INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.
100 N. Senate Avenue • Indianapolis, IN 46204
(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Eric J. Holcomb
Governor

Brian C. Rockensuess
Commissioner

To:	Interested Parties
Date:	July 2, 2024
From:	Jenny Acker, Chief Permits Branch Office of Air Quality
Source Name:	Fritz Enterprises Incorporated Contractor of Cleveland - Cliffs Steel LLC
Permit Level:	TV Significant Permit Modification
Permit Number:	089-47405-00465
Source Location:	3210 Watling St East Chicago, IN 46312
Type of Action Taken:	Modification at an existing source

Notice of Decision: Approval - Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the matter referenced above.

The final decision is available on the IDEM website at: http://www.in.gov/apps/idem/caats/
To view the document, choose Search Option **by Permit Number**, then enter permit 47405. This search will also provide the application received date, **draft permit** public notice start and end date, **proposed permit** EPA review period start and end date, and **final** permit issuance date.

The final decision is also available via IDEM's Virtual File Cabinet (VFC). Please go to: https://www.in.gov/idem and enter VFC in the search box. You will then have the option to search for permit documents using a variety of criteria.

(continues on next page)

If you would like to request a paper copy of the permit document, please contact IDEM's Office of Records Management:

IDEM - Office of Records Management
Indiana Government Center North, Room 1207
100 North Senate Avenue
Indianapolis, IN 46204
Phone: (317) 232-8667
Fax: (317) 233-6647
Email: IDEMFILEROOM@idem.in.gov

Pursuant to IC 13-17-3-4 and 326 IAC 2, this permit modification is effective immediately, unless a petition for stay of effectiveness is filed and granted, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3-7 and IC 13-15-7-3 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to Indiana Office of Administrative Law Proceedings, 100 N. Senate Avenue Suite N802, Indianapolis, IN 46204, **within eighteen (18) days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

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

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

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

Pursuant to 326 IAC 2-7-18(d), any person may petition the U.S. EPA to object to the issuance of an initial Title V operating permit, permit renewal, or permit modification within sixty (60) days of the end of the forty-five (45) day EPA review period. Such an objection must be based only on issues that were raised with reasonable specificity during the public comment period, unless the petitioner demonstrates that it was impractible to raise such issues, or if the grounds for such objection arose after the comment period.

The EPA requests that you file Title V petitions electronically through the Central Data Exchange. To do so, please go to: https://cdx.epa.gov/ .

If you tried but you are unable to use the Central Data Exchange to file your petition, the EPA requests that you send your petition and associated attachments via email to: titleVpetitions@epa.gov.

If you have made every effort to electronically submit your petition but are simply unable to successfully do so, please submit a hardcopy of your petition to the following address:

US EPA
Office of Air Quality Planning and Standards
Air Quality Policy Division
Operating Permits Group Leader
109 T.W. Alexander Dr. (C-504-01)
Research Triangle Park, NC 27711

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

Enclosures
Decision-Title V-Mod 7/1/24

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.
100 N. Senate Avenue • Indianapolis, IN 46204
(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov
Eric J. Holcomb
Governor
Brian C. Rockensuess
Commissioner

July 2, 2024

Mr. Jeff Hynes
Fritz Enterprises, Incorporated Contractor of Cleveland-Cliffs Steel LLC
3210 Watling St.
East Chicago, IN 46312

Re: 089-47405-00465
Significant Permit Modification

Dear Mr. Hynes:

Fritz Enterprises, Incorporated Contractor of Cleveland-Cliffs Steel LLC was issued Administrative Part 70 Operating Permit Renewal No. T 089-43176-00465 on March 16, 2021, for a stationary iron and steel recycling process, iron pigging, and coke screening operation located at 3210 Watling Street, East Chicago, Indiana 46312. An application requesting changes to this permit was received on January 5, 2024. Pursuant to the provisions of 326 IAC 2-7-12, a Significant Permit Modification to this permit is hereby approved as described in the attached Technical Support Document.

Please find attached the entire Part 70 Operating Permit as modified. The permit references the below listed attachment(s). Since these attachments have been provided in previously issued approvals for this source, IDEM OAQ has not included a copy of these attachments with this modification:

Attachment A: Fugitive Dust Control Plan
Attachment B: 40 CFR 60, Subpart IIII, NSPS for Stationary Compression Ignition Internal Combustion Engines
Attachment C: 40 CFR 63, Subpart ZZZZ, NESHAP for Stationary Reciprocating Internal Combustion Engines

Previously issued approvals for this source containing these attachments are available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/.

Previously issued approvals for this source are also available via IDEM's Virtual File Cabinet (VFC). To access VFC, please go to: https://www.in.gov/idem/ and enter VFC in the search box. You will then have the option to search for permit documents using a variety of criteria.

Federal rules under Title 40 of United States Code of Federal Regulations may also be found on the U.S. Government Printing Office's Electronic Code of Federal Regulations (eCFR) website, located on the Internet at: http://www.ecfr.gov/cgi-bin/text-idx?tpl=/ecfrbrowse/Title40/40tab_02.tpl.

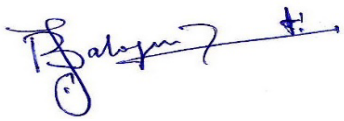
A copy of the permit is available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/. A copy of the application and permit is also available via IDEM's Virtual File Cabinet (VFC). To access VFC, please go to: https://www.in.gov/idem/ and enter VFC in the search box. You will then have the option to search for permit documents using a variety of criteria. For additional information about air permits and how the public and interested parties can participate, refer to the IDEM Air Permits page on the Internet at: https://www.in.gov/idem/airpermit/public-participation/; and the Citizens' Guide to IDEM on the Internet at: https://www.in.gov/idem/resources/citizens-guide-to-idem/.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5.

If you have any questions regarding this matter, please contact Daria Antipova, Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate

Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251, or by telephone at (317) 234-3429 or (800) 451-6027, and ask for Daria Antipova or (317) 234-3429.

Sincerely,



Josiah K. Balogun, Section Chief
Permits Branch
Office of Air Quality

Attachments: Modified Permit and Technical Support Document

cc: File - Lake County
Lake County Health Department
U.S. EPA, Region 5
Compliance and Enforcement Branch
IDEM Northwest Regional Office

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.
100 N. Senate Avenue • Indianapolis, IN 46204
(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Eric J. Holcomb
Governor

Brian C. Rockensuess
Commissioner

Administrative Part 70 Operating Permit Renewal
OFFICE OF AIR QUALITY

Fritz Enterprises, Incorporated Contractor of Cleveland-Cliffs Steel LLC
3210 Watling Street
East Chicago, Indiana 46312

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

The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit is grounds for enforcement action; permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. 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, Emergency Provisions.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 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.

Operation Permit No.: T 089-43176-00465 Master Agency Interest ID.: 21621	
Issued by: Original signed by: Josiah K. Balogun, Section Chief Permits Branch, Office of Air Quality	Issuance Date: March 16, 2021 Expiration Date: March 16, 2026

Significant Permit Modification No.: 089-46413-00465, issued on August 10, 2023

Significant Permit Modification No.: 089-47405-00465	
Issued by: Josiah K. Balogun, Section Chief Permits Branch Office of Air Quality	Issuance Date: July 2, 2024 Expiration Date: March 16, 2026

TABLE OF CONTENTS

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, A3, and A.4 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-7-4(c)][326 IAC 2-7-5(14)][326 IAC 2-7-1(22)]

The Permittee owns and operates a stationary iron and steel recycling process, iron pigging, and coke screening operation.

Source Address:	3210 Watling Street, East Chicago, Indiana 46312
General Source Phone Number:	(219) 378-0148
SIC Code:	5093 (Scrap and Waste Materials) 3312 (Steel Works, Blast Furnaces (Including Coke Ovens, and Rolling Mills)
County Location:	Lake (Calumet Township)
Source Location Status:	Nonattainment for 8-hour ozone standard Attainment for all other criteria pollutants
Source Status:	Part 70 Operating Permit Program Major Source, under PSD and Emission Offset Rules Major Source, Section 112 of the Clean Air Act 1 of 28 Source Categories

A.2 Part 70 Source Definition [326 IAC 2-7-1(22)]

The source, an integrated steel mill, includes Cleveland-Cliffs Steel LLC Indiana Harbor West (Source ID 089-00316), at 3210 Watling Street, East Chicago, Indiana, collocated with Cleveland-Cliffs Steel LLC Indiana Harbor West (Source ID 089-00318), at 3001 Dickey Road, East Chicago, Indiana, and onsite contractors:

	Company Name	Source ID	Operation Description
1	Cleveland-Cliffs Steel LLC Indiana Harbor West	089-00316	Integrated steel mill
2	Cleveland-Cliffs Steel LLC Indiana Harbor West	089-00318	Integrated steel mill
	Onsite Contractors		
3	Beemsterboer Slag Corp.	089-00356	Slag crushing and sizing
4	Beemsterboer Slag Corp.	089-00537	Slag micro pelletizing
5	Cokenergy LLC	089-00383	Heated gas steam from coal carbonization
6	Fritz Enterprises, Incorporated	089-00465	Iron and steel recycling process and coke screening
7	TMS International LLC	089-00358	Scarfing facility
8	Indiana Harbor Coke Company LP	089-00382	Heat recovery coal carbonization
9	Ironside Energy, LLC	089-00448	Industrial steam and electric power cogeneration
10	Holcim (US), Inc.	089-00458	Slag granulator and pelletizer
11	Oil Technology, Inc.	089-00375	Used oil recycling
12	Oil Technology, Inc.	089-00369	Used oil recycling
13	Phoenix Global	089-00538	Slag and kish processing
14	Phoenix Global	089-00536	Slag and kish processing
15	TMS International LLC	089-00353	Steel slab scarfer

IDEM has determined that Fritz Enterprises, Incorporated Contractor of Cleveland-Cliffs Steel LLC, and the other on-site contractors are under the common control of Cleveland-Cliffs Steel LLC Indiana Harbor West. These plants are considered one source due to contractual control. Therefore, the term “source” in the Part 70 documents refers to Cleveland-Cliffs Steel LLC Indiana Harbor West, Fritz Enterprises, Incorporated Contractor Cleveland-Cliffs Steel LLC, and the other on-site contractors as one source.

Separate Part 70 permits have been issued to Cleveland-Cliffs Steel LLC Indiana Harbor West and each

on-site contractor, solely for administrative purposes. The companies may maintain separate reporting and compliance certification.

A.3 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)][326 IAC 2-7-5(14)]

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

(a) One (1) Iron Pigging Machine, identified as unit SPM-01, also known as Pigging Ladle Facility, constructed in 1993, with a maximum capacity of 270 tons molten iron per hour temporarily cast into "pigs". This operation is only used occasionally. The particulate emissions are controlled by ArcelorMittal USA, Inc. former mold foundry baghouse (43), exhausting through stack 43. This baghouse also controls Pugh Ladle lancing emissions resulting from operations performed by ArcelorMittal USA, Inc.

(b) One (1) non-emergency diesel engine 3512, identified as unit SD-1, constructed in 1986, installed August 2001, with a maximum capacity of 1019 horsepower, and venting to stack SV001.

Under 40 CFR 63, Subpart ZZZZ, this unit is considered an affected facility.

(c) One (1) steel and iron sizing and classifying process, constructed in 2001, consisting of:

(1) One (1) Hammer Mill, identified as unit SH-1, with a maximum capacity of 75 tons of steel and iron per hour, using no control, and venting to the atmosphere;

(2) One (1) iron and steel drop-balling process, consisting of three (3) drop-ball cranes, identified as units SDB1, SDB2 and SDB3, with a combined maximum capacity of 112.5 tons of steel and iron per hour, using no control, and venting to the atmosphere;

(3) One (1) Wash Screen, identified as unit SS-1, with a maximum capacity of 75 tons of steel and iron per hour, using no control, and venting to the atmosphere;

(4) Eight (8) conveyors, identified as SC-1 through SC-8, with a total maximum throughput of 112.5 tons of steel and iron per hour, using no control;

(5) Three (3) front-end loaders, with a total maximum throughput of 112.5 tons of steel and iron per hour, using no control;

(6) Three (3) storage piles, identified as units SSP-1, SSP-2 and SSP-3, also identified as the feed storage pile, the non-magnetic material storage pile, and the magnetic material storage pile, each with a maximum capacity of 1000 tons of steel and iron, for a total capacity of 3000 tons, using wet suppression for particulate matter control and venting to the atmosphere. The total storage area encompasses 40,000 square feet or approximately 0.918 acres.

(d) One (1) coke screening operation, constructed in 2004, with a maximum capacity of 110 tons of coke per hour, using no control, exhausting to the atmosphere, and consisting of the following:

(1) One (1) feed hopper, identified as unit CH-1.

(2) One (1) double deck screen, identified as unit CS-1.

(3) Five (5) conveyors, identified as units CC-1 through CC-5.

(4) One (1) diesel engine, identified as unit CD-1, purchased on January 5, 2003, constructed in 2003, installed in 2004 with a maximum capacity of 134 horsepower, and exhausting to stack SV002.

Under 40 CFR 63, Subpart ZZZZ, this unit is considered an affected facility.

(5) Three (3) material storage piles for the coke screening operation, with a total maximum throughput of 110 tons of coke per hour. The total area encompasses 562,500 square feet or approximately 12.91 acres.

(e) One (1) mobile slag screening operation, constructed in 2005, consisting of the following:

(1) One (1) mobile rotary drum screen (trommel), identified as SS-2, with a maximum capacity of 200 tons of slag per hour and an average sustainable capacity of 125 tons per hour, using no control, and exhausting to the atmosphere.

(2) One (1) six-cylinder diesel engine associated with the rotary drum screen (trommel) (SS-2), identified as SD-2, with a maximum rated capacity of 200 horsepower, using no control, and exhausting to atmosphere.

Under 40 CFR 63, Subpart ZZZZ, this unit is considered an affected facility.

(3) Two (2) portable stacking conveyor belts with a maximum combined capacity of 200 tons of slag per hour and an average sustainable capacity of 125 tons per hour.

(4) One (1) diesel drive engine for conveyors, identified as SD-3, purchased on June 10, 2005, with a maximum rated capacity of 45 horsepower, using no control, and exhausting to atmosphere.

Under 40 CFR 63, Subpart ZZZZ, this unit is considered an affected facility.

(f) One (1) mobile slag screening operation, permitted in 2013, consisting of the following:

(1) One (1) Terex (Chieftain) multi-deck portable screen identified as PS-1, with a maximum capacity of 300 tons of slag per hour, using no control, exhausting to the atmosphere.

(2) One (1) diesel engine, identified as D-1, with a rated capacity of 168 horsepower, using no control, exhausting to atmosphere.

Under 40 CFR 60, Subpart IIII, this unit is considered an affected facility.
Under 40 CFR 63, Subpart ZZZZ, this unit is considered an affected facility.

(3) One (1) diesel engine, identified as D-2, with a rated capacity of 200 horsepower, using no control, exhausting to the atmosphere.

Under 40 CFR 60, Subpart IIII, this unit is considered an affected facility.
Under 40 CFR 63, Subpart ZZZZ, this unit is considered an affected facility.

(g) One (1) magnetic separator and conveyor, identified as MAG-1, permitted in 2013, with a maximum capacity of 300 tons per hour, and using no control.

(h) One (1) re-usable iron and slag reclaim operation, constructed in 2015, including the following:

(1) One (1) Salvage Machine, identified at S-4, with a maximum throughput of 600 tons per hour, to separate iron from slag materials magnetically, using a 135 HP diesel engine D-5 and dust suppression for particulate matter control.

(2) One (1) Triple Deck Screening system, identified as S-3, with a maximum throughput of 350 tons per hour, including magnetic separation, using a 168 HP diesel engine D-4 and dust suppression for particulate matter control.

(3) One (1) Belt Feeder/Scalper, identified as F-3, with a maximum throughput of 600 tons per hour, using dust suppression for particulate matter control.

(4) Three (3) conveyors, identified as C6, C7 and C8, with a maximum throughput of 600 tons per hour, 350 tons per hours and 250 tons per hour, respectively, for a total of 1200 tons per hour, and using no control.

(5) Four (4) storage piles for the slag reclaim operations, identified as P-7 through P-10, each with a maximum throughput of 150 tons per hour, with a maximum storage capacity of 750,000 tons, with no control. The total area encompasses 250,000 square feet or approximately 5.74 acres.

(6) One (1) diesel engine, identified as D-4, with a rated capacity of 168 horsepower, using no control, and exhausting to the atmosphere.

Under 40 CFR 60, Subpart IIII, this unit is considered an affected facility.

Under 40 CFR 63, Subpart ZZZZ, this unit is considered an affected facility.

(7) One (1) diesel engine, identified as D-5, with a rated capacity of 135 horsepower, using no control, and exhausting to the atmosphere.

Under 40 CFR 60, Subpart IIII, this unit is considered an affected facility.

Under 40 CFR 63, Subpart ZZZZ, this unit is considered an affected facility.

(i) One (1) mobile slag crushing operation, constructed in 2016, consisting of the following:

(1) One (1) mobile vertical shaft, identified as V-1, used for crushing oversize slag material from the trommel slag screener, with a maximum throughput rate of 240 tons per hour, using no control, and exhausting to atmosphere.

(2) One (1) feeder for the vertical shaft, identified as F-4, with a maximum throughput rate of 240 tons per hour, using no control, and exhausting to atmosphere.

(3) Two (2) conveyor belts, identified as C-9 and C-10, with a maximum combined throughput rate of 240 tons per hour, using no control, and exhausting to atmosphere.

(4) One (1) vertical shaft diesel engine, identified as D-6, with a maximum rated capacity of 400 horsepower, using no control, and exhausting to atmosphere.

Under 40 CFR 60, Subpart IIII, this unit is considered an affected facility.

Under 40 CFR 63, Subpart ZZZZ, this unit is considered an affected facility.

(5) One (1) diesel engine, identified as D-7, with a maximum rated capacity of 135 horsepower, using no control, and exhausting to atmosphere.

Under 40 CFR 60, Subpart IIII, this unit is considered an affected facility.

Under 40 CFR 63, Subpart ZZZZ, this unit is considered an affected facility.

(j) One (1) Slag Processing System, constructed in 2018, using wet suppression for particulate control, and consisting of the following:

(1) One (1) Feeder, identified as FD-1, with a maximum throughput of 300 tons per hour.

(2) One (1) Magnetic Separator, identified as MWS-1, with a maximum throughput of 300 tons per hour.

(3) Two (2) Tripe Deck Screens, identified as WS-1, each with a maximum throughput of 300 tons per hour.

(4) One (1) Jaw Crusher, identified as JC-1, with a maximum throughput of 300 tons per hour.

(5) One (1) Cone Crusher, identified as CC-1, with a maximum throughput of 300 tons per hour.

(6) Eleven (11) Conveyors, identified as F-1 through F-11, with a maximum capacity of 300 tons per hour.

(7) Two (2) Product Storage Piles, identified as P-1 and P-2, each with a maximum capacity of 1,000 tons.

(8) One (1) diesel engine, identified as ICE 1, commenced construction prior to December 19, 2002, with a rated capacity of 2.73 MMBtu per hour, uncontrolled, and exhausting through stack SV-ICE to the atmosphere.

Under 40 CFR 63, Subpart ZZZZ, this unit is considered an affected facility.

(k) One (1) Steel Mill Slag Processing System, using wet suppression for particulate control, and consisting of the following:

(1) Four (4) Screens, identified as EU5, constructed in 1992, with a maximum capacity of 800 tons per hour.

(2) One (1) Jaw Crusher, identified as EU2, constructed in 1992, with a maximum capacity of 495 tons per hour.

(3) Two (2) Cone Crushers, both constructed in 1992, with one used as secondary crusher (EU3) with a maximum capacity of 670 tons per hour and one used as tertiary crusher (EU4) with a maximum capacity of 260 tons per hour.

(4) Twenty-five (25) conveyors, identified as EU6, constructed in 1992 and 2003, with a maximum capacity of 800 tons per hour.

(5) Feeder Box, constructed in 1992, with a maximum capacity of 800 tons per hour.

(6) Two (2) Magnets.

(l) One (1) vessel loading plant, identified as Boat/Barge Slag Loading, with particulate emissions controlled by wet suppression using water trucks, and consisting of the following equipment:

(1) One (1) feed hopper, identified as FH-1, approved in 2023 for construction, with a maximum capacity of 1,500 tons per hour, with a front-end loader drop point,

(2) One (1) self-contained tracked stacker/conveyor, identified as VL-1, approved in 2023 for construction, with a maximum capacity of 1,500 tons per hour,

(3) One (1) loadout drop point, identified as LD-1, with a maximum capacity of 1,500 tons per hour approved in 2023 for construction,

(4) One (1) slag stockpile wind erosion, identified as SP-1, approved in 2023 for construction,

(5) One (1) 129 HP (96 kW) diesel-fired engine, identified as D-8, approved in 2023 for construction.

The 129 HP (96 kW) diesel-fired engine, identified as D-8, associated with the Boat/Barge Slag Loading operation is a nonroad engine, as defined in 40 CFR 1068.30.

(m) One (1) vessel loading plant, identified as Boat/Barge Iron Chips Loading, with particulate emissions controlled by wet suppression using water trucks, and consisting of the following equipment:

(1) One (1) feed hopper, identified as FH-2, approved in 2023 for construction, with a maximum capacity of 1,500 tons per hour, with a front-end loader drop point,

(2) One (1) conveyor system, identified as VL-2, approved in 2023 for construction, consisting of four (4) belt conveyors, each with a maximum capacity of 1,500 tons per hour,

(3) One (1) loadout drop point, identified as LD-2, with a maximum capacity of 1,500 tons per hour approved in 2023 for construction,

(4) One (1) iron chips stockpile wind erosion, identified as IP-1, approved in 2023 for construction,

(5) One (1) 470 HP (300kW) diesel-fired engine, identified as D-9, approved in 2023 for construction.

The 470 HP (300kW) diesel-fired engine, identified as D-9, associated with the Boat/Barge Iron Chips Loading operation is a nonroad engine, as defined in 40 CFR 1068.30.

(n) One (1) boat slag loading operation, identified as Boatloading, with particulate emissions controlled by wet suppression, and consisting of the following equipment:

(1) One (1) conveyor belt Telescopic Stockpiler system, identified as CB 1, approved in 2024 for construction, with a maximum capacity of 1,500 tons per hour, with a front-end loader drop point.

(2) One (1) feeder box with conveyor, identified as FB 1, approved in 2024 for construction, with a maximum capacity of 1,500 tons per hour.

(3) One (1) nonroad diesel-fired engine, identified as CE 5, approved in 2024 for construction, with a maximum capacity of 96kW (129HP).

The 96 kW (129 HP) diesel-fired engine, identified as CE 5, is a nonroad engine, as defined in 40 CFR 1068.30.

A.4 Insignificant Activities [326 IAC 2-7-1(21)][326 IAC 2-7-4(c)][326 IAC 2-7-5(14)]

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

(a) One (1) diesel fuel storage tank, constructed in 2001, with a maximum capacity of 10,000 gallons.

(b) One (1) diesel fuel storage tank, constructed in 2003, with a maximum capacity of 1,000 gallons.

(c) Paved and unpaved roads and parking lots [326 IAC 6-4].

A.5 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

B.1 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.2 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, T089-43176-00465, 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.3 Term of Conditions [326 IAC 2-1.1-9.5]

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

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

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

B.4 Enforceability [326 IAC 2-7-7] [IC 13-17-12]

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

B.5 Severability [326 IAC 2-7-5(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.6 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.7 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. Upon request, the Permittee shall also furnish to IDEM, OAQ copies of records required to be kept by this permit.

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

B.8 Certification [326 IAC 2-7-4(f)][326 IAC 2-7-6(1)][326 IAC 2-7-5(3)(C)]

(a) A certification required by this permit meets the requirements of 326 IAC 2-7-6(1) if:

(1) it contains a certification by a "responsible official" as defined by 326 IAC 2-7-1(35), and

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

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

(c) A "responsible official" is defined at 326 IAC 2-7-1(35).

B.9 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. All certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted no later than April 15 of each year to:

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

and

United States Environmental Protection Agency, Region 5
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 a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

B.10 Preventive Maintenance Plan [326 IAC 2-7-5(12)][326 IAC 1-6-3]

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

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

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

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

The Permittee shall implement the PMPs.

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

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

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

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

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

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

The PMP extension notification does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

The Permittee shall implement the PMPs.

(c) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions. The PMPs and their submittal do not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(d) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

B.11 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.

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

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance and Enforcement Branch), or
Telephone Number: 317-233-0178 (ask for Office of Air Quality, Compliance and Enforcement Branch)
Facsimile Number: 317-233-6865
Northwest Regional Office phone: (219) 464-0233; fax: (219) 464-0553**.**

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

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

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

The notice fulfills the requirement of 326 IAC 2-7-5(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 a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

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

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

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

(e) The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or contribute to an exceedance of any limitations on emissions. However, IDEM, OAQ may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4(c)(8) 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.

B.12 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 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) The 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.13 Prior Permits Superseded [326 IAC 2-1.1-9.5][326 IAC 2-7-10.5]

(a) All terms and conditions of permits established prior to T089-43176-00465 and issued pursuant to permitting programs approved into the state implementation plan have been either:

(1) incorporated as originally stated,

(2) revised under 326 IAC 2-7-10.5, or

(3) deleted under 326 IAC 2-7-10.5.

(b) Provided that all terms and conditions are accurately reflected in this permit, all previous registrations and permits are superseded by this Part 70 operating permit.

B.14 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.15 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 Operating Permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-7-5(6)(C)] The notification by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(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.16 Permit Renewal [326 IAC 2-7-3][326 IAC 2-7-4][326 IAC 2-7-8(e)]

(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(42). The renewal application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

Request for renewal shall be submitted to:

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

(b) A timely renewal application is one that is:

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

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

(c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-7 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified, pursuant to 326 IAC 2-7-4(a)(2)(D), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.17 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
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

Any such application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(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.18 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 or notice 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.19 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) or (c) without a prior permit revision, if each of the following conditions is met:

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

(2) Any preconstruction approval required by 326 IAC 2-7-10.5 has been obtained;

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

(4) The Permittee notifies the:

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

and

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

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

(5) The Permittee maintains records on-site, on a rolling five (5) year basis, which document all such changes and emission trades that are subject to 326 IAC 2-7-20(b)(1) and (c)(1). The Permittee shall make such records available, upon reasonable request, for public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ in the notices specified in 326 IAC 2-7-20(b)(1) and (c)(1).

(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(37)) 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 a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(c) Emission Trades [326 IAC 2-7-20(c)]
The Permittee may trade emissions increases and decreases at the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-7-20(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.20 Source Modification Requirement [326 IAC 2-7-10.5]

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

B.21 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.22 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
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

Any such application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(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.23 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.24 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 Opacity [326 IAC 5-1]

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

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

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

C.2 Open Burning [326 IAC 4-1] [IC 13-17-9]

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1.

C.3 Incineration [326 IAC 4-2] [326 IAC 9-1-2]

The Permittee shall not operate an incinerator except as provided in 326 IAC 4-2 or in this permit. The Permittee shall not operate a refuse incinerator or refuse burning equipment except as provided in 326 IAC 9-1-2 or in this permit.

C.4 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.5 Fugitive Particulate Matter Emissions [326 IAC 6.8-10-3]

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

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

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

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

(d) The opacity of fugitive particulate emissions from continuous transfer of material onto and out of storage piles shall not exceed ten percent (10%) on a three (3) minute average.

(e) The opacity of fugitive particulate emissions from storage piles shall not exceed ten percent (10%) on a six (6) minute average.

(f) There shall be a zero (0) percent frequency of visible emission observations of a material during the inplant transportation of material by truck or rail at any time.

(g) The opacity of fugitive particulate emissions from the inplant transportation of material by front end loaders and skip hoists shall not exceed ten percent (10%).

(h) Material processing facilities shall include the following:

(1) There shall be a zero (0) percent frequency of visible emission observations from a building enclosing all or part of the material processing equipment, except from a vent in the building.

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

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

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

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

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

(j) Material transfer limits shall be as follows:

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

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

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

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

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

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

The Permittee shall achieve these limits by controlling fugitive particulate matter emissions according to the attached Fugitive Dust Control Plan (Attachment A of the operating permit).

C.6 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.7 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

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

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

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

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

(A) Asbestos removal or demolition start date;

(B) Removal or demolition contractor; or

(C) Waste disposal site.

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

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

All required notifications shall be submitted to:

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

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

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

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

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

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

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

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

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

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

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

Compliance Requirements [326 IAC 2-1.1-11]

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

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

C.10 Lake County Fugitive Particulate Matter Control Requirements [326 IAC 6.8-10]

Pursuant to 326 IAC 6.8-10 (Lake County Fugitive Particulate Matter Control Requirements), compliance with the opacity limits specified in Condition C.5, of this permit, shall be achieved by controlling fugitive particulate matter emissions according to the Fugitive Dust Control Plan (FDCP) (Attachment A of the operating permit). If it is determined that the control procedures specified in the FDCP do not demonstrate compliance with the fugitive emission limitations, IDEM, OAQ may request that the FDCP be revised and submitted for approval.

Opacity from the activities shall be determined as follows:

(a) Batch Transfer
The average instantaneous opacity shall consist of the average of three (3) opacity readings taken five (5) seconds, ten (10) seconds, and fifteen (15) seconds after the end of one (1) batch loading or unloading operation. The three (3) readings shall be taken at the point of maximum opacity. The observer shall stand approximately fifteen (15) feet from the plume and at approximately right angles to the plume.

(b) Continuous Transfer
The opacity shall be determined using 40 CFR 60, Appendix A, Method 9. The opacity readings shall be taken at least four (4) feet from the point of origin.

(c) Wind Erosion from Storage Piles
The opacity shall be determined using 40 CFR 60, Appendix A, Method 9, except that the opacity

shall be observed at approximately four (4) feet from the surface at the point of maximum opacity. The observer shall stand approximately fifteen (15) feet from the plume and at approximately right angles to the plume. These limitations may not apply during periods when application of fugitive particulate control measures is either ineffective or unreasonable due to sustained very high wind speeds. During such periods, the company must continue to implement all reasonable fugitive particulate control measures and maintain records documenting the application of measures and the basis for a claim that meeting the opacity limitation was not reasonable given prevailing wind conditions.

(d) Wind Erosion from Exposed Areas
The opacity shall be determined using 40 CFR 60, Appendix A, Method 9.

(e) Material Transported by Truck or Rail
Compliance with this limitation shall be determined by 40 CFR 60, Appendix A, Method 22, except that the observation shall be taken at approximately right angles to the prevailing wind from the leeward side of the truck or railroad car. Material transported by truck or rail that is enclosed and covered shall be considered in compliance with the inplant transportation requirement.

(f) Material Transported by Front End Loader or Skip Hoist
Compliance with this limitation shall be determined by the average of three (3) opacity readings taken at five (5) second intervals. The three (3) opacity readings shall be taken as follows:

(1) The first will be taken at the time of emission generation.

(2) The second will be taken five (5) seconds later.

(3) The third will be taken five (5) seconds later or ten (10) seconds after the first.

The three (3) readings shall be taken at the point of maximum opacity. The observer shall stand at least fifteen (15) feet from the plume approximately and at right angles to the plume. Each reading shall be taken approximately four (4) feet above the surface of the roadway or parking area.

(g) Material Processing Limitations
Compliance with all opacity limitations from material processing equipment shall be determined using 40 CFR 60, Appendix A, Method 9. Compliance with all visible emissions limitations from material processing equipment shall be determined using 40 CFR 60, Appendix A, Method 22. Compliance with all particulate matter limitations from material processing equipment shall be determined using 40 CFR 60, Appendix A, Method 5 or 17.

(h) Paved Roads and Parking Lots
The average instantaneous opacity shall be the average of twelve (12) instantaneous opacity readings, taken for four (4) vehicle passes, consisting of three (3) opacity readings for each vehicle pass. The three (3) opacity readings for each vehicle pass shall be taken as follows:

(1) The first will be taken at the time of emission generation.

(2) The second will be taken five (5) seconds later.

(3) The third will be taken five (5) seconds later or ten (10) seconds after the first.

The three (3) readings shall be taken at the point of maximum opacity. The observer shall stand approximately fifteen (15) feet from the plume and at approximately right angles to the plume. Each reading shall be taken approximately four (4) feet above the surface of the roadway or parking area.

(i) Unpaved Roads and Parking

The fugitive particulate emissions from unpaved roads shall be controlled by the implementation of a work program and work practice under the fugitive dust control plan.

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

C.11 Compliance Monitoring [326 IAC 2-7-5(3)][326 IAC 2-7-6(1)][40 CFR 64][326 IAC 3-8]

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

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

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

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

The notification which shall be submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(c) For monitoring required by CAM, at all times, the Permittee shall maintain the monitoring, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.

