NOTICE OF 30-DAY PERIOD FOR PUBLIC COMMENT

Preliminary Findings Regarding a Significant Modification to a Part 70 Operating Permit

for NLMK Indiana in Porter County

PSD/Significant Source Modification No.: 127-43932-00036
Significant Permit Modification No.: 127-43985-00036

The Indiana Department of Environmental Management (IDEM) has received an application from NLMK Indiana, located at 6500 South Boundary Road, Portage, IN 46368, for a significant modification of its Part 70 Operating Permit issued on May 6, 2021. If approved by IDEM’s Office of Air Quality (OAQ), this proposed modification would allow NLMK Indiana to make certain changes at its existing source. NLMK Indiana has applied requesting re-opening of the existing VOC PSD BACT analysis for the meltshop operations in order to alter the existing tons/hour throughput limit for meltshop operations to 185 net tons of steel per hour. This change is being requested so that NLMK Indiana can meet the annual tons/year limit of net steel which is 1.1 million tons/year. The current net steel limit of 151 tons/hour makes it physically impossible for the source to meet the annual 1.1 million tons/year.

This draft permit does not contain any new equipment that would emit air pollutants; however, some conditions from previously issued permits/approvals have been corrected, changed, or removed. These corrections, changes, and removals may include Title I changes (e.g., changes that add or modify synthetic minor emission limits). This notice fulfills the public notice procedures to which those conditions are subject. IDEM has reviewed this application and has developed preliminary findings, consisting of a draft permit and several supporting documents, which would allow for these changes.

A copy of the permit application and IDEM’s preliminary findings have been sent to:

Westchester Public Library
200 West Indiana Avenue
Chesterton, IN 46304

and

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

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

A copy of the application and preliminary findings 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.

How can you participate in this process?

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

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

Comments and supporting documentation, or a request for a public hearing should be sent in writing to IDEOM at the address below. If you comment via e-mail, please include your full U.S. mailing address so that you can be added to IDEOM’s mailing list to receive notice of future action related to this permit. If you do not want to comment at this time, but would like to receive notice of future action related to this permit application, please contact IDEOM at the address below. Please refer to permit number SSM 127-43932-00036 and SPM 127-43985-00036 in all correspondence.

Comments should be sent to:

Travis Flock
IDEM, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
(800) 451-6027, ask for Travis Flock or (317) 233-1782
Or dial directly: (317) 233-1782
Fax: (317) 232-6749 attn: Travis Flock
E-mail: tflock@idem.IN.gov

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

For additional information about air permits and how the public and interested parties can participate, refer to the IDEOM Air Permits page on the Internet at: https://www.in.gov/idem/airpermit/public-participation/ and the Citizens’ Guide to IDEOM on the Internet at: https://www.in.gov/idem/resources/citizens-guide-to-idem/.

What will happen after IDEOM makes a decision?

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

Jenny Acker, Chief
Permits Branch
Office of Air Quality
Robert Passalacqua  
NLMK Indiana  
6500 South Boundary Road  
Portage, IN 46368

Dear Robert Passalacqua:

NLMK Indiana was issued Part 70 Operating Permit Renewal No. T127-41023-00036 on May 6, 2021 for a stationary steel mill located at 6500 South Boundary Road, Portage, IN 46368. An application requesting changes to this permit was received on March 30, 2021. 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: Scrap Management Plan  
Attachment C: Pollution Prevention Plan for the Control of Contaminants in Scrap Under the Area Source Rule for Electric Arc Furnace (EAF) Steelmaking Facilities  
Attachment E: 40 CFR 63, Subpart YYYY—National Emission Standards for Hazardous Air Pollutants for Area Sources: Electric Arc Furnace Steelmaking Facilities  

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.


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/.

Re: 127-43985-00036  
Significant Permit Modification
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 Travis Flock, Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251, or by telephone at (317) 233-1782 or (800) 451-6027, and ask for Travis Flock or (317) 233-1782.

