate control and exhaust through a stack, identified as Stack 1001.
- (2) Fugitive Dust Collection #2, with baghouse(s), identified as Fugitive Baghouse #2, for particulate control and exhaust through a stack, identified as Stack 1005.

Due to design uncertainty at this time of the review, the number of fugitive dust collection baghouses is permitted to change, however, the total dust collection volume and emissions will remain the same.

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

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.6.1 Fugitive Dust Collection Systems PSD BACT Limits [326 IAC 2-2]

Pursuant to 326 IAC 2-2 Prevention of Significant Deterioration (PSD), the Permittee shall comply with the following PSD Best Available Control Technology (BACT) standards:

Fugitive Dust Collection #1 - - Stack 1001

- (a) The filterable particulate matter (PM) emissions from the Fugitive Dust Collection #1 shall be captured and controlled by baghouse(s) (identified as Fugitive Baghouse #1).
- (b) The filterable particulate matter (PM) emissions exhausting through the Fugitive Baghouse #1 shall not exceed 0.0052 grains per dry standard cubic foot of exhaust air.
- (c) The visible emissions from Stack 1001 shall not exceed 3% opacity, based on a 6-minute average as determined in 326 IAC 5-1-4.

Fugitive Dust Collection #2 - - Stack 1005

- (d) The filterable particulate matter (PM) emissions from the Fugitive Dust Collection #2 shall be captured and controlled by baghouse(s) (identified as Fugitive Baghouse #2).
- (e) The filterable particulate matter (PM) emissions exhausting through the Fugitive Baghouse #2 shall not exceed 0.0052 grains per dry standard cubic foot of exhaust air.
- (f) The visible emissions from Stack 1005 shall not exceed 3% opacity, based on a 6-minute average as determined in 326 IAC 5-1-4.

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D.6.2 Preventive Maintenance Plan (PMP) [326 IAC 2-7-5(13)] [326 IAC 1-6-3]

A Preventive Maintenance Plan (PMP), in accordance with Section **B.18** - Preventive Maintenance Plan (PMP), of this permit, is required for the Fugitive Baghouse #1 and Fugitive Baghouse #2.

Compliance Determination Requirements

D.6.3 Operation of Add-on Control Devices [326 IAC 2-2]

- (a) Fugitive Baghouse #1 - - Stack 1001
Pursuant to 326 IAC 2-2 Prevention of Significant Deterioration (PSD), the Fugitive Baghouse #1 for particulate control shall be in operation and control the emissions at all times from the Fugitive Dust Collection #1 when fugitive emissions are emitted.
- (b) Fugitive Baghouse #2 - - Stack 1005
Pursuant to 326 IAC 2-2 Prevention of Significant Deterioration (PSD), the Fugitive Baghouse #2 for particulate control shall be in operation and control the emissions at all times from the Fugitive Dust Collection #2 when fugitive emissions are emitted.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.6.4 Visible Emissions Notations [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

- (a) Visible emission notations of the Fugitive Baghouse #2 stack (Stack 1005) exhaust shall be performed once per shift during normal daylight operations when exhausting to the atmosphere.

A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan (CRP) for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section **C.18** - Compliance Response Plan (CRP) - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

D.6.5 Baghouse Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

The Permittee shall record the total static pressure drop across the:

- (a) Fugitive Baghouse #1, used in conjunction with the Fugitive Dust Collection #1;
and
- (b) Fugitive Baghouse #2, used in conjunction with the Fugitive Dust Collection #2;

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at least once per shift when the process is in operation when venting to the atmosphere.

When for any one reading, the pressure drop across the baghouse is outside the normal range of 6.0 and 12.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section **C.18** - Compliance Response Plan (CRP) - Preparation, Implementation, Records, and Reports.

A pressure reading that is outside the above mentioned range is not a deviation from this permit.