(d) For monitoring required by CAM, except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the Permittee shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of this part, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

C.12 Continuous Compliance Plan [326 IAC 6.8-8-1][326 IAC 6.8-8-8]

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

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

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

C.13 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

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

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

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

C.14 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]

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

(a) The Permittee shall maintain the most recently submitted written emergency reduction plans (ERPs) consistent with safe operating procedures.

(b) 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.15 Risk Management Plan [326 IAC 2-7-5(11)] [40 CFR 68]

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

C.16 Response to Excursions or Exceedances [40 CFR 64][326 IAC 3-8][326 IAC 2-7-5] [326 IAC 2-7-6]

(I) Upon detecting an excursion where a response step is required by the D Section, or an exceedance of a limitation, not subject to CAM, in this permit:

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

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

(1) initial inspection and evaluation;

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

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

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

(1) monitoring results;

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

(3) inspection of the control device, associated capture system, and the process.

(d) Failure to take reasonable response steps shall be considered a deviation from the permit.

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

(II)

(a) CAM *Response to excursions or exceedances.*

(1) Upon detecting an excursion or exceedance, subject to CAM, the Permittee shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.

(2) Determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include but is not limited to, monitoring results, review of operation and maintenance procedures and records, and inspection of the control device, associated capture system, and the process.

(b) If the Permittee identifies a failure to achieve compliance with an emission limitation, subject to CAM, or standard, subject to CAM, for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the Permittee shall promptly notify the IDEM, OAQ and, if necessary, submit a proposed significant permit modification to this permit to address the necessary monitoring changes. Such a modification may include, but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters.

(c) Based on the results of a determination made under paragraph (II)(a)(2) of this condition, the EPA or IDEM, OAQ may require the Permittee to develop and implement a Quality Improvement Plan (QIP). The Permittee shall develop and implement a QIP if notified to in writing by the EPA or IDEM, OAQ.

(d) Elements of a QIP:
The Permittee shall maintain a written QIP, if required, and have it available for inspection. The plan shall conform to 40 CFR 64.8 b (2).

(e) If a QIP is required, the Permittee shall develop and implement a QIP as expeditiously as practicable and shall notify the IDEM, OAQ if the period for completing the improvements contained in the QIP exceeds 180 days from the date on which the need to implement the QIP was determined.

(f) Following implementation of a QIP, upon any subsequent determination pursuant to paragraph (II)(a)(2) of this condition the EPA or the IDEM, OAQ may require that the Permittee make reasonable changes to the QIP if the QIP is found to have:

(1) Failed to address the cause of the control device performance problems; or

(2) Failed to provide adequate procedures for correcting control device performance problems as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.

(g) Implementation of a QIP shall not excuse the Permittee from compliance with any existing emission limitation or standard, or any existing monitoring, testing, reporting or recordkeeping requirement that may apply under federal, state, or local law, or any other applicable requirements under the Act.

(h) *CAM recordkeeping requirements.*

(1) The Permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to paragraph (II)(c) of this condition and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under this condition (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions). Section C - General Record Keeping Requirements of this permit contains the Permittee's obligations with regard to the records required by this condition.

(2) Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements

C.17 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 - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall submit a description of its response actions to IDEM, OAQ no later than seventy-five (75) days after the date of the test.

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

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

The response action documents submitted pursuant to this condition do require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

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

C.18 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]

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(33) (“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
MC 61-50 IGCN 1003
Indianapolis, Indiana 46204-2251

The emission statement does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

C.19 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6]

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

(AA) All calibration and maintenance records.
(BB) All original strip chart recordings for continuous monitoring instrumentation.
(CC) Copies of all reports required by the Part 70 permit.

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

(AA) The date, place, as defined in this permit, and time of sampling or measurements.
(BB) The dates analyses were performed.
(CC) The company or entity that performed the analyses.
(DD) The analytical techniques or methods used.
(EE) The results of such analyses.
(FF) The operating conditions as existing at the time of sampling or measurement.

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

(b) Unless otherwise specified in this permit, for all record keeping requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or the date of initial start-up, whichever is later, to begin such record keeping.

(c) If there is a reasonable possibility (as defined in 326 IAC 2-2-8 (b)(6)(A), 326 IAC 2-2-8 (b)(6)(B), 326 IAC 2-3-2 (l)(6)(A), and/or 326 IAC 2-3-2 (l)(6)(B)) that a “project” (as defined in 326 IAC 2-2-1(oo) and/or 326 IAC 2-3-1(jj)) at an existing emissions unit, other than projects at a source with a Plantwide Applicability Limitation (PAL), which is not part of a “major modification” (as defined in 326 IAC 2-2-1(dd) and/or 326 IAC 2-3-1(y)) may result in significant emissions increase and the Permittee elects to utilize the “projected actual emissions” (as defined in 326 IAC 2-2-1(pp) and/or 326 IAC 2-3-1(kk)), the Permittee shall comply with following:

(1) Before beginning actual construction of the “project” (as defined in 326 IAC 2-2-1(oo) and/or 326 IAC 2-3-1(jj)) at an existing emissions unit, 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(pp)(2)(A)(iii) and/or 326 IAC 2-3-1 (kk)(2)(A)(iii); and

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

(d) If there is a reasonable possibility (as defined in 326 IAC 2-2-8 (b)(6)(A) and/or 326 IAC 2-3-2 (l)(6)(A)) that a "project" (as defined in 326 IAC 2-2-1(oo) and/or 326 IAC 2-3-1(jj)) at an existing emissions unit, other than projects at a source with a Plantwide Applicability Limitation (PAL), which is not part of a "major modification" (as defined in 326 IAC 2-2-1(dd) and/or 326 IAC 2-3-1(y)) may result in significant emissions increase and the Permittee elects to utilize the "projected actual emissions" (as defined in 326 IAC 2-2-1(pp) and/or 326 IAC 2-3-1(kk)), the Permittee shall comply with following:

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

(2) 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.20 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11] [40 CFR 64][326 IAC 3-8]

(a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Proper notice submittal under Section B - Emergency Provisions satisfies the reporting requirements of this paragraph. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported except that a deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. This report shall be submitted not later than thirty (30) days after the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35). A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

On and after the date by which the Permittee must use monitoring that meets the requirements of 40 CFR Part 64 and 326 IAC 3-8, the Permittee shall submit CAM reports to the IDEM, OAQ.

A report for monitoring under 40 CFR Part 64 and 326 IAC 3-8 shall include, at a minimum, the information required under paragraph (a) of this condition and the following information, as applicable:

(1) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

(2) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and

(3) A description of the actions taken to implement a QIP during the reporting period as specified in Section C-Response to Excursions or Exceedances. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

The Permittee may combine the Quarterly Deviation and Compliance Monitoring Report and a report pursuant to 40 CFR 64 and 326 IAC 3-8.

(b) The address for report submittal is:

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

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

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

C.21 Record Keeping Requirements [326 IAC 6.8-10]

Pursuant to 326 IAC 6.8-10-4(4) (Lake County Fugitive Particulate Matter Control Requirements):

(a) The source shall keep the following documentation to document compliance with each of its control measures and control practices:

(1) A map or diagram showing the location of all emission sources controlled, including the location, identification, length, and width of roadways.

(2) For each application of water or chemical solution to roadways, the following shall be recorded:

(A) The name and location of the roadway controlled

(B) Application rate

(C) Time of each application

(D) Width of each application

(E) Identification of each method of application

(F) Total quantity of water or chemical used for each application

(G) For each application of chemical solution, the concentration and identity of the chemical

(H) The material data safety sheets for each chemical

(3) For application of physical or chemical control agents not covered by 326 IAC 6.8-10, the following:

(A) The name of the agent

(B) Location of application

(C) Application rate

(D) Total quantity of agent used

(E) If diluted, percent of concentration

(F) The material data safety sheets for each chemical

(4) A log recording incidents when control measures were not used and a statement of explanation.

(5) Copies of all records required by this section shall be submitted to the department within twenty (20) working days of a written request by the department.

Stratospheric Ozone Protection

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

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

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(a) One (1) Iron Pigging Machine, identified as unit SPM-01, also known as Pigging Ladle Facility, constructed in 1993, with a maximum capacity of 270 tons molten iron per hour temporarily cast into "pigs". This operation is only used occasionally. The particulate emissions are controlled by ArcelorMittal USA, Inc. former mold foundry baghouse (43), exhausting through stack 43. This baghouse also controls Pugh Ladle lancing emissions resulting from operations performed by ArcelorMittal USA, Inc.

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

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

D.1.1 Prevention of Significant Deterioration (PSD) and Emission Offset Limits [326 IAC 2-2] [326 IAC 2-3]

Pursuant to CP No. 089-2905-00316, issued on March 29, 1993 to ArcelorMittal USA, Inc. and in order to render the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset) not applicable, the Permittee shall comply with the following:

(a) The iron pigging machine, pugh car lancing, and the dekishing, and debricking operations shall be conducted inside the mold foundry building.

(b) The emissions from the pigging operation shall be captured and exhausted to the former mold foundry baghouse (43) with particulate matter emissions not to exceed 26.0 pounds per hour and 0.011 grains per dry standard cubic foot of exhaust air, each.

(c) The iron dumping operation, which accompanied these operations, has been replaced by iron pigging. However, in an emergency or when the iron pigging machine is not available, iron dumping is used.

Compliance with these limits shall render the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset) not applicable.

D.1.2 Lake County PM10 Emission Requirements [326 IAC 6.8-2-17]

Pursuant to 326 IAC 6.8-2-17, PM10 emissions from the former mold foundry baghouse (43) shall not exceed 0.011 grain per dry standard cubic foot and 26.0 pounds per hour.

The limit encompasses all operations in the former mold foundry (pigging, pugh car lancing operation, dekishing, and debricking operations) performed by the primary source, ArcelorMittal, and its contractors.

D.1.3 Sulfur Dioxide (SO_2)[326 IAC 7-4.1-11]

Pursuant to 326 IAC 7-4.1-11(a)(12), the SO_2 emissions from the Iron Pigging Machine, SPM-01, shall not exceed 0.020 pounds per ton and four (4.0) pounds per hour.

D.1.4 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

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

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

D.1.5 Particulate Control

In order to assure compliance with Condition D.1.1, the mold foundry baghouse (43) for PM, PM10, and PM2.5 control shall be in operation and control emissions from the iron pigging machine, SPM-01, at all times the iron pigging machine is in operation.

In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the

Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

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

D.1.6 Visible Emissions Notations

(a) Visible emission notations of mold foundry baghouse (43) stack exhausts shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

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

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

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

(e) If abnormal emissions are observed, the Permittee shall take a reasonable response. Section C – Response to Excursions and Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

D.1.7 Parametric Monitoring

The Permittee shall record the pressure drop across the baghouse (43) at least once per day when the associated iron pigging machine, SPM-01, unit is in operation. When, for any one reading, the pressure drop across a baghouse is outside the normal range, the Permittee shall take a reasonable response. The normal range for this unit is a pressure drop between 2.0 and 8.0 inches of water unless a different upper-bound or lower-bound value for this range is determined during the latest stack test. Section C - Response to Excursions and Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

The instruments used for determining the pressure shall comply with Section C – Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated or replaced at least once every six (6) months.

D.1.8 Broken or Failed Bag Detection

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

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

Bag failure can be indicated by a significant drop in the baghouse’s pressure reading with abnormal

visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

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

D.1.9 Record Keeping Requirements

(a) To document the compliance status with Condition D.1.6, the Permittee shall maintain records of daily visible emission notations of the baghouse(s) stack exhausts. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g., the process did not operate that day).

(b) To document the compliance status with Condition D.1.7, the Permittee shall maintain daily records of pressure drop across the baghouse(s). The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g., the process did not operate that day).

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

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(b) One (1) non-emergency diesel engine 3512, identified as unit SD-1, constructed in 1986, installed August 2001, with a maximum capacity of 1019 horsepower, and venting to stack SV001.

Under 40 CFR 63, Subpart ZZZZ, this unit is considered an affected facility.

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

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

D.2.1 Emission Offset Limit [326 IAC 2-3]

Pursuant to F089-14058-00465, issued on August 6, 2001, as revised in Part 70 Operating Permit No. T089-29857-00465, issued on October 11, 2011 and in order to render the requirements of 326 IAC 2-3 (Emission Offset) not applicable, the Permittee shall comply with the following:

(a) The hours of operation of the diesel engine 3512, identified as SD-1, shall not exceed 2,242 hours per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) The NO_x emissions from diesel engine unit 3512, identified as SD-1, shall be less than or equal to an emission rate of 22.3 pounds per hour.

Compliance with these limits shall limit the potential to emit of nitrogen oxides (NO_x) to less than twenty-five (25) tons per year and shall render the requirements of 326 IAC 2-3 (Emission Offset) not applicable to the 2001 modification.

D.2.2 Particulate Matter (PM) Limitations for Lake County [326 IAC 6.8-1-2]

Pursuant to 326 IAC 6.8-1-2(a), (Particulate Matter Limitations for Lake County), particulate matter (PM) emissions from diesel engine 3512, identified as SD-1, shall be limited to 0.03 grain per dry standard cubic foot of exhaust air.

D.2.3 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

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

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

D.2.4 Record Keeping Requirements

(a) To document the compliance status with Condition D.2.1, the Permittee shall maintain records of the total hours of operation per month of diesel engine 3512, identified as SD-1.

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

D.2.5 Reporting Requirements

A quarterly summary of the information to document the compliance status with Condition D.2.1 shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official," as defined by 326 IAC 2-7-1(35).

SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(c) One (1) steel and iron sizing and classifying process, constructed in 2001, consisting of:

(1) One (1) Hammer Mill, identified as unit SH-1, with a maximum capacity of 75 tons of steel and iron per hour, using no control, and venting to the atmosphere;

(2) One (1) iron and steel drop-balling process, consisting of three (3) drop-ball cranes, identified as units SDB1, SDB2 and SDB3, with a combined maximum capacity of 112.5 tons of steel and iron per hour, using no control, and venting to the atmosphere;

(3) One (1) Wash Screen, identified as unit SS-1, with a maximum capacity of 75 tons of steel and iron per hour, using no control, and venting to the atmosphere;

(4) Eight (8) conveyors, identified as SC-1 through SC-8, with a total maximum throughput of 112.5 tons of steel and iron per hour, using no control;

(5) Three (3) front-end loaders, with a total maximum throughput of 112.5 tons of steel and iron per hour, using no control;

(6) Three (3) storage piles, identified as units SSP-1, SSP-2 and SSP-3, also identified as the feed storage pile, the non-magnetic material storage pile, and the magnetic material storage pile, each with a maximum capacity of 1000 tons of steel and iron, for a total capacity of 3000 tons, using wet suppression for particulate matter control and venting to the atmosphere. The total storage area encompasses 40,000 square feet or approximately 0.918 acres.

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

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

D.3.1 Particulate Matter (PM) Limitations for Lake County [326 IAC 6.8-1-2]

Pursuant to 326 IAC 6.8-1-2(a), (Particulate Matter Limitations for Lake County), particulate matter (PM) emissions from the hammer mill SH-1, iron and steel drop-balling process (drop-ball cranes SDB1, SDB2 and SDB3), wash screen SS-1, and conveyor transfer points (SC-1 through SC-8) shall each be limited to 0.03 grain per dry standard cubic foot of exhaust air.

D.3.2 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

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

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

D.3.3 Particulate Control

In order to assure compliance with Condition D.3.1, the Permittee shall use wet suppression on an as needed basis to control emissions of PM from the hammer mill SH-1, iron and steel drop-balling process (drop-ball cranes SDB1, SDB2 and SDB3), wash screen SS-1, and each conveyor transfer point (SC-1 through SC-8) when these emission units are in operation. If weather conditions preclude the use of wet suppression, the Permittee shall perform chemical analysis on the processed material to ensure the moisture content is greater than five (5) weight percent (%). The method for moisture content analysis shall be approved by IDEM, OAQ.

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

D.3.4 Visible Emissions Notations

(a) Visible emission notations of the hammer mill SH-1, iron and steel drop-balling process (drop-ball cranes SDB1, SDB2 and SDB3), wash screen SS-1, and each conveyor transfer point (SC-1 through SC-8) exhausts shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

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

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

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

(e) If abnormal emissions are observed, the Permittee shall take a reasonable response. Section C – Response to Excursions and Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

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

D.3.5 Record Keeping Requirements

(a) To document the compliance status with Condition D.3.3, the Permittee shall maintain records of the chemical analysis of the processed materials from the steel and iron sizing and classifying process line, as needed.

(b) To document the compliance status with Condition D.3.4, the Permittee shall maintain records of daily visible emission notations of the stack exhausts. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g., the process did not operate that day).

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

SECTION D.4 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(d) One (1) coke screening operation, constructed in 2004, with a maximum capacity of 110 tons of coke per hour, using no control, exhausting to the atmosphere, and consisting of the following:

(1) One (1) feed hopper, identified as unit CH-1.

(2) One (1) double deck screen, identified as unit CS-1.

(3) Five (5) conveyors, identified as units CC-1 through CC-5.

(4) One (1) diesel engine, identified as unit CD-1, purchased on January 5, 2003, constructed in 2003, installed in 2004 with a maximum capacity of 134 horsepower, and exhausting to stack SV002.

Under 40 CFR 63, Subpart ZZZZ, this unit is considered an affected facility.

(5) Three (3) material storage piles for the coke screening operation, with a total maximum throughput of 110 tons of coke per hour. The total area encompasses 562,500 square feet or approximately 12.91 acres.

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

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

D.4.1 Prevention of Significant Deterioration (PSD) and Emission Offset Limits [326 IAC 2-2] [326 IAC 2-3]

Pursuant to Significant Permit Revision 089-17404-00465, issued on January 13, 2004, and in order to render the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset) not applicable, the PM and PM_{10} emissions from the coke screening operation (feed hopper CH-1, double deck screen CS-1, and the five (5) conveyor transfer points (CC-1 through CC-5)) shall not exceed the emission rates listed in the table below:

Emission Units	PM Emission Limit (lbs/hr)	PM_{10} Emission Limit (lbs/hr)
Feed Hopper CH-1	0.097	0.047
Double Deck Screen CS-1	0.485	0.231
Each Conveyor Transfer Point	0.011	0.005

Compliance with these limits, combined with the PM, PM10, and PM2.5 emissions from the other emission units at this source, shall limit the source-wide total PM, PM10, and PM2.5 emissions to less than major thresholds and shall render the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset) not applicable.

D.4.2 Particulate Matter (PM) Limitations for Lake County [326 IAC 6.8-1-2]

Pursuant to 326 IAC 6.8-1-2(a), (Particulate Matter Limitations for Lake County), particulate matter (PM) emissions from the feed hopper CH-1, double deck screen CS-1, each conveyor point (CC-1 through CC-5) and diesel engine CD-1 shall each be limited to 0.03 grain per dry standard cubic foot of exhaust air.

D.4.3 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

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

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

D.4.4 Particulate Control

In order to assure compliance with Conditions D.4.1 and D.4.2, the Permittee shall use wet suppression on an as needed basis to control emissions of PM and PM10 from the feed hopper CH-1, double deck screen CS-1, and each conveyor point (CC-1 through CC-5) when these emission units are in operation. If weather conditions preclude the use of wet suppression, the Permittee shall perform chemical analysis on the processed material to ensure the moisture content is greater than five (5) weight percent (%). The method for moisture content analysis shall be approved by IDEM, OAQ.

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

D.4.5 Visible Emissions Notations

(a) Visible emission notations from the feed hopper CH-1, double deck screen CS-1, and each conveyor transfer point (CC-1 through CC-5) exhausts shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

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

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

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

(e) If abnormal emissions are observed, the Permittee shall take a reasonable response. Section C – Response to Excursions and Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

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

D.4.6 Record Keeping Requirements

(a) To document the compliance status with Condition D.4.4, the Permittee shall maintain records of the chemical analysis of the processed materials from the steel and iron sizing and classifying process line, as needed.

(b) To document the compliance status with Condition D.4.5, the Permittee shall maintain records of daily visible emission notations of the stack exhausts. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g., the process did not operate that day).

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

SECTION D.5 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(e) One (1) mobile slag screening operation, constructed in 2005, consisting of the following:

(1) One (1) mobile rotary drum screen (trommel), identified as SS-2, with a maximum capacity of 200 tons of slag per hour and an average sustainable capacity of 125 tons per hour, using no control, and exhausting to the atmosphere.

(2) One (1) six-cylinder diesel engine associated with the rotary drum screen (trommel) (SS-2), identified as SD-2, with a maximum rated capacity of 200 horsepower, using no control, and exhausting to atmosphere.

Under 40 CFR 63, Subpart ZZZZ, this unit is considered an affected facility.

(3) Two (2) portable stacking conveyor belts with a maximum combined capacity of 200 tons of slag per hour and an average sustainable capacity of 125 tons per hour.

(4) One (1) diesel drive engine for conveyors, identified as SD-3, purchased on June 10, 2005, with a maximum rated capacity of 45 horsepower, using no control, and exhausting to atmosphere.

Under 40 CFR 63, Subpart ZZZZ, this unit is considered an affected facility.

(f) One (1) mobile slag screening operation, permitted in 2013, consisting of the following:

(1) One (1) Terex (Chieftain) multi-deck portable screen identified as PS-1, with a maximum capacity of 300 tons of slag per hour, using no control, exhausting to the atmosphere.

(2) One (1) diesel engine, identified as D-1, with a rated capacity of 168 horsepower, using no control, exhausting to atmosphere.

Under 40 CFR 60, Subpart IIII, this unit is considered an affected facility.

Under 40 CFR 63, Subpart ZZZZ, this unit is considered an affected facility.

(3) One (1) diesel engine, identified as D-2, with a rated capacity of 200 horsepower, using no control, exhausting to the atmosphere.

Under 40 CFR 60, Subpart IIII, this unit is considered an affected facility.

Under 40 CFR 63, Subpart ZZZZ, this unit is considered an affected facility.

(g) One (1) magnetic separator and conveyor, identified as MAG-1, permitted in 2013, with a maximum capacity of 300 tons per hour, and using no control.

(h) One (1) re-usable iron and slag reclaim operation, constructed in 2015, including the following:

(1) One (1) Salvage Machine, identified at S-4, with a maximum throughput of 600 tons per hour, to separate iron from slag materials magnetically, using a 135 HP diesel engine D-5 and dust suppression for particulate matter control.

(2) One (1) Triple Deck Screening system, identified as S-3, with a maximum throughput of 350 tons per hour, including magnetic separation, using a 168 HP diesel engine D-4 and dust suppression for particulate matter control.

(3) One (1) Belt Feeder/Scalper, identified as F-3, with a maximum throughput of 600 tons per hour, using dust suppression for particulate matter control.

(4) Three (3) conveyors, identified as C6, C7 and C8, with a maximum throughput of 600 tons per hour, 350 tons per hours and 250 tons per hour, respectively, for a total of 1200 tons per hour, and using no control.

(5) Four (4) storage piles for the slag reclaim operations, identified as P-7 through P-10, each with a maximum throughput of 150 tons per hour, with a maximum storage capacity of 750,000 tons, with no control. The total area encompasses 250,000 square feet or approximately 5.74 acres.

(6) One (1) diesel engine, identified as D-4, with a rated capacity of 168 horsepower, using no control, and exhausting to the atmosphere.

Under 40 CFR 60, Subpart IIII, this unit is considered an affected facility.

Under 40 CFR 63, Subpart ZZZZ, this unit is considered an affected facility.

(7) One (1) diesel engine, identified as D-5, with a rated capacity of 135 horsepower, using no control, and exhausting to the atmosphere.

Under 40 CFR 60, Subpart IIII, this unit is considered an affected facility.

Under 40 CFR 63, Subpart ZZZZ, this unit is considered an affected facility.

(i) One (1) mobile slag crushing operation, constructed in 2016, consisting of the following:

(1) One (1) mobile vertical shaft, identified as V-1, used for crushing oversize slag material from the trommel slag screener, with a maximum throughput rate of 240 tons per hour, using no control, and exhausting to atmosphere.

(2) One (1) feeder for the vertical shaft, identified as F-4, with a maximum throughput rate of 240 tons per hour, using no control, and exhausting to atmosphere.

(3) Two (2) conveyor belts, identified as C-9 and C-10, with a maximum combined throughput rate of 240 tons per hour, using no control, and exhausting to atmosphere.

(4) One (1) vertical shaft diesel engine, identified as D-6, with a maximum rated capacity of 400 horsepower, using no control, and exhausting to atmosphere.

Under 40 CFR 60, Subpart IIII, this unit is considered an affected facility.

Under 40 CFR 63, Subpart ZZZZ, this unit is considered an affected facility.

(5) One (1) diesel engine, identified as D-7, with a maximum rated capacity of 135 horsepower, using no control, and exhausting to atmosphere.

Under 40 CFR 60, Subpart IIII, this unit is considered an affected facility.

Under 40 CFR 63, Subpart ZZZZ, this unit is considered an affected facility.

(j) One (1) Slag Processing System, constructed in 2018, using wet suppression for particulate control, and consisting of the following:

(1) One (1) Feeder, identified as FD-1, with a maximum throughput of 300 tons per hour.

(2) One (1) Magnetic Separator, identified as MWS-1, with a maximum throughput of 300 tons per hour.

(3) Two (2) Tripe Deck Screens, identified as WS-1, each with a maximum throughput of 300 tons per hour.

(4) One (1) Jaw Crusher, identified as JC-1, with a maximum throughput of 300 tons per hour.

(5) One (1) Cone Crusher, identified as CC-1, with a maximum throughput of 300 tons per hour.

(6) Eleven (11) Conveyors, identified as F-1 through F-11, with a maximum capacity of 300 tons per hour.

(7) Two (2) Product Storage Piles, identified as P-1 and P-2, each with a maximum capacity of 1,000 tons.

(8) One (1) diesel engine, identified as ICE 1, commenced construction prior to December 19, 2002, with a rated capacity of 2.73 MMBtu per hour, uncontrolled, and exhausting through stack SV-ICE to the atmosphere.

Under 40 CFR 63, Subpart ZZZZ, this unit is considered an affected facility.

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

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

D.5.1 Emission Offset Limits [326 IAC 2-3]

(a) Diesel engines SD-2 and SD-3 (Trommel Mobile Slag Screening Operation)

Pursuant to Minor Source Modification 089-20905-00465, issued on May 25, 2005, and as revised in Part 70 Operating Permit No. T089-29857-00465, issued on October 11, 2011, and in order to render the requirements of 326 IAC 2-3 (Emission Offset) not applicable, the Permittee shall comply with the following:

(1) The total hours of operation of each diesel engine (SD-2 and SD-3) shall not exceed 6,579 hours per twelve (12) consecutive month period with compliance determined at the end of each month.

(2) The total NOx emissions from diesel engines SD-2 and SD-3 shall be less than or equal to an emission rate of 7.595 pounds per hour.

Compliance with these limits in Condition D.5.1(a)(1) and (2) shall limit nitrogen oxide (NO_x) emissions to less than twenty-five (25) tons per year and shall render the requirements of 326 IAC 2-3 (Emission Offset) not applicable to the 2005 modification.

(b) Diesel engines D-1 and D-2 (Chieftain Mobile Slag Screening Operation)
Pursuant to Significant Permit Modification 089-32562-00465, issued March 27, 2013, and in order to render the requirements of 326 IAC 2-3 (Emission Offset) not applicable, the Permittee shall comply with the following:

(1) The total hours of operation of each diesel engine (D-1 and D-2) shall not exceed 4,000 hours per twelve (12) consecutive month period, with compliance determined at the end of each month.

(2) The total NOx emissions from diesel engines D-1 and D-2 shall be less than or equal to an emission rate of 11.4 pounds per hour.

Compliance with these limits in Conditions D.5.1(b)(1) and (2) and D.5.1(c)(1) and (2) shall ensure that the combined potential to emit of NOx for D-1, D-2, D-4, and D-5 remains below 40 tons per year, rendering 326 IAC 2-3 not applicable to the 2013 (SSM No. 089-32538-00465) and 2015 (SSM 089-34972-00465) modifications.

(c) Diesel engines D-4 and D-5 (Iron and Slag Reclaim Operation)

Pursuant to Significant Permit Modification 089-34974-00465 issued February 10, 2015, as revised in Part 70 Operating Permit No. T089-36694-00465 and in order to render the requirements of 326 IAC 2-3 (Emission Offset) not applicable, the Permittee shall comply with the following:

(1) The total hours of operation of each diesel engine (D-4 and D-5) shall not exceed 2,080 hours per twelve (12) consecutive month period, with compliance determined at the end of each month.

(2) The total NOx emissions from diesel engines D-4 and D-5 shall be less than or equal to an emission rate of 9.4 pounds per hour.

Compliance with D.5.1(b)(1) and (2) and D.5.1(c)(1) and (2) shall ensure that the combined potential to emit of NOx for D-1, D-2, D-4, and D-5 remains below 40 tons per year, rendering 326 IAC 2-3 not applicable to the 2013 (SSM No. 089-32538-00465) and 2015 (SSM 089-34972-00465) modifications.

(d) Diesel Engines, D-6 and D-7 (Mobile Slag Crushing Operation)

Pursuant to Significant Source Modification 089-37275-00465 issued on September 26, 2016, and in order to render the requirements of 326 IAC 2-3 (Emission Offset) not applicable, the Permittee shall comply with the following:

(1) The combined diesel throughput to vertical shaft diesel engine, identified as D-6 and diesel engine, identified as D-7 shall be limited to less than 125,635 gallons per twelve consecutive month period, with compliance at the end of each month.

(2) The NOx emissions from the vertical shaft diesel engine, identified as D-6 and diesel engine, identified as D-7 shall not exceed 0.62 pound per gallon of diesel, each.

Compliance with these limitations shall limit the NOx emissions from these engines to less than 40 tons per year and shall render the requirements of 326 IAC 2-3 (Emission Offset) not applicable to this 2016 modification.

(e) Diesel Engine, ICE 1 (Slag Processing System)

Pursuant to Significant Source Modification 089-39939-00465 issued on August 8, 2018, and in order to render the requirements of 326 IAC 2-3 (Emission Offset) not applicable, the Permittee shall comply with the following:

(1) The diesel throughput to diesel engine, identified as ICE 1, shall be limited to less than 129,286 gallons per twelve (12) consecutive month period, with compliance at the end of each month.

(2) The NOx emissions from the diesel engine, identified as ICE 1, shall not exceed 0.62 pound per gallon of diesel.

Compliance with these limitations shall limit the NOx emissions from this engine to less than 40 tons per year and shall render the requirements of 326 IAC 2-3 (Emission Offset) not applicable to the 2018 modification.

D.5.2 Prevention of Significant Deterioration (PSD) Minor Limit [326 IAC 2-2]

(a) Mobile Slag Screening Operation:

Pursuant to Significant Permit Modification 089-32562-00465, issued March 27, 2013, as revised in Part 70 Operating Permit No. T089-36694-00465, and in order to render 326 IAC 2-2 (PSD) not applicable, the Terex (Chieftain) screen PS-1 and magnetic conveyor MAG-1 shall comply with the following:

(1) The throughput of slag for the Terex (Chieftain) screen PS-1 and magnetic conveyor MAG-1 shall be limited to 1,200,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(2) The controlled PM, PM_{10} and $PM_{2.5}$ emission limits shall not exceed the following:

Emission Unit	PM Limit (lb/ton)	PM10 Limit (lb/ton)	PM2.5 Limit (lb/ton)
Screen PS-1	0.005	0.0017	0.0008
Conveyor MAG-1	0.0006	0.0002	0.0001

(3) The Permittee shall use wet suppression at all times to control emissions of PM, PM_{10} and $PM_{2.5}$ from the Screen PS-1 and Conveyor MAG-1 when these emission units are in operation. If weather conditions preclude the use of wet suppression, the Permittee shall perform chemical analysis on the processed material to ensure the moisture content is greater than five (5) weight percent (%). The method for moisture content analysis shall be approved by IDEM, OAQ.

Compliance with these limits, shall limit the potential to emit of PM, PM10, and PM2.5 to less than twenty-five (25) tons, fifteen (15) tons, and ten (10) tons per year, and shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable to the 2013 modification.

(b) Re-usable Iron and Slag Reclaim Operation:

Pursuant to Significant Permit Modification 089-34974-00465 issued February 10, 2015, as revised in Part 70 Operating Permit No. T089-36694-00465 and in order to render the requirements of 326 IAC 2-2 (PSD) not applicable, the Permittee shall comply with the following:

(1) The throughput of the reclaimed slag & iron for the following emission units shall be limited to 1,157,025 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

Screener S-3
Conveyors C6, C7, and C8
Belt Feeder/Scalper F-3
Salvage Machine S-4

(2) The controlled PM, PM_{10} and $PM_{2.5}$ emission limit shall not exceed the following:

Emission Unit	PM Limit (lb/ton)	PM10 Limit (lb/ton)	PM2.5 Limit (lb/ton)
Screener S-3	0.005	0.0017	0.0008
Conveyors C6, C7, C-8	0.0006	0.0002	0.0002
Belt Feeder/Scalper F-3	0.0006	0.0002	0.0002
Salvage Machine S-4	0.00002	0.00002	0.00002

(3) The Permittee shall use wet suppression at all times to control emissions of PM, $PM_{10,}$

and $PM_{2.5}$ from the following emission units when these emission units are in operation. If weather conditions preclude the use of wet suppression, the Permittee shall perform chemical analysis on the processed material to ensure the moisture content is greater than five (5) weight percent (%). The method for moisture content analysis shall be approved by IDEM, OAQ.