Sincerely,

Brian Williams, Section Chief
Permits Branch
Office of Air Quality

Attachments: Modified Permit and Technical Support Document

cc: File - Porter County
   Porter County Health Department
   U.S. EPA, Region 5
   Compliance and Enforcement Branch
   IDEM Northwest Regional Office
Part 70 Operating Permit Renewal
OFFICE OF AIR QUALITY

NLMK Indiana
6500 South Boundary Road
Portage, Indiana 46368

(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.

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<td>11580</td>
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<tr>
<td>Issued by: Original signed by:</td>
<td>Brian Williams, Section Chief</td>
</tr>
<tr>
<td>Branch, Office of Air Quality</td>
<td></td>
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<tr>
<td>Issuance Date:</td>
<td>May 6, 2021</td>
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<td>May 6, 2026</td>
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Attachment B: Scrap Management Program

Attachment C: Pollution Prevention Plan for the Control of Contaminants in Scrap Under the Area Source Rule for Electric Arc Furnace (EAF) Steelmaking Facilities


Attachment E: 40 CFR 63, Subpart YYYYY—National Emission Standards for Hazardous Air Pollutants for Area Sources: Electric Arc Furnace Steelmaking Facilities

SECTION A

SOURCE SUMMARY

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

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

The Permittee owns and operates a stationary steel mini mill.

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<tr>
<th>Source Address:</th>
<th>6500 South Boundary Road, Portage, Indiana 46368</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Source Phone Number:</td>
<td>219-787-8200</td>
</tr>
<tr>
<td>SIC Code:</td>
<td>3312 (Steel Works, Blast Furnaces (Including Coke Ovens), and Rolling Mills)</td>
</tr>
<tr>
<td>County Location:</td>
<td>Porter (Portage Township)</td>
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<tr>
<td>Source Location Status:</td>
<td>Serious Nonattainment for 8-hour ozone standard Attainment for all other criteria pollutants</td>
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<tr>
<td>Source Status:</td>
<td>Part 70 Operating Permit Program Major Source, under PSD and Emission Offset Rules Minor Source, Section 112 of the Clean Air Act 1 of 28 Source Categories</td>
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A.2 Part 70 Source Definition [326 IAC 2-7-1(22)]

This steel mini mill consists of a source with an on-site contractor:

(a) NLMK Indiana, Plant ID# 127-00036, the primary operation, is located at 6500 South Boundary Road, Portage, Indiana 46368; and

(b) TMS International, LLC, Plant ID# 127-00104, the supporting operation, is located at 6500 US Highway 12, Portage IN 46368.

IDEM has determined that NLMK Indiana and TMS International, LLC are under the common control of NLMK Indiana. These plants will be considered one major source, as defined by 326 IAC 2-7-1(22), based on this contractual control. Therefore, the term "source" in the Part 70 documents refers to both NLMK Indiana and TMS International, LLC as one major source.

Separate Part 70 Operating permits will be issued to NLMK Indiana and TMS International, LLC solely for administrative purposes.
A.3 Emission Units and Pollution Control Equipment Summary

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

(a) One (1) Melt Shop with a production capacity of 1.1 million tons per year of steel comprised of the following:

(1) One (1) twin shell electric arc furnace (EAF), identified as unit 1, constructed in 1997, having a maximum capacity of 185 tons per hour, equipped with a direct shell evacuation (DSE) control system ("fourth hole" duct), an overhead roof exhaust system consisting of a canopy hood and charge area scavenging canopy hood (installed in 2016), an air gap for controlling carbon monoxide (CO) and volatile organic compound (VOC) emissions, low -NOx/oxyfuel burners and the melt shop baghouse CE-2 (modified in 2011) controlling PM/PM10 emissions, exhausting through stack S-2 with a continuous opacity monitor (COM).

(2) One (1) ladle metallurgical station, identified as unit 2, constructed in 1997, having a maximum capacity of 185 tons per hour, exhausting to a side draft hood ducted to the melt shop baghouse CE-2 (modified in 2011) exhausting through stack S-2 with a COM.