Failure to take response steps in accordance with Section **C.18** - Compliance Response Plan (CRP) – Preparation, Implementation, Records and Reports shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section **C.15** - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.6.6 Baghouse Inspections [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

- (a) An inspection shall be performed each calendar quarter of all bags controlling the:
 - Fugitive Dust Collection #1, and
 - Fugitive Dust Collection #2when venting to the atmosphere.
- (b) Inspections required by this condition shall not be performed in consecutive months.
- (c) All defective bags shall be **repaired or** replaced.

D.6.7 Broken or Failed Bag Detection [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

In the event that bag failure has been observed:

- (a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan (CRP) shall be initiated.

For any failure with corresponding response steps and timetable not described in the Compliance Response Plan (CRP), response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion.

Failure to take response steps in accordance with Section **C.18** - Compliance Response Plan (CRP) - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

If operations continue after bag failure is observed and it will be 10 days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

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- (b) For single compartment baghouses, if failure is indicated by a significant drop in the baghouse's pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, then failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced.

Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section **B.19** - Emergency Provisions).

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.6.8 Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

- (a) The Permittee shall maintain records required under 326 IAC 3-5-6 at the source in a manner that they may be inspected by the IDEM, OAQ, or the US EPA, if so requested or required.
- (b) The Permittee shall maintain the following records, and make such records available upon request to IDEM, OAQ, and the US EPA:
- (1) Records of the once per shift visible emission notations.
 - (2) Records of the once per shift readings of the baghouses' total static pressure drop during normal operation when venting to the atmosphere.
 - (3) Records of the results of the baghouse inspections.
- (c) The Permittee shall maintain records of any additional inspections prescribed by the Preventive Maintenance Plan (PMP) and make such records available upon request to IDEM, OAQ, and the US EPA.
- (d) Records necessary to demonstrate compliance shall be available ~~within~~ **no later than** 30 days of the end of each compliance period.
- (e) All records shall be maintained in accordance with Section **C.21** - General Record Keeping Requirements of this permit.

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SECTION D.7 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

Material storage, handling, transfer, and conveying, each nominally rated at 200 tons per hour.

| Summary of Bin Vents and Corresponding Operations | | | |
|---|----------------------|-------------|---------------------------------|
| Bin Vent ID | Operation | Bin Vent ID | Operation |
| 1006 | Raw Ore Silo | 1022 | Flux Silo #3 |
| 1010 | Raw Flux Silo | 1023 | Flux Silo #4 |
| 1011 | Binder Silo | 1024 | Recycle Silo |
| 1014 | Raw Coal Silo | 1025 | Flux Silo #5 |
| 1015 | Recycle Fines Silo | 1027 | EAF Dust Silo |
| 1018 | Raw Coal Silo | 1037 | Product Silo |
| 1019 | Pulverized Coal Silo | 1038 | Raw Flux Silo |
| 1020 | Pulverized Coal Silo | 1040 | Slag Separator Baghouse Silo |
| 1021 | Pulverized Coal Silo | Total | 17 |

These silos are controlled by bin vent filters.

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

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.7.1 Material storage, handling, transfer, and conveying PSD BACT Limits [326 IAC 2-2]

Pursuant to 326 IAC 2-2 Prevention of Significant Deterioration (PSD), the Permittee shall comply with the following PSD Best Available Control Technology (BACT) standards:

- (a) The coal and iron ore receiving shall be conducted in a shed. The air pressure in the shed shall be maintained at a level to ensure that particulate matter does not escape through the doors.
- (b) The front-end loader dropping distance to the material reclaim hoppers shall be less than six (6) feet.
- (c) Water or chemical suppressant shall be applied to the storage piles to minimize fugitive dust as needed. Water shall be applied continuously during stacking, as necessary. The material dropping distance shall be maintained at less than ten (10) feet.
- (d) The opacity of fugitive particulate emissions from the storage piles shall not exceed 10% opacity, based on a 6 minute average as determined in 326 IAC 5-1-4.