Screener S-3
Conveyors C6, C7, and C8
Belt Feeder/Scalper F-3
Salvage Machine S-4

Compliance with these limitations shall ensure that the PM, PM_{10} and $PM_{2.5}$ emissions from Screener PS-1, Conveyor MAG-1, Screener S-3, Conveyors C6, C7, and C8, Belt Feeder/Scalper F-3 and Salvage Machine S-4, in conjunction with the PM, PM_{10}, and $PM_{2.5}$ emissions from diesel engines D-1 and D-2, D-4 and D-5 and the 2013 mobile slag operations front end loaders and storage piles shall be limited to less than twenty-five (25) tons, fifteen (15) tons, and ten (10) tons per year, rendering 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset) not applicable to the 2013 (SSM No. 089-32538-00465) and 2015 (SSM 089-34972-00465) modifications.

(c) Slag Processing System

Pursuant to Significant Permit Modification No. 089-39939-00465, issued on August 8, 2018, and in order to render the requirements of 326 IAC 2-2 (PSD) not applicable, the slag and iron throughput for the following emission units shall be limited to less than 624,000 tons per twelve (12) consecutive month period, each, with compliance determined at the end of each month.

(1) One (1) Feeder, identified as FD-1;

(2) Two (2) Tripe Deck Screens, identified as WS-1 and WS-2;

(3) One (1) Jaw Crusher, identified as JC-1;

(4) One (1) Cone Crusher, identified as CC-1; and

(5) Eleven (11) conveyors, identified as F-1 through F-11

Compliance with this limitation shall limit the PM and PM10 emissions from these units to less than twenty-five (25) tons and fifteen (15) tons per year, respectively, and render the requirements of 326 IAC 2-2 (PSD), not applicable to the 2018 modification.

D.5.3 Particulate Matter (PM) Limitations for Lake County [326 IAC 6.8-1-2]

Pursuant to 326 IAC 6.8-1-2(a), (Particulate Matter Limitations for Lake County), particulate matter (PM) emissions from the following shall each be limited to 0.03 grain per dry standard cubic foot of exhaust air.

Trommel Mobile Slag Screening Operations:
Rotary Drum Screen SS-2
Conveyor Belts
Diesel Engines (SD-2 and SD-3)
Chieftain Mobile Slag Screening Operations:
Terex (Chieftain) Screen PS-1
Magnetic Separator and Conveyor MAG-1
Diesel Engines (D-1 and D-2)
Iron and Slag Reclaim Operations:
Salvage Machine S-4
Triple Deck Screening System S-3
Belt Feeder/Scalper F-3
Conveyors (C6, C7, and C8)

Diesel Engines (D-4 and D-5)
Mobile Slag Crushing Operations:
Vertical Shaft V-1
Feeder F-4
Conveyors (C-9 and C-10)
Diesel Engines (D-6 and D-7)
Slag Processing System:
Feeder FD-1
Magnetic Separator MWS-1
Triple Deck Screens WS-1
Jaw Crusher JC-1
Cone Crusher CC-1
Conveyors (F-1 through F-11)
Diesel Engine ICE 1

D.5.4 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

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

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

D.5.5 Particulate Control

In order to assure compliance with Conditions D.5.2 and D.5.3, the Permittee shall use wet suppression at all times to control emissions of PM, PM_{10} and $PM_{2.5}$ from the Trommel rotary drum screen SS-2, conveyor belts, Chieftain screen PS-1, magnetic separator and conveyor MAG-1, salvage machine S-4, triple deck screening system S-3, belt feeder/scalper F-3, each conveyor point C6, C7, and C8, vertical shaft V-1, feeder FD-1, conveyors C-9 and C-10, feeder F-1, magnetic separator MWS-1, triple deck screens WS-1, jaw crusher JC-1, cone crusher CC-1, and conveyors F-1 through F-11 when these emission units are in operation. If weather conditions preclude the use of wet suppression, the Permittee shall perform chemical analysis on the processed material to ensure the moisture content is greater than five (5) weight percent (%). The method for moisture content analysis shall be approved by IDEM, OAQ.

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

D.5.6 Visible Emissions Notations

(a) Visible emission notations of Trommel rotary drum screen SS-2, conveyor belts, Chieftain screen PS-1, magnetic separator and conveyor MAG-1, salvage machine S-4, triple deck screening system S-3, belt feeder/scalper F-3, each conveyor point C6, C7, and C8, vertical shaft V-1, feeder FD-1, conveyors C-9 and C-10, feeder F-1, magnetic separator MWS-1, triple deck screens WS-1, jaw crusher JC-1, cone crusher CC-1, and conveyors F-1 through F-11 exhausts shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

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

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

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

(e) If abnormal emissions are observed, the Permittee shall take a reasonable response. Section C – Response to Excursions and Exceedances contains the Permittee's obligation with regard to

the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

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

D.5.7 Record Keeping Requirements

(a) To document the compliance status with Condition D.5.1, the Permittee shall maintain records of the total hours of operation per month of each of the diesel engines (SD-2 SD-3, D-1, D-2, D-4, D-5).

(b) To document the compliance status with Condition D.5.1(d), the Permittee shall maintain records of the combined diesel throughput to vertical shaft diesel engine, identified as D-6, and diesel engine, identified as D-7.

(c) To document the compliance status with Condition D.5.1(e), the Permittee shall maintain records of the diesel throughput to diesel engine, identified as ICE 1.

(d) To document the compliance status with Condition D.5.2(a)(1), the Permittee shall maintain monthly records of the total slag throughput to the mobile slag screening operation.

(e) To document the compliance status with Condition D.5.2(b)(1), the Permittee shall maintain monthly records of the total throughput to the re-usable iron and slag reclaim operation.

(f) To document the compliance status with Conditions D.5.2(a)(3), D.5.2(b)(3), and D.5.5, the Permittee shall maintain records of the chemical analysis of the processed material, as needed.

(g) To document the compliance status with Condition D.5.2(c), the permittee shall maintain monthly records of the total throughput to the feeder, two (2) triple deck screens, jaw crusher, cone crusher, and eleven (11) conveyors.

(h) To document the compliance status with Condition D.5.6, the Permittee shall maintain records of daily visible emission notations of the stack exhausts. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g., the process did not operate that day).

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

D.5.8 Reporting Requirements

A quarterly summary of the information to document the compliance status with Conditions D.5.1 and D.5.2 shall be submitted using the reporting forms located at the end of this permit, or their equivalent not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee’s obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official,” as defined by 326 IAC 2-7-1(35).

SECTION D.6 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

Insignificant Activities:

(a) One (1) diesel fuel storage tank, constructed in 2001, with a maximum capacity of 10,000 gallons.

(b) One (1) diesel fuel storage tank, constructed in 2003, with a maximum capacity of 1,000 gallons.

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

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

D.6.1 Record Keeping Requirements

Pursuant to 326 IAC 8-9-6(b), the Permittee must keep the following records for the two (2) diesel fuel storage tanks:

(a) The vessel identification number;

(b) The vessel dimensions; and

(c) The vessel capacity.

Pursuant to 326 IAC 8-9-6(a), these records shall be maintained for the life of the vessel.

SECTION D.7 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(k) One (1) Steel Mill Slag Processing System, using wet suppression for particulate control, and consisting of the following:

(1) Four (4) Screens, identified as EU5, constructed in 1992, with a maximum capacity of 800 tons per hour.

(2) One (1) Jaw Crusher, identified as EU2, constructed in 1992, with a maximum capacity of 495 tons per hour.

(3) Two (2) Cone Crushers, both constructed in 1992, with one used as secondary crusher (EU3) with a maximum capacity of 670 tons per hour and one used as tertiary crusher (EU4) with a maximum capacity of 260 tons per hour.

(4) Twenty-five (25) conveyors, identified as EU6, constructed in 1992 and 2003, with a maximum capacity of 800 tons per hour.

(5) Feeder Box, constructed in 1992, with a maximum capacity of 800 tons per hour.

(6) Two (2) Magnets.

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

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

D.7.1 Prevention of Significant Deterioration (PSD) Limits [326 IAC 2-2]

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

(a) The input of steel mill slag to the steel mill slag processing system consisting of: Feeder Box; one (1) Jaw Crusher (EU2); two (2) Cone Crushers (EU3 and EU4); four (4) Screens (EU5); two (2) Magnets; and fourteen (14) conveyors (EU6) shall be less than 731,308 tons per twelve (12) consecutive month period with compliance demonstrated at the end of each month.

(b) The Permittee shall comply with the following PM and PM0 emissions:

Emission Unit	PM Emission Limit (lb/ton)	PM10 Emission Limit (lb/ton)
Jaw Crusher (EU2)	0.0012	0.00054
Cone Crushers (EU3 & EU4)	0.0012	0.00054
Screens (EU5)	0.0022	0.00074
Conveyors (EU6)	0.00014	0.00005

Compliance with this limitation will ensure that the potential to emit from these emission units are less than twenty-five (25) tons of PM per year and less than fifteen (15) tons of PM_{10} per year. Therefore, the requirements of 326 IAC 2-2 (PSD) are not applicable.

(c) The slag input to the eleven (11) conveyors (collectively identified as EU6), installed in 2003, shall be less than 5,848,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

Emission Unit	PM Emission Limit (lb/ton)	PM10 Emission Limit (lb/ton)
Eleven (11) Conveyors (collectively identified as EU6)	0.00014	0.000046

Compliance with this limitation will ensure that the potential to emit from these emission units are less than twenty-five (25) tons of PM per year and less than fifteen (15) tons of PM_{10} per year. Therefore, the requirements of 326 IAC 2-2 (PSD) are rendered not applicable.

D.7.2 Particulate Matter (PM) Limitations for Lake County [326 IAC 6.8-1-2]

Pursuant to 326 IAC 6.8-1-2(a), (Particulate Matter Limitations for Lake County), particulate matter (PM) emissions from the four (4) screens EU5, jaw crusher EU2, cone crushers EU3 and EU4, and conveyors EU6 shall each be limited to 0.03 grain per dry standard cubic foot of exhaust air.

D.7.3 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

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

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

D.7.4 Particulate Control

In order to ensure compliance with Condition D.7.1(a), the Permittee shall apply an initial application of water or a mixture of water and wetting agent to control the particulate emissions from the steel mill slag processing system. The suppressant shall be applied in a manner and at a frequency sufficient to ensure compliance with Conditions D.7.1(a). If weather conditions preclude the use of wet suppression, the Permittee shall perform chemical analysis on the metallurgical material to ensure it has a moisture content greater than 2.0 percent of the process stream by weight. The Permittee shall submit to IDEM OAQ the method for moisture content analysis for approval.

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

D.7.5 Visible Emissions Notations

(a) Visible emission notations from the screens, crushers, and conveyors stack exhausts shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

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

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

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

(e) If abnormal emissions are observed, the Permittee shall take a reasonable response. Section C – Response to Excursions and Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

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

D.7.6 Record Keeping Requirements

(a) To document the compliance status with Condition D.7.1, the Permittee shall maintain records at

the plant of the steel mill slag input.

(b) To document the compliance status with Condition D.7.5, the Permittee shall maintain records of visible emission notations of the screens, crushers and the conveyor transfer points stack exhausts once per day. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).

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

D.7.7 Reporting Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-19]

A quarterly summary of the information to document the compliance status with Conditions D.7.1(a) and D.7.1(b) shall be submitted using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days following the end of each calendar quarter. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official” as defined by 326 IAC 2-7-1(35). Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.

SECTION D.8 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(l) One (1) vessel loading plant, identified as Boat/Barge Slag Loading, with particulate emissions controlled by wet suppression using water trucks, and consisting of the following equipment:

(1) One (1) feed hopper, identified as FH-1, approved in 2023 for construction, with a maximum capacity of 1,500 tons per hour, with a front-end loader drop point,

(2) One (1) self-contained tracked stacker/conveyor, identified as VL-1, approved in 2023 for construction, with a maximum capacity of 1,500 tons per hour,

(3) One (1) loadout drop point, identified as LD-1, with a maximum capacity of 1,500 tons per hour approved in 2023 for construction,

(4) One (1) slag stockpile wind erosion, identified as SP-1, approved in 2023 for construction,

(5) One (1) 129 HP (96 kW) diesel-fired engine, identified as D-8, approved in 2023 for construction.

The 129 HP (96 kW) diesel-fired engine, identified as D-8, associated with the Boat/Barge Slag Loading operation is a nonroad engine, as defined in 40 CFR 1068.30.

(m) One (1) vessel loading plant, identified as Boat/Barge Iron Chip Loading, with particulate emissions controlled by wet suppression using water trucks, and consisting of the following equipment:

(1) One (1) feed hopper, identified as FH-2, approved in 2023 for construction, with a maximum capacity of 1,500 tons per hour, with a front-end loader drop point,

(2) One (1) conveyor system, identified as VL-2, approved in 2023 for construction, consisting of four (4) belt conveyors, each with a maximum capacity of 1,500 tons per hour,

(3) One (1) loadout drop point, identified as LD-2, with a maximum capacity of 1,500 tons per hour approved in 2023 for construction,

(4) One (1) iron chip stockpile wind erosion, identified as IP-1, approved in 2023 for construction,

(5) One (1) 470 HP (300kW) diesel-fired engine, identified as D-9, approved in 2023 for construction.

The 470 HP (300kW) diesel-fired engine, identified as D-9, associated with the Boat/Barge Iron Chips Loading operation is a nonroad engine, as defined in 40 CFR 1068.30.

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

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

D.8.1 Prevention of Significant Deterioration (PSD) Minor Limits [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable to the 2023 Modification, the Permittee shall comply with the following PSD minors limits for the Boat/Barge Slag Loading and Boat/Barge Iron Chips Loading operations:

(a) The throughput of iron chips to the Boat/Barge Iron Chips Loading operation shall not exceed 963,600 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(b) Particulate emissions per ton of slag handled from the Boat/Barge Iron Chips Loading operation emission units shall not exceed the values specified in the table below:

Emission Unit	PM Emission Limit (lb/ton)	PM_{10} Emission Limit (lb/ton)	$PM_{2.5}$ Emission Limit (lb/ton)
Feed hopper drop point	0.0073	0.0035	0.0005
Conveyor transfer point, each	0.0030	0.0011	0.0011
Loadout drop point	0.0073	0.0035	0.0005

(c) The moisture content of the iron chips shall be 2.0 percent (2%) or greater of the process stream by weight.

(d) The throughput of slag to the Boat/Barge Slag Loading operation shall not exceed 1,314,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(e) Particulate emissions per ton of slag handled from the Boat/Barge Slag Loading operation emission units shall not exceed the values specified in the table below:

Emission Unit	PM Emission Limit (lb/ton)	PM_{10} Emission Limit (lb/ton)	$PM_{2.5}$ Emission Limit (lb/ton)
Feed hopper drop point	0.0073	0.0035	0.0005
Conveyor transfer point	0.0030	0.0011	0.0011
Loadout drop point	0.0073	0.0035	0.0005

(f) The moisture content of the slag shall be 2.0 percent (2%) or greater of the process stream by weight.

Compliance with these limits shall limit the potential to emit of PM, PM_{10}, and $PM_{2.5}$ to less than twenty-five (25) tons per year for PM, fifteen (15) tons of per year for PM_{10}, and ten (10) tons of per year for $PM_{2.5}$, respectively, and shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable to the 2023 modification.

D.8.2 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(e), the particulate matter (PM) emissions from each of the Boat/Barge Loading emission units shall not exceed the following pounds per hour PM emissions when operating at the specified process weight rate, as shown the table below:

Emission Unit	Process Weight Rate (tons/hr)	Allowable Particulate Emissions (326 IAC 6-3-2) (lb/hr)	PTE PM (lbs/hr)
Boat/Barge Iron Chips Loading			
Feed hopper	1,500	82.95	4.50
Loadout	1,500	82.95	4.50
Stacker/Conveyor	1,500	82.95	4.50
Boat/Barge Slag Loading			
Feed hopper	1,500	82.95	4.50
Loadout	1,500	82.95	4.50
Conveyor, each	1,500	82.95	4.50

The pound per hour limitation was calculated with the equations shown below.

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

$E = 55.0\ P^{0.11} - 40$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

When the process weight rate exceeds two hundred (200) tons per hour, the maximum allowable emission may exceed the emission rate derived by the equation above, provided the concentration of particulate matter in the discharge gases to the atmosphere is less than 0.10 pounds per one thousand (1,000) pounds of gases.

D.8.3 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

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

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

D.8.4 Particulate Control

In order to ensure compliance with Conditions D.8.1(b) and D.8.1(e), the Permittee shall apply an initial application of water or a mixture of water and wetting agent to control the particulate emissions from each of the Boat/Barge Loading operations. The suppressant shall be applied in a manner and at a frequency sufficient to ensure compliance with Conditions D.8.1(c) and D.8.1(f). If weather conditions preclude the use of wet suppression, the Permittee shall perform laboratory analysis on the slag and iron chips to ensure it has a moisture content of 2.0 percent (2%) or greater of the process stream by weight. The Permittee shall submit to IDEM OAQ the method for moisture content analysis for approval.

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

D.8.5 Visible Emissions Notations

(a) Visible emission notations from each of the Boat/Barge Loading operation shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

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

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

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

(e) If abnormal emissions are observed, the Permittee shall take a reasonable response. Section C – Response to Excursions and Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

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

D.8.6 Record Keeping Requirements

(a) To document the compliance status with Condition D.8.1(a), the Permittee shall maintain records at the plant of the iron chips throughput.

(b) To document the compliance status with Condition D.8.1(d), the Permittee shall maintain records at the plant of the slag throughput.

(c) To document the compliance status with Conditions D.8.1(c) and D.8.1(f), the Permittee shall maintain records at the plant of the date and results of the chemical analysis for the slag and iron chips moisture content, respectively.

(d) To document the compliance status with Condition D.8.5 - Visible Emissions Notations, the Permittee shall maintain records of visible emission notations of each of the Boat/Barge Loading operation emission units once per day. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g., the process did not operate that day).

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

D.8.7 Reporting Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-19]

A quarterly summary of the information to document the compliance status with Conditions D.8.1(a) and D.8.1(d) shall be submitted using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days following the end of each calendar quarter. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official” as defined by 326 IAC 2-7-1(35). Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.

SECTION D.9 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(n) One (1) boat slag loading operation, identified as Boatloading, with particulate emissions controlled by wet suppression, and consisting of the following equipment:

(1) One (1) conveyor belt Telescopic Stockpiler system, identified as CB 1, approved in 2024 for construction, with a maximum capacity of 1,500 tons per hour, with a front-end loader drop point.

(2) One (1) feeder box with conveyor, identified as FB 1, approved in 2024 for construction, with a maximum capacity of 1,500 tons per hour.

(3) One (1) nonroad diesel-fired engine, identified as CE 5, approved in 2024 for construction, with a maximum capacity of 96kW (129HP).

The 96 kW (129 HP) diesel-fired engine, identified as CE 5, is a nonroad engine, as defined in 40 CFR 1068.30.

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

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

D.9.1 Prevention of Significant Deterioration (PSD) Minor Limits [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable to the 2024 Modification, the Permittee shall comply with the following PSD minors limits for the Boat Slag Loaning operation:

(a) The throughput of slag to the Boat Slag Loading operation shall not exceed 6,789,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(b) Particulate emissions per ton of slag handled from the Boat/Barge Slag Loading operation emission units shall not exceed the values specified in the table below:

Emission Unit	PM Emission Limit (lb/ton)	PM_{10} Emission Limit (lb/ton)
Feed hopper drop point	0.0021	0.0010
Conveyor transfer point	0.0030	0.0011
Loadout drop point	0.0021	0.0010

(c) The moisture content of the slag shall be 4.8 percent (4.8%) or greater of the process stream by weight.

Compliance with these limits shall limit the potential to emit of PM and PM10 to less than twenty-five (25) tons per twelve (12) consecutive month for PM and fifteen (15) tons of per year for PM10, respectively, and shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable to the 2024 modification.

D.9.2 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(e), the particulate matter (PM) emissions from the new Boat Slag Loading operation shall not exceed the following pounds per hour PM emissions when operating at the specified process weight rate, as shown the table below:

Emission Unit	Process Weight Rate (tons/hr)	Allowable Particulate Emissions (326 IAC 6-3-2) (lb/hr)	PTE PM (lbs/hr)
Boat Slag Loading			
Feed hopper	1,500	82.95	4.50
Loadout	1,500	82.95	4.50
Conveyor, each	1,500	82.95	4.50

The pound per hour limitation was calculated with the equations shown below.

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

$E = 55.0\ P^{0.11} - 40$ where E = rate of emission in pounds per hour, and
P = process weight rate in tons per hour.

D.9.3 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

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

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

D.9.4 Particulate Control

In order to ensure compliance with Condition D.9.1(b), the Permittee shall apply an initial application of water or a mixture of water and wetting agent to control the particulate emissions from the Boat Slag Loading operation. The suppressant shall be applied in a manner and at a frequency sufficient to ensure compliance with Condition D.9.1(c). If weather conditions preclude the use of wet suppression, the Permittee shall perform laboratory analysis on the slag to ensure it has a moisture content of 4.8 percent (4.8%) or greater of the process stream by weight. The Permittee shall submit to IDEM OAQ the method for moisture content analysis for approval.

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

D.9.5 Visible Emissions Notations

(a) Visible emission notations from the Boat Slag Loading operation shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

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

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

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

(e) If abnormal emissions are observed, the Permittee shall take a reasonable response. Section C – Response to Excursions and Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

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

D.9.6 Record Keeping Requirements

(a) To document the compliance status with Condition D.9.1(a), the Permittee shall maintain records at the plant of the iron chips throughput.

(b) To document the compliance status with Condition D.9.1(c), the Permittee shall maintain records at the plant of the date and results of the chemical analysis for the slag moisture content.

(c) To document the compliance status with Condition D.9.5 - Visible Emissions Notations, the Permittee shall maintain records of visible emission notations of the Boat Slag Loading operation emission units once per day. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g., the process did not operate that day).

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

D.9.7 Reporting Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-19]

A quarterly summary of the information to document the compliance status with Condition D.9.1(a) shall be submitted using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days following the end of each calendar quarter. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official” as defined by 326 IAC 2-7-1(35). Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.

SECTION E.1 NSPS

Emissions Unit Description:

(f) One (1) mobile slag screening operation, permitted in 2013, consisting of the following:

(2) One (1) diesel engine, identified as D-1, with a rated capacity of 168 horsepower, using no control, exhausting to atmosphere.

Under 40 CFR 60, Subpart IIII, this unit is considered an affected facility.
Under 40 CFR 63, Subpart ZZZZ, this unit is considered an affected facility.

(3) One (1) diesel engine, identified as D-2, with a rated capacity of 200 horsepower, using no control, exhausting to the atmosphere.

Under 40 CFR 60, Subpart IIII, this unit is considered an affected facility.
Under 40 CFR 63, Subpart ZZZZ, this unit is considered an affected facility.

(h) One (1) re-usable iron and slag reclaim operation, constructed in 2015, including the following:

(6) One (1) diesel engine, identified as D-4, with a rated capacity of 168 horsepower, using no control, and exhausting to the atmosphere.

Under 40 CFR 60, Subpart IIII, this unit is considered an affected facility.
Under 40 CFR 63, Subpart ZZZZ, this unit is considered an affected facility.

(7) One (1) diesel engine, identified as D-5, with a rated capacity of 135 horsepower, using no control, and exhausting to the atmosphere.

Under 40 CFR 60, Subpart IIII, this unit is considered an affected facility.
Under 40 CFR 63, Subpart ZZZZ, this unit is considered an affected facility.

(i) One (1) mobile slag crushing operation, constructed in 2016, consisting of the following:

(4) One (1) vertical shaft diesel engine, identified as D-6, with a maximum rated capacity of 400 horsepower, using no control, and exhausting to atmosphere.

Under 40 CFR 60, Subpart IIII, this unit is considered an affected facility.
Under 40 CFR 63, Subpart ZZZZ, this unit is considered an affected facility.

(5) One (1) diesel engine, identified as D-7, with a maximum rated capacity of 135 horsepower, using no control, and exhausting to atmosphere.

Under 40 CFR 60, Subpart IIII, this unit is considered an affected facility.
Under 40 CFR 63, Subpart ZZZZ, this unit is considered an affected facility.

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

New Source Performance Standards (NSPS) Requirements [326 IAC 2-7-5(1)]

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

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

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

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

E.1.2 Stationary Compression Ignition Internal Combustion Engines NSPS [326 IAC 12] [40 CFR Part 60, Subpart IIII]

The Permittee shall comply with the following provisions of 40 CFR Part 60, Subpart IIII (included as Attachment B to the operating permit), which are incorporated by reference as 326 IAC 12.

(a) The diesel engines identified as D-1, D-2, D-4, and D-5
(1) 40 CFR 60.4200(a)(2)
(2) 40 CFR 60.4204
(3) 40 CFR 60.4205(b)
(4) 40 CFR 60.4206
(5) 40 CFR 60.4207(b)
(6) 40 CFR 60.4209
(7) 40 CFR 60.4211(a) and (c)
(8) 40 CFR 60.4212
(9) 40 CFR 60.4214(c)
(10) 40 CFR 60.4218
(11) 40 CFR 60.4219

(b) The diesel engines identified as D-6 and D-7
(1) 40 CFR 60.4200(a)(2)(i), (4)
(2) 40 CFR 60.4204(b)
(3) 40 CFR 60.4205(b)
(4) 40 CFR 60.4206
(5) 40 CFR 60.4207(b)
(6) 40 CFR 60.4208
(7) 40 CFR 60.4209(b)
(8) 40 CFR 60.4211(a) and (c)
(9) 40 CFR 60.4212
(10) 40 CFR 60.4214(c)
(11) 40 CFR 60.4218
(12) 40 CFR 60.4219
(13) Table 8 of 40 CFR 60, Subpart IIII

SECTION E.2 NESHAP

Emissions Unit Description:

(b) One (1) non-emergency diesel engine 3512, identified as unit SD-1, constructed in 1986, installed August 2001, with a maximum capacity of 1019 horsepower, and venting to stack SV001.

Under 40 CFR 63, Subpart ZZZZ, this unit is considered an affected facility.

(d) One (1) coke screening operation, constructed in 2004, with a maximum capacity of 110 tons of coke per hour, using no control, exhausting to the atmosphere, and consisting of the following:

(4) One (1) diesel engine, identified as unit CD-1, purchased on January 5, 2003, constructed in 2003, installed in 2004 with a maximum capacity of 134 horsepower, and exhausting to stack SV002.

Under 40 CFR 63, Subpart ZZZZ, this unit is considered an affected facility.

(e) One (1) mobile slag screening operation, constructed in 2005, consisting of the following:

(2) One (1) six-cylinder diesel engine associated with the rotary drum screen (trommel) (SS-2), identified as SD-2, with a maximum rated capacity of 200 horsepower, using no control, and exhausting to atmosphere.

Under 40 CFR 63, Subpart ZZZZ, this unit is considered an affected facility.

(4) One (1) diesel drive engine for conveyors, identified as SD-3, purchased on June 10, 2005, with a maximum rated capacity of 45 horsepower, using no control, and exhausting to atmosphere.

Under 40 CFR 63, Subpart ZZZZ, this unit is considered an affected facility.

(f) One (1) mobile slag screening operation, permitted in 2013, consisting of the following:

(2) One (1) diesel engine, identified as D-1, with a rated capacity of 168 horsepower, using no control, exhausting to atmosphere.

Under 40 CFR 60, Subpart IIII, this unit is considered an affected facility.

Under 40 CFR 63, Subpart ZZZZ, this unit is considered an affected facility.

(3) One (1) diesel engine, identified as D-2, with a rated capacity of 200 horsepower, using no control, exhausting to the atmosphere.

Under 40 CFR 60, Subpart IIII, this unit is considered an affected facility.
Under 40 CFR 63, Subpart ZZZZ, this unit is considered an affected facility.

(h) One (1) re-usable iron and slag reclaim operation, constructed in 2015, including the following:

(6) One (1) diesel engine, identified as D-4, with a rated capacity of 168 horsepower, using no control, and exhausting to the atmosphere.

Under 40 CFR 60, Subpart IIII, this unit is considered an affected facility.
Under 40 CFR 63, Subpart ZZZZ, this unit is considered an affected facility.

(7) One (1) diesel engine, identified as D-5, with a rated capacity of 135 horsepower, using no control, and exhausting to the atmosphere.

Under 40 CFR 60, Subpart IIII, this unit is considered an affected facility.
Under 40 CFR 63, Subpart ZZZZ, this unit is considered an affected facility.

(i) One (1) mobile slag crushing operation, constructed in 2016, consisting of the following:

(4) One (1) vertical shaft diesel engine, identified as D-6, with a maximum rated capacity of 400 horsepower, using no control, and exhausting to atmosphere.

Under 40 CFR 60, Subpart IIII, this unit is considered an affected facility.
Under 40 CFR 63, Subpart ZZZZ, this unit is considered an affected facility.

(5) One (1) diesel engine, identified as D-7, with a maximum rated capacity of 135 horsepower, using no control, and exhausting to atmosphere.

Under 40 CFR 60, Subpart IIII, this unit is considered an affected facility.
Under 40 CFR 63, Subpart ZZZZ, this unit is considered an affected facility.

(j) One (1) Slag Processing System, constructed in 2018, using wet suppression for particulate control, and consisting of the following:

(8) One (1) diesel engine, identified as ICE 1, commenced construction prior to December 19, 2002, with a rated capacity of 2.73 MMBtu per hour, uncontrolled, and exhausting through stack SV-ICE to the atmosphere.

Under 40 CFR 63, Subpart ZZZZ, this unit is considered an affected facility.

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

National Emission Standards for Hazardous Air Pollutants (NESHAP) Requirements [326 IAC 2-7-5(1)]

E.2.1 General Provisions Relating to National Emission Standards for Hazardous Air Pollutants under 40 CFR Part 63 [326 IAC 20-1] [40 CFR Part 63, Subpart A]

(a) Pursuant to 40 CFR 63.1 the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1, for the emission unit(s) listed above, except as otherwise specified in 40 CFR Part 63, Subpart ZZZZ

(b) Pursuant to 40 CFR 63.10, the Permittee shall submit all required notifications and reports to:

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

E.2.2 Stationary Reciprocating Internal Combustion Engines NESHAP [40 CFR Part 63, Subpart ZZZZ] [326 IAC 20-82]

The Permittee shall comply with the following provisions of 40 CFR Part 63, Subpart ZZZZ (included as Attachment C to the operating permit). which are incorporated by reference as 326 IAC 20-82.