(3) One (1) continuous caster, identified as unit 3, constructed in 1997, having a maximum capacity of 185 tons per hour, with emissions from the hot metal handling and pouring operations exhausting to a canopy hood and ducted to the melt shop baghouse CE-2 (modified in 2011), then through stack S-2 with a COM. Steam from the slab cooling operations is vented through a steam vent in the roof of the Melt Shop Building.

(4) One (1) Slag Air Cooling Bay Area, identified as unit 4, constructed in 1997, having a maximum capacity of 10 tons per hour, exhausting through the Slag Cooling Bays exhaust system to the melt shop baghouse CE-2 (modified in 2011) for controlling PM/PM10 emissions, exhausting through the melt shop stack S-2 with a COM.

(5) Three (3) natural gas-fired, ladle preheat holding stations identified as units 5, 6 and 7, constructed in 1997, having a heat input capacity of 11.5 MMBtu per hour each, exhausting to canopy hoods ducted to the melt shop baghouse CE-2 (modified in 2011), exhausting through the melt shop stack S-2 with a COM.

(6) One (1) natural gas-fired, ladle preheat holding station, identified as unit 8 constructed in 1997, having a heat input capacity of 6.0 MMBtu per hour. Emissions exhaust to canopy hoods ducted to the melt shop baghouse CE-2 (modified in 2011), then exhausting through stack S-2, with a COM.

(7) One (1) natural gas-fired, Tundish dry out and preheat station identified as unit 9, constructed in 1997, having a heat input capacity of 3.5 MMBtu per hour. Emissions exhaust to canopy hoods ducted to the melt shop baghouse CE-2 (modified in 2011), then exhausting through stack S-2, with a COM.

(8) One (1) CoJet System including oxy-fuel burners.

(9) Oxy-fuel cutoff Torch at the exit end of the continuous caster.
(b) Hot Strip Mill Operations with a maximum capacity of 1.16 MM ton per year steel production, comprised of the following:

(1) One (1) 264.6 MMBtu/hour natural gas-fired Reheat Furnace identified as unit 10, constructed in 1992, equipped with low NOx burners and a Selective Catalytic Reduction (SCR) Unit (CE-1), exhausting to Reheat Furnace Stack (S-1).

(2) One (1) 60-inch Hot Strip Mill consisting of unit 11 (Hot Rolling Mill), unit 12 (Strip Cooling Line) and unit 13 (Coiler), constructed in 1991, having a maximum capacity of 170 tons per hour.

(c) Fugitive dust and material handling processes

(1) Roadways and parking lots are paved.

(2) Material Handling

(A) EAF slag pit dig-out operations are controlled by a canopy hood exhausted to melt shop baghouse (CE-2) (modified in 2011) through stack S-2, with a COM.

(B) Slag and bulk materials, except steel scrap, are handled and stored in the melt shop building prior to use or sale and the PM/PM10 emissions are controlled by the melt baghouse (CE-2) (modified in 2011) and exhausted through stack S-2, with a COM.

(C) EAF slag cooling operations are conducted in the enclosed slag cooling area controlled by the melt shop baghouse (CE-2) (modified in 2011) and exhausted through stack S-2, with a COM.

A.4 Specifically Regulated Insignificant Activities

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

(a) Specifically regulated insignificant activities:

(1) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6.

(2) Cleaners and solvents characterized as follows: Having a vapor pressure equal to or less than 2 kPa; 15 mm Hg; or 0.3 psi measured at 38 degrees C (100°F).

(b) Other insignificant activities:

(1) Natural gas-fired combustion sources such as space heaters, process heaters, or boilers with heat input equal to or less than ten million (10,000,000) Btu per hour.

(2) Combustion source flame safety purging on startup.

(3) A petroleum fuel, other than gasoline, dispensing facility having a storage capacity less than or equal to 10,500 gallons, and dispensing 3,500 gallons per day or less.
(4) The following VOC and HAP storage containers: Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids.