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- (e) ~~The opacity of fugitive particulate emissions from all transfer and discharge points shall not exceed 3% opacity, based on a 6-minute average as determined in 326 IAC 5-1-4.~~

D.7.2 1 Silos PSD BACT Limits [326 IAC 2-2]

Pursuant to 326 IAC 2-2 (PSD), the Permittee shall comply with the following:

- (a) The filterable particulate matter (PM) emissions from each storage silo shall be each controlled by its bin vent filter at an outlet grain loading of 0.01 grains per dry standard cubic feet of exhaust air.
- (b) The visible emissions from each storage silo bin vent shall not exceed 3% opacity, based on a 6-minute average ~~as determined in 326 IAC 5-1-4.~~

D.7.3 2 Silos Clean Unit [326 IAC 2-2.2]

- (a) Pursuant to 326 IAC 2-2.2 (Clean Unit), the storage silos are classified as Clean Units for filterable particulate matter (PM).
- (b) The Clean Unit designations for the storage silos are in effect for ten (10) years from their initial start ups.
- (c) In order to maintain the clean unit designations for the silos, the Permittee shall comply with the silos' filterable particulate matter (PM) and opacity PSD BACT limits.

D.7.4 3 Preventive Maintenance Plan (PMP) [326 IAC 1-6-3] [326 IAC 1-6-3]

A Preventive Maintenance Plan (PMP), in accordance with Section ~~C~~ **B.18** - Preventive Maintenance Plan (PMP), of this permit, is required for the bin vent filters.

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

D.7.5 4 Particulate Matter (PM) [326 IAC 2-2]

Pursuant to 326 IAC 2-2 (PSD), the bin vents filters for particulate control shall be in operation and control emissions at all times from the storage silos when the storage silos are in operation.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

None

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

None

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SECTION D.8 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

Paved and Unpaved Roadways

Roadways used by the semi-tractor trailers, employee vehicles, and support vehicles are **either** paved **or** ; ~~and the rest are~~ unpaved stone or gravel.

Fugitive dust emissions are controlled by the implementation of the Fugitive Dust Control Plan (FDCP).

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

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.8.1 Paved Roadways [326 IAC 2-2]

Pursuant to 326 IAC 2-2 Prevention of Significant Deterioration (PSD), the Permittee shall pave roadways used by semi-tractor trailers, employee vehicles, and support vehicles within the plant property.

D.8.2 Opacity PSD BACT Limit [326 IAC 2-2]

Pursuant to 326 IAC 2-2 Prevention of Significant Deterioration (PSD), the visible emissions from:

- (a) paved roadways,
- (b) unpaved roadways and
- (c) unpaved areas

shall not exceed 10% opacity, based on a 6-minute average ~~as determined in 326 IAC 5-1-4.~~

D.8.3 Paved Roadways Clean Unit [326 IAC 2-2.2]

- (a) Pursuant to 326 IAC 2-2.2 (Clean Unit), the Paved Roadways are classified as Clean Units for filterable particulate matter (PM).
- (b) The Clean Unit designations for the Paved Roadways are in effect for ten (10) years from their respective initial start ups.
- (c) In order to maintain the clean unit designations for the Paved Roadways, the Permittee shall comply with the paved roadways filterable particulate matter (PM) and Opacity PSD BACT limits.

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Compliance Determination Requirements

D.8.4 Fugitive Dust Control Plan (FDCP) [326 IAC 2-2]

Pursuant to 326 IAC 2-2 Prevention of Significant Deterioration (PSD), the Permittee shall maintain and implement its Fugitive Dust Control Plan (FDCP) (**Section E of this permit Attachment A**).