(a) The diesel engine identified as 3512 (SD-1)

(1) 40 CFR 63.6585(a) and (b)
(2) 40 CFR 63.6590(a)(1)(i)

(3) 40 CFR 63.6595(a)(1) and (c)
(4) 40 CFR 63.6600(d)
(5) 40 CFR 63.6604
(6) 40 CFR 63.6605
(7) 40 CFR 63.6610(a) and (d)
(8) 40 CFR 63.6615
(9) 40 CFR 63.6620
(10) 40 CFR 63.6625(g) and (h)
(11) 40 CFR 63.6630
(12) 40 CFR 63.6635
(13) 40 CFR 63.6640(a) and (b)
(14) 40 CFR 63.6645(a)(3)
(15) 40 CFR 63.6645(b), (g), and (h)
(16) 40 CFR 63.6650(a), (b), and (c)
(17) 40 CFR 63.6655(a), (d), and (e)
(18) 40 CFR 63.6660
(19) 40 CFR 63.6665
(20) 40 CFR 63.6670
(21) 40 CFR 63.6675
(22) Tables 1a, 1b, 2a, 2b, 2c, 3, 4, 5, 6, 7, and 8 of 40 CFR 63, Subpart ZZZZ

(b) The diesel engines identified as CD-1, SD-2, and SD-3

(1) 40 CFR 63.6585(a) and (b)
(2) 40 CFR 63.6590(a)(1)(ii)
(3) 40 CFR 63.6595(a)(1) and (c)
(4) 40 CFR 63.6602
(5) 40 CFR 63.6605
(6) 40 CFR 63.6612
(7) 40 CFR 63.6615
(8) 40 CFR 63.6620
(9) 40 CFR 63.6625(e) and (h)
(10) 40 CFR 63.6630
(11) 40 CFR 63.6635
(12) 40 CFR 63.6640(a) and (b)
(13) 40 CFR 63.6645(a)(1)
(14) 40 CFR 63.6645(d), (g), and (h)
(15) 40 CFR 63.6650(a), (b), and (c)
(16) 40 CFR 63.6655(a), (d), and (e)
(17) 40 CFR 63.6660
(18) 40 CFR 63.6665
(19) 40 CFR 63.6670
(20) 40 CFR 63.6675
(21) Tables 2c, 4, 5, 7, and 8 of 40 CFR 63, Subpart ZZZZ

(c) The diesel engines identified as D-1, D-2, D-4, and D-5

(1) 40 CFR 63.6585(a) and (b)
(2) 40 CFR 63.6590(a)(2)(ii)
(3) 40 CFR 63.6595(a)(5) and (c)
(4) 40 CFR 63.6605
(5) 40 CFR 63.6625(h)
(6) 40 CFR 63.6645(e)
(7) 40 CFR 63.6650(a),(b),and (c)
(8) 40 CFR 63.6655(a), (d), (e),
(9) 40 CFR 63.6660
(10) 40 CFR 63.6665
(11) 40 CFR 63.6670

(12) 40 CFR 63.6675

(d) The diesel engine identified as D-6

(1) 40 CFR 63.6585(a) and (b)
(2) 40 CFR 63.6590(a)(2)(ii)
(3) 40 CFR 63.6595(a)(5) and (c)
(4) 40 CFR 63.6602
(5) 40 CFR 63.6605
(6) 40 CFR 63.6611
(7) 40 CFR 63.6615
(8) 40 CFR 63.6620
(9) 40 CFR 63.6630
(10) 40 CFR 63.6635
(11) 40 CFR 63.6640(a) and (b)
(12) 40 CFR 63.6645(e)
(13) 40 CFR 63.6650(a),(b),and (c)
(14) 40 CFR 63.6660
(15) 40 CFR 63.6665
(16) 40 CFR 63.6670
(17) 40 CFR 63.6675
(18) Table 8 of 40 CFR 63, Subpart ZZZZ

(e) The diesel engine identified as D-7

(1) 40 CFR 63.6585(a) and (b)
(2) 40 CFR 63.6590(a)(2)(ii)
(3) 40 CFR 63.6595(a)(5) and (c)
(4) 40 CFR 63.6602
(5) 40 CFR 63.6605
(6) 40 CFR 63.6625(h)
(7) 40 CFR 63.6645(e)
(8) 40 CFR 63.6650(a), (b), and (c)
(9) 40 CFR 63.6655(a)
(10) 40 CFR 63.6660
(11) 40 CFR 63.6665
(12) 40 CFR 63.6670
(13) 40 CFR 63.6675
(14) Table 8 of 40 CFR 63, Subpart ZZZZ

(f) The diesel engine identified as ICE 1

(1) 40 CFR 63.6580
(2) 40 CFR 63.6585(a)(1)(i), (a)(2)(i), (a)(3)(i), and (b)
(3) 40 CFR 63.6590(a)(2), and (a)(3)
(4) 40 CFR 63.6595(c)
(5) 40 CFR 63.6600
(6) 40 CFR 63.6605(a)-b
(7) 40 CFR 63.6610(a), (b), and (c)
(8) 40 CFR 63.6615
(9) 40 CFR 63.6620(a), (e)(1), (i), and (f)
(10) 40 CFR [G]63.6620(b), (b)(1) and (d)
(11) 40 CFR 63.6625 (b) and (h)
(12) 40 CFR 63.6630(a) and (b)
(13) 40 CFR 63.6635(a), (b), and (c)
(14) 40 CFR 63.6640 (a), (b), (e), (g), (h), and (h)(2)
(15) 40 CFR 63.6645(c)

(16) 40 CFR 63.6550(a), (c), and (f)
(17) 40 CFR [G]63.6650 [G](c), (f)
(18) 40 CF 63.6655 (a), (a)(1)-(5), and (d)
(19) 40 CFR 63.6660(a)-(c)
(20) Table 1a of 40 CFR 63, Subpart ZZZZ
(21) Table 1b of 40 CFR 63, Subpart ZZZZ
(22) Table 4 of 40 CFR 63, Subpart ZZZZ
(23) Table 5 of 40 CFR 63, Subpart ZZZZ
(24) Table 6 of 40 CFR 63, Subpart ZZZZ
(25) Table 7 of 40 CFR 63, Subpart ZZZZ

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
PART 70 OPERATING PERMIT
CERTIFICATION

Source Name: Fritz Enterprises, Incorporated Contractor of Cleveland-Cliffs Steel LLC
Source Address: 3210 Watling Street, East Chicago, Indiana 46312
Part 70 Permit No.: T089-43176-00465

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

Please check what document is being certified:

☐ Annual Compliance Certification Letter

☐ Test Result (specify) _____

☐ Report (specify) _____

☐ Notification (specify) _____

☐ Affidavit (specify) _____

☐ Other (specify) _____

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

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

PART 70 OPERATING PERMIT
EMERGENCY OCCURRENCE REPORT

Source Name: Fritz Enterprises, Incorporated Contractor of Cleveland-Cliffs Steel LLC
Source Address: 3210 Watling Street, East Chicago, Indiana 46312
Part 70 Permit No.: T089-43176-00465

This form consists of 2 pages **Page 1 of 2**

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

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

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

If any of the following are not applicable, mark N/A **Page 2 of 2**

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency? Y N
Type of Pollutants Emitted: TSP, PM-10, SO_2, VOC, NO_X, CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by:_____

Title / Position: _____

Date:_____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: Fritz Enterprises, Incorporated Contractor of Cleveland-Cliffs Steel LLC
Source Address: 3210 Watling Street, East Chicago, Indiana 46312
Part 70 Permit No.: T089-43176-00465
Facility: Diesel Engine 3512 (SD-1)
Parameter: Hours of Operation Limitation
Limit: Shall not exceed 2,242 hours per twelve (12) consecutive month period with compliance determined at the end of each month

QUARTER: _____ YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	(hours)	(hours)	(hours)
	This Month	Previous 11 Months	12 Month Total

☐ No deviation occurred in this quarter.
☐ Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: Fritz Enterprises, Incorporated Contractor of Cleveland-Cliffs Steel LLC
Source Address: 3210 Watling Street, East Chicago, Indiana 46312
Part 70 Permit No.: T089-43176-00465
Facility: Diesel Engines SD-2 and SD-3
Parameter: Hours of Operation Limitation
Limit: Shall not exceed 6,579 hours (each) per twelve (12) consecutive month period with compliance determined at the end of each month

QUARTER: _____ YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	(hours)	(hours)	(hours)
	This Month	Previous 11 Months	12 Month Total

☐ No deviation occurred in this quarter.
☐ Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: Fritz Enterprises, Incorporated Contractor of Cleveland-Cliffs Steel LLC
Source Address: 3210 Watling Street, East Chicago, Indiana 46312
Part 70 Permit No.: T089-43176-00465
Facility: Diesel Engines D-1 and D-2
Parameter: Hours of Operation Limitation
Limit: Shall not exceed 4,000 hours (each) per twelve (12) consecutive month period with compliance determined at the end of each month

QUARTER: _____ YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	(hours)	(hours)	(hours)
	This Month	Previous 11 Months	12 Month Total

☐ No deviation occurred in this quarter.
☐ Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: Fritz Enterprises, Incorporated Contractor of Cleveland-Cliffs Steel LLC
Source Address: 3210 Watling Street, East Chicago, Indiana 46312
Part 70 Permit No.: T089-43176-00465
Facility: Diesel Engines D-4 and D-5
Parameter: Hours of Operation Limitation
Limit: Shall not exceed 2,080 hours (each) per twelve (12) consecutive month period with compliance determined at the end of each month

QUARTER: _____ YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	(hours)	(hours)	(hours)
	This Month	Previous 11 Months	12 Month Total

☐ No deviation occurred in this quarter.
☐ Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: Fritz Enterprises, Incorporated Contractor of Cleveland-Cliffs Steel LLC
Source Address: 3210 Watling Street, East Chicago, Indiana 46312
Part 70 Permit No.: T089-43176-00465
Facility: Chieftain Screen PS-1 and Conveyor MAG-1
Parameter: Slag Throughput Limitation
Limit: Shall not exceed 1,200,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month

QUARTER: _____ YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	(tons)	(tons)	(tons)
	This Month	Previous 11 Months	12 Month Total

☐ No deviation occurred in this quarter.
☐ Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: Fritz Enterprises, Incorporated Contractor of Cleveland-Cliffs Steel LLC
Source Address: 3210 Watling Street, East Chicago, Indiana 46312
Part 70 Permit No.: T089-43176-00465
Facility: Salvage Machine S-4, Triple Deck Screener S-3, Belt Feeder F-3, and Conveyors C6, C7, and C8
Parameter: Reclaimed Iron and Slag Throughput Limitation
Limit: Shall not exceed 1,157,025 tons per twelve (12) consecutive month period with compliance determined at the end of each month

QUARTER: _____ YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	(tons)	(tons)	(tons)
	This Month	Previous 11 Months	12 Month Total

☐ No deviation occurred in this quarter.
☐ Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: Fritz Enterprises, Incorporated Contractor of Cleveland-Cliffs Steel LLC
Source Address: 3210 Watling Street, East Chicago, Indiana 46312
Part 70 Permit No.: T089-43176-00465
Facility: Feeder FD-1
Parameter: Slag and Iron Throughput Limitation
Limit: Shall be limited to less than 624,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month

QUARTER: _____ YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	(tons)	(tons)	(tons)
	This Month	Previous 11 Months	12 Month Total

☐ No deviation occurred in this quarter.
☐ Deviation/s occurred in this quarter.
Deviation has been reported on:_____

Submitted by: _____

Title / Position: _____

Signature:_____

Date:_____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: Fritz Enterprises, Incorporated Contractor of Cleveland-Cliffs Steel LLC
Source Address: 3210 Watling Street, East Chicago, Indiana 46312
Part 70 Permit No.: T089-43176-00465
Facility: Triple Deck Screens WS-1
Parameter: Slag and Iron Throughput Limitation
Limit: Shall be limited to less than 624,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month

QUARTER: _____ YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	(tons)	(tons)	(tons)
	This Month	Previous 11 Months	12 Month Total

☐ No deviation occurred in this quarter.
☐ Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: Fritz Enterprises, Incorporated Contractor of Cleveland-Cliffs Steel LLC
Source Address: 3210 Watling Street, East Chicago, Indiana 46312
Part 70 Permit No.: T089-43176-00465
Facility: Jaw Crusher JC-1
Parameter: Slag and Iron Throughput Limitation
Limit: Shall be limited to less than 624,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month

QUARTER: _____ YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	(tons)	(tons)	(tons)
	This Month	Previous 11 Months	12 Month Total

☐ No deviation occurred in this quarter.
☐ Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: Fritz Enterprises, Incorporated Contractor of Cleveland-Cliffs Steel LLC
Source Address: 3210 Watling Street, East Chicago, Indiana 46312
Part 70 Permit No.: T089-43176-00465
Facility: Cone Crusher CC-1
Parameter: Slag and Iron Throughput Limitation
Limit: Shall be limited to less than 624,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month

QUARTER: _____ YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	(tons)	(tons)	(tons)
	This Month	Previous 11 Months	12 Month Total

☐ No deviation occurred in this quarter.
☐ Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: Fritz Enterprises, Incorporated Contractor of Cleveland-Cliffs Steel LLC
Source Address: 3210 Watling Street, East Chicago, Indiana 46312
Part 70 Permit No.: T089-43176-00465
Facility: Eleven (11) Conveyors F-1 through F-11
Parameter: Slag and Iron Throughput Limitation
Limit: Shall be limited to less than 624,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month

QUARTER: _____ YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	(tons)	(tons)	(tons)
	This Month	Previous 11 Months	12 Month Total

☐ No deviation occurred in this quarter.
☐ Deviation/s occurred in this quarter.
Deviation has been reported on:_____

Submitted by: _____

Title / Position: _____

Signature:_____

Date:_____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: Fritz Enterprises, Incorporated Contractor of Cleveland-Cliffs Steel LLC
Source Address: 3210 Watling Street, East Chicago, Indiana 46312
Part 70 Permit No.: T089-43176-00465
Facility: Diesel Engine ICE 1
Parameter: Diesel Throughput Limitation
Limit: Shall be limited to less than 129,286 gallons per twelve (12) consecutive month period with compliance determined at the end of each month

QUARTER: _____ YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	(gallons)	(gallons)	(gallons)
	This Month	Previous 11 Months	12 Month Total

☐ No deviation occurred in this quarter.
☐ Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: Fritz Enterprises, Incorporated Contractor of Cleveland-Cliffs Steel LLC
Source Address: 3210 Watling Street, East Chicago, Indiana 46312
Part 70 Permit No.: T089-43176-00465
Facility: Diesel Engines D-6 and D-7
Parameter: Diesel Throughput Limitation
Limit: Combined diesel throughput shall be limited to less than 125,635 gallons per twelve (12) consecutive month period with compliance determined at the end of each month

QUARTER: _____ YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	(gallons)	(gallons)	(gallons)
	This Month	Previous 11 Months	12 Month Total

☐ No deviation occurred in this quarter.
☐ Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: Fritz Enterprises, Incorporated Contractor of Cleveland-Cliffs Steel LLC
Source Address: 3210 Watling Street, East Chicago, Indiana 46312
Part 70 Permit No.: T089-43176-00465
Facility: Steel Mill Slag Processing System (Feeder Box, Jaw Crusher EU2, Cone Crushers EU3 and EU4, Four (4) Screens EU5, Two (2) Magnets, and Fourteen (14) Conveyors EU6)
Parameter: Steel Mill Slag Throughput Limitation
Limit: Shall be limited to less than 731,308 tons per twelve (12) consecutive month period with compliance determined at the end of each month

QUARTER: _____ YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	(tons)	(tons)	(tons)
	This Month	Previous 11 Months	12 Month Total

☐ No deviation occurred in this quarter.
☐ Deviation/s occurred in this quarter.
Deviation has been reported on:_____

Submitted by: _____

Title / Position: _____

Signature:_____

Date:_____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: Fritz Enterprises, Incorporated Contractor of Cleveland-Cliffs Steel LLC
Source Address: 3210 Watling Street, East Chicago, Indiana 46312
Part 70 Permit No.: T089-43176-00465
Facility: Eleven (11) Conveyors EU6
Parameter: Slag Throughput Limitation
Limit: Shall be limited to less than 5,848,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month

QUARTER: _____ YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	(tons)	(tons)	(tons)
	This Month	Previous 11 Months	12 Month Total

☐ No deviation occurred in this quarter.
☐ Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: Fritz Enterprises, Incorporated Contractor of Cleveland-Cliffs Steel LLC
Source Address: 3210 Watling Street, East Chicago, Indiana 46312
Part 70 Permit No.: T089-43176-00465
Facility: Boat/Barge Iron Chips loading operation
Parameter: Iron Chips Throughput
Limit: Shall not exceed 963,600 tons per twelve (12) consecutive month period with compliance determined at the end of each month

QUARTER: _____ YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	(tons)	(tons)	(tons)
	This Month	Previous 11 Months	12 Month Total

☐ No deviation occurred in this quarter.
☐ Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: Fritz Enterprises, Incorporated Contractor of Cleveland-Cliffs Steel LLC
Source Address: 3210 Watling Street, East Chicago, Indiana 46312
Part 70 Permit No.: T089-43176-00465
Facility: Boat/Barge Slag loading operation
Parameter: Slag Throughput
Limit: Shall not exceed 1,314,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month

QUARTER: _____ YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	(tons)	(tons)	(tons)
	This Month	Previous 11 Months	12 Month Total

☐ No deviation occurred in this quarter.
☐ Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: Fritz Enterprises, Incorporated Contractor of Cleveland-Cliffs Steel LLC
Source Address: 3210 Watling Street, East Chicago, Indiana 46312
Part 70 Permit No.: T089-43176-00465
Facility: Boat Slag Loading operation, identified as Boatloading
Parameter: Slag Throughput
Limit: Shall not exceed 6,789,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month

QUARTER: _____ YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	(tons)	(tons)	(tons)
	This Month	Previous 11 Months	12 Month Total

☐ No deviation occurred in this quarter.
☐ Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
PART 70 OPERATING PERMIT
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: Fritz Enterprises, Incorporated Contractor of Cleveland-Cliffs Steel LLC
Source Address: 3210 Watling Street, East Chicago, Indiana 46312
Part 70 Permit No.: T089-43176-00465

Months: _____ to _____ Year: _____

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

□ NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

□ THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD

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

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

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

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

Indiana Department of Environmental Management
Office of Air Quality

Addendum to the Technical Support Document (ATSD) for an Administrative Part 70 Significant Source Modification and Significant Permit Modification

Source Background and Description

Source Name:	**Fritz Enterprises, Incorporated Contractor of Cleveland-Cliffs Steel LLC**
Source Location:	**3210 Watling Street, East Chicago, Indiana 46312**
County:	**Lake (Calumet Township)**
SIC Code:	**5093 (Scrap and Waste Materials)** **3312 (Steel Works, Blast Furnaces (Including Coke Ovens), and Rolling Mills)**
Operation Permit No.:	**T 089-43176-00465**
Operation Permit Issuance Date:	**March 16, 2021**
Significant Source Modification No.:	**089-47391-00465**
Significant Permit Modification No.:	**089-47405-00465**
Permit Reviewer:	**Daria Antipova**

On March 14, 2024, the Office of Air Quality (OAQ) had a notice posted on IDEM's website (https://www.in.gov/idem/public-notices/), stating that Fritz Enterprises, Incorporated had applied for a significant source modification and significant permit modification to construct and operate a new boat loading operation. The notice also stated that the OAQ proposed to issue an administrative Part 70 Significant Source Modification and Significant Permit Modification for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

Comments and Responses

On April 1, 2024, Cavin McNulty submitted comments to IDEM, OAQ on the draft for administrative Part 70 Significant Source Modification and Significant Permit Modification.

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

Comment 1:

> "I am writing this letter to ask if a public hearing could be heard on the permit numbers 089-47391-00465 and 089-47405-00465 related to Fritz Enterprises Incorporated.
>
> Cleveland-Cliffs Steel is one of the largest polluters in our state and any further action to reduce pollution levels of this company is very important. I do not want my health to be compromised in order for the production process of a steel company. Any further action the Indiana Department of Environmental Management can do to enact further pollution restrictions on this company is welcome. However, I do understand that your actions are limited in the permit renewal process. At the very least, I would like to learn about this air permit and see how it will impact me. I would

like to request a public hearing on this permit renewal because I would like to know the impacts of this local business.

Thank you for your work and consideration. I hope you understand.

Sincerely,
Cavin McNulty "

Response to Comment 1:

IDEM reviewed this comment for the significant source and permit modifications, and since this is a sole hearing request, the public meeting does not appear to be necessary. IDEM, OAQ understands the reasons for this request and the representative of the IDEM, Northwest Regional Office has reached out to the citizen to respond to his concerns.

No changes were made as a result of this comment.

IDEM Contact

(a) If you have any questions regarding this permit, please contact Daria Antipova, Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251, or by telephone at (317) 234-3429 or (800) 451-6027, and ask for Daria Antipova or (317) 234-3429.

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

(c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM Air Permits page on the Internet at: https://www.in.gov/idem/airpermit/public-participation/; and the Citizens' Guide to IDEM on the Internet at: https://www.in.gov/idem/resources/citizens-guide-to-idem/.

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for an Administrative Part 70 Significant Source Modification and Significant Permit Modification

Source Description and Location

Source Name:	**Fritz Enterprises, Incorporated Contractor of Cleveland-Cliffs Steel LLC**
Source Location:	**3210 Watling Street, East Chicago, Indiana 46312**
County:	**Lake (Calumet Township)**
SIC Code:	**5093 (Scrap and Waste Materials)** **3312 (Steel Works, Blast Furnaces (Including Coke Ovens), and Rolling Mills)**
Operation Permit No.:	**T 089-43176-00465**
Operation Permit Issuance Date:	**March 16, 2021**
Significant Source Modification No.:	**089-47391-00465**
Significant Permit Modification No.:	**089-47405-00465**
Permit Reviewer:	**Daria Antipova**

Source Definition

The source, an integrated steel mill, includes Cleveland-Cliffs Steel LLC Indiana Harbor West (Source ID 089-00316), at 3210 Watling Street, East Chicago, Indiana, collocated with Cleveland-Cliffs Steel LLC Indiana Harbor West (Source ID 089-00318), at 3001 Dickey Road, East Chicago, Indiana, and onsite contractors:

	Company Name	Source ID	Operation Description
1	Cleveland-Cliffs Steel LLC Indiana Harbor East	089-00316	Integrated steel mill
2	Cleveland-Cliffs Steel LLC Indiana Harbor West	089-00318	Integrated steel mill
	Onsite Contractors	**Source ID**	**Operation Description**
3	Beemsterboer Slag Corp.	089-00356	Slag crushing and sizing
4	Beemsterboer Slag Corp.	089-00537	Slag micro pelletizing
5	Cokenergy LLC	089-00383	Heated gas steam from coal carbonization
6	Fritz Enterprises, Inc.	089-00465	Iron and steel recycling process and coke screening
7	TMS International LLC	089-00358	Scarfing facility
8	Indiana Harbor Coke Company LP	089-00382	Heat recovery coal carbonization
9	Ironside Energy, LLC	089-00448	Industrial steam and electric power cogeneration
10	Holcim (US), Inc.	089-00458	Slag granulator and pelletizer
11	Oil Technology, Inc.	089-00375	Used oil recycling
12	Oil Technology, Inc.	089-00369	Used oil recycling
13	Phoenix Global	089-00538	Slag and kish processing
14	Phoenix Global	089-00536	Slag and kish processing
15	TMS International LLC	089-00353	Steel slab scarfer

IDEM has determined that Fritz Enterprises, Incorporated Contractor of Cleveland-Cliffs Steel LLC and the other on-site contractors are under the common control of Cleveland-Cliffs Steel LLC Indiana Harbor West. These plants are considered one source due to contractual control. Therefore, the term “source” in the Part 70 documents refers to Cleveland-Cliffs Steel LLC Indiana Harbor West, Fritz Enterprises, Incorporated Contractor of Cleveland-Cliffs Steel LLC, and the other on-site contractors as one source.

Separate Part 70 permits have been issued to Cleveland-Cliffs Steel LLC Indiana Harbor West and each on-site contractor, solely for administrative purposes. The companies may maintain separate reporting and compliance certification.

Existing Approvals

The source was issued Administrative Part 70 Operating Permit Renewal No. T 089-43176-00465 on March 16, 2021. The source has since received the following approvals:

(a) Significant Source Modification No. 089-46324-00465, issued on July 10, 2023; and

(b) Significant Permit Modification No. 089-46413-00465, issued on August 10, 2023.

County Attainment Status

The source is located in Lake County (Calumet Township).

Pursuant to amendments to Indiana Code IC 13-17-3-14, effective July 1, 2023, a federal regulation that classifies or amends a designation of attainment, nonattainment, or unclassifiable for any area in Indiana under the federal Clean Air Act is effective and enforceable in Indiana on the effective date of the federal regulation.

Pollutant	Designation
SO_2	Unclassifiable or attainment effective April 9, 2018, for the 2010 primary 1-hour SO_2 standard. Better than national secondary standards effective March 3, 1978.
CO	Attainment effective February 18, 2000, for the part of the city of East Chicago bounded by Columbus Drive on the north; the Indiana Harbor Canal on the west; 148th Street, if extended, on the south; and Euclid Avenue on the east. Unclassifiable or attainment effective November 15, 1990, for the remainder of East Chicago and Lake County.
O_3	Attainment effective May 20, 2022, for the 2008 8-hour ozone standard.
O_3	Moderate nonattainment effective November 7, 2022, for the 2015 8-hour ozone standard for Calumet, Hobart, North, Ross, and St. John townships. Unclassifiable or attainment effective August 3, 2018, for the remainder of the county.
$PM_{2.5}$	Unclassifiable or attainment effective January 28, 2019, for the 2012 annual $PM_{2.5}$ standard.
$PM_{2.5}$	Unclassifiable or attainment effective December 13, 2009, for the 2006 24-hour $PM_{2.5}$ standard.
PM_{10}	Attainment effective March 11, 2003, for the cities of East Chicago, Hammond, Whiting, and Gary. Unclassifiable effective November 15, 1990, for the remainder of Lake County.
NO_2	Unclassifiable or attainment effective January 29, 2012, for the 2010 NO_2 standard.
Pb	Unclassifiable or attainment effective December 31, 2011, for the 2008 lead standard.

(a) Ozone Standards
U.S. EPA, in the Federal Register Notice 87 FR 60897 dated October 7, 2022, designated Lake County, Calumet Township, as moderate nonattainment for the 2015 8-hour ozone standard effective November 7, 2022. Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to ozone. Therefore, VOC and NOx emissions were evaluated pursuant to the requirements of Emission Offset, 326 IAC 2-3.

(b) $PM_{2.5}$
Lake County has been classified as attainment for $PM_{2.5}$. Therefore, direct $PM_{2.5}$, SO_2, and NOx emissions were reviewed pursuant to the requirements of Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

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

Fugitive Emissions

Since this source is classified as an integrated steel mill, it is considered one (1) of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(ff)(1), 326 IAC 2-3-2(g), or 326 IAC 2-7-1(22)(B). Therefore, fugitive emissions are counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

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

Greenhouse Gas (GHG) Emissions

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

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

Source Status - Existing Source

The table below summarizes the potential to emit of the entire source, prior to the proposed modification, after consideration of all enforceable limits established in the effective permits. If the control equipment has been determined to be integral, the table reflects the potential to emit (PTE) after consideration of the integral control device.

	Source-Wide Emissions Prior to Modification (ton/year)							
	PM[1]	**PM_{10}[1]**	**$PM_{2.5}$[1, 2]**	**SO_2**	**NO_X**	**VOC**	**CO**	**Total HAPs**
Boat/Barge Slag Loading	11.82	5.35	1.50	-	-	-	-	-
Boat/Barge Iron Chips Loading	13.07	5.54	2.71	-	-	-	-	-
Iron Pigging Machine	113.88	113.88	113.88	17.52	-	-	-	-
Diesel Engine 3512	0.80	0.46	0.44	1.85	24.99	0.81	6.28	0.01
Iron & Steel Crushing	250.71	26.76	26.76	-	-	-	-	-
Iron & Steel Sizing	20.04	7.19	7.19	-	-	-	-	-
Iron & Steel Storage Piles	0.31	0.11	0.02	-	-	-	-	-
Coke Screening Operation	2.60	1.24	1.24	-	-	-	-	-
Coke Screening Engine	1.29	1.29	1.29	1.20	18.19	1.48	3.92	0.02
Coke Screening Storage Piles	4.36	1.53	0.23	-	-	-	-	-
Trommel Mobile Slag Screening	27.16	9.55	9.55	-	-	-	-	-
Trommel Diesel Engines	1.77	1.77	1.77	1.65	24.98	2.03	5.38	0.02
Chieftain Mobile Slag Screening	3.36	1.18	0.50	-	-	-	-	-
Chieftain Diesel Engines	1.62	1.62	1.62	1.51	22.82	1.85	4.92	0.02
Iron & Slag Reclaim	3.60	1.27	0.70	-	-	-	-	-
Iron & Slag Reclaim Diesel Engines	0.69	0.69	0.69	0.65	9.77	0.79	2.11	0.01
Iron & Slag Reclaim Storage Piles	1.94	0.68	0.10	-	-	-	-	-
Mobile Slag Crushing	11.98	4.84	4.84	-	-	-	-	-
Mobile Slag Crushing Engines	2.76	2.76	2.76	2.58	38.95	3.16	8.39	0.03
Slag Processing System	12.11	4.56	5.0E-03	-	-	-	-	-
Slag Processing Storage Piles	6.52	3.10	1.00	-	-	-	-	-
Slag Processing Diesel Engine	2.81	2.81	2.81	2.62	39.91	3.26	8.60	0.04
Steel Mill Slag Processing	16.18	6.31	6.31	-	-	-	-	-
Diesel Storage Tanks	-	-	-	-	-	1.00	-	-
Unpaved Roads	28.65	7.64	0.76	-	-	-	-	-
Total PTE of Entire Source Including Fugitives*	**540.03**	**212.12**	**188.68**	**29.58**	**179.61**	**14.37**	**39.60**	**0.15**
Total PTE of Cleveland-Cliffs Steel, LLC	**>100**	**>100**	**>100**	**>100**	**>100**	**>100**	**>100**	**>25**
Combined Source-wide PTE	**>100**	**>100**	**>100**	**>100**	**>100**	**>100**	**>100**	**>25**
Title V Major Source Thresholds	NA	100	100	100	100	100	100	25
PSD Major Source Thresholds	100	100	100	100	100	100	100	--
Emission Offset Major Source Thresholds	---	NA	NA	NA	100	100	NA	--

[1]Under the Part 70 Permit program (40 CFR 70), PM_{10} and $PM_{2.5}$, not particulate matter (PM), are each considered as a "regulated air pollutant."

[2]$PM_{2.5}$ listed is direct $PM_{2.5}$.

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

(a) This existing source is a major stationary source, under PSD (326 IAC 2-2), because a PSD regulated pollutant(s), PM, PM10, PM2.5, SO2, NOx, VOC, and CO, each is emitted at a rate of

100 tons per year or more, and it is one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(ff)(1).

(b) This existing source is a major stationary source, under Emission Offset (326 IAC 2-3), because NOx and VOC, a nonattainment regulated pollutant(s), is emitted at a rate of 100 tons per year or more.

(c) This existing source is a major source of HAP, as defined in 40 CFR 63.2, because HAP emissions are equal to or greater than ten (10) tons per year for a single HAP and equal to or greater than twenty-five (25) tons per year for a combination of HAPs.

(d) These emissions are based on the TSD of Significant Source Modification No. 089-46324-00465, issued on July 10, 2023.

Description of Proposed Modification

The Office of Air Quality (OAQ) has reviewed an application, submitted by Fritz Enterprises, Incorporated Contractor of Cleveland-Cliffs Steel LLC on January 5, 2024, relating to construction and operation of a new boat loading operation.

The following is a list of the new emission units:

(a) One (1) boat slag loading operation, identified as Boatloading, with particulate emissions controlled by wet suppression, and consisting of the following equipment:

(1) One (1) conveyor belt Telescopic Stockpiler system, identified as CB 1, approved in 2024 for construction, with a maximum capacity of 1,500 tons per hour, with a front-end loader drop point.

(2) One (1) feeder box with conveyor, identified as FB 1, approved in 2024 for construction, with a maximum capacity of 1,500 tons per hour.

(3) One (1) nonroad diesel-fired engine, identified as CE 5, approved in 2024 for construction, with a maximum capacity of 96kW (129HP).

Enforcement Issues

There are no pending enforcement actions related to this modification.

Emission Calculations

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

Permit Level Determination – Part 70 Modification to an Existing Source

Pursuant to 326 IAC 2-1.1-1(12), Potential to Emit is defined as “the maximum capacity of a stationary source or emission unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, IDEM, or the appropriate local air pollution control agency.”

The following table is used to determine the appropriate permit level under 326 IAC 2-7-10.5. This table reflects the PTE before controls. If the control equipment has been determined to be integral, the table reflects the potential to emit (PTE) after consideration of the integral control device.

	PTE Before Controls of the New Emission Units (ton/year)							
Process / Emission Unit	**PM**	**PM_{10}**	**$PM_{2.5}$[1]**	**SO_2**	**NO_X**	**VOC**	**CO**	**Total HAPs**
New Boat Loading Operation								
One (1) Feeder hopper drop point	14.10	6.67	1.01	-	-	-	-	-
One (1) Conveyor transfer point	19.71	7.23	7.23	-	-	-	-	-
One (1) Loadout drop point	14.10	6.67	1.01	-	-	-	-	-
Total PTE Before Controls of the New Emission Units:	**47.91**	**20.57**	**9.25**	**-**	**-**	**-**	**-**	**-**

[1]$PM_{2.5}$ listed is direct $PM_{2.5}$.

Appendix A of this TSD reflects the detailed potential emissions of the modification.

(a) Approval to Construct

Pursuant to 326 IAC 2-7-10.5(g)(4), a Significant Source Modification is required because this modification has the potential to emit PM at equal to or greater than twenty-five (25) tons per year.

(b) Approval to Operate

Pursuant to 326 IAC 2-7-12(d)(1), this change to the permit is being made through a Significant Permit Modification because this modification does not qualify as a Minor Permit Modification or as an Administrative Amendment.

Permit Level Determination – PSD and EO Emissions Increase

(a) Actual to Potential (ATP) Applicability Test
Since this project only involves the construction of new emissions units and/or emissions units considered new for this evaluation, an Actual to Potential (ATP) applicability test, specified in 326 IAC 2-2-2(d)(4), is used to determine if the project results in a Significant Emissions Increase.

(b) New Emissions Units Only
Pursuant to 326 IAC 2-2-1(t)(1), a new emissions unit is any emissions unit that is, or will be, newly constructed and that has existed for less than two (2) years from the date the emissions unit first operated.

The following proposed emissions unit(s) are considered as new emissions units for this evaluation.

(A) One (1) slag boat loading operation, identified as Boatloading, with particulate emissions controlled by wet suppression, and consisting of the following equipment:

(1) One (1) conveyor belt Telescopic Stockpiler system, identified as CB 1, approved in 2024 for construction, with a maximum capacity of 1,500 tons per hour, with a front-end loader drop point.