(5) Refractory storage not requiring air pollution control equipment.

(6) Machining where an aqueous cutting coolant continuously floods the machining interface.

(7) The following equipment related to manufacturing activities not resulting in the emission of HAPS: brazing equipment, cutting torches, soldering equipment, welding equipment.

(8) Closed loop heating and cooling systems.

(9) Any of the following structural steel and bridge fabrication activities:
   (A) Cutting 200,000 linear feet or less of one inch (10) plate or equivalent.
   (B) Using 80 tons or less of welding consumables.

(10) Activities associated with the treatment of wastewater streams with an oil and grease content less than or equal to 1% by volume.

(11) Any operation using aqueous solutions containing less than 1% by weight of VOCs, excluding HAPS.

(12) Noncontact cooling tower systems with the following: Forced and induced draft cooling tower system not regulated under a NESHAP.

(13) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment.

(14) Heat exchanger cleaning and repair.

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

(16) Flue gas conditioning systems and associated chemicals such as the following: sodium sulfate, ammonia, and sulfur trioxide.

(17) Equipment used to collect any material that might be released during a malfunction, process upset, or spill cleanup, including catch tanks, temporary liquid separators, tanks, and fluid handling equipment.

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

(19) Emergency compression ignition generators as follows: Diesel generators not exceeding 1600 horsepower, constructed in 2004.

Under 40 CFR 63, Subpart ZZZZ, these generators are each considered an existing affected source.

(20) Filter or coalesce media change out.
(21) Mold release agents using low volatile products (vapor pressure less than or equal to 2 kiloPascals measured at 38 degrees C).

(22) A laboratory as defined in 326 IAC 2-7-1(21) (D).

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, T127-41023-00036, 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 or of permits issued pursuant to Title IV of the Clean Air Act and 326 IAC 21 (Acid Deposition Control).

(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, OAQor 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 T127-41023-00036 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, except for permits issued pursuant to Title IV of the Clean Air Act and 326 IAC 21 (Acid Deposition Control)

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

(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] [40 CFR 72]

(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) Pursuant to 326 IAC 2-7-11(b) and 326 IAC 2-7-12(a), administrative Part 70 operating permit amendments and permit modifications for purposes of the acid rain portion of a Part 70 permit shall be governed by regulations promulgated under Title IV of the Clean Air Act. [40 CFR 72]

(c) 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).

(d) 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.

(f) This condition does not apply to emission trades of SO₂ or NOₓ under 326 IAC 21.

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  Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) Pounds per Hour [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(e)(2), particulate emissions from any process not exempt under 326 IAC 6-3-1(b) or (c) which has a maximum process weight rate less than 100 pounds per hour and the methods in 326 IAC 6-3-2(b) through (d) do not apply shall not exceed 0.551 pounds per hour.

C.2  Opacity [326 IAC 5-1]

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

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

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

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

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

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

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

C.5  Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

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

Pursuant to 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations), fugitive particulate matter emissions shall be controlled according to the attached plan as in Attachment A. The provisions of 326 IAC 6-5 are not federally enforceable.

C.7  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.
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.
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).

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.9 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.10 Compliance Requirements [326 IAC 2-1.1-11]**  
The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements by issuing an order under 326 IAC 2-1.1-11. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

**Compliance Monitoring Requirements [326 IAC 2-7-5(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 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.13 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.14 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.15 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.16 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.17 Emission Statement [326 IAC 2-7-5(3)(C)(iii)|326 IAC 2-7-5(7)|326 IAC 2-7-19(c)|326 IAC 2-6]

(a) Pursuant to 326 IAC 2-6-3(a)(1) and 326 IAC 2-6-3(b)(1), the Permittee shall submit by July 1 an emission statement covering the previous calendar year as follows:

(1) starting in 2004 and every three (3) years thereafter, and

(2) any year not already required under (1) if the source emits volatile organic compounds or oxides of nitrogen into the ambient air at levels equal to or greater than twenty-five (25) tons during the previous calendar year.