- (a) ~~At a minimum, the fugitive dust plan shall address any fugitive emissions from paved roads, parking lots, unpaved roads, traveled open areas and storage piles.~~
- (b) ~~The job title and telephone number on site of the person responsible for implementing the fugitive dust plan shall be provided to IDEM, OAQ.~~
- (c) ~~Upon request by IDEM, OAQ, the Permittee shall sample surface material silt content and surface dust loadings in accordance with field and laboratory procedure set by IDEM, OAQ. Road segments to be sampled shall be approved by IDEM, OAQ.~~
- (d) ~~The Permittee shall provide supplemental cleaning of paved roads found to exceed allowable silt loadings.~~

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

None

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.8.5 Record Keeping Requirements [326 IAC 2-2] [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

- (a) The Permittee shall maintain records of the activities required by the fugitive dust control plan (FDCP) and make such records available upon request to IDEM, OAQ and the US EPA.
- (b) Records necessary to demonstrate compliance shall be available ~~within~~ **no later than** 30 days of the end of each compliance period.
- (c) All records shall be maintained in accordance with Section **C.21** - General Record Keeping Requirements of this permit.

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SECTION D.9 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

Insignificant Activities

- (a) Two (2) Cooling Towers:
 - (1) Identified as Cooling Tower 743, with nominal capacity of 23,450 gallons per minute and 0.005% drift rate.
 - (2) Identified as Cooling Tower 726, with nominal capacity of 10,350 gallons per minute and 0.005% drift rate.
- (b) Emergency Generator(s)

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

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.9.1 Cooling Towers PSD BACT Limits [326 IAC 2-2]

- (a) Pursuant to 326 IAC 2-2 Prevention of Significant Deterioration (PSD), the visible emissions from each cooling tower shall not exceed 20% opacity, based on a 6-minute average as determined in 326 IAC 5-1-4.
- (b) Pursuant to 326 IAC 2-2 Prevention of Significant Deterioration (PSD), the drift rate from each cooling tower shall not exceed 0.005%.

D.9.2 Emergency Generator(s) PSD BACT Limits [326 IAC 2-2]

Pursuant to 326 IAC 2-2 Prevention of Significant Deterioration (PSD), the Permittee shall comply with the following PSD Best Available Control technology (BACT) standards:

- (a) Each emergency generator shall ~~solely~~ provide back up power when electric power is interrupted **or for periodic generator testing purposes**.
- (b) Each emergency generator shall not operate more than 500 hours per 12-consecutive month period, with compliance determined at the end of each month.
- (c) Good combustion practices shall be performed.

Compliance Determination Requirements

None

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

None

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Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.9.3 Record Keeping Requirements [326 IAC 2-2] [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

- (a) The Permittee shall maintain records of the hours of operation of each emergency generator(s) and make such records available upon request to IDEM, OAQ and the US EPA.
- (b) Records necessary to demonstrate compliance shall be available ~~within~~ **no later than** 30 days of the end of each compliance period.
- (c) All records shall be maintained in accordance with Section **C.21** - General Record Keeping Requirements of this permit.

D.9.4 Reporting Requirements [326 IAC 2-2] [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

The Permittee shall maintain and submit with the Affidavit of Construction (**Condition B.6**), the final design specifications and vendor guarantees of the cooling towers.

These reports shall be submitted in accordance with Section **C.22** - General Reporting Requirements of this permit and do require the certification by the responsible official, as defined by 326 IAC 2-7-1(34).

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| | |
|------------------|--|
| SECTION E | FUGITIVE DUST CONTROL PLAN (FDCP) |
|------------------|--|

E.1 Section 1-- Introduction

The following control plan, when implemented, is designed to reduce uncontrolled fugitive dust, based on a particulate matter mass emission basis from:

- (a) Paved roadways and parking lots -- down to 9.7 grams per square meter,
- (b) Unpaved areas -- 90 percent, and
- (c) Feedstock and product outdoor operations -- by 95 percent,

such that the silt loading limitation and visible emissions limitations specified in the permit are met.

The plan shall be implemented on a year-round basis until such time as another plan is approved or ordered by the Indiana Department of Environmental Management (IDEM).

E.2 Section 2-- Paved Roadways and Parking Lots

Paved roads and parking lots shall be controlled by the use of a vehicular vacuum sweeper, wet sweeping, or water flushing and shall be performed **at least** every 14 days.