(2) One (1) feeder box with conveyor, identified as FB 1, approved in 2024 for construction, with a maximum capacity of 1,500 tons per hour.

(3) One (1) nonroad diesel-fired engine, identified as CE 5, approved in 2024 for construction, with a maximum capacity of 96kW (129HP).

(c) Baseline Actual Emissions
For a new emissions unit, the baseline actual emissions for purposes of determining the Emissions Increase that will result from the initial construction and operation of the unit shall equal zero (0) and thereafter, for all other purposes, shall equal the unit's potential to emit.

(d) Actual to Potential (ATP) Summary
The Emissions Increase of the project is the sum of the difference between the potential to emit (PTE) from **each new emissions** unit following completion of the project and the baseline actual emissions of these units before the project.

$ATP_{(new\ unit)} = PTE_{(new\ unit)} - Baseline\ Emissions_{(new\ unit)}$

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

Project Emissions Increase (tons/year)							
Process/Emissions Unit	**PM**	**PM_{10}**	**$PM_{2.5}$***	**SO_2**	**NOx**	**VOC**	**CO**
Feed hopper drop point	7.28	3.445	1.01	-			
Conveyor transfer point	10.18	3.73	7.23	-	-	-	-
Loadout drop point	7.28	3445	1.01	-	-	-	-
Project Emissions Increase	**24.74**	**10.62**	**9.25**	**-**	**-**	**-**	**-**
Significant Levels	25	15	10	40	40	40	100
*PM2.5 listed is direct PM2.5.							

The source opted to take limits in order to render the requirements of 326 IAC 2-2 not applicable to this modification.

See Technical Support Document (TSD) State Rule Applicability - Entire Source section, 326 IAC 2-2 (PSD) applicability determination for more information regarding the limits.

The source stated that the boat loading operations are going to be independent of the various operations and processes. There will be no positive or negative impacts on the rest of the operations. Therefore, there is no potential upstream or downstream increased utilization of the associated emission units with respect to the installation of the new Boat Slag Loading operation at the source. The only change in emissions will come from the addition of the new Boat Slag Loading operation.

(e) Conclusion
This modification to an existing major PSD stationary source is not major because the Emissions Increase of each PSD regulated pollutant is less than the PSD significant level (i.e., the modification does not cause a Significant Emissions Increase). Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

PTE of the Entire Source After Issuance of the Part 70 Modification

The table below summarizes the after issuance source-wide potential to emit, reflecting all limits, of the emission units. Any control equipment is considered federally enforceable only after issuance of the Part 70 source and permit modification, and only to the extent that the effect of the control equipment is made practically enforceable in the permit. If the control equipment has been determined to be integral, the table reflects the potential to emit (PTE) after consideration of the integral control device.

	Source-Wide Emissions After Issuance (ton/year)							
	PM[1]	**PM_{10}[1]**	**$PM_{2.5}$[1, 2]**	**SO_2**	**NO_X**	**VOC**	**CO**	**Total HAPs**
Boat/Barge Slag Loading	11.82	5.35	1.50	-	-	-	-	-
Boat/Barge Iron Chips Loading	13.07	5.54	2.71	-	-	-	-	-
Iron Pigging Machine	113.88	113.88	113.88	17.52	-	-	-	-
Diesel Engine 3512	0.80	0.46	0.44	1.85	24.99	0.81	6.28	0.01
Iron & Steel Crushing	250.71	26.76	26.76	-	-	-	-	-
Iron & Steel Sizing	20.04	7.19	7.19	-	-	-	-	-
Iron & Steel Storage Piles	0.31	0.11	0.02	-	-	-	-	-
Coke Screening Operation	2.60	1.24	1.24	-	-	-	-	-
Coke Screening Engine	1.29	1.29	1.29	1.20	18.19	1.48	3.92	0.02
Coke Screening Storage Piles	4.36	1.53	0.23	-	-	-	-	-
Trommel Mobile Slag Screening	27.16	9.55	9.55	-	-	-	-	-
Trommel Diesel Engines	1.77	1.77	1.77	1.65	24.98	2.03	5.38	0.02
Chieftain Mobile Slag Screening	3.36	1.18	0.50	-	-	-	-	-
Chieftain Diesel Engines	1.62	1.62	1.62	1.51	22.82	1.85	4.92	0.02
Iron & Slag Reclaim	3.60	1.27	0.70	-	-	-	-	-
Iron & Slag Reclaim Diesel Engines	0.69	0.69	0.69	0.65	9.77	0.79	2.11	0.01
Iron & Slag Reclaim Storage Piles	1.94	0.68	0.10	-	-	-	-	-
Mobile Slag Crushing	11.98	4.84	4.84	-	-	-	-	-
Mobile Slag Crushing Engines	2.76	2.76	2.76	2.58	38.95	3.16	8.39	0.03
Slag Processing System	12.11	4.56	5.0E-03	-	-	-	-	-
Slag Processing Storage Piles	6.52	3.10	1.00	-	-	-	-	-
Slag Processing Diesel Engine	2.81	2.81	2.81	2.62	39.91	3.26	8.60	0.04
Steel Mill Slag Processing	16.18	6.31	6.31	-	-	-	-	-
Diesel Storage Tanks	-	-	-	-	-	1.00	-	-
Unpaved Roads	28.65	7.64	0.76	-	-	-	-	-
Boat Loading Operation	24.74	10.62	4.78	-	-	-	-	-
Total PTE of Entire Source Including Fugitives*	**564.79**	**225.90**	**193.46**	**29.58**	**179.61**	**14.37**	**39.60**	**0.15**
Total PTE of Cleveland-Cliffs Steel, LLC	**>100**	**>100**	**>100**	**>100**	**>100**	**>100**	**>100**	**>25**
Combined Source-wide PTE	**>100**	**>100**	**>100**	**>100**	**>100**	**>100**	**>100**	**>25**
Title V Major Source Thresholds	NA	100	100	100	100	100	100	25
PSD Major Source Thresholds	100	100	100	100	100	100	100	--
Emission Offset Major Source Thresholds	---	NA	NA	NA	100	100	NA	--

[1]Under the Part 70 Permit program (40 CFR 70), PM_{10} and $PM_{2.5}$, not particulate matter (PM), are each considered as a "regulated air pollutant."

[2]$PM_{2.5}$ listed is direct $PM_{2.5}$.

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

The source opted to take limit(s) in order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable to this source. See Technical Support Document (TSD) State Rule Applicability - Entire Source section, 326 IAC 2-2 (PSD) for more information regarding the limit(s).

(a) This existing major PSD stationary source will continue to be major under 326 IAC 2-2 because at least one pollutant, PM, PM10, PM2.5, SO2, NOx, VOC, CO, has emissions equal to or greater than the PSD major source threshold.

(b) This existing major Emission Offset stationary source will continue to be major under 326 IAC 2-3 because the emissions of the nonattainment pollutant(s), NOx and VOC, will continue to be equal to or greater than the Emission Offset major source threshold(s).

(c) This existing major source of HAP will continue to be a major source of HAP, as defined in 40 CFR 63.2, because HAP emissions will continue to be equal to or greater than ten (10) tons per year for any single HAP and/or equal to or greater than twenty-five (25) tons per year of a combination of HAPs. Therefore, this source is a major source under Section 112 of the Clean Air Act (CAA).

Federal Rule Applicability Determination

Due to the modification at this source, federal rule applicability has been reviewed as follows:

New Source Performance Standards (NSPS):

(a) The requirements of the New Source Performance Standard for Stationary Compression Ignition Internal Combustion Engine, 40 CFR 60, Subpart IIII and 326 IAC 12, are not included in the permit for the new diesel fired portable generator, because this is a nonroad engine as defined at 40 CFR 1068.30. Nonroad engines are excluded from the definition of stationary internal combustion engine at 40 CFR 60.4219. Therefore, nonroad engines are not subject to 40 CFR 60, Subpart IIII.

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

National Emission Standards for Hazardous Air Pollutants (NESHAP):

(c) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs): for Stationary Reciprocating Internal Combustion Engines, 40 CFR 63, Subpart ZZZZ, are not included in the registration for the new diesel fired portable generator, since this is a nonroad engine as defined at 40 CFR 1068.30. Nonroad engines are excluded from the definition of stationary internal combustion engine at 40 CFR 63.6675. Therefore, nonroad engines are not subject to 40 CFR 60, Subpart ZZZZ.

(d) There are no other National Emission Standards for Hazardous Air Pollutants under 40 CFR 63, 326 IAC 14 and 326 IAC 20 included for this proposed modification.

Compliance Assurance Monitoring (CAM):

(a) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is applicable to each pollutant-specific emission unit that meets the following criteria:

(1) has a potential to emit before controls equal to or greater than the major source threshold for the regulated pollutant involved;

(2) is subject to an emission limitation or standard for that pollutant (or a surrogate thereof); and

(3) uses a control device, as defined in 40 CFR 64.1, to comply with that emission limitation or standard.

(b) Pursuant to 40 CFR 64.2(b)(1)(i), emission limitations or standards proposed after November 15, 1990, pursuant to a NSPS or NESHAP under Section 111 or 112 of the Clean Air Act are exempt from the requirements of CAM. Therefore, an evaluation was not conducted for any emission limitations or standards proposed after November 15, 1990, pursuant to a NSPS or NESHAP under Section 111 or 112 of the Clean Air Act.

Particulate emissions in the new Boat Loading operation are controlled by wet suppression which does not meet the definition of a control device. Based on this evaluation, the requirements of 40 CFR Part 64, CAM, are not applicable to any of the new units as part of this modification.

State Rule Applicability - Entire Source

Due to this modification, state rule applicability has been reviewed as follows:

326 IAC 2-2 (PSD)
Fritz Enterprises, Inc. existing major status is based upon Cleveland-Cliffs Steel LLC (Source ID 089-00316) status as an existing major source. Cleveland-Cliffs Steel LLC (Source ID 089-00316) has been in operation prior to the promulgation of the PSD Rules (326 IAC 2-2) on August 7, 1977. Cleveland-Cliffs Steel LLC (Source ID 089-00316) belongs to one (1) of the twenty-eight (28) listed source categories with PSD major source threshold level of greater one hundred (100) tons per year. Therefore, all modifications made after August 7, 1977 for Fritz Enterprises, Inc. are evaluated as an existing major source under PSD.

2024 Modification (SSM No. 089-47391-00465/SPM No. 089-47405-00465)
The uncontrolled/unlimited PTE of PM and PM10 of the new Boat Slag loading operation are each above the PSD significant levels; however, the Permittee opted to take limits in order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable to proposed 2024 modification.

In order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable to the 2024 Modification, the Permittee shall comply with the following PSD minors limits for the Boat Slag Loaning operation:

(a) The throughput of slag to the Boat Slag Loading operation shall not exceed 6,789,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(b) Particulate emissions per ton of slag handled from the Boat/Barge Slag Loading operation emission units shall not exceed the values specified in the table below:

Emission Unit	PM Emission Limit (lb/ton)	PM_{10} Emission Limit (lb/ton)
Feed hopper drop point	0.0021	0.0010
Conveyor transfer point	0.0030	0.0011
Loadout drop point	0.0021	0.0010

(c) The moisture content of the slag shall be 4.8 percent (4.8%) or greater of the process stream by weight.

Compliance with these limits shall limit the potential to emit of PM and PM10 to less than twenty-five (25) tons per twelve (12) consecutive month for PM and fifteen (15) tons of per year for

PM10, respectively, and shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable to the 2024 modification.

326 IAC 2-3 (Emission Offset)
Fritz Enterprises, Inc. existing major status is based upon Cleveland-Cliffs Steel LLC (Source ID 089-00316) status as an existing major source. Cleveland-Cliffs Steel LLC (Source ID 089-00316) has been in operation prior to the promulgation of the Emission Offset Rules (326 IAC 2-3) on December 21, 1976. Cleveland-Cliffs Steel LLC (Source ID 089-00316) is a major stationary source, under Emission Offset (326 IAC 2-3), because NOx and VOC, nonattainment regulated pollutants, are each emitted at a rate of one hundred (100) tons per year or more. Therefore, all modifications made after December 21, 1976 for Fritz Enterprises, Inc. are evaluated as an existing major source under Emission Offset Rules.

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

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

326 IAC 6.5 (Particulate Matter Limitations Except Lake County)
Pursuant to 326 IAC 6.5-1-1(a), this source (located in Lake County) is not subject to the requirements of 326 IAC 6.5 because it is not located in one of the following counties: Clark, Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo or Wayne.

326 IAC 6.8 (Particulate Matter Limitations for Lake County)
Fritz Enterprises, Inc. (located in Lake County) is not one of the sources specifically listed in 326 IAC 6.8-4, 326 IAC 6.8-5, or 326 IAC 6.8-8 through 326 IAC 6.8-11. The source-wide PTE of PM is ten (10) tons per year or more. This source is subject to the requirements of 326 IAC 6.8-1-2 because the source-wide actual emissions of PM can be ten (10) tons per year or more. Therefore, 326 IAC 6.8-1-2 applies to the boat loading/handling processes.

Because the boat loading/handling processes are not enclosed and emissions are emitted to the open air, the emissions from the equipment do not allow for compliance demonstration against the mass/flow-based limit specified in 326 IAC 6.8-1-2. Therefore, IDEM, OAQ has determined that 326 IAC 6-3 is more stringent, and the requirements of 326 IAC 6-3-2(e) shall apply to the boat loading/handling processes.

State Rule Applicability – Individual Facilities

Due to this modification, state rule applicability has been reviewed as follows:

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-2(e), the particulate matter (PM) emissions from the new Boat Slag Loading operation shall not exceed the following pounds per hour PM emissions when operating at the specified process weight rate, as shown the table below:

Emission Unit	Process Weight Rate (tons/hr)	Allowable Particulate Emissions (326 IAC 6-3-2) (lb/hr)	PTE PM (lbs/hr)
Boat Slag Loading			
Feed hopper	1,500	82.95	4.50
Loadout	1,500	82.95	4.50
Conveyor, each	1,500	82.95	4.50

The pound per hour limitation was calculated with the equations shown below.

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

$E = 55.0\ P^{0.11} - 40$ where E = rate of emission in pounds per hour, and
P = process weight rate in tons per hour.

Compliance Determination and Monitoring Requirements

Permits issued under 326 IAC 2-7 are required to assure that sources can demonstrate compliance with all applicable state and federal rules on a continuous basis. All state and federal rules contain compliance provisions; however, these provisions do not always fulfill the requirement for a continuous demonstration. When this occurs, IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, Compliance Determination Requirements are included in the permit. The Compliance Determination Requirements in Section D of the permit are those conditions that are found directly within state and federal rules and the violation of which serves as grounds for enforcement action.

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

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

(1) Application of water or a mixture of water and wetting agent on an as needed basis to the slag stockpile to control particulate emissions from the new slag Boat Loading operation. If weather conditions preclude the use of wet suppression, the Permittee shall perform laboratory analysis on the slag and iron chips to ensure each has a moisture content of 4.8 percent (4.8%) or greater of the process stream by weight. Records of the slag moisture content and sample date shall be maintained.

(2) Pursuant to 326 IAC 6.8-8-1, the Permittee shall perform the inspections, monitoring and record keeping in accordance with the information in 326 IAC 6.8-8-5 through 326 IAC 6.8-8-7 or applicable procedures in the CCP.

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

(4) Record keeping and reporting of the amount of slag handled.

Testing Requirements:

IDEM OAQ has determined that testing is not required because the only control measure used at the source is wet suppression. Compliance with the requirement to apply wet suppression, maintain slag moisture content greater than or equal to 4.8 percent (4.8%) of the process stream weight , and perform visible emissions monitoring is sufficient to satisfy compliance.

(b) The Compliance Monitoring Requirements applicable to this proposed modification are as follows:

Emission Unit	Type of Monitoring	Frequency	Range or Specification
Boat Slag Loading operation	Visible emission notations	Daily	Verify whether emissions are normal or abnormal

These monitoring conditions are necessary because the wet suppression associated with the new Boat Slag Loading operation must be applied and maintained properly to ensure compliance with 326 IAC 2-2 (PSD), and 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes).

Proposed Changes

As part of this permit approval, the permit may contain new or different permit conditions and some conditions from previously issued permits/approvals may have been corrected, changed, or removed. These corrections, changes, and removals may include Title I changes.

The following changes listed below are due to the proposed modification. Deleted language appears as ~~strikethrough~~ text and new language appears as **bold** text (these changes may include Title I changes):

(1) Condition A.3 of the permit has been modified to include new emission units as follows:

****

A.3 Emission Units and Pollution Control Equipment Summary
[326 IAC 2-7-4(c)(3)][326 IAC 2-7-5(14)]

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

*****

(n) One (1) boat slag loading operation, identified as Boatloading, with particulate emissions controlled by wet suppression, and consisting of the following equipment:

(1) One (1) conveyor belt Telescopic Stockpiler system, identified as CB 1, approved in 2024 for construction, with a maximum capacity of 1,500 tons per hour, with a front-end loader drop point.

(2) One (1) feeder box with conveyor, identified as FB 1, approved in 2024 for construction, with a maximum capacity of 1,500 tons per hour.

(3) One (1) nonroad diesel-fired engine, identified as CE 5, approved in 2024 for construction, with a maximum capacity of 96kW (129HP).

The 96 kW (129 HP) diesel-fired engine, identified as CE 5, is a nonroad engine, as defined in 40 CFR 1068.30.

****

(2) A new Section D.9 is added to the permit to incorporate the proposed new Boat Slag Loading operation as follows:

****

SECTION D.9 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(n) One (1) boat slag loading operation, identified as Boatloading, with particulate emissions controlled by wet suppression, and consisting of the following equipment:

(1) One (1) conveyor belt Telescopic Stockpiler system, identified as CB 1, approved in 2024 for construction, with a maximum capacity of 1,500 tons per hour, with a front-end loader drop point.

(2) One (1) feeder box with conveyor, identified as FB 1, approved in 2024 for construction, with a maximum capacity of 1,500 tons per hour.

(3) One (1) nonroad diesel-fired engine, identified as CE 5, approved in 2024 for construction, with a maximum capacity of 96kW (129HP).

The 96 kW (129 HP) diesel-fired engine, identified as CE 5, is a nonroad engine, as defined in 40 CFR 1068.30.

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

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

D.9.1 Prevention of Significant Deterioration (PSD) Minor Limits [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable to the 2024 Modification, the Permittee shall comply with the following PSD minors limits for the Boat Slag Loaning operation:

(a) The throughput of slag to the Boat Slag Loading operation shall not exceed 6,789,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(b) Particulate emissions per ton of slag handled from the Boat/Barge Slag Loading operation emission units shall not exceed the values specified in the table below:

Emission Unit	PM Emission Limit (lb/ton)	PM_{10} Emission Limit (lb/ton)
Feed hopper drop point	0.0021	0.0010
Conveyor transfer point	0.0030	0.0011
Loadout drop point	0.0021	0.0010

(c) The moisture content of the slag shall be 4.8 percent (4.8%) or greater of the process stream by weight.

Compliance with these limits shall limit the potential to emit of PM and PM10 to less than twenty-five (25) tons per twelve (12) consecutive month for PM and fifteen (15) tons of per year for PM10, respectively, and shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable to the 2024 modification.

D.9.2 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(e), the particulate matter (PM) emissions from the new Boat Slag Loading operation shall not exceed the following pounds per hour PM emissions when operating at the specified process weight rate, as shown the table below:

Emission Unit	Process Weight Rate (tons/hr)	Allowable Particulate Emissions (326 IAC 6-3-2) (lb/hr)	PTE PM (lbs/hr)
Boat Slag Loading			
Feed hopper	1,500	82.95	4.50
Loadout	1,500	82.95	4.50
Conveyor, each	1,500	82.95	4.50

The pound per hour limitation was calculated with the equations shown below.

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

$E = 55.0\ P^{0.11} - 40$ **where E = rate of emission in pounds per hour, and P = process weight rate in tons per hour.**

D.9.3 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

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

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

D.9.4 Particulate Control

In order to ensure compliance with Condition D.9.1(b), the Permittee shall apply an initial application of water or a mixture of water and wetting agent to control the particulate emissions from the Boat Slag Loading operation. The suppressant shall be applied in a manner and at a frequency sufficient to ensure compliance with Condition D.9.1(c). If weather conditions preclude the use of wet suppression, the Permittee shall perform laboratory analysis on the slag to ensure it has a moisture content of 4.8 percent (4.8%) or greater of the process stream by weight. The Permittee shall submit to IDEM OAQ the method for moisture content analysis for approval.

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

D.9.5 Visible Emissions Notations

(a) Visible emission notations from the Boat Slag Loading operation shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

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

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

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

(e) If abnormal emissions are observed, the Permittee shall take a reasonable response. Section C – Response to Excursions and Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by

this condition. Failure to take response steps shall be considered a deviation from this permit.

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

D.9.6 Record Keeping Requirements

(a) To document the compliance status with Condition D.9.1(a), the Permittee shall maintain records at the plant of the iron chips throughput.

(b) To document the compliance status with Condition D.9.1(c), the Permittee shall maintain records at the plant of the date and results of the chemical analysis for the slag moisture content.

(c) To document the compliance status with Condition D.9.5 - Visible Emissions Notations, the Permittee shall maintain records of visible emission notations of the Boat Slag Loading operation emission units once per day. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g., the process did not operate that day).

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

D.9.7 Reporting Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-19]

A quarterly summary of the information to document the compliance status with Condition D.9.1(a) shall be submitted using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days following the end of each calendar quarter. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35). Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.

****

(3) A new Part 70 Quarterly Report associated with the new Boat Slag Loading operation is added at the end of the permit:

****

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name:	**Fritz Enterprises, Incorporated Contractor of Cleveland-Cliffs Steel LLC**
Source Address:	**3210 Watling Street, East Chicago, Indiana 46312**
Part 70 Permit No.:	**T089-43176-00465**
Facility:	**Boat Slag Loading operation, identified as Boatloading**
Parameter:	**Slag Throughput**
Limit:	**Shall not exceed 6,789,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month**

QUARTER: _____ YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	(tons)	(tons)	(tons)
	This Month	Previous 11 Months	12 Month Total

☐ **No deviation occurred in this quarter.**
☐ **Deviation/s occurred in this quarter.**
Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

****

Additional Changes

IDEM, OAQ made additional changes to the permit as described below in order to update the language to match the most current version of the applicable rule, to eliminate redundancy within the permit, and to provide clarification regarding the requirements of these conditions.

These permit changes include model updates to standard permit language that are applicable to this source, as follows:

(1) Condition A.2 of the permit was revised to incorporate updated information as follows:

****

A.2 Part 70 Source Definition [326 IAC 2-7-1(22)]

The source, an integrated steel mill, includes Cleveland-Cliffs Steel LLC Indiana Harbor West (Source ID 089-00316), at 3210 Watling Street, East Chicago, Indiana, collocated with Cleveland-Cliffs Steel LLC Indiana Harbor West (Source ID 089-00318), at 3001 Dickey Road, East Chicago, Indiana, and onsite contractors:

	Company Name	Source ID	Operation Description
1	Cleveland-Cliffs Steel LLC Indiana Harbor West	089-00316	Integrated steel mill
2	Cleveland-Cliffs Steel LLC Indiana Harbor West	089-00318	Integrated steel mill
	Onsite Contractors		
3	Beemsterboer Slag Corp.	089-00356	Slag crushing and sizing

4	Beemsterboer Slag Corp.	089-00537	~~Metallurgical coke screening~~ **Slag micro pelletizing**
5	Cokenergy LLC	089-00383	Heated gas steam from coal carbonization
6	Fritz Enterprises, Incorporated	089-00465	Iron and steel recycling process and coke screening
7	~~Harsco Metals Americas~~ **TMS International LLC**	089-00358	~~Briquetting~~ **Scarfing** facility
8	Indiana Harbor Coke Company LP	089-00382	Heat recovery coal carbonization
9	Ironside Energy, LLC	089-00448	Industrial steam and electric power cogeneration
10	~~Lafarge North America~~ **Holcim (US), Inc.**	089-00458	Slag granulator and pelletizer
11	Oil Technology, Inc.	089-00375	Used oil recycling
12	Oil Technology, Inc.	089-00369	Used oil recycling
13	~~Phoenix Services, LLC~~ **Phoenix Global**	089-00538	Slag and kish processing
14	~~Phoenix Services, LLC, dba Metal Services LLC~~ **Phoenix Global**	089-00536	Slag and kish processing
15	~~Tube City IMS~~ **TMS International LLC**	089-00353	Steel slab scarfer

****

(2) Section B - Annual Fee Payment of the permit has been revised as follows to include an updated phone number for the OAQ, Billing, Licensing, and Training Section:

****

B.23 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-7-5(7)][326 IAC 2-1.1-7]

*****

(c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-~~4230~~**8590** (ask for OAQ, Billing, Licensing, and Training Section) to determine the appropriate permit fee.

****

Conclusion and Recommendation

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant. An application for the purposes of this review was received on January 5, 2024.

The construction of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. 089-47391-00465.The operation of this proposed modification shall be subject to the conditions of the attached proposed Significant Permit Modification No. 089-47405-00465.

The staff recommends to the Commissioner that the Administrative Part 70 Significant Source Modification and Significant Permit Modification be approved.

IDEM Contact

(a) If you have any questions regarding this permit, please contact Daria Antipova, Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251, or by telephone at (317) 234-3429 or (800) 451-6027, and ask for Daria Antipova or (317) 234-3429.

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

(c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM Air Permits page on the Internet at: https://www.in.gov/idem/airpermit/public-participation/; and the Citizens' Guide to IDEM on the Internet at: https://www.in.gov/idem/resources/citizens-guide-to-idem/.

Appendix A: Emissions Calculations
Source Wide Emissions Summary

Company Name: Fritz Enterprises, Incorporated Contractor of Cleveland-Cliffs Steel LLC
Address City IN Zip: 3210 Watling Street, East Chicago, Indiana 46312
Operating Permit No.: T089-43176-00465
Significant Source Modification No.: 089-47391-00465
Significant Permit Modification No.: 089-47405-00465
Reviewer: Daria Antipova

Unrestricted Potential to Emit (tons/year)									
Emission Unit	**PM**	**PM10**	**PM2.5**	**SO2**	**NOx**	**VOC**	**CO**	**Single HAP**	**Total HAPs**
Boat/Barge Slag Loading	116.01	52.74	14.19	-	-	-	-	-	-
Boat/Barge Iron Chips Loading	175.14	74.43	35.87	-	-	-	-	-	-
Iron Pigging Machine	224.69	224.69	224.69	-	-	-	-	-	-
Diesel Engine 3512	3.12	1.79	1.74	7.22	107.12	3.15	24.55	2.5E-03	0.05
Iron&Steel Crushing	250.71	26.76	26.76	-	-	-	-	-	-
Iron&Steel Sizing	20.04	7.19	7.19	-	-	-	-	-	-
Iron&Steel Storage Piles	0.31	0.11	0.02	-	-	-	-	-	-
Coke Screening Operation	156.01	39.41	39.41	-	-	-	-	-	-
Coke Screening Engine	1.29	1.29	1.29	1.20	18.19	1.48	3.92	4.8E-03	0.02
Coke Screening Storage Piles	4.36	1.53	0.23	-	-	-	-	-	-
Trommel Mobile Slag Screening	27.16	9.55	9.55	-	-	-	-	-	-
Trommel Diesel Engines	2.36	2.36	2.36	2.20	33.27	2.70	7.17	8.86E-03	0.03
Chieftain Mobile Slag Screening	36.79	12.88	5.52	-	-	-	-	-	-
Chieftain Diesel Engines	3.55	3.55	3.55	3.30	49.97	4.05	10.77	0.01	0.04
Iron&Slag Reclaim	62.24	22.27	14.68	-	-	-	-	-	-
Iron&Slag Reclaim Diesel Engines	2.92	2.92	2.92	2.72	41.14	3.34	8.87	0.01	0.04
Iron&Slag Reclaim Storage Piles	1.94	0.68	0.10	-	-	-	-	-	-
Mobile Slag Crushing	11.98	4.84	4.84	-	-	-	-	-	-
Mobile Slag Crushing Engines	5.16	5.16	5.16	4.80	72.64	5.89	15.65	0.02	0.06
Slag Processing System	50.98	19.21	0.02	-	-	-	-	-	-
Slag Processing Storage Piles	13.01	6.17	1.96	-	-	-	-	-	-
Slag Processing Diesel Engine	3.71	3.71	3.71	3.47	52.73	4.30	11.36	0.01	0.05
Steel Mill Slag Processing	142.33	53.17	53.17	-	-	-	-	-	-
Diesel Storage Tanks	-	-	-	-	-	1.00	-	-	-
Unpaved Roads	57.31	15.27	1.53	-	-	-	-	-	-
Barge Loading Bulk Products	47.91	20.56	9.25	-	-	-	-	-	-
Total Emissions (Fritz Enterprises, Inc.)	**1,421.03**	**612.23**	**469.70**	**24.92**	**375.06**	**25.90**	**82.28**	**0.07** (Formaldehyde)	**0.28**

Limited Emissions (tons/year)									
Emission Unit	**PM**	**PM10**	**PM2.5**	**SO2**	**NOx**	**VOC**	**CO**	**Single HAP**	**Total HAPs**
Boat/Barge Slag Loading	11.82	5.35	1.50	-	-	-	-	-	-
Boat/Barge Iron Chips Loading	13.07	5.54	2.71	-	-	-	-	-	-
Iron Pigging Machine	113.88	113.88	113.88	17.52	-	-	-	-	-
Diesel Engine 3512	0.80	0.46	0.44	1.85	24.99	0.81	6.28	6.31E-04	0.01
Iron&Steel Crushing	250.71	26.76	26.76	-	-	-	-	-	-
Iron&Steel Sizing	20.04	7.19	7.19	-	-	-	-	-	-
Iron&Steel Storage Piles	0.31	0.11	0.02	-	-	-	-	-	-
Coke Screening Operation	2.60	1.24	1.24	-	-	-	-	-	-
Coke Screening Engine	1.29	1.29	1.29	1.20	18.19	1.48	3.92	0.00	0.02
Coke Screening Storage Piles	4.36	1.53	0.23	-	-	-	-	-	-
Trommel Mobile Slag Screening	27.16	9.55	9.55	-	-	-	-	-	-
Trommel Diesel Engines	1.77	1.77	1.77	1.65	24.98	2.03	5.38	0.01	0.02
Chieftain Mobile Slag Screening	3.36	1.18	0.50	-	-	-	-	-	-
Chieftain Diesel Engines	1.62	1.62	1.62	1.51	22.82	1.85	4.92	-	0.02
Iron&Slag Reclaim	3.60	1.27	0.70	-	-	-	-	-	-
Iron&Slag Reclaim Diesel Engines	0.69	0.69	0.69	0.65	9.77	0.79	2.11	-	0.01
Iron&Slag Reclaim Storage Piles	1.94	0.68	0.10	-	-	-	-	-	-
Mobile Slag Crushing	11.98	4.84	4.84	-	-	-	-	-	-
Mobile Slag Crushing Engines	2.76	2.76	2.76	2.58	38.95	3.16	8.39	-	0.03
Slag Processing System	12.11	4.56	5.0E-03	-	-	-	-	-	-
Slag Processing Storage Piles	6.52	3.10	1.00	-	-	-	-	-	-
Slag Processing Diesel Engine	2.81	2.81	2.81	2.62	39.91	3.26	8.60	-	0.04
Steel Mill Slag Processing	16.18	6.31	6.31	-	-	-	-	-	-
Diesel Storage Tanks	-	-	-	-	-	1.00	-	-	-
Unpaved Roads	28.65	7.64	0.76	-	-	-	-	-	-
Barge Loading Bulk Products	24.75	13.78	4.78	-	-	-	-	-	-
Total Limited Emissions (Fritz Enterprises, Inc.)	**564.79**	**225.90**	**193.46**	**29.58**	**179.61**	**14.37**	**39.60**	**0.01**	**0.15**

Appendix A: Emission Calculations
New Boat/Barge Loading Plant (Slag)
Modification Permit Level SSM #47391, Particulate Emissions

Company Name: Fritz Enterprises, Incorporated Contractor of Cleveland-Cliffs Steel LLC
Address City IN Zip: 3210 Watling Street, East Chicago, Indiana 46312
Operating Permit No.: T089-43176-00465
Significant Source Modification No.: 089-47391-00465
Significant Permit Modification No.: 089-47405-00465
Reviewer: Daria Antipova

1. Part 70 Permit Level: SSM 1,500 ton/hr 13,140,000 ton/yr

	Uncontrolled Potential to Emit (PTE)							
Pollutants	**PM**	**PM10**	**PM2.5**	**SO2**	**NOx**	**VOC**	**CO**	**HAPs**
Conveying	19.71	7.23	7.23	-	-	-	-	-
Drop Points	28.20	13.34	2.02	-	-	-	-	-
Diesel Engine 96kW*	0.45	0.45	0.45	0.42	6.37	0.52	1.37	0.0002
Totals	**47.91**	**20.56**	**9.25**	**-**	**-**	**-**	**-**	**-**

2. PSD Minor Limit: Throughput 6,789,000 ton/yr

	Limited Potential to Emit (PTE)							
Pollutants	**PM**	**PM10**	**PM2.5**	**SO2**	**NOx**	**VOC**	**CO**	**HAPs**
Conveying	10.18	3.73	7.23	-	-	-	-	-
Drop Points	14.57	6.89	2.02	-	-	-	-	-
Diesel Engine 96kW*	0.45	0.45	0.45	0.4	6.4	0.5	1.4	0.0002
Totals	**24.75**	**10.62**	**9.25**	**-**	**-**	**-**	**-**	**-**
Significant Levels	>25	<15	<10					

The 96kW (129HP) diesel engine, identified as CE 5, is concidered a nonroad engine, therefore, the emissions from this engine are not counted t

Appendix A: Emission Calculations
Feeder Bin and Barge Loading of Bulk Products: Drop Points
Modification Permit Level SSM #47391, Particulate Emissions

Company Name: Fritz Enterprises, Incorporated Contractor of Cleveland-Cliffs Steel LLC
Address City IN Zip: 3210 Watling Street, East Chicago, Indiana 46312
Operating Permit No.: T089-43176-00465
Significant Source Modification No.: 089-47391-00465
Significant Permit Modification No.: 089-47405-00465
Reviewer: Daria Antipova

Drop Operations (AP-42 Section 13.2.4)
To estimate potential fugitive dust emissions from loading/unloading of bulk products (batch or continuous drop operations), AP-42 emission factors for Aggregate Handling, Section 13.2.4 (fifth edition, 11/2006) are utilized.