(b) 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.18 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.19 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.

(e) If the Permittee is required to comply with the recordkeeping provisions of (d) in Section C - General Record Keeping Requirements for any “project” (as defined in 326 IAC 2-2-1 (oo) and/or 326 IAC 2-3-1 (jj)) at an existing emissions unit, and the project meets the following criteria, then the Permittee shall submit a report to IDEM, OAQ:

1. The annual emissions, in tons per year, from the project identified in (c)(1) in Section C- General Record Keeping Requirements exceed the baseline actual emissions, as documented and maintained under Section C- General Record Keeping Requirements (c)(1)(C)(i), by a significant amount, as defined in 326 IAC 2-2-1 (ww) and/or 326 IAC 2-3-1 (pp), for that regulated NSR pollutant, and

2. The emissions differ from the preconstruction projection as documented and maintained under Section C - General Record Keeping Requirements (c)(1)(C)(ii).

(f) The report for project at an existing emissions unit shall be submitted no later than sixty (60) days after the end of the year and contain the following:

1. The name, address, and telephone number of the major stationary source.

2. The annual emissions calculated in accordance with (d)(1) and (2) in Section C - General Record Keeping Requirements.

3. The emissions calculated under the actual-to-projected actual test stated in 326 IAC 2-2-2(d)(3) and/or 326 IAC 2-3-2(c)(3).

4. Any other information that the Permittee wishes to include in this report such as an explanation as to why the emissions differ from the preconstruction projection.

Reports required in this part 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

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

Stratospheric Ozone Protection

C.20 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:

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<tbody>
<tr>
<td>(a)</td>
<td>One (1) Melt Shop with a production capacity of 1.1 million tons per year of steel comprised of the following:</td>
</tr>
<tr>
<td>(1)</td>
<td>One (1) twin shell electric arc furnace (EAF), identified as unit 1, constructed in 1997, having a maximum capacity of 185 tons per hour, equipped with a direct shell evacuation (DSE) control system (&quot;fourth hole&quot; duct), an overhead roof exhaust system consisting of a canopy hood and charge area scavenging canopy hood (installed in 2016), an air gap for controlling carbon monoxide (CO) and volatile organic compound (VOC) emissions, low -NOx/oxyfuel burners and the melt shop baghouse CE-2 (modified in 2011) controlling PM/PM10 emissions, exhausting through stack S-2 with a continuous opacity monitor (COM).</td>
</tr>
<tr>
<td>(2)</td>
<td>One (1) ladle metallurgical station, identified as unit 2, constructed in 1997, having a maximum capacity of 185 tons per hour, exhausting to a side draft hood ducted to the melt shop baghouse CE-2 (modified in 2011) exhausting through stack S-2 with a COM.</td>
</tr>
<tr>
<td>(3)</td>
<td>One (1) continuous caster, identified as unit 3, constructed in 1997, having a maximum capacity of 185 tons per hour, with emissions from the hot metal handling and pouring operations exhausting to a canopy hood and ducted to the melt shop baghouse CE-2 (modified in 2011), then through stack S-2 with a COM. Steam from the slab cooling operations is vented through a steam vent in the roof of the Melt Shop Building.</td>
</tr>
<tr>
<td>(4)</td>
<td>One (1) Slag Air Cooling Bay Area, identified as unit 4, constructed in 1997, having a maximum capacity of 10 tons per hour, exhausting through the Slag Cooling Bays exhaust system to the melt shop baghouse CE-2 (modified in 2011) for controlling PM/PM10 emissions, exhausting through the melt shop stack S-2 with a COM.</td>
</tr>
<tr>
<td>(5)</td>
<td>Three (3) natural gas-fired, ladle preheat holding stations identified as units 5, 6 and 7, constructed in 1997, having a heat input capacity of 11.5 MMBtu per hour each, exhausting to canopy hoods ducted to the melt shop baghouse CE-2 (modified in 2011), exhausting through the melt shop stack S-2 with a COM.</td>
</tr>
<tr>
<td>(6)</td>
<td>One (1) natural gas-fired, ladle preheat holding station, identified as unit 8 constructed in 1997, having a heat input capacity of 6 MMBtu per hour. Emissions exhaust to canopy hoods ducted to the melt shop baghouse CE-2 (modified in 2011), then exhausting through stack S-2, with a COM.</td>
</tr>
<tr>
<td>(7)</td>
<td>One (1) natural gas-fired, Tundish dry out and preheat station identified as unit 9, constructed in 1997, having a heat input capacity of 3.5 MMBtu per hour. Emissions exhaust to canopy hoods ducted to the melt shop baghouse CE-2 (modified in 2011), then exhausting through stack S-2, with a COM.</td>
</tr>
<tr>
<td>(8)</td>
<td>One (1) CoJet System including oxy-fuel burners.</td>
</tr>
<tr>
<td>(9)</td>
<td>Oxy-fuel cutoff Torch at the exit end of the continuous caster.</td>
</tr>
</tbody>
</table>