Upon request of the Assistant Commissioner, Auburn Nugget LLC shall sample and provide to IDEM surface material silt content and surface dust loadings in accordance with C. Cowherd, Jr., et al., Iron and Steel Plant Open Dust Source Fugitive Emission Evaluation, EPA-600/2-79-103, U.S. Environmental Protection Agency, Cincinnati, OH, May 1979.

IDEM will have the right to specify road segments to be sampled. Auburn Nugget shall provide supplemental cleaning of paved road sections found to exceed the controlled silt surface loading of 9.7 grams per square meter.

Cleaning of paved road segments and parking lots may be delayed by one day when:

- (a) 0.1 or more inches of rain has accumulated during the 24-hour period prior to the scheduled cleaning.
- (b) The road segment is closed or abandoned. Abandoned roads will be barricaded to prevent vehicle access.
- (c) It is raining at the time of the scheduled cleaning.
- (d) The ambient air temperature is below 32°F.

The above dust control measures shall be performed such that the visible emission limitations in the permit are met. Visible emissions shall be determined in accordance with the procedures specified in the permit.

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E.3 Section 3— Unpaved Areas within the Plant

Unpaved areas traveled shall be treated with an IDEM-approved chemical dust suppressant at a rate necessary to meet compliance with the associated visible emissions limitations. Fugitive dust emissions shall be reduced by at least 90 percent instantaneous control on a particulate matter mass emission basis.

Treating of unpaved areas may be delayed by one (1) day when:

- (a) 0.1 or more inches of rain have accumulated during the 24-hour period prior to the scheduled treatment.
- (b) Unpaved areas are saturated with water such that chemical dust suppressants cannot be accepted by the surface.
- (c) Unpaved areas are frozen or covered by ice, snow, or standing water.
- (d) The area is closed or abandoned.
- (e) It is raining at the time of the scheduled treatment.
- (f) The ambient air temperature is below 32°F.

The above dust control measures shall be performed such that the visible emission limitations in the permit are met. Visible emissions shall be determined in accordance with the procedures specified in the permit.

E.4 Section 4— Wind Erosion from Open Piles

Piles shall be sprayed with water or chemical dust suppressant on an “as-needed” basis to eliminate wind erosion and not exceed the visible emission limitations in the permit.

The above dust control measures shall be performed such that the visible emission limitations in the permit are met. Visible emissions shall be determined in accordance with the procedures specified in the permit.

E.5 Section 5— Product Handling and Processing

Emissions from pile processing operations shall be controlled through the application of water or chemical dust suppressant on an as-needed basis and by limiting front-end loader batch drop height into trucks and hoppers to less than six feet.

Water application or chemical dust suppressant rate and frequency shall be sufficient to meet permit limitations.

Emissions from conveyor transfer points shall be controlled through the application of water or chemical dust suppressant.

Treating of pile processing operations and conveyor transfer points shall be delayed by one (1) day when:

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- (a) 0.1 or more inches of rain has accumulated during the 24-hour period prior to the scheduled cleaning.
- (b) The pile or material is saturated with water such that chemical suppressants are ineffective.
- (c) The material is frozen or covered by ice, or snow.
- (d) The ambient air temperature is below 32°F.

E.6 ~~Section 6~~ -- Vehicle Speed Control

Posted speed limits on paved roads shall be 20 miles per hour.

Posted speed limits on unpaved areas shall be 10 miles per hour.

Upon violation, employees shall receive a written warning, followed by disciplinary action if a second violation occurs.

Visitors to the plant shall be denied access if repeated violations occur.

E.7 ~~Section 7~~ -- Material Spill Control

Incidents of material spillage on plant property that may create fugitive dust shall be properly cleaned up.

E.8 ~~Section 8~~ -- Monitoring and Recording Keeping

Records shall be kept of the vacuum sweeping, wet sweeping, or water flushing, spill control activities, and dust suppressant application frequency and amount. Also, records shall contain the amount of water or chemical dust suppressant used to control fugitive dust.