Ef = k*(0.0032)*[(U/5)^1.3 / (M/2)^1.4]

where: Ef = Emission factor (lb/ton)

k (PM) =	0.74	= particle size multiplier (0.74 assumed for aerodynamic diameter <=100 um)
k (PM10) =	0.35	= particle size multiplier (0.35 assumed for aerodynamic diameter <=10 um)
k(PM2.5) =	0.053	= particle size multiplier (0.35 assumed for aerodynamic diameter <=2.5 um)
U =	11.9	= worst case average wind speed (Source: NOAA, 2009*)
M =	4.8	= material % moisture content of materials

Emission factor (Ef) (lb/ton)		
PM	PM_{10}	$PM_{2.5}$
0.0021	0.0010	0.0002

Unctrolled PTE Barge Loading and Feed hopper

Type of Activity	Type of Emissions	Maximum Material Handling Throughput (tons/hour)	Number of Drop Points	Uncontrolled PTE of PM (tons/yr)	Uncontrolled PTE of PM_{10} (tons/yr)	Uncontrolled PTE of $PM_{2.5}$ (tons/yr)
Loading bulk products from stockpile to feeder hopper (front end loader)	Fugitive	1500	1	14.10	6.67	1.010
Unloading bulk products from conveyor to barge	Fugitive	1500	1	14.10	6.67	1.010
			Total Fugitive Emissions (tons/yr)	28.20	13.34	2.02

PSD Minor Limit: Throughput

Type of Activity	Type of Emissions	Maximum Material Handling Throughput (tons/hour)	Number of Drop Points	Uncontrolled PTE of PM (tons/yr)	Uncontrolled PTE of PM_{10} (tons/yr)	Uncontrolled PTE of $PM_{2.5}$ (tons/yr)
Loading bulk products from stockpile to feeder hopper (front end loader)	Fugitive	775	1	7.28	3.45	0.52
Unloading bulk products from conveyor to barge	Fugitive	775	1	7.28	3.45	0.52
			Total Fugitive Emissions (tons/yr)	14.57	6.89	1.04

Methodology
Uncontrolled Potential to Emit (tons/yr) = [Maximum Material Handling Throughput (tons/hour)] * [Emission Factor (lb/ton)] * [Number of Drop Points] * [8760 hours/year] * [ton/2000 lbs]
*Worst case average wind speed (South Bend, IN) from "Comparative Climatic Data", National Climatic Data Center, NOAA, 2009

Abbreviations
PM = Particulate Matter
PM10 = Particulate Matter (<10 um)
PTE = Potential to Emit

Appendix A: Emission Calculations
Barge Loading of Bulk Products: Transfer Points
Modification Permit Level SSM #47391, Particulate Emissions

Company Name: Fritz Enterprises, Incorporated Contractor of Cleveland-Cliffs Steel LLC
Address City IN Zip: 3210 Watling Street, East Chicago, Indiana 46312
Operating Permit No.: T089-43176-00465
Significant Source Modification No.: 089-47391-00465
Significant Permit Modification No.: 089-47405-00465
Reviewer: Daria Antipova

1. Barge Loading

Emission Units	Capacity Throughput (tph)	Number of Transfer Points	Emission Factors*			Uncontrolled PTE		
			PM (lb/ton)	PM_{10} (lb/ton)	$PM_{2.5}$ (lb/ton)	PM (tpy)	PM_{10} (tpy)	$PM_{2.5}$ (tpy)
Stacker/conveyor (1)	1,500	1	0.003	0.0011	0.0011	19.71	7.23	7.23
					Total (tpy):	**19.71**	**7.23**	**7.23**

1. PSD Minor Limit: Throughput

Emission Units	Capacity Throughput (tph)	Number of Transfer Points	Emission Factors*			Uncontrolled PTE		
			PM (lb/ton)	PM_{10} (lb/ton)	$PM_{2.5}$ (lb/ton)	PM (tpy)	PM_{10} (tpy)	$PM_{2.5}$ (tpy)
Stacker/conveyor (1)	775	1	0.003	0.0011	0.0011	10.18	3.73	3.73
					Total (tpy):	**10.18**	**3.73**	**3.73**

Notes:

* The uncontrolled emission factors for the conveyor transfer points are from AP-42, Chapter 11.19, Table 11.19.2-2 - crushed stone processing operations (AP-42 01/95).

Methodology

Uncontrolled Potential to Emit (tons/yr) = [Maximum Material Handling Throughput (tons/hour)] * [Emission Factor (lb/ton)] * [Number of Drop Points] * [8760 hours/year] * [ton/2000 lbs]

Appendix A: Emission Calculations
Reciprocating Internal Combustion Engines - Diesel Fuel
Modification Permit Level SSM #47391, Particulate Emissions
Maximum Input Rate (<=4.2 MMBtu/hr)

Company Name: **Fritz Enterprises, Incorporated Contractor of Cleveland-Cliffs Steel LLC**
Address City IN Zip: **3210 Watling Street, East Chicago, Indiana 46312**
Operating Permit No.: **T089-43176-00465**
Significant Source Modification No.: **089-47391-00465**
Significant Permit Modification No.: **089-47405-00465**
Reviewer: **Daria Antipova**

A. Emissions calculated based on heat input capacity (MMBtu/hr)

Heat Input Capacity (MMBtu/hr)	0.33
Maximum Hours Operated per Year	8760
Potential Throughput (MMBtu/yr)	2,891

GENERATOR SPECS:
96kW Power Output
Engine: CAT C4.4 TA (TIER III)
Engine Model:
129 HP Diesel Engine – Tier 3 Exhausting to Atmosphere

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMBtu	0.31	0.31	0.31	0.29	4.41	0.36	0.95
Potential Emission in tons/yr	0.45	0.45	0.45	0.42	6.37	0.52	1.37

*PM and PM2.5 emission factors are assumed to be equivalent to PM10 emission factors. No information was given regarding which method was used to determine the factor or the fraction of PM10 which is condensable.

Hazardous Air Pollutants (HAPs)

	Pollutant						
	Benzene	Toluene	Xylene	1,3-Butadiene	Formaldehyde	Acetaldehyde	Acrolein
Emission Factor in lb/MMBtu	9.33E-04	4.09E-04	2.85E-04	3.91E-05	1.18E-03	7.67E-04	9.25E-05
Potential Emission in tons/yr	1.35E-03	5.91E-04	4.12E-04	5.65E-05	1.71E-03	1.11E-03	1.34E-04

Potential Emission of Total HAPs (tons/yr)

Green House Gas Emissions (GHG)

	Pollutant		
	CO2	CH4	N2O
Emission Factor in lb/MMBtu	1.64E+02	6.61E-03	1.32E-03
Potential Emission in tons/yr	2.37E+02	9.56E-03	1.91E-03

Total PAH HAPs***
1.68E-04
2.43E-04
2.43E-04

Summed Potential Emissions in tons/yr
CO2e Total in tons/yr

Appendix A: Emissions Calculations
Source Wide Emissions Summary

Company Name: Fritz Enterprises, Incorporated Contractor of Cleveland-Cliffs Steel LLC
Address City IN Zip: 3210 Watling Street, East Chicago, Indiana 46312
Operating Permit No.: T089-43176-00465
Significant Source Modification No.: 089-47391-00465
Significant Permit Modification No.: 089-47405-00465
Reviewer: Daria Antipova

Unrestricted Potential to Emit (tons/year)									
Emission Unit	**PM**	**PM10**	**PM2.5**	**SO2**	**NOx**	**VOC**	**CO**	**Single HAP**	**Total HAPs**
Boat/Barge Slag Loading	116.01	52.74	14.19	-	-	-	-	-	-
Boat/Barge Iron Chips Loading	175.14	74.43	35.87	-	-	-	-	-	-
Iron Pigging Machine	224.69	224.69	224.69	-	-	-	-	-	-
Diesel Engine 3512	3.12	1.79	1.74	7.22	107.12	3.15	24.55	2.5E-03	0.05
Iron&Steel Crushing	250.71	26.76	26.76	-	-	-	-	-	-
Iron&Steel Sizing	20.04	7.19	7.19	-	-	-	-	-	-
Iron&Steel Storage Piles	0.31	0.11	0.02	-	-	-	-	-	-
Coke Screening Operation	156.01	39.41	39.41	-	-	-	-	-	-
Coke Screening Engine	1.29	1.29	1.29	1.20	18.19	1.48	3.92	4.8E-03	0.02
Coke Screening Storage Piles	4.36	1.53	0.23	-	-	-	-	-	-
Trommel Mobile Slag Screening	27.16	9.55	9.55	-	-	-	-	-	-
Trommel Diesel Engines	2.36	2.36	2.36	2.20	33.27	2.70	7.17	8.86E-03	0.03
Chieftain Mobile Slag Screening	36.79	12.88	5.52	-	-	-	-	-	-
Chieftain Diesel Engines	3.55	3.55	3.55	3.30	49.97	4.05	10.77	0.01	0.04
Iron&Slag Reclaim	62.24	22.27	14.68	-	-	-	-	-	-
Iron&Slag Reclaim Diesel Engines	2.92	2.92	2.92	2.72	41.14	3.34	8.87	0.01	0.04
Iron&Slag Reclaim Storage Piles	1.94	0.68	0.10	-	-	-	-	-	-
Mobile Slag Crushing	11.98	4.84	4.84	-	-	-	-	-	-
Mobile Slag Crushing Engines	5.16	5.16	5.16	4.80	72.64	5.89	15.65	0.02	0.06
Slag Processing System	50.98	19.21	0.02	-	-	-	-	-	-
Slag Processing Storage Piles	13.01	6.17	1.96	-	-	-	-	-	-
Slag Processing Diesel Engine	3.71	3.71	3.71	3.47	52.73	4.30	11.36	0.01	0.05
Steel Mill Slag Processing	142.33	53.17	53.17	-	-	-	-	-	-
Diesel Storage Tanks	-	-	-	-	-	1.00	-	-	-
Unpaved Roads	57.31	15.27	1.53	-	-	-	-	-	-
Total Emissions (Fritz Enterprises, Inc.)	**1,373.12**	**591.66**	**460.46**	**24.92**	**375.06**	**25.90**	**82.28**	**0.07**	**0.28**

(Formaldehyde)

Limited Emissions (tons/year)									
Emission Unit	**PM**	**PM10**	**PM2.5**	**SO2**	**NOx**	**VOC**	**CO**	**Single HAP**	**Total HAPs**
Boat/Barge Slag Loading	11.82	5.35	1.50	-	-	-	-	-	-
Boat/Barge Iron Chips Loading	13.07	5.54	2.71	-	-	-	-	-	-
Iron Pigging Machine	113.88	113.88	113.88	17.52	-	-	-	-	-
Diesel Engine 3512	0.80	0.46	0.44	1.85	24.99	0.81	6.28	6.31E-04	0.01
Iron&Steel Crushing	250.71	26.76	26.76	-	-	-	-	-	-
Iron&Steel Sizing	20.04	7.19	7.19	-	-	-	-	-	-
Iron&Steel Storage Piles	0.31	0.11	0.02	-	-	-	-	-	-
Coke Screening Operation	2.60	1.24	1.24	-	-	-	-	-	-
Coke Screening Engine	1.29	1.29	1.29	1.20	18.19	1.48	3.92	0.00	0.02
Coke Screening Storage Piles	4.36	1.53	0.23	-	-	-	-	-	-
Trommel Mobile Slag Screening	27.16	9.55	9.55	-	-	-	-	-	-
Trommel Diesel Engines	1.77	1.77	1.77	1.65	24.98	2.03	5.38	0.01	0.02
Chieftain Mobile Slag Screening	3.36	1.18	0.50	-	-	-	-	-	-
Chieftain Diesel Engines	1.62	1.62	1.62	1.51	22.82	1.85	4.92	-	0.02
Iron&Slag Reclaim	3.60	1.27	0.70	-	-	-	-	-	-
Iron&Slag Reclaim Diesel Engines	0.69	0.69	0.69	0.65	9.77	0.79	2.11	-	0.01
Iron&Slag Reclaim Storage Piles	1.94	0.68	0.10	-	-	-	-	-	-
Mobile Slag Crushing	11.98	4.84	4.84	-	-	-	-	-	-
Mobile Slag Crushing Engines	2.76	2.76	2.76	2.58	38.95	3.16	8.39	-	0.03
Slag Processing System	12.11	4.56	5.0E-03	-	-	-	-	-	-
Slag Processing Storage Piles	6.52	3.10	1.00	-	-	-	-	-	-
Slag Processing Diesel Engine	2.81	2.81	2.81	2.62	39.91	3.26	8.60	-	0.04
Steel Mill Slag Processing	16.18	6.31	6.31	-	-	-	-	-	-
Diesel Storage Tanks	-	-	-	-	-	1.00	-	-	-
Unpaved Roads	28.65	7.64	0.76	-	-	-	-	-	-
Total Limited Emissions (Fritz Enterprises, Inc.)	**540.03**	**212.12**	**188.68**	**29.58**	**179.61**	**14.37**	**39.60**	**0.01**	**0.15**

TSD Appendix A: Emission Calculations
New Boat/Barge Loading Operation
Part 70 Modification Permit Level and PSD Minor Limits

Company Name: Fritz Enterprises, Incorporated Contractor of Cleveland-Cliffs Steel LLC
Address City IN Zip: 3210 Watling Street, East Chicago, Indiana 46312
Operating Permit No.: T089-43176-00465
Significant Source Modification No.: 089-47391-00465
Significant Permit Modification No.: 089-47405-00465
Reviewer: Daria Antipova

1. Part 70 Permit Level: SSM 1,500 ton/hr 13,140,000 ton/yr

A. Boat/Barge loading operation for Slag PTE

	Uncontrolled Potential to Emit (PTE)							
Pollutants	**PM**	**PM10**	**PM2.5**	**SO2**	**NOx**	**VOC**	**CO**	**HAPs**
Conveying	19.71	7.23	7.23	-	-	-	-	-
Bulk Stock Pile - wind erosion	0.24	0.09	0.09	-	-	-	-	-
Feed hopper loading drop point	48.03	22.72	3.44	-	-	-	-	-
Loadout drop point	48.03	22.72	3.44	-	-	-	-	-
Totals	**116.01**	**52.74**	**14.19**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

B. Boat/Barge loading operation for Iron Chips PTE

	Uncontrolled Potential to Emit (PTE)							
Pollutants	**PM**	**PM10**	**PM2.5**	**SO2**	**NOx**	**VOC**	**CO**	**HAPs**
Conveying	78.84	28.91	28.91	-	-	-	-	-
Bulk Stock Pile - wind erosion	0.24	0.09	0.09	-	-	-	-	-
Feed hopper loading drop point	48.03	22.72	3.44	-	-	-	-	-
Loadout drop point	48.03	22.72	3.44	-	-	-	-	-
Totals	**175.14**	**74.43**	**35.87**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Modification Uncontrolled PTE:	**291.15**	**127.17**	**50.06**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2. PSD Minor Limits:

A. Boat/Barge loading operation for Slag PTE: Throughput = 1,314,000 tons/yr

	Limited Potential to Emit (PTE)							
Pollutants	**PM**	**PM10**	**PM2.5**	**SO2**	**NOx**	**VOC**	**CO**	**HAPs**
Conveying	1.97	0.72	0.72	-	-	-	-	-
Bulk Stock Pile - wind erosion	0.24	0.09	0.09	-	-	-	-	-
Feed hopper loading drop point	4.80	2.27	0.34	-	-	-	-	-
Loadout drop point	4.80	2.27	0.34	-	-	-	-	-
Totals	**11.82**	**5.35**	**1.50**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

B. Boat/Barge loading operation for Iron Chips PTE: Throughput = 963,600 tons/yr

	Limited Potential to Emit (PTE)							
Pollutants	**PM**	**PM10**	**PM2.5**	**SO2**	**NOx**	**VOC**	**CO**	**HAPs**
Conveying	5.78	2.12	2.12	-	-	-	-	-
Bulk Stock Pile - wind erosion	0.24	0.09	0.09	-	-	-	-	-
Feed hopper loading drop point	3.52	1.67	0.25	-	-	-	-	-
Loadout drop point	3.52	1.67	0.25	-	-	-	-	-
Totals	**13.07**	**5.54**	**2.71**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Modification Total:	**24.89**	**10.89**	**4.21**
Significant Levels:	<25	<15	<10

TSD Appendix A: Emission Calculations
Boat/Barge Loading of Bulk Products: Conveyor Transfer Point
Particulate Emissions

Company Name: Fritz Enterprises, Incorporated Contractor of Cleveland-Cliffs Steel
Address City IN Zip: 3210 Watling Street, East Chicago, Indiana 46312
Operating Permit No.: T089-43176-00465
Significant Source Modification No.: 089-47391-00465
Significant Permit Modification No.: 089-47405-00465
Reviewer: Daria Antipova

1. Barge/Boat Loading for Slag PTE

Emission Units	Capacity Throughput (tph)	Number of Transfer Points	Emission Factors*			Uncontrolled PTE		
			PM (lb/ton)	PM_{10} (lb/ton)	$PM_{2.5}$ (lb/ton)	PM (tpy)	PM_{10} (tpy)	$PM_{2.5}$ (tpy)
Stacker/conveyor	1,500	1	0.003	0.0011	0.0011	19.71	7.23	7.23
					Total (tpy):	**19.71**	**7.23**	**7.23**

2. Barge/Boat Loading for Iron Chips PTE

Emission Units	Capacity Throughput (tph)	Number of Transfer Points	Emission Factors*			Uncontrolled PTE		
			PM (lb/ton)	PM_{10} (lb/ton)	$PM_{2.5}$ (lb/ton)	PM (tpy)	PM_{10} (tpy)	$PM_{2.5}$ (tpy)
four (4) conveyors	1,500	4	0.003	0.0011	0.0011	78.84	28.91	28.91
					Total (tpy):	**78.84**	**28.91**	**28.91**

3. Barge/Boat Loading for Slag: PSD Minor Limit

Emission Units	Capacity Throughput (tph)	Number of Transfer Points	Emission Factors*			Uncontrolled PTE		
			PM (lb/ton)	PM_{10} (lb/ton)	$PM_{2.5}$ (lb/ton)	PM (tpy)	PM_{10} (tpy)	$PM_{2.5}$ (tpy)
Stacker/conveyor	150	1	0.003	0.0011	0.0011	1.97	0.72	0.72
					Total (tpy):	**1.97**	**0.72**	**0.72**

4. Barge/Boat Loading for Iron Chips: PSD Minor Limit

Emission Units	Capacity Throughput (tph)	Number of Transfer Points	Emission Factors*			Uncontrolled PTE		
			PM (lb/ton)	PM_{10} (lb/ton)	$PM_{2.5}$ (lb/ton)	PM (tpy)	PM_{10} (tpy)	$PM_{2.5}$ (tpy)
four (4) conveyors	110	4	0.003	0.0011	0.0011	5.78	2.12	2.12
					Total (tpy):	**5.78**	**2.12**	**2.12**

Notes:

* The uncontrolled emission factors for the conveyor transfer points are from AP-42, Chapter 11.19, Table 11.19.2-2 - crushed stone processing operations (AP-42 01/95).

Methodology

Uncontrolled Potential to Emit (tons/yr) = [Maximum Material Handling Throughput (tons/hour)] * [Emission Factor (lb/ton)] * [Number of Transfer Points] * [8760 hours/year] * [ton/2000 lbs]

TSD Appendix A: Emission Calculations
Feed Hopper and Barge Loading of Bulk Products: Drop Points
Particulate Emissions

Company Name: Fritz Enterprises, Incorporated Contractor of Cleveland-Cliffs Steel LLC
Address City IN Zip: 3210 Watling Street, East Chicago, Indiana 46312
Operating Permit No.: T089-43176-00465
Significant Source Modification No.: 089-47391-00465
Significant Permit Modification No.: 089-47405-00465
Reviewer: Daria Antipova

Drop Operations (AP-42 Section 13.2.4)

To estimate potential fugitive dust emissions from loading/unloading of bulk products (batch or continuous drop operations), AP-42 emission factors for Aggregate Handling, Section 13.2.4 (fifth edition, 11/2006) are utilized.

Ef = k*(0.0032)*[(U/5)^1.3 / (M/2)^1.4]

where: Ef = Emission factor (lb/ton)

k (PM) =	0.74	= particle size multiplier (0.74 assumed for aerodynamic diameter <=100 um)
k (PM10) =	0.35	= particle size multiplier (0.35 assumed for aerodynamic diameter <=10 um)
k(PM2.5) =	0.053	= particle size multiplier (0.35 assumed for aerodynamic diameter <=2.5 um)
U =	11.9	= worst case average wind speed (Source: NOAA, 2009*)
M =	2.0	=% moisture content of slag (Source specific moisture content)

Emission factor (Ef) (lb/ton)		
PM	PM_{10}	$PM_{2.5}$
7.31E-03	3.46E-03	5.24E-04

1. Uncontrolled PTE Barge Loading and Feed hopper

Type of Activity	Type of Emissions	Maximum Material Handling Throughput (tons/hour)	Number of Drop Points	Uncontrolled PTE of PM (tons/yr)	Uncontrolled PTE of PM_{10} (tons/yr)	Uncontrolled PTE of $PM_{2.5}$ (tons/yr)
Loading bulk products from stockpile to feeder hopper (front end loader)	Fugitive	1500	1	48.03	22.72	3.44
Unloading bulk products from conveyor to barge	Fugitive	1500	1	48.03	22.72	3.44
			Total Fugitive Emissions (tons/yr)	96.06	45.43	6.88

2. PTE Barge Loading and Feed hopper for Slag: PSD Minor Limit

Type of Activity	Type of Emissions	Maximum Material Handling Throughput (tons/hour)	Number of Drop Points	Uncontrolled PTE of PM (tons/yr)	Uncontrolled PTE of PM_{10} (tons/yr)	Uncontrolled PTE of $PM_{2.5}$ (tons/yr)
Loading bulk products from stockpile to feed hopper (front end loader)	Fugitive	150	1	4.80	2.27	0.34
Unloading bulk products from conveyor to boat/barge	Fugitive	150	1	4.80	2.27	0.34
			Total Fugitive Emissions (tons/yr)	9.61	4.54	0.69

3. PTE Barge Loading and Feed hopper for Iron Chips: PSD Minor Limit

Type of Activity	Type of Emissions	Maximum Material Handling Throughput (tons/hour)	Number of Drop Points	Uncontrolled PTE of PM (tons/yr)	Uncontrolled PTE of PM_{10} (tons/yr)	Uncontrolled PTE of $PM_{2.5}$ (tons/yr)
Loading bulk products from stockpile to feed hopper (front end loader)	Fugitive	110	1	3.52	1.67	0.25
Unloading bulk products from conveyor to boat/barge	Fugitive	110	1	3.52	1.67	0.25
			Total Fugitive Emissions (tons/yr)	7.04	3.33	0.50

Methodology

Uncontrolled Potential to Emit (tons/yr) = [Maximum Material Handling Throughput (tons/hour)] * [Emission Factor (lb/ton)] * [Number of Drop Points] * [8760 hours/year] * [ton/2000 lbs]
*Worst case average wind speed (South Bend, IN) from "Comparative Climatic Data", National Climatic Data Center, NOAA, 2009

Abbreviations

PM = Particulate Matter
PM10 = Particulate Matter (<10 um)
PTE = Potential to Emit

TSD Appendix A: Emission Calculations
Fugitive Dust Emissions from Open Storage Pile Wind Erosion

Company Name: **Fritz Enterprises, Incorporated Contractor of Cleveland-Cliffs Steel LLC**
Address City IN Zip: **3210 Watling Street, East Chicago, Indiana 46312**
Operating Permit No.: **T089-43176-00465**
Significant Source Modification No.: **089-47391-00465**
Significant Permit Modification No.: **089-47405-00465**
Reviewer: **Daria Antipova**

Material Storage Piles (AP-42 Section 11.2.3)

The following calculations determine the amount of emissions created by wind erosion of storage stockpiles, based on 8,760 hours of use and USEPA's AP-42 (Pre 1983 Edition), Section 11.2.3.

Ef = 1.7*(s/1.5)*(365-p)/235*(f/15)
where Ef = emission factor (lb/acre/day)
s = silt content (wt %)
p = 125 days of rain greater than or equal to 0.01 inches
f = 15 % of wind greater than or equal to 12 mph

Storage Pile	Materials	Worst Case Silt Content (wt %)*	Emission Factor (lb/acre/day)	Maximum Anticipated Pile Size (acres)**	Unlimited PTE of PM (Before Control) (tons/yr)	Unlimited PTE of PM10/PM2.5 (Before Control) (tons/yr)
Storage Pile	Iron Chips	4.6	5.32	0.25	0.243	0.085
Storage Pile	Slag	4.6	5.32	0.25	0.243	0.085
			Totals PTE (Before Control) =		**0.49**	**0.17**
				Dust Control Efficiency =	50.0%	50.0%
			Totals PTE (After Control) =		**0.24**	**0.09**

Methodology

*The silt content (wght %) is the average value for coal, AP-42, Chapter 13.2.4 Aggregate Handling And Storage Piles, Table 13.2.4-1.
**Maximum pile size (acres) provided by the source
Unlimited PTE of PM (tons/yr) = (Emission Factor (lb/acre/day)) * (Maximum Pile Size (acres)) * (ton/2000 lbs) * (8760 hours/yr)
Unlimited PTE of PM10/PM2.5 (tons/yr) = (Potential PM Emissions (tons/yr)) * 35%

Appendix A: Emission Calculations
Potential Particulate Emissions from Iron Pigging Machine

Company Name: Fritz Enterprises, Incorporated Contractor of Cleveland-Cliffs Steel LLC
Address City IN Zip: 3210 Watling Street, East Chicago, Indiana 46312
Operating Permit No.: T089-43176-00465
Significant Source Modification No.: 089-47391-00465
Significant Permit Modification No.: 089-47405-00465
Reviewer: Daria Antipova

Equipment Description/Unit ID	Unit Capacity (tons/hr)	Throughput Capacity (tons/yr)	AP42 Emission Factors (lb/ton)[1]			Uncontrolled Emissions (ton/yr)			Uncontrolled Emissions (lb/hr)			Limited Emissions (ton/yr)	
			PM	PM_{10}	$PM_{2.5}$	PM	PM_{10}	$PM_{2.5}$	PM	PM_{10}	$PM_{2.5}$	PM/PM10/PM2.5	SO2
SPM-01	270	2,365,200	0.19	0.1900	0.1900	224.69	224.69	224.69	51.30	51.30	51.30	113.88	17.52
					Total	**224.69**	**224.69**	**224.69**				**113.88**	**17.52**

The uncontrolled emission factors were obtained from AP42, Ch 12, Table 12.5-1, for hot metal transfer at source.

Methodology

Uncontrolled Emissions (tpy) = Throughput (tons/yr) * Uncontrolled Emission Factor (lb/ton) / 2000 (lb/ton)
Limited Emissions (tpy) = Limited Emissions (lb/hr) * 8760 hours / 2000 (lbs/ton)

Appendix A: Emission Calculations
Large Reciprocating Internal Combustion Engines - Diesel Fuel
Output Rating (>600 HP)
Maximum Input Rate (>4.2 MMBtu/hr)

Company Name: **Fritz Enterprises, Incorporated Contractor of Cleveland-Cliffs Steel LLC**
Address City IN Zip: **3210 Watling Street, East Chicago, Indiana 46312**
Operating Permit No.: **T089-43176-00465**
Significant Source Modification No.: **089-47391-00465**
Significant Permit Modification No.: **089-47405-00465**
Reviewer: **Daria Antipova**

Emissions calculated based on output rating (hp)

Output Horsepower Rating (hp)	1019.0
Maximum Hours Operated per Year	8760
Potential Throughput (hp-hr/yr)	8,926,440
Sulfur Content (S) of Fuel (% by weight)	0.200
Limited Hours Operated per Year	2242
Limited Potential Throughput (hp-hr/yr)	2,284,598

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/hp-hr	7.00E-04	4.01E-04	3.89E-04	1.62E-03 *(.00809S)*	2.40E-02 **see below	7.05E-04	5.50E-03
Potential Emission in tons/yr	3.12	1.79	1.74	7.22	107.12	3.15	24.55
Limited Emission in tons/yr	0.80	0.46	0.44	1.85	24.99	0.81	6.28

*PM emission factor is from AP-42 Table 3.4-1. The PM10 and PM2.5 emission factors for are from AP-42 Table 3.4-2. The PM10 emission factor is the sum of filterable PM10 and condensable particulate. The PM2.5 emission factor is the sum of filterable particulate less than 3 um and condensable particulate. Emission factors in lb/hp-hr were calculated using the emission factor in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Tables 3.3-1 and 3.4-1).
**NOx emission factor: uncontrolled = 0.024 lb/hp-hr, controlled by ignition timing retard = 0.013 lb/hp-hr
**Limited NOx emission factor: 0.02188 lb/hp-hr = 22.3 lb/hr limitation/1019 HP

Hazardous Air Pollutants (HAPs)

	Pollutant						
	Benzene	Toluene	Xylene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH HAPs***
Emission Factor in lb/hp-hr****	5.43E-06	1.97E-06	1.35E-06	5.52E-07	1.76E-07	5.52E-08	1.48E-06
Potential Emission in tons/yr	2.42E-02	8.78E-03	6.03E-03	2.47E-03	7.87E-04	2.46E-04	6.62E-03
Limited Emissions in tons/yr	6.20E-03	2.25E-03	1.54E-03	6.31E-04	2.02E-04	6.30E-05	1.70E-03

***PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)
****Emission factors in lb/hp-hr were calculated using emission factors in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Tables 3.3-1 and 3.4-1).

Potential Emission of Total HAPs (tons/yr)	**0.05**
Limited Emissions of Total HAPs (tons/yr)	**0.01**

Methodology
Emission Factors are from AP 42 (Supplement B 10/96) Tables 3.4-1 , 3.4-2, 3.4-3, and 3.4-4.
Potential Throughput (hp-hr/yr) = [Output Horsepower Rating (hp)] * [Maximum Hours Operated per Year]
Potential Emission (tons/yr) = [Potential Throughput (hp-hr/yr)] * [Emission Factor (lb/hp-hr)] / [2,000 lb/ton]

Greenhouse Gas Emissions (GHG)

	Pollutant		
	CO2	CH4	N2O
Emission Factor in lb/hp-hr	1.16E+00	6.35E-05	9.30E-06
Potential Emission in tons/yr	5.18E+03	2.83E-01	4.15E-02

Summed Potential Emissions in tons/yr	**5.18E+03**
CO2e Total in tons/yr	**5.20E+03**

Methodology
CO2 Emission Factor is from AP 42 (Supplement B 10/96) Table 3.4-1.
CH4 and N2O Emission Factors are from 40 CFR 98 Subpart C Table C-2.
Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Potential Emission (tons/yr) = [Potential Throughput (MMBtu/yr)] * [Emission Factor (lb/MMBtu)] / [2,000 lb/ton]
CO2e (tons/yr) based on 11/29/2013 federal GWPs= CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (25) + N2O Potential Emission ton/yr x N2O GWP (298).