(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 Particulate Matter (PM/PM-10) PSD BACT Limits [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3 and A 127-9642-00036, issued May 30, 2003 (an amendment to CP 127-2326-00036, issued February 24, 1992), the Permittee shall comply with the following Best Available Control Technology (BACT) requirements:

(a) PM/PM10 (where PM-10 includes filterable and condensable components) from the melt shop baghouse stack S-2 (exhausting EAF, LMF, Caster and natural gas combustion units) shall not exceed 0.0052 grains per dry standard cubic feet (gr/dscf) and 58.8 pounds per hour. The EAF shall be controlled by a direct shell evacuation (DSE) control system. The DSE and canopy hoods shall be ducted to the melt shop baghouse rated at least 1.0 million actual cubic feet per minute (MM acfm), demonstrating 100% capture.

(b) PM/PM-10 emissions from the one (1) continuous caster (unit 3) shall be captured by a canopy hood and exhausted to the melt shop baghouse.

(c) PM/PM-10 emissions from the one (1) ladle metallurgical station (unit 2) shall be captured by a side draft hood and exhausted to the melt shop baghouse.

(d) The fugitive PM/PM10 emissions during furnace operations shall be captured by the roof canopies or contained and collected within the melt shop building.

(e) Except for scrap steel, slag and raw material handling and storage shall be conducted inside the melt shop.

D.1.2 Nitrogen Oxides (NOx) PSD BACT Limits [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3 and A 127-9642-00036, issued May 30, 2003 (an amendment to CP 127-2326-00036, issued February 24, 1992), the Permittee shall comply with the following Best Available Control Technology (BACT) requirements:

(a) The NOx emissions from the melt shop operations (consisting of the EAF, LMF, Caster and natural gas combustion units) shall not exceed forty five hundredths (0.45) pound per ton of steel produced and 67.95 pounds per hour through the melt shop stack (S-2).

(b) The (3) Ladle Preheat/Holding Stations shall be limited to the use of low NOx natural gas fired burners. Each Ladle Preheat/Holding Station shall not exceed 11.5 MMBtu per hour heat input. Emissions from the three (3) stations shall be exhausted to the melt shop baghouse exhaust S-2.

(c) The (1) ladle/preheat station shall be limited to the use of low NOx natural gas fired burners and not exceed 6.0 MMBtu per hour heat input. Emissions from the one (1) ladle/preheat station shall be exhausted to the melt shop baghouse exhaust S-2.

(d) The one (1) Tundish, Dry out and Preheat Station shall be limited to the use of low NOx natural gas fired burners and not exceed 3.5 MMBtu per hour heat input. Emissions from the one (1) Tundish, Dry out and Preheat Station shall be exhausted to the melt shop baghouse exhaust S-2.