Records and support information required by this plan shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

E.9 ~~Section 9~~ -- Compliance Schedule

This plan shall be fully implemented when construction is completed. Until that time, the plan shall be implemented within portions of the site where construction is considered complete. Where construction is incomplete, appropriate control measures shall be implemented. These activities shall be recorded.

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**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE BRANCH
100 North Senate Avenue, Indianapolis, IN 46204**

**PART 70 OPERATING PERMIT
CERTIFICATION**

Source Name: Auburn Nugget LLC
Source Location: County Road 55 and 42, Butler, IN 46721
Mailing Address: 221 South Main Street, Auburn, IN 46706

| |
|---|
| <p>This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this approval.</p> <p>Please check what document is being certified:</p> |
| <p><input type="checkbox"/> Test Result (specify)</p> |
| <p><input type="checkbox"/> Report (specify)</p> |
| <p><input type="checkbox"/> Notification (specify)</p> |
| <p><input type="checkbox"/> Affidavit (specify)</p> |
| <p><input type="checkbox"/> Other (specify)</p> |

| |
|--|
| <p>I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.</p> |
| <p>Signature:</p> |
| <p>Printed Name:</p> |
| <p>Title/Position:</p> |
| <p>Date:</p> |

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**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY, COMPLIANCE BRANCH
100 North Senate Avenue, Indianapolis, IN 46204**

**PART 70 OPERATING PERMIT
EMERGENCY OCCURRENCE REPORT**

Source Name: Auburn Nugget LLC
Source Location: County Road 55 and 42, Butler, IN 46721
Mailing Address: 221 South Main Street, Auburn, IN 46706

| |
|--|
| <p><input type="checkbox"/> This is an emergency as defined in 326 IAC 2-7-1(12)</p> <p>The Permittee must notify the Office of Air Quality (OAQ), within no later than four (4) business hours (1-800-451-6027 or 317-233-5674, ask for Compliance Section); and</p> <p>The Permittee must submit notice in writing or by facsimile within no later than two (2) working days (Facsimile Number: 317-233-5967), and follow the other requirements of 326 IAC 2-7-16.</p> <p>Address: 100 North Senate Avenue, Indianapolis, Indiana 46204</p> |
|--|

This EMERGENCY OCCURRENCE REPORT consists of 2 pages.

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

| |
|---|
| Facility/Equipment/Operation: |
| Control Equipment: |
| Permit Condition or Operation Limitation in Permit: |
| Description of the Emergency: |
| Describe the cause of the Emergency: |
| Date/Time Emergency started: |
| Date/Time Emergency was corrected: |

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

| |
|--------------------|
| Form Completed By: |
| Title/Position: |
| Date: |
| Telephone: |

A certification by the responsible official as defined by 326 IAC 2-7-1(34) is NOT required for this report.

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**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION
100 North Senate Avenue, Indianapolis, IN 46204**

**PART 70 OPERATING PERMIT
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT**

Source Name: Auburn Nugget LLC
Source Location: County Road 55 and 42, Butler, IN 46721
Mailing Address: 221 South Main Street, Auburn, IN 46706

Months: _____ to _____ Year: _____

This Quarterly Deviation And Compliance Monitoring Report consists of 2 pages.

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

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| Page 2 of 2 of Quarterly Deviation And Compliance Monitoring Report | |
|--|------------------------|
| Permit Requirement (specify permit condition #) | |
| Date of Deviation: | Duration of Deviation: |
| Number of Deviations: | |
| Probable Cause of Deviation: | |
| Response Steps Taken: | |
| Permit Requirement (specify permit condition #) | |
| Date of Deviation: | Duration of Deviation: |
| Number of Deviations: | |
| Probable Cause of Deviation: | |
| Response Steps Taken: | |
| Permit Requirement (specify permit condition #) | |
| Date of Deviation: | Duration of Deviation: |
| Number of Deviations: | |
| Probable Cause of Deviation: | |
| Response Steps Taken: | |

| |
|--------------------|
| Form Completed By: |
| Title/Position: |
| Date: |
| Telephone: |

Attach a signed certification to complete this report.