Appendix A: Emission Calculations
Potential PM/PM_{10} Emissions
from the Steel and Iron Crushing and Classifying Process

Company Name: Fritz Enterprises, Incorporated Contractor of Cleveland-Cliffs Steel LLC
Address City IN Zip: 3210 Watling Street, East Chicago, Indiana 46312
Operating Permit No.: T089-43176-00465
Significant Source Modification No.: 089-47391-00465
Significant Permit Modification No.: 089-47405-00465
Reviewer: Daria Antipova

Maximum Throughput Rate:

112.5	(tons/hr)

Crushing Operations PM Emissions

Process	Number of units	Uncontrolled PM Emission Factor (lbs/ton)	PTE of PM before Control (lbs/hr/unit)	PTE of PM before Control (tons/yr)	Controlled* PM Emission Factor (lbs/ton)	PTE of PM after Control (lbs/hr/unit)	PTE of PM after Control (tons/yr)
** Hammer Mill/Drop Ball Crane	1	0.50	56.25	246.4	0.02	2.25	9.86
***End Loaders	1	8.8E-03	0.99	4.3	8.8E-03	0.99	4.34
Total				**250.7**			**14.19**

Crushing Operations PM10 Emissions

Process	Number of units	Uncontrolled PM10 Emission Factor (lbs/ton)	PTE of PM10 before Control (lbs/hr/unit)	PTE of PM10 before Control (tons/yr)	Controlled* PM10 Emission Factor (lbs/ton)	PTE of PM10 after Control (lbs/hr/unit)	PTE of PM10 after Control (tons/yr)
** Hammer Mill/Drop Ball Crane	1	0.05	5.63	24.6	9.0E-03	1.01	4.43
***End Loaders	1	4.3E-03	0.48	2.1	4.3E-03	0.48	2.12
Total				**26.8**			**6.55**

* Emission factors for material with >4% moisture.

** Iron and steel is processed by either the hammer mill or the drop ball cranes. The emission factors are from AP-42 (8/82), table 11.24-2 from Emission Factors for Metallic Minerals Processing.

*** End loaders emission factors are from AP-42, table 12.5-4 from Uncontrolled Particulate Emission Factors for Open Dust at Iron and Steel Mills, and include handling for storage piles (SSP1-SSP3). There are three end loaders with a combined maximum throughput rate of 112.5 tons per hour.

Methodology

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

PTE before Control (tons/yr) = PTE before Control (lbs/hr/unit) x Number of Units x 8760 hr/yr x 1 ton/2000 lbs

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

PTE after Control (tons/yr) = PTE after Control (lbs/hr/unit) x Number of Units x 8760 hr/yr x 1 ton/2000 lbs

Assume PM10 = PM2.5

Appendix A: Emission Calculations
Potential PM/PM_{10} Emissions
from the Steel and Iron Sizing and Classifying Process

Company Name: Fritz Enterprises, Incorporated Contractor of Cleveland-Cliffs Steel LLC
Address City IN Zip: 3210 Watling Street, East Chicago, Indiana 46312
Operating Permit No.: T089-43176-00465
Significant Source Modification No.: 089-47391-00465
Significant Permit Modification No.: 089-47405-00465
Reviewer: Daria Antipova

Maximum Wash Screen Throughput Rate:

75.0 (tons/hr)

Maximum Conveyor Throughput Rate:

112.5 (tons/hr)

Sizing Operations PM Emissions

Process	Number of Units	Uncontrolled PM Emission Factor (lbs/ton)	PTE of PM before Control (lbs/hr/unit)	PTE of PM before Control (tons/yr)	Controlled PM Emission Factor (lbs/ton)	PTE of PM after Control (lbs/hr/unit)	PTE of PM after Control (tons/yr)
* Wash Screen	1	0.025	1.9	8.2	2.20E-03	0.17	0.72
*Conveyor Transfer Points	8	3.00E-03	0.3	11.8	1.40E-04	0.02	0.55
Total				**20.0**			**1.27**

Sizing Operations PM10 Emissions

Process	Number of Units	Uncontrolled PM10 Emission Factor (lbs/ton)	PTE of PM10 before Control (lbs/hr/unit)	PTE of PM10 before Control (tons/yr)	Controlled PM10 Emission Factor (lbs/ton)	PTE of PM10 after Control (lbs/hr/unit)	PTE of PM10 after Control (tons/yr)
* Wash Screen	1	8.70E-03	0.65	2.858	7.40E-04	0.06	0.24
*Conveyor Transfer Points	8	1.10E-03	0.12	4.336	4.60E-05	0.01	0.18
Total				**7.2**			**0.42**

* The uncontrolled and controlled emission factors for the conveyor transfer point and screen are from AP-42, Chapter 11.19, Table 11.19.2-2 - crushed stone processing operations (AP-42 01/95). The controlled emission factors reflect water suppression at 90-95% control.

Methodology

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

PTE before Control (tons/yr) = PTE before Control (lbs/hr/unit) x Number of Units x 8760 hr/yr x 1 ton/2000 lbs

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

PTE after Control (tons/yr) = PTE after Control (lbs/hr/unit) x Number of Units x 8760 hr/yr x 1 ton/2000 lbs

Assume PM10 = PM2.5

Appendix A: Emissions Calculations
Fugitive Particulate Emissions from
Wind Erosion of Material Storage Piles

Company Name: Fritz Enterprises, Incorporated Contractor of Cleveland-Cliffs Steel LLC
Address City IN Zip: 3210 Watling Street, East Chicago, Indiana 46312
Operating Permit No.: T089-43176-00465
Significant Source Modification No.: 089-47391-00465
Significant Permit Modification No.: 089-47405-00465
Reviewer: Daria Antipova

The following calculations determine the amount of fugitive particulate emissions created by wind erosion of material storage piles, based on 8,760 hours of use and USEPA's AP 42 (Pre 1983 Edition), Section 11.2.3 emission factor methodology.

EF = 1.7 * (s/1.5) * ((365-p)/235) * (f/15)
where EF = Uncontrolled emission factor (lb/acre/day) for total suspended particulates (TSP)
s = silt content of material (% by weight)
p = 125 = number of days with greater than or equal to 0.01 inches of precipitation per year
f = 15 = % of time that the unobstructed wind speed exceeds 12 mph at the mean pile height

Material	Silt Content of Material (wt %)*	Uncontrolled PM Emission Factor (lb/acre/day)**	Maximum Anticipated Pile Size (acres)	Uncontrolled PTE of PM (tons/yr)	Uncontrolled PTE of PM10 (tons/yr)***	Uncontrolled PTE of PM2.5 (tons/yr)***
Limestone	1.6	1.85	0.92	0.310	0.109	0.016
			Totals	**0.31**	**0.11**	**0.02**

Methodology
*Silt content values obtained from AP 42 Section 13.2.4 (dated 11/2006) Table 13.2.4-1 (dated 11/2006)
**PM emissions assumed equal to total suspended particulate (TSP) emissions.
***Based on the aerodynamic particle size multiplier values for PM10 and PM2.5 from AP 42 Section 13.2.4 (dated 11/2006) for Aggregate Handling and Storage Piles, PM10 and PM2.5 emissions were calculated as follows:
PM10 emissions = 0.35 * PM emissions
PM2.5 emissions = 0.053 * PM emissions
Uncontrolled PTE of PM (tons/yr) = [Emission Factor (lb/acre/day)] * [Maximum Pile Size (acres)] * (ton/2000 lbs) * (365 days/yr)
Uncontrolled PTE of PM10 (tons/yr) = [Uncontrolled PTE of PM (tons/yr)] * 0.35
Uncontrolled PTE of PM2.5 (tons/yr) = [Uncontrolled PTE of PM (tons/yr)] * 0.053

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

Appendix A: Emission Calculations
Potential PM Emissions
from the Coke Screening Plant

Company Name: **Fritz Enterprises, Incorporated Contractor of Cleveland-Cliffs Steel LLC**
Address City IN Zip: **3210 Watling Street, East Chicago, Indiana 46312**
Operating Permit No.: **T089-43176-00465**
Significant Source Modification No.: **089-47391-00465**
Significant Permit Modification No.: **089-47405-00465**
Reviewer: **Daria Antipova**

Maximum Throughput Rate:
110 (tons/hr)

Coke Screening PM Emissions

Process	Number of Units	Uncontrolled PM Emission Factor (lbs/ton)	PTE of PM before Control (lbs/hr/unit)	PTE of PM before Control (tons/yr)	Controlled PM Emission Factor (lbs/ton)	PTE of PM after Control (lbs/hr/unit)	PTE of PM after Control (tons/yr)
*Hopper CH-1	1	8.80E-03	0.968	4.24	8.80E-04	0.097	0.42
** Double-Deck Screen CS-1	1	0.30	33.000	144.5	3.60E-03	0.396	1.73
**Conveyor Transfer Points CC-1 to CC-5	5	3.00E-03	0.330	7.23	1.40E-04	0.015	0.34
Total				**156.0**			**2.50**

Coke Screening PM10 Emissions

Process	Number of Units	Uncontrolled PM10 Emission Factor (lbs/ton)	PTE of PM10 before Control (lbs/hr/unit)	PTE of PM10 before Control (tons/yr)	Controlled PM10 Emission Factor (lbs/ton)	PTE of PM10 after Control (lbs/hr/unit)	PTE of PM10 after Control (tons/yr)
*Hopper CH-1	1	4.30E-03	0.473	2.07	4.30E-04	0.047	0.207
** Double-Deck Screen CS-1	1	0.07	7.920	34.7	2.20E-03	0.242	1.06
**Conveyor Transfer Points CC-1 to CC-5	5	1.10E-03	0.121	2.65	4.60E-05	0.0051	0.111
Total				**39.4**			**1.38**

* The uncontrolled emission factor for the hopper is the one for low silt batch drop from iron and steel mill in AP-42, Table 12.5-4 (10/86). The controlled emission factor is calculated at 90% control by wet suppression, based on Significant Permit Modification 089-17404-00465, issued on January 13, 2004.

** The uncontrolled and controlled emission factors for the conveyor transfer point and screen are from AP-42, Chapter 11.19, Table 11.19.2-2 - crushed stone processing operations (AP-42 08/2004). The controlled emission factors reflect water suppression at 95% control..

Methodology

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

PTE before Control (tons/yr) = PTE before Control (lbs/hr/unit) x Number of Units x 8760 hr/yr x 1 ton/2000 lbs

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

PTE after Control (tons/yr) = PTE after Control (lbs/hr/unit) x Number of Units x 8760 hr/yr x 1 ton/2000 lbs

Assume PM10 = PM2.5

D.4 Limitation to limit PM to <25 tpy & PM10 emissions to <15 tpy pursuant to 326- IAC 2-2 PSD and 326-IAC 2-3 Emission Offset

Process	PM Emission Limit (lb/hr)	PTE of PM after Limits PSD 2-2, EO 2-3 (tons/yr)	PM10 Emission Limit (lb/hr)	PTE of PM10 after Limits PSD 2-2, EO 2-3
*Hopper CH-1	0.097	0.42	0.047	0.21
** Double-Deck Screen CS-1	0.485	2.12	0.231	1.01
**Conveyor Transfer Points CC-1 to CC-5	0.011	0.05	0.005	0.02
Total		**2.60**		**1.24**

Appendix A: Emission Calculations
Reciprocating Internal Combustion Engines - Diesel Fuel
Output Rating (<=600 HP)
Maximum Input Rate (<=4.2 MMBtu/hr)

Company Name: Fritz Enterprises, Incorporated Contractor of Cleveland-Cliffs Steel LLC
Address City IN Zip: 3210 Watling Street, East Chicago, Indiana 46312
Operating Permit No.: T089-43176-00465
Significant Source Modification No.: 089-47391-00465
Significant Permit Modification No.: 089-47405-00465
Reviewer: Daria Antipova

Emissions calculated based on output rating (hp)

Output Horsepower Rating (hp)	134.0
Maximum Hours Operated per Year	8760
Potential Throughput (hp-hr/yr)	1,173,840

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/hp-hr	0.0022	0.0022	0.0022	0.00205	0.0310	0.0025	0.00668
Potential Emission in tons/yr	1.29	1.29	1.29	1.20	18.19	1.48	3.92

*PM and PM2.5 emission factors are assumed to be equivalent to PM10 emission factors. No information was given regarding which method was used to determine the factor or the fraction of PM10 which is condensable.

Hazardous Air Pollutants (HAPs)

	Pollutant							
	Benzene	Toluene	Xylene	1,3-Butadiene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH HAPs***
Emission Factor in lb/hp-hr****	6.53E-06	2.86E-06	2.00E-06	2.74E-07	8.26E-06	5.37E-06	6.48E-07	1.18E-06
Potential Emission in tons/yr	3.83E-03	1.68E-03	1.17E-03	1.61E-04	4.85E-03	3.15E-03	3.80E-04	6.90E-04

***PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)

****Emission factors in lb/hp-hr were calculated using emission factors in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Table 3.3-1).

Potential Emission of Total HAPs (tons/yr)	**0.02**

Methodology

Emission Factors are from AP 42 (Supplement B 10/96) Tables 3.3-1 and 3.3-2.

Potential Throughput (hp-hr/yr) = [Output Horsepower Rating (hp)] * [Maximum Hours Operated per Year]

Potential Emission (tons/yr) = [Potential Throughput (hp-hr/yr)] * [Emission Factor (lb/hp-hr)] / [2,000 lb/ton]

Green House Gas Emissions (GHG)

	Pollutant		
	CO2	CH4	N2O
Emission Factor in lb/hp-hr	1.15E+00	4.63E-05	9.26E-06
Potential Emission in tons/yr	6.75E+02	2.72E-02	5.43E-03

Summed Potential Emissions in tons/yr	**674.99**
CO2e Total in tons/yr	**677.26**

Methodology

CO2 Emission Factor is from AP42 (Supplement B 10/96), Tables 3.3-1.

CH4 and N2O Emission Factors are from 40 CFR 98 Subpart C Table C-2.

Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

Potential Emission (tons/yr) = [Potential Throughput (hp-hr/yr)] * [Emission Factor (lb/hp-hr)] / [2,000 lb/ton]

CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (25) + N2O Potential Emission ton/yr x N2O GWP (298).

Appendix A: Emissions Calculations
Fugitive Particulate Emissions from
Wind Erosion of Material Storage Piles

Company Name: Fritz Enterprises, Incorporated Contractor of Cleveland-Cliffs Steel LLC
Address City IN Zip: 3210 Watling Street, East Chicago, Indiana 46312
Operating Permit No.: T089-43176-00465
Significant Source Modification No.: 089-47391-00465
Significant Permit Modification No.: 089-47405-00465
Reviewer: Daria Antipova

The following calculations determine the amount of fugitive particulate emissions created by wind erosion of material storage piles, based on 8,760 hours of use and USEPA's AP 42 (Pre 1983 Edition), Section 11.2.3 emission factor methodology.

EF = 1.7 * (s/1.5) * ((365-p)/235) * (f/15)
where EF = Uncontrolled emission factor (lb/acre/day) for total suspended particulates (TSP)
s = silt content of material (% by weight)
p = 125 = number of days with greater than or equal to 0.01 inches of precipitation per year
f = 15 = % of time that the unobstructed wind speed exceeds 12 mph at the mean pile height

Material	Silt Content of Material (wt %)*	Uncontrolled PM Emission Factor (lb/acre/day)**	Maximum Anticipated Pile Size (acres)	Uncontrolled PTE of PM (tons/yr)	Uncontrolled PTE of PM10 (tons/yr)***	Uncontrolled PTE of PM2.5 (tons/yr)***
Limestone	1.6	1.85	12.91	4.363	1.527	0.231
			Totals	**4.36**	**1.53**	**0.23**

Methodology

*Silt content values obtained from AP 42 Section 13.2.4 (dated 11/2006) Table 13.2.4-1 (dated 11/2006)

**PM emissions assumed equal to total suspended particulate (TSP) emissions.

***Based on the aerodynamic particle size multiplier values for PM10 and PM2.5 from AP 42 Section 13.2.4 (dated 11/2006) for Aggregate Handling and Storage Piles, PM10 and PM2.5 emissions were calculated as follows:

PM10 emissions = 0.35 * PM emissions

PM2.5 emissions = 0.053 * PM emissions

Uncontrolled PTE of PM (tons/yr) = [Emission Factor (lb/acre/day)] * [Maximum Pile Size (acres)] * (ton/2000 lbs) * (365 days/yr)

Uncontrolled PTE of PM10 (tons/yr) = [Uncontrolled PTE of PM (tons/yr)] * 0.35

Uncontrolled PTE of PM2.5 (tons/yr) = [Uncontrolled PTE of PM (tons/yr)] * 0.053

Abbreviations

PM = Particulate Matter

PM10 = Particulate Matter (<10 um)

PM2.5 = Particulate Matter (<2.5 um)

PTE = Potential to Emit

Appendix A: Emission Calculations
Potential PM/PM_{10} Emissions
from the Mobile Slag Trommel Screening System

Company Name: **Fritz Enterprises, Incorporated Contractor of Cleveland-Cliffs Steel LLC**
Address City IN Zip: **3210 Watling Street, East Chicago, Indiana 46312**
Operating Permit No.: **T089-43176-00465**
Significant Source Modification No.: **089-47391-00465**
Significant Permit Modification No.: **089-47405-00465**
Reviewer: **Daria Antipova**

Maximum Throughput Rate:
200 (tons/hr)

Trommel Screening PM Emissions

Process	Number of Units	Uncontrolled PM Emission Factor (lbs/ton)	PTE of PM before Control (lbs/hr/unit)	PTE of PM before Control (tons/yr)	Controlled PM Emission Factor (lbs/ton)	PTE of PM after Control (lbs/hr/unit)	PTE of PM after Control (tons/yr)
** Trommel Screen SS-2	1	0.03	5.000	21.9	2.20E-03	0.440	1.93
**Conveyor Transfer Points	2	3.00E-03	0.600	5.26	1.40E-04	0.028	0.25
Total				**27.2**			**2.17**

Trommel Screening PM10 Emissions

Process	Number of Units	Uncontrolled PM10 Emission Factor (lbs/ton)	PTE of PM10 before Control (lbs/hr/unit)	PTE of PM10 before Control (tons/yr)	Controlled PM10 Emission Factor (lbs/ton)	PTE of PM10 after Control (lbs/hr/unit)	PTE of PM10 after Control (tons/yr)
** Trommel Screen SS-2	1	8.70E-03	1.740	7.6	7.40E-04	0.148	0.65
**Conveyor Transfer Points	2	1.10E-03	0.220	1.93	4.60E-05	0.009	0.08
Total				**9.5**			**0.73**

** The uncontrolled and controlled emission factors for the conveyor transfer point and screen are from AP-42, Chapter 11.19, Table 11.19.2-2 - crushed stone processing operations (AP-42 08/2004). The controlled emission factors reflect water suppression at 90-95% control..

Methodology

PTE before Control (lbs/hr/unit) = Maximum Throughput (tons/hr) x Uncontrolled Emission Factor (lbs/ton)
PTE before Control (tons/yr) = PTE before Control (lbs/hr/unit) x Number of Units x 8760 hr/yr x 1 ton/2000 lbs
PTE after Control (lbs/hr/unit) = Maximum Throughput (tons/hr) x Controlled Emission Factor (lb/ton)
PTE after Control (tons/yr) = PTE after Control (lbs/hr/unit) x Number of Units x 8760 hr/yr x 1 ton/2000 lbs
Assume PM10 = PM2.5

Appendix A: Emission Calculations
Reciprocating Internal Combustion Engines - Diesel Fuel
Output Rating (<=600 HP)
Maximum Input Rate (<=4.2 MMBtu/hr)

Company Name: Fritz Enterprises, Incorporated Contractor of Cleveland-Cliffs Steel LLC
Address City IN Zip: 3210 Watling Street, East Chicago, Indiana 46312
Operating Permit No.: T089-43176-00465
Significant Source Modification No.: 089-47391-00465
Significant Permit Modification No.: 089-47405-00465
Reviewer: Daria Antipova

Diesel Engine	HP
SD-2	200
SD-3	45
Total:	**245**

Emissions calculated based on output rating (hp)

Output Horsepower Rating (hp)	245.0
Maximum Hours Operated per Year	8760
Potential Throughput (hp-hr/yr)	2,146,200
Limited Hours of Operation per Year	6,579
Combined Pound per Hour Limitation	7.595
Limited Potential Throughput (hp-hr/yr)	1,611,855

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/hp-hr	0.0022	0.0022	0.0022	0.00205	0.0310	0.0025	0.00668
Potential Emission in tons/yr	2.36	2.36	2.36	2.20	33.27	2.70	7.17
Limited Emission in tons/yr	1.77	1.77	1.77	1.65	24.98	2.03	5.38

*PM and PM2.5 emission factors are assumed to be equivalent to PM10 emission factors. No information was given regarding which method was used to determine the factor or the fraction of PM10 which is condensable.

Hazardous Air Pollutants (HAPs)

	Pollutant							
	Benzene	Toluene	Xylene	1,3-Butadiene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH HAPs***
Emission Factor in lb/hp-hr****	6.53E-06	2.86E-06	2.00E-06	2.74E-07	8.26E-06	5.37E-06	6.48E-07	1.18E-06
Potential Emission in tons/yr	7.01E-03	3.07E-03	2.14E-03	2.94E-04	8.86E-03	5.76E-03	6.95E-04	1.26E-03
Limited Emission in tons/yr	5.26E-03	2.31E-03	1.61E-03	2.21E-04	6.66E-03	4.33E-03	5.22E-04	9.48E-04

***PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)
****Emission factors in lb/hp-hr were calculated using emission factors in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Table 3.3-1).

Potential Emission of Total HAPs (tons/yr)	**2.91E-02**
Limited Emission of Total HAPs (tons/yr)	**2.19E-02**

Methodology
Emission Factors are from AP 42 (Supplement B 10/96) Tables 3.3-1 and 3.3-2.
Potential Throughput (hp-hr/yr) = [Output Horsepower Rating (hp)] * [Maximum Hours Operated per Year]
Potential Emission (tons/yr) = [Potential Throughput (hp-hr/yr)] * [Emission Factor (lb/hp-hr)] / [2,000 lb/ton]

Green House Gas Emissions (GHG)

	Pollutant		
	CO2	CH4	N2O
Emission Factor in lb/hp-hr	1.15E+00	4.63E-05	9.26E-06
Potential Emission in tons/yr	1.23E+03	4.97E-02	9.94E-03

Summed Potential Emissions in tons/yr	**1.23E+03**
CO2e Total in tons/yr	**1.24E+03**

Methodology
CO2 Emission Factor is from AP42 (Supplement B 10/96), Tables 3.3-1.
CH4 and N2O Emission Factors are from 40 CFR 98 Subpart C Table C-2.
Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Potential Emission (tons/yr) = [Potential Throughput (hp-hr/yr)] * [Emission Factor (lb/hp-hr)] / [2,000 lb/ton]
CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (25) + N2O Potential Emission ton/yr x N2O GWP (298).

Appendix A: Emission Calculations
Potential PM/PM_{10} Emissions
from the Portable Terex (Chieftain) multi-deck Screening System

Company Name: Fritz Enterprises, Incorporated Contractor of Cleveland-Cliffs Steel LLC
Address City IN Zip: 3210 Watling Street, East Chicago, Indiana 46312
Operating Permit No.: T089-43176-00465
Significant Source Modification No.: 089-47391-00465
Significant Permit Modification No.: 089-47405-00465
Reviewer: Daria Antipova

Maximum Throughput rate	300	tons/hour
Maximum Hours operated per year	8760	hours/year
Potential Throughput (tons/year)*	2,628,000	tons/ year

Unrestricted PTE						
Emission Unit	**PM Emission Factor (lb/ton)**	**PM (tons/yr)**	**PM-10 Emission Factor (lb/ton)**	**PM-10 (tons/yr)**	**PM2.5 Emission Factor (lb/ton)**	**PM2.5 (tons/yr)**
Chieftain Screen PS-1	0.03	32.85	8.70E-03	11.43	3.75E-03	4.93
Conveyor MAG-1	3.00E-03	3.94	1.10E-03	1.45	4.50E-04	0.59
Total (tons/yr)		**36.79**		**12.88**		**5.52**

Limitation to limit PM, PM10 & PM2.5 emissions to <25 tpy PM, <15 tpy PM10 & <10 tpy PM2.5 pursuant to 326- IAC 2-2 PSD

Maximum Throughput rate	300	tons/hour
Limited Hours operated per year	4000	hours/year
Potential Limited Throughput (tons/year)**	1,200,000	tons/ year

Limited PTE						
Emission Unit	**PM Emission Limit (lb/ton)**	**PTE of PM after Limits PSD 2-2 (tons/yr)**	**PM 10 Emission Limit (lb/ton)**	**PTE of PM10 after Limits PSD 2-2 (tons/yr)**	**PM2.5 Emission Limit (lb/ton)**	**PTE of PM2.5 after Limits PSD 2-2 (tons/yr)**
Chieftain Screen PS-1	5.00E-03	3.00	1.74E-03	1.04	7.50E-04	0.45
Conveyor MAG-1	6.00E-04	0.36	2.20E-04	0.13	9.00E-05	0.05
Total (tons/yr)		**3.36**		**1.18**		**0.50**

Methodology:
Emission factors for screening and conveying based on AP-42 Table 11.19.2-2 (Crushed Stone Processing Operations)
PM/PM10/PM2.5 emission limit (lb/ton) calculated using 80% wet suppression control

Appendix A: Emission Calculations
Reciprocating Internal Combustion Engines - Diesel Fuel
Output Rating (<=600 HP)
Maximum Input Rate (<=4.2 MMBtu/hr)

Company Name: Fritz Enterprises, Incorporated Contractor of Cleveland-Cliffs Steel LLC
Address City IN Zip: 3210 Watling Street, East Chicago, Indiana 46312
Operating Permit No.: T089-43176-00465
Significant Source Modification No.: 089-47391-00465
Significant Permit Modification No.: 089-47405-00465
Reviewer: Daria Antipova

Diesel Engine	HP
D-1	168
D-2	200
Total:	**368**

Emissions calculated based on output rating (hp)

Output Horsepower Rating (hp)	368.0
Maximum Hours Operated per Year	8760
Potential Throughput (hp-hr/yr)	3,223,680
Limited Hours of Operation per Year	4,000
Combined Pound per Hour Limitation	11.4
Limited Potential Throughput (hp-hr/yr)	1,472,000

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/hp-hr	0.0022	0.0022	0.0022	0.00205	0.0310	0.0025	0.00668
Potential Emission in tons/yr	3.55	3.55	3.55	3.30	49.97	4.05	10.77
Limited Emission in tons/yr	1.62	1.62	1.62	1.51	22.82	1.85	4.92

*PM and PM2.5 emission factors are assumed to be equivalent to PM10 emission factors. No information was given regarding which method was used to determine the factor or the fraction of PM10 which is condensable.

Hazardous Air Pollutants (HAPs)

	Pollutant							
	Benzene	Toluene	Xylene	1,3-Butadiene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH HAPs***
Emission Factor in lb/hp-hr****	6.53E-06	2.86E-06	2.00E-06	2.74E-07	8.26E-06	5.37E-06	6.48E-07	1.18E-06
Potential Emission in tons/yr	0.01	4.61E-03	3.22E-03	4.41E-04	0.01	8.65E-03	1.04E-03	1.90E-03
Limited Emission in tons/yr	4.81E-03	2.11E-03	1.47E-03	2.01E-04	6.08E-03	3.95E-03	4.77E-04	8.66E-04

***PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)
****Emission factors in lb/hp-hr were calculated using emission factors in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Table 3.3-1).

Potential Emission of Total HAPs (tons/yr)	**0.04**
Limited Emission of Total HAPs (tons/yr)	**0.02**

Methodology
Emission Factors are from AP 42 (Supplement B 10/96) Tables 3.3-1 and 3.3-2.
Potential Throughput (hp-hr/yr) = [Output Horsepower Rating (hp)] * [Maximum Hours Operated per Year]
Potential Emission (tons/yr) = [Potential Throughput (hp-hr/yr)] * [Emission Factor (lb/hp-hr)] / [2,000 lb/ton]

Green House Gas Emissions (GHG)

	Pollutant		
	CO2	CH4	N2O
Emission Factor in lb/hp-hr	1.15E+00	4.63E-05	9.26E-06
Potential Emission in tons/yr	1.85E+03	7.46E-02	1.49E-02

Summed Potential Emissions in tons/yr	**1.85E+03**
CO2e Total in tons/yr	**1.86E+03**

Methodology
CO2 Emission Factor is from AP42 (Supplement B 10/96), Tables 3.3-1.
CH4 and N2O Emission Factors are from 40 CFR 98 Subpart C Table C-2.
Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Potential Emission (tons/yr) = [Potential Throughput (hp-hr/yr)] * [Emission Factor (lb/hp-hr)] / [2,000 lb/ton]
CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (25) + N2O Potential Emission ton/yr x N2O GWP (298).

Appendix A: Emission Calculations
Potential PM/ PM_{10} /$PM_{2.5}$ Emissions
from the Triple-Deck Screening System for iron/slag reclaim operation

Company Name: Fritz Enterprises, Incorporated Contractor of Cleveland-Cliffs Steel LLC
Address City IN Zip: 3210 Watling Street, East Chicago, Indiana 46312
Operating Permit No.: T089-43176-00465
Significant Source Modification No.: 089-47391-00465
Significant Permit Modification No.: 089-47405-00465
Reviewer: Daria Antipova

Unrestricted PTE							
Emission Unit	Throughput Capacity (tons/hr)	PM Emission Factor (lb/ton)	PM (tons/yr)	0 Emission Factor (l	PM-10 (tons/yr)	PM2.5 EF (lb/ton)	PM2.5 (tons/yr)
Screener S-3	350	0.03	38.33	8.70E-03	13.34	3.75E-03	5.75
Salvage Machine S-4*	600	1.00E-04	0.26	1.00E-04	0.26	1.00E-04	0.26
Feed Belt F-3	600	3.00E-03	7.88	1.10E-03	2.89	1.10E-03	2.89
Conveyors C6, C7, C8	1200	3.00E-03	15.77	1.10E-03	5.78	1.10E-03	5.78
Total (tons/yr)			**62.24**		**22.27**		**14.68**

Controlled PTE							
Emission Unit	Throughput Capacity (tons/hr)	PM EF (lb/ton)	PM (tons/yr)	PM-10 EF (lb/ton)	PM-10 (tons/yr)	PM2.5 EF (lb/ton)	PM2.5 (tons/yr)
Screener S-3	350	2.20E-03	3.37	7.40E-04	1.13	5.00E-05	0.08
Salvage Machine S-4*	600	1.00E-04	0.26	1.00E-04	0.26	1.00E-04	0.26
Feed Belt F-3	600	1.40E-04	0.37	4.60E-05	0.12	4.60E-05	0.12
Conveyors C6, C7, C8	1200	1.40E-04	0.74	4.60E-05	0.24	4.60E-05	0.24
Total (tons/yr)			**4.74**		**1.76**		**0.70**

Methodology:
Emission factors for screening and conveying based on AP-42 Table 11.19.2-2 (Crushed Stone Processing Operations)
* Salvage Machine - transfer point EF = truck loading of conveyors (PM2.5, which is assumed to be same for PM and PM-10)
Conveyors; one at 600 tons per hour, one at 350 tons/hr, one at 250 tons/hr

Limitation to limit PM, PM10 & PM2.5 emissions to <25 tpy PM, <15 tpy PM10 & <10 tpy PM2.5 pursuant to 326- IAC 2-2 PSD

Potential Limited Throughput (tons/year)	1,157,025	**Limited PTE**				
Process	PM Emission Limit (lb/ton)	PTE of PM after Limits PSD 2-2 (tons/yr)	PM10 Emission Limit (lb/ton)	PTE of PM10 after Limits PSD 2-2 (tons/yr)	PM 2.5 Emission Limit (lb/ton)	PTE of PM2.5 after Limits PSD 2-2 (tons/yr)
Screener S-3	0.0050	2.89	0.0017	1.01	0.0008	0.43
Salvage Machine S-4	0.00002	0.01	0.00002	0.01	0.00002	0.01
Feed Belt F-3	0.0006	0.35	0.0002	0.13	0.0002	0.13
Conveyors C6, C7, C8	0.0006	0.35	0.0002	0.13	0.0002	0.13
Total		**3.60**		**1.27**		**0.70**

Note: PM/PM10/PM2.5 emission limit (lb/ton) calculated using 80% wet suppression control

Methodology
Potential Limited Throughput (tons/year)=0.7 (tons PM2.5/yr)*sum of PM2.5 emission limits(lb/ton)/2000(lb/ton)

Appendix A: Emission Calculations
Reciprocating Internal Combustion Engines - Diesel Fuel
Output Rating (<=600 HP)
Maximum Input Rate (<=4.2 MMBtu/hr)

Company Name: Fritz Enterprises, Incorporated Contractor of Cleveland-Cliffs Steel LLC
Address City IN Zip: 3210 Watling Street, East Chicago, Indiana 46312
Operating Permit No.: T089-43176-00465
Significant Source Modification No.: 089-47391-00465
Significant Permit Modification No.: 089-47405-00465
Reviewer: Daria Antipova

Diesel Engine	HP
D-4	168
D-5	135
Total:	**303**

Emissions calculated based on output rating (hp)

Output Horsepower Rating (hp)	303.0
Maximum Hours Operated per Year	8760
Potential Throughput (hp-hr/yr)	2,654,280
Limited Hours of Operation per Year	2,080
Combined Pound per Hour Limitation	9.4
Limited Potential Throughput (hp-hr/yr)	630,240

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/hp-hr	0.0022	0.0022	0.0022	0.00205	0.0310	0.0025	0.00668
Potential Emission in tons/yr	2.92	2.92	2.92	2.72	41.14	3.34	8.87
Limited Emission in tons/yr	0.69	0.69	0.69	0.65	9.77	0.79	2.11

*PM and PM2.5 emission factors are assumed to be equivalent to PM10 emission factors. No information was given regarding which method was used to determine the factor or the fraction of PM10 which is condensable.