D.1.3 Sulfur Dioxide (SO2) PSD BACT Limits [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3 Best Available Control Technology (BACT) and A 127-9642-00036 issued May 30, 2003 (an amendment to CP 127-2326-00036, issued February 24, 1992), the SO2 emissions from the melt shop stack (S-2) (exhausting EAF, LMF, Caster and natural gas combustion units) shall not exceed 0.33 pounds per ton of steel produced and 49.83 pounds per hour from the baghouse stack.
D.1.4 Carbon Monoxide (CO) PSD BACT Limits [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3 and A 127-9642-00036, issued May 30, 2003 (an amendment to CP 127-2326-00036, issued February 24, 1992), the Permittee shall comply with the following Best Available Control Technology (BACT) requirements:

(a) The EAF shall be controlled by a direct shell evacuation (DSE) control system. The combustion elbow at the DSE shall be designed to provide 200% excess air for the oxidation of CO and other present gaseous pollutants.

(b) The total Melt Shop Stack (S-2) (exhausting EAF, LMF, Caster and natural gas combustion units) CO emissions shall not exceed 817 pounds per hour.

D.1.5 Carbon Monoxide (CO) [326 IAC 9-1]

Pursuant to A 127-9642-0003, issued on May 30, 2003 (an amendment to CP 127-2326-00036, issued February 24, 1992) and 326 IAC 9-1 (Carbon Monoxide Emission Limits), the CO concentrations shall be less than 20% of the maximum one (1) hour National Ambient Air Quality Standards (NAAQS) of 40 milligrams per cubic meter (40,000 ug/m3, 35 ppm).

D.1.6 Volatile Organic Compounds (VOC) BACT Limits [326 IAC 2-2-3][326 IAC 8-1-6]

Pursuant to 326 IAC 2-2-3 (PSD Control Technology Requirements) and 326 IAC 8-1-6 (New Facilities: General Reduction Requirements) and CP 127-2326-00036, issued on February 24, 1992, A 127-9642-00036, issued May 30, 2003, and PSD SSM 127-43932-00036, the Permittee shall comply with the following Best Available Control Technology (BACT) requirements:

(a) The volatile organic compound (VOC) emissions shall be controlled through a scrap management program to eliminate steel scrap with high residual oil content.

(b) The Permittee shall charge only clean scrap, consistent with the scrap management program.

(c) The combined VOC emissions from the Melt shop processes (consisting of EAF, LMF, Continuous Caster and natural gas units) shall not exceed 0.13 pounds per ton of steel produced from the common stack (S-2).

D.1.7 Visible Emissions PSD BACT Limits [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3 and A 127-9642-00036, issued May 30, 2003 (an amendment to CP 127-2326-00036, issued February 24, 1992), the Permittee shall comply with the following Best Available Control Technology (BACT) requirements:

(a) Visible emissions from any building opening as a result of EAF operation shall be limited to 3% opacity based on a six-minute average (24 readings taken in accordance with 40 CFR Part 60, Appendix A, Method 9).

(b) Visible emissions shall not be allowed (3% opacity) from any roof building opening as a result of the EAF dust handling system operation based on a six-minute average (24 readings taken in accordance with 40 CFR Part 60, Appendix A, Method 9).

D.1.8 Operational Parameters PSD BACT Limits [326 IAC 2-2-3][326 IAC 8-1-6]

Pursuant to 326 IAC 2-2-3 (PSD Control Technology Requirements) and 326 IAC 8-1-6 (New Facilities: General Reduction Requirements) and CP 127-2326-00036, issued on February 24, 1992, A 127-9642-00036, issued May 30, 2003, and PSD SSM 127-43932-00036, the Permittee shall comply with the revised SO2, VOC and NOx emissions from the melt shop by limiting the following throughput:
(a) The maximum short term metal production capacity from the melt shop shall not exceed 185 tons per hour, over a period of 24 operating hours rolling average, with compliance demonstrated at the end of each hour; and

(b) The maximum long term metal production capacity from the melt shop shall not exceed 1,100,000 tons per 12-consecutive month period with compliance demonstrated at the end of each month.