Hazardous Air Pollutants (HAPs)

	Pollutant							
	Benzene	Toluene	Xylene	1,3-Butadiene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH HAPs***
Emission Factor in lb/hp-hr****	6.53E-06	2.86E-06	2.00E-06	2.74E-07	8.26E-06	5.37E-06	6.48E-07	1.18E-06
Potential Emission in tons/yr	8.67E-03	3.80E-03	2.65E-03	3.63E-04	1.10E-02	7.13E-03	8.59E-04	1.56E-03
Limited Emission in tons/yr	2.06E-03	9.02E-04	6.29E-04	8.62E-05	2.60E-03	1.69E-03	2.04E-04	3.71E-04

***PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)
****Emission factors in lb/hp-hr were calculated using emission factors in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Table 3.3-1).

Potential Emission of Total HAPs (tons/yr)	**3.60E-02**
Limited Emission of Total HAPs (tons/yr)	**8.54E-03**

Methodology
Emission Factors are from AP 42 (Supplement B 10/96) Tables 3.3-1 and 3.3-2.
Potential Throughput (hp-hr/yr) = [Output Horsepower Rating (hp)] * [Maximum Hours Operated per Year]
Potential Emission (tons/yr) = [Potential Throughput (hp-hr/yr)] * [Emission Factor (lb/hp-hr)] / [2,000 lb/ton]

Green House Gas Emissions (GHG)

	Pollutant		
	CO2	CH4	N2O
Emission Factor in lb/hp-hr	1.15E+00	4.63E-05	9.26E-06
Potential Emission in tons/yr	1.53E+03	6.14E-02	1.23E-02

Summed Potential Emissions in tons/yr	**1.53E+03**
CO2e Total in tons/yr	**1.53E+03**

Methodology
CO2 Emission Factor is from AP42 (Supplement B 10/96), Tables 3.3-1.
CH4 and N2O Emission Factors are from 40 CFR 98 Subpart C Table C-2.
Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Potential Emission (tons/yr) = [Potential Throughput (hp-hr/yr)] * [Emission Factor (lb/hp-hr)] / [2,000 lb/ton]
CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (25) + N2O Potential Emission ton/yr x N2O GWP (298).

Appendix A: Emissions Calculations
Fugitive Particulate Emissions from
Wind Erosion of Material Storage Piles

Company Name: Fritz Enterprises, Incorporated Contractor of Cleveland-Cliffs Steel LLC
Address City IN Zip: 3210 Watling Street, East Chicago, Indiana 46312
Operating Permit No.: T089-43176-00465
Significant Source Modification No.: 089-47391-00465
Significant Permit Modification No.: 089-47405-00465
Reviewer: Daria Antipova

The following calculations determine the amount of fugitive particulate emissions created by wind erosion of material storage piles, based on 8,760 hours of use and USEPA's AP 42 (Pre 1983 Edition), Section 11.2.3 emission factor methodology.

EF = 1.7 * (s/1.5) * ((365-p)/235) * (f/15)
where EF = Uncontrolled emission factor (lb/acre/day) for total suspended particulates (TSP)
s = silt content of material (% by weight)
p = 125 = number of days with greater than or equal to 0.01 inches of precipitation per year
f = 15 = % of time that the unobstructed wind speed exceeds 12 mph at the mean pile height

Material	Silt Content of Material (wt %)*	Uncontrolled PM Emission Factor (lb/acre/day)**	Maximum Anticipated Pile Size (acres)	Uncontrolled PTE of PM (tons/yr)	Uncontrolled PTE of PM10 (tons/yr)***	Uncontrolled PTE of PM2.5 (tons/yr)***
Limestone	1.6	1.85	5.74	1.940	0.679	0.103
			Totals	**1.94**	**0.68**	**0.10**

Methodology
*Silt content values obtained from AP 42 Section 13.2.4 (dated 11/2006) Table 13.2.4-1 (dated 11/2006)
**PM emissions assumed equal to total suspended particulate (TSP) emissions.
***Based on the aerodynamic particle size multiplier values for PM10 and PM2.5 from AP 42 Section 13.2.4 (dated 11/2006) for Aggregate Handling and Storage Piles, PM10 and PM2.5 emissions were calculated as follows:
PM10 emissions = 0.35 * PM emissions
PM2.5 emissions = 0.053 * PM emissions
Uncontrolled PTE of PM (tons/yr) = [Emission Factor (lb/acre/day)] * [Maximum Pile Size (acres)] * (ton/2000 lbs) * (365 days/yr)
Uncontrolled PTE of PM10 (tons/yr) = [Uncontrolled PTE of PM (tons/yr)] * 0.35
Uncontrolled PTE of PM2.5 (tons/yr) = [Uncontrolled PTE of PM (tons/yr)] * 0.053

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

Appendix A: Emission Calculations
Potential to Emit from the Vertical Shaft Mill (Crusher)

Company Name: Fritz Enterprises, Incorporated Contractor of Cleveland-Cliffs Steel LLC
Address City IN Zip: 3210 Watling Street, East Chicago, Indiana 46312
Operating Permit No.: T089-43176-00465
Significant Source Modification No.: 089-47391-00465
Significant Permit Modification No.: 089-47405-00465
Reviewer: Daria Antipova

Operation/Equipment	Max Throughput	Uncontrolled Emission Factors (lb/ton)			Controlled Emission Factors (lb/ton)			Uncontrolled Emissions Potential-to-Emit (PTE) (tpy)			Controlled Emissions (tpy)		
	(tons/hr)	PM	PM_{10}	$PM_{2.5}$	PM	PM_{10}	$PM_{2.5}$	PM	PM_{10}	$PM_{2.5}$	PM	PM_{10}	$PM_{2.5}$
*Vertical Shaft Mill	240	0.0054	0.0024	0.0024	0.0012	0.00054	0.0001	5.68	2.52	2.52	1.26	0.57	0.11
Feeder	240	0.003	0.0011	0.0011	0.00014	0.000046	0.000013	3.15	1.16	1.16	0.15	0.05	0.01
Conveyors (2)	240	0.003	0.0011	0.0011	0.00014	0.000046	0.000013	3.15	1.16	1.16	0.15	0.05	0.01
	TOTAL PTE from Slag Handling							**11.98**	**4.84**	**4.84**	**1.56**	**0.66**	**0.13**

* The vertical shaft mill will crush oversize slag material from the existing trommel slag screener and material output from the mill will be stored in the existing trommel open pile storage.
Therefore, there are no additional emissions from the pile storage.
Emission Factors controlled and uncontrolled were taken from AP-42, Table 11.19.2-2

The slag moisture content is 5.0 %, based on the requirement in Condition D.5.3. With moisture content being above 1.5% the material is considered controlled.
Pursuant to AP-42 11.19.2 background information on page 14, moisture content less than 1.5% is considered uncontrolled.

Appendix A: Emission Calculations
Reciprocating Internal Combustion Engines - Diesel Fuel
Output Rating (<=600 HP)
Maximum Input Rate (<=4.2 MMBtu/hr)

Company Name: Fritz Enterprises, Incorporated Contractor of Cleveland-Cliffs Steel LLC
Address City IN Zip: 3210 Watling Street, East Chicago, Indiana 46312
Operating Permit No.: T089-43176-00465
Significant Source Modification No.: 089-47391-00465
Significant Permit Modification No.: 089-47405-00465
Reviewer: Daria Antipova

Diesel Engine	HP
D-6	400
D-7	135
Total:	**535**

Emissions calculated based on output rating (hp)

Output Horsepower Rating (hp)	535.0
Maximum Hours Operated per Year	8760
Potential Throughput (hp-hr/yr)	4,686,600
Limited Output Horsepower Rating (hp)	287
Diesel Throughput Limit (gal/yr)	125,637
NOx Pound per Gallon Limitation	0.62
Limited Potential Throughput (hp-hr/yr)	2,512,750

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/hp-hr	0.0022	0.0022	0.0022	0.00205	0.0310	0.0025	0.00668
Potential Emission in tons/yr	5.16	5.16	5.16	4.80	72.64	5.89	15.65
Limited Emission in tons/yr	2.76	2.76	2.76	2.58	38.95	3.16	8.39

*PM and PM2.5 emission factors are assumed to be equivalent to PM10 emission factors. No information was given regarding which method was used to determine the factor or the fraction of PM10 which is condensable.

Hazardous Air Pollutants (HAPs)

	Pollutant							
	Benzene	Toluene	Xylene	1,3-Butadiene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH HAPs***
Emission Factor in lb/hp-hr****	6.53E-06	2.86E-06	2.00E-06	2.74E-07	8.26E-06	5.37E-06	6.48E-07	1.18E-06
Potential Emission in tons/yr	1.53E-02	6.71E-03	4.67E-03	6.41E-04	1.94E-02	1.26E-02	1.52E-03	2.76E-03
Limited Emission in tons/yr	8.21E-03	3.60E-03	2.51E-03	3.44E-04	1.04E-02	6.75E-03	8.14E-04	1.48E-03

***PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)
****Emission factors in lb/hp-hr were calculated using emission factors in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Table 3.3-1).

Potential Emission of Total HAPs (tons/yr)	**6.35E-02**
Limited Emission of Total HAPs (tons/yr)	**3.41E-02**

Methodology
Emission Factors are from AP 42 (Supplement B 10/96) Tables 3.3-1 and 3.3-2.
Potential Throughput (hp-hr/yr) = [Output Horsepower Rating (hp)] * [Maximum Hours Operated per Year]
Potential Emission (tons/yr) = [Potential Throughput (hp-hr/yr)] * [Emission Factor (lb/hp-hr)] / [2,000 lb/ton]

Green House Gas Emissions (GHG)

	Pollutant		
	CO2	CH4	N2O
Emission Factor in lb/hp-hr	1.15E+00	4.63E-05	9.26E-06
Potential Emission in tons/yr	2.69E+03	1.08E-01	2.17E-02

Summed Potential Emissions in tons/yr	**2.69E+03**
CO2e Total in tons/yr	**2.70E+03**

Methodology
CO2 Emission Factor is from AP42 (Supplement B 10/96), Tables 3.3-1.
CH4 and N2O Emission Factors are from 40 CFR 98 Subpart C Table C-2.
Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Potential Emission (tons/yr) = [Potential Throughput (hp-hr/yr)] * [Emission Factor (lb/hp-hr)] / [2,000 lb/ton]
CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (25) + N2O Potential Emission ton/yr x N2O GWP (298).

#REF!

Potential to Emit from the Slag Processing System

Company Name: **Fritz Enterprises, Incorporated Contractor of Cleveland-Cliffs Steel LLC**
Address City IN Zip: **3210 Watling Street, East Chicago, Indiana 46312**
Operating Permit No.: **T089-43176-00465**
Significant Source Modification No.: **089-47391-00465**
Significant Permit Modification No.: **089-47405-00465**
Reviewer: **Daria Antipova**

Uncontrolled Emissions

Emission Unit	Throughput		Emission Factor, lb/ton			Annual Emissions TPY		
	Ton/Hr	TPY	PM	PM-10	PM-2.5	PM	PM-10	PM-2.5
Feeder (Truck Unloading)	300	2,628,000	ND	1.60E-05	1.60E-05	0.00	0.021	0.021
Jaw Crusher (1)	300	2,628,000	5.40E-03	2.40E-03	ND	7.10	3.15	0.00
Cone Crusher (1)	300	2,628,000	5.40E-03	2.40E-03	ND	7.10	3.15	0.00
3-Deck Screens (2)	300	2,628,000	2.50E-02	8.70E-03	ND	32.85	11.43	0.00
Conveyors (11)	300	2,628,000	3.00E-03	1.10E-03	ND	3.94	1.45	0.00
Total						50.98	19.21	0.02

NOTES:

1) Emissions Factors (EM) are based on EM for Crushed Stone Procesing Operations (lb/ton) from Table 11.19.2-2 of AP 42
2) Annual Operating Hours (Potentiall) = 8760 hrs
3) ND = Not Detected

Limited Emissions

Emission Unit	Throughput		Emission Factor, lb/ton			Annual Emissions TPY		
	Ton/Hr	TPY	PM	PM-10	PM-2.5	PM	PM-10	PM-2.5
Loading Slag	300	624,000	ND	1.60E-05	1.60E-05	0.000	0.005	0.005
Jaw Crusher (1)	300	624,000	5.40E-03	2.40E-03	ND	1.68	0.75	0.00
Cone Crusher (1)	300	624,000	5.40E-03	2.40E-03	ND	1.68	0.75	0.00
3-Deck Screens (2)	300	624,000	2.50E-02	8.70E-03	ND	7.80	2.71	0.00
Conveyors (11)	300	624,000	3.00E-03	1.10E-03	ND	0.94	0.34	0.00
Total						12.11	4.56	0.00

NOTES:

1) Emissions Factors (EM) are based on EM for Crushed Stone Procesing Operations (lb/ton) from Table 11.19.2-2 of AP 42
2) Annual Operating Hours (limited) = 2080 hrs
3) ND = Not Detected

Appendix A: Emissions Calculations
Storage Piles and Wind Erosion

Company Name: Fritz Enterprises, Incorporated Contractor of Cleveland-Cliffs Steel LLC
Address City IN Zip: 3210 Watling Street, East Chicago, Indiana 46312
Operating Permit No.: T089-43176-00465
Significant Source Modification No.: 089-47391-00465
Significant Permit Modification No.: 089-47405-00465
Reviewer: Daria Antipova

Storage Piles:
From AP-42 13.2.4, Aggregate Handling and Storage Piles, 11/2006

Emissions from storage piles can be described by the following empirical equation:

$$E = k(0.0032)\frac{\left(\frac{U}{5}\right)^{1.3}}{\left(\frac{M}{2}\right)^{1.4}}$$

Where:
E = emission factor (lb/tn)
k = particle size multiplier (dimensionless)
U = mean wind speed, miles per hour
M = material moisture content (%)

k =		
	PM	0.74
	PM10	0.35
	PM2.5	0.11

U =	15	mean wind speed, (mph) [source=rredc.nrel.gov/wind/pubs/atlas/maps/chap1/2-06m.html]

The mean moisture content was estimated as the average moisture content based on onsite test data.
M = 2.00 %, site specific moisture data

E = Emission Factors (lb/ton)

PM	PM10	PM2.5
0.009877325	0.004671708	0.0014683

Maximum amount of material handled (tons/yr): 2,628,000 tons/year
Dust Control Efficiency: 50%

12.98	**Uncontrolled PM (tons/year)**
6.14	**Uncontrolled PM10 (tons/year)**
1.93	**Uncontrolled PM2.5 (tons/year)**
6.49	**Controlled PM (tons/year)**
3.07	**Controlled PM10 (tons/year)**
0.965	**Controlled PM2.5 (tons/year)**

Notes: Production is 300 tons/hour.

Methodology:
Maximum amount of material handled information is provided by the source.
Uncontrolled Emissions (tons/yr) = Emission Factors (lb/ton) * Production (tons/yr) * (ton/2000 lbs)
Controlled PTE (tons/yr) = (Uncontrolled Emissions (tons/yr)) * (1 - Dust Control Efficiency)

Wind Erosion:

Ef = 1.7*(s/1.5)*(365-p)/235*(f/15)
= 2.36 lb/acre/day
where s = 2 % silt content of material
p = 120 days of rain greater than or equal to 0.01 inches
f = 15 % of wind greater than or equal to 12 mph

Ep (storage) = Ef*sc*(40 cuft/ton)/(2000 lb/ton)/(43560 sqft/acre)/(25 ft)*(365 day/yr)
= 0.03 tons/yr
where sc = 2 ,000 tons storage capacity

Appendix A: Emission Calculations
Reciprocating Internal Combustion Engines - Diesel Fuel
Output Rating (<=600 HP)
Maximum Input Rate (<=4.2 MMBtu/hr)

Company Name: Fritz Enterprises, Incorporated Contractor of Cleveland-Cliffs Steel LLC
Address City IN Zip: 3210 Watling Street, East Chicago, Indiana 46312
Operating Permit No.: T089-43176-00465
Significant Source Modification No.: 089-47391-00465
Significant Permit Modification No.: 089-47405-00465
Reviewer: Daria Antipova

Emissions calculated based on heat input capacity (MMBtu/hr)

Heat Input Capacity (MMBtu/hr)	2.7
Maximum Hours Operated per Year	8760
Potential Throughput (MMBtu/yr)	23,915
Diesel Throughput Limit (gal/yr)	129,286
NOx Pound per Gallon Limitation	0.62
Limited Potential Throughput (hp-hr/yr)	18,100

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMBtu	0.31	0.31	0.31	0.29	4.41	0.36	0.95
Potential Emission in tons/yr	3.71	3.71	3.71	3.47	52.73	4.30	11.36
Limited Emissions in tons/yr	2.81	2.81	2.81	2.62	39.91	3.26	8.60

*PM and PM2.5 emission factors are assumed to be equivalent to PM10 emission factors. No information was given regarding which method was used to determine the factor or the fraction of PM10 which is condensable.
Diesel Limit, gal/yr = MMBtu/yr x 1 gal/0.140 MMBtu
NOx Emissions Limit, tons/yr = 4.41 lb/MMBtu X 0.14 MMBtu/gal

Hazardous Air Pollutants (HAPs)

	Pollutant							
	Benzene	Toluene	Xylene	1,3-Butadiene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH HAPs***
Emission Factor in lb/MMBtu	9.33E-04	4.09E-04	2.85E-04	3.91E-05	1.18E-03	7.67E-04	9.25E-05	1.68E-04
Potential Emission in tons/yr	1.12E-02	4.89E-03	3.41E-03	4.68E-04	1.41E-02	9.17E-03	1.11E-03	2.01E-03
Limited Emissions in tons/yr	8.44E-03	3.70E-03	2.58E-03	3.54E-04	1.07E-02	6.94E-03	8.37E-04	1.52E-03

***PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)

Potential Emission of Total HAPs (tons/yr)	**0.05**
Limited Emission of Total HAPs (tons/yr)	**0.04**

Methodology
Emission Factors are from AP 42 (Supplement B 10/96) Tables 3.3-1 and 3.3-2.
Potential Throughput (MMBtu/yr) = [Heat Input Capacity (MMBtu/hr)] * [Maximum Hours Operated per Year]
Potential Emission (tons/yr) = [Potential Throughput (MMBtu/yr)] * [Emission Factor (lb/MMBtu)] / [2,000 lb/ton]

Greenhouse Gas Emissions (GHG)

	Pollutant		
	CO2	CH4	N2O
Emission Factor in lb/MMBtu	1.64E+02	6.61E-03	1.32E-03
Potential Emission in tons/yr	1.96E+03	7.91E-02	1.58E-02

Summed Potential Emissions in tons/yr	**1.96E+03**
CO2e Total in tons/yr	**1.97E+03**

Methodology
CO2 Emission Factor is from AP42 (Supplement B 10/96), Tables 3.3-1.
CH4 and N2O Emission Factors are from 40 CFR 98 Subpart C Table C-2.
Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Potential Emission (tons/yr) = [Potential Throughput (MMBtu/yr)] * [Emission Factor (lb/MMBtu)] / [2,000 lb/ton]
CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (25) + N2O Potential Emission ton/yr x N2O GWP (298).

#

Appendix A: Emission Calculations
Potential to Emit from the Slag Processing System

Company Name: Fritz Enterprises, Incorporated Contractor of Cleveland-Cliffs Steel LLC
Address City IN Zip: 3210 Watling Street, East Chicago, Indiana 46312
Operating Permit No.: T089-43176-00465
Significant Source Modification No.: 089-47391-00465
Significant Permit Modification No.: 089-47405-00465
Reviewer: Daria Antipova

Uncontrolled Emissions								
Emission Unit	Throughput		Emission Factor, lb/ton			Annual Emissions TPY		
	Ton/Hr	TPY	PM	PM-10	PM-2.5	PM	PM-10	PM-2.5
Four (4) Screens (EU5)	800	7,008,000	0.025	8.70E-03	8.70E-03	87.60	30.48	30.48
Jaw Crusher (EU2)	495	4,336,200	5.40E-03	2.40E-03	2.40E-03	11.71	5.20	5.20
Cone Crushers (EU3 and EU4)	930	8,146,800	5.40E-03	2.40E-03	2.40E-03	22.00	9.78	9.78
Twenty-five (25) Conveyors (EU6)	1600	14,016,000	3.00E-03	1.10E-03	1.10E-03	21.02	7.71	7.71
Feeder Box/Magnets/Crane	1800	15,768,000	0.00	0.00	0.00	0.00	0.00	0.00
Total						142.33	53.17	53.17

NOTES:
Emissions Factors (EM) are based on EM for Crushed Stone Procesing Operations (lb/ton) from Table 11.19.2-2 of AP 42

Limited Emissions								
Emission Unit	Throughput		Emission Factor, lb/ton			Annual Emissions TPY		
	Ton/Hr	TPY	PM	PM-10	PM-2.5	PM	PM-10	PM-2.5
Four (4) Screens (EU5)	800	7,008,000	2.20E-03	7.40E-04	7.40E-04	7.71	2.59	2.59
Jaw Crusher (EU2)	495	4,336,200	1.20E-03	5.40E-04	5.40E-04	2.60	1.17	1.17
Cone Crushers (EU3 and EU4)	930	8,146,800	1.20E-03	5.40E-04	5.40E-04	4.89	2.20	2.20
Twenty-five (25) Conveyors (EU6)	1600	14,016,000	1.40E-04	5.00E-05	5.00E-05	0.98	0.35	0.35
Feeder Box/Magnets/Crane	1800	15,768,000	0.00	0.00	0.00	0.00	0.00	0.00
Total						16.18	6.31	6.31

NOTES:
Emissions Factors (EM) are based on EM for Crushed Stone Procesing Operations (lb/ton) from Table 11.19.2-2 of AP 42

Appendix A: Emission Calculations
Fugitive Dust Emissions - Unpaved Roads

Company Name: Fritz Enterprises, Incorporated Contractor of Cleveland-Cliffs Steel LLC
Address City IN Zip: 3210 Watling Street, East Chicago, Indiana 46312
Operating Permit No.: T089-43176-00465
Significant Source Modification No.: 089-47391-00465
Significant Permit Modification No.: 089-47405-00465
Reviewer: Daria Antipova

Unpaved Roads at Industrial Site
The following calculations determine the amount of emissions created by unpaved roads, based on 8,760 hours of use and AP-42, Ch 13.2.2 (11/2006).

Vehicle Information (provided by source)

Type	Maximum number of vehicles	Number of one-way trips per day per vehicle	Maximum trips per day (trip/day)	Maximum Weight of Loaded Vehicle (tons/trip)	Total Weight driven per day (ton/day)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/day)	Maximum one-way miles (miles/yr)
Front-end Loaders	3.0	257.0	771.0	30.5	23515.5	400	0.076	58.4	21319.3
Front-end Loaders	2.0	150.0	300.0	10.0	3000.0	50	0.009	2.8	1036.9
		Totals	**1071.0**		**26515.5**			**61.3**	**22356.3**

Average Vehicle Weight Per Trip = 24.8 tons/trip
Average Miles Per Trip = 0.06 miles/trip

Unmitigated Emission Factor, Ef = k*[(s/12)^a]*[(W/3)^b] (Equation 1a from AP-42 13.2.2)

	PM	PM10	PM2.5	
where k =	4.9	1.5	0.15	lb/mi = particle size multiplier (AP-42 Table 13.2.2-2 for Industrial Roads)
s =	6.0	6.0	6.0	% = mean % silt content of unpaved roads (AP-42 Table 13.2.2-1 Iron and Steel Production)
a =	0.7	0.9	0.9	= constant (AP-42 Table 13.2.2-2 for Industrial Roads)
W =	24.8	24.8	24.8	tons = average vehicle weight
b =	0.45	0.45	0.45	= constant (AP-42 Table 13.2.2-2 for Industrial Roads)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, Eext = E * [(365 - P)/365] (Equation 2 from AP-42 13.2.2)
Mitigated Emission Factor, Eext = E * [(365 - P)/365]
where P = 125 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.2-1)

	PM	PM10	PM2.5	
Unmitigated Emission Factor, Ef =	7.80	2.08	0.21	lb/mile
Mitigated Emission Factor, Eext =	5.13	1.37	0.14	lb/mile
Dust Control Efficiency =	50%	50%	50%	(pursuant to control measures outlined in fugitive dust control plan)

Process	Mitigated PTE of PM (Before Control) (tons/yr)	Mitigated PTE of PM10 (Before Control) (tons/yr)	Mitigated PTE of PM2.5 (Before Control) (tons/yr)	Mitigated PTE of PM (After Control) (tons/yr)	Mitigated PTE of PM10 (After Control) (tons/yr)	Mitigated PTE of PM2.5 (After Control) (tons/yr)
Front-end Loaders	54.65	14.56	1.46	27.33	7.28	0.73
Front-end Loaders	2.66	0.71	0.07	1.33	0.35	0.04
Totals	**57.31**	**15.27**	**1.53**	**28.65**	**7.64**	**0.76**

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

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

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.
100 N. Senate Avenue • Indianapolis, IN 46204
(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Eric J. Holcomb
Governor

Brian C. Rockensuess
Commissioner

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

TO: Jeff Hynes
Fritz Enterprises Incorporated Contractor of Clevelands - Cliffs Steel LLC
3210 Watling St
East Chicago, IN 46312

DATE: June 2, 2024

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

SUBJECT: Final Decision
TV Significant Permit Modification
089-47405-00465

This notice is to inform you that a final decision has been issued for the air permit application referenced above.

Our records indicate that you are the contact person for this application. However, if you are not the appropriate person within your company to receive this document, please forward it to the correct person. In addition, the Notice of Decision has been sent to the OAQ Permits Branch Interested Parties List and, if applicable, the Consultant/Agent and/or Responsible Official/Authorized Individual.

The final decision and supporting materials are available electronically; the original signature page is enclosed for your convenience. The final decision and supporting materials available electronically at:

IDEM's online searchable database: http://www.in.gov/apps/idem/caats/ . Choose Search Option **by Permit Number**, then enter permit 47405

and

IDEM's Virtual File Cabinet (VFC): https://www.in.gov/idem. Enter VFC in the search box, then search for permit documents using a variety of criteria, such as Program area, date range, permit #, Agency Interest Number, or Source ID.

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

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.
100 N. Senate Avenue • Indianapolis, IN 46204
(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Eric J. Holcomb
Governor

Brian C. Rockensuess
Commissioner

July 2, 2024

TO: East Chicago Public Library - Main Library

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

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

Applicant Name: **Fritz Enterprises Incorporated**
Contractor of Cleveland – Cliffs Steel LLC
Permit Number: **089-47405-00465**

You previously received information to make available to the public during the public comment period of a draft permit. Enclosed is a copy of the final decision and supporting materials for the same project. Please place the enclosed information along with the information you previously received. To ensure that your patrons have ample opportunity to review the enclosed permit, **we ask that you retain this document for at least 60 days.**

The applicant is responsible for placing a copy of the application in your library. If the permit application is not on file, or if you have any questions concerning this public review process, please contact Joanne Smiddie-Brush, OAQ Permits Administration Section at 1-800-451-6027, extension 3-0185.

Enclosures
Final Library 1/9/2017

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.
100 N. Senate Avenue • Indianapolis, IN 46204
(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Eric J. Holcomb
Governor

Brian C. Rockensuess
Commissioner

July 2, 2024
Fritz Enterprises Incorporated Contractor of Cleveland – Cliffs Steel LLC
089-47405-00465

To: Interested Parties

This notice is to inform you that a final decision has been issued for the air permit application referenced above. This notice is for informational purposes only. You are not required to take any action.

You are receiving this notice because you asked to be on IDEM's notification list for this company and/or county; or because your property is nearby the company being permitted; or because you represent a local/regional government entity.

The enclosed Notice of Decision Letter provides additional information about the final permit decision.

The final decision and supporting materials are available electronically at:

IDEM's online searchable database: http://www.in.gov/apps/idem/caats/ . Choose Search Option by Permit Number, then enter permit 47405

and

IDEM's Virtual File Cabinet (VFC): https://www.in.gov/idem. Enter VFC in the search box, then search for permit documents using a variety of criteria, such as Program area, date range, permit #, Agency Interest Number, or Source ID.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178, or toll-free at 1-800-451-6027 (ext. 3-0178), and ask to speak to the permit reviewer who prepared the permit.

Please Note: *If you would like to be removed from the Air Permits mailing list, please contact Joanne Smiddie-Brush with the Air Permits Administration Section at 1-800-451-6027, ext. 3-0185 or via e-mail at JBRUSH@IDEM.IN.GOV. If you have recently moved and this Notice has been forwarded to you, please notify us of your new address and if you wish to remain on the mailing list. Mail that is returned to IDEM by the Post Office with a forwarding address in a different county will be removed from our list unless otherwise requested.*

Enclosure
Final Interested Parties Cover Letter 10/13/2023

Mail Code 61-53 Page 1 of 2

IDEM Staff	CMOSIER 7/2/2024 Fritz Enterprises Inc Contractor of Cleveland-Cliffs Steel LLC 089-47405-00465 (final)		AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender		Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail: **CERTIFICATE OF MAILING ONLY**

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee Remarks
1		Jeff Hynes Fritz Enterprises Incorporated Contractor of Cleve 3210 Watling St East Chicago IN 46312 (Source CAATS) via UPS									
2		David Splan Vice President Fritz Enterprises Incorporated Contractor of Cleve 1650 W Jefferson Ave Trenton MI 48183 *(RO CAATS)*									
3		Jerry Tippy 2293 N Main St, Bldg A, 3rd Floor Crown Point IN 46307 *(Affected Party)*									
4		Michael C Repay Lake County Board of Commissioners 2293 N Main St, Bldg A, 3rd Floor Crown Point IN 46307 *(Affected Party)*									
5		Jeff Mayes News-Dispatch 422 Franklin St Michigan City IN 46360 *(Affected Party)*									
6		East Chicago City Health Department 100 W Chicago Ave East Chicago IN 46312 *(Health Department)*									
7		Lake County Health Department 2900 W 93rd Ave Crown Point IN 46307 *(Health Department)*									
8		Kristina Lindborg League of Women Voters of Indiana 2213 S Sussex Dr Bloomington IN 47401 *(Affected Party)*									
9		Menards 6300 Mississippi St Merrillville IN 46410 *(Affected Party)*									
10		Jesus A Gallegos II 6814 Prairie Path Ln Merrillville IN 46410 *(Affected Party)*									
11		East Chicago City Council 4525 Indianapolis Blvd East Chicago IN 46312 *(Local Official)*									
12		East Chicago Public Library - Main Library 2401 E Columbus Dr East Chicago IN 46312-2998 *(Library)*									
13		Gary Mayors Office 401 Broadway #102 Gary IN 46402 (Local Official)									
14		Responsible Official Cleveland-Cliffs 3210 Watling St East Chicago IN 46312-1610 *(source - addl contact)*									
15		Lake County Board of Commissioners 2293 N Main St, Bldg A, 3rd Floor Crown Point IN 46307 *(Local Official)*									

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

FACSIMILIE OF PS Form 3877

Mail Code 61-53 Page 2 of 2

IDEM Staff	CMOSIER 7/2/2024 Fritz Enterprises Inc Contractor of Cleveland-Cliffs Steel LLC 089-47405-00465 (final)		AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender	▶	Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail: **CERTIFICATE OF MAILING ONLY**

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee / Remarks
1		Barbara G 506 Lilac St East Chicago IN 46312 (Affected Party)									
2		Mr. Robert Garcia 3733 Parrish Ave East Chicago IN 46312 *(Affected Party)*									
3		Ms. Karen Kroczek 8212 Madison Ave Munster IN 46321-1627 *(Affected Party)*									
4		Gary City Council 401 Broadway #209 Gary IN 46402 *(Local Official)*									
5		Mr. Larry Davis 268 S 600 W Hebron IN 46341 *(Affected Party)*									
6		Cavin McNulty Or Current Resident 8202 Jackson Ave Munster IN 46321 *(Affected Party)*									
7		Rebecca Dien-Johns Or Current Resident 612 N Temple Ave Indianapolis IN 46201 *(Affected Party)*									
8		John Loftus Wisconsin Department of Natural Resources 101 S. Webster Street Madison WI 53707 *(Affected Party)*									
9											
10											
11											
12											
13											
14											
15											

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

FACSIMILIE OF PS Form 3877