D.1.9 Hazardous Air Pollutants [326 IAC 20] [326 IAC 2-2]

(a) In order to render the requirements of 326 IAC 2-2 (PSD) not applicable and to assure this source is an area source of HAPs under Section 112 of the Clean Air Act (CAA), the Permittee shall comply with the following:

(1) Lead (Pb) emissions from the melt shop operations shall not exceed 9.94 tons per 12-consecutive month period with compliance determined at the end of each month.

Compliance with this limit combined with the potential to emit Pb from all other emission units at the source shall limit the Pb emissions from the entire source to less than ten (10) tons per twelve (12) consecutive month period and render this source an area source of HAP emissions under Section 112 of the Clean Air Act (CAA) and render the requirements of 326 IAC 2-2 (PSD) not applicable.

(b) In order to assure this source is an area source of HAPs under Section 112 of the Clean Air Act (CAA), the Permittee shall comply with the following:

(1) Chromium emissions from the melt shop operations shall not exceed 9.99 tons per 12-consecutive month period with compliance determined at the end of each month.

(2) Manganese emissions from the melt shop operations shall not exceed 9.19 tons per 12-consecutive month period with compliance determined at the end of each month.

(3) The combined Metallic HAP emissions (chromium, cobalt, lead, nickel, arsenic, cadmium, selenium, manganese, beryllium, mercury, and antimony compounds) from the melt shop operations shall not exceed 21.59 tons per 12-consecutive month period with compliance determined at the end of each month.

Compliance with the above HAP emission limits, combined with the potential to emit HAP from all other emission units at the source, shall limit HAP emissions from the entire source to less than ten (10) tons for any single HAP and twenty-five (25) tons for any combination of HAPS per twelve (12) consecutive month period and render this source an area source of HAP emissions under Section 112 of the Clean Air Act (CAA).

D.1.10 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan is required for the EAF (unit 1), ladle metallurgical facility (unit 2), exhaust duct system and melt shop baghouse (CE-2). Section B - Preventative Maintenance Plan contains the Permittee’s obligation with regard to the preventative maintenance plan required by this condition.
Compliance Determination Requirements [326 IAC 2-7-5(1)]

D.1.11 Testing Requirements [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Condition D.1.1 and D.1.7, the Permittee shall perform PM/PM10 testing on the Melt shop operations consisting of the EAF, LMF, castor and natural gas combustion units, stack (S-2), utilizing methods as approved by the Commissioner at least annually from the most recent valid compliance demonstration. PM10 includes filterable and condensable PM10.

Compliance with the visible emissions limit in Condition D.1.7, as determined using the Continuous Opacity Monitor (COM) at the Melt Shop Baghouse, shall serve to satisfy the annual PM and PM-10 testing requirement for Melt Shop Baghouse Stack (S-2), unless violations have occurred during the past 12 month period.

(b) In order to demonstrate compliance with Condition D.1.2, the Permittee shall perform NOx testing on the Melt shop operations consisting of the EAF, LMF, castor and natural gas combustion units, stack (S-2), utilizing methods as approved by the Commissioner at least annually from the most recent valid compliance demonstration.

(c) In order to demonstrate compliance with Condition D.1.3, the Permittee shall perform SO2 testing on the Melt shop operations consisting of the EAF, LMF, castor and natural gas combustion units, stack (S-2), utilizing methods as approved by the Commissioner at least annually from the most recent valid compliance demonstration.

(d) In order to demonstrate compliance with Condition D.1.4 and D.1.5, the Permittee shall perform CO testing on the Melt shop operations consisting of the EAF, LMF, castor and natural gas combustion units, stack (S-2), utilizing methods as approved by the Commissioner at least annually from the most recent valid compliance demonstration.

(e) In order to demonstrate compliance with Condition D.1.6, the Permittee shall perform VOC testing on the Melt shop operations consisting of the EAF, LMF, castor and natural gas combustion units; stack (S-2), utilizing methods as approved by the Commissioner at least annually from the most recent valid compliance demonstration.

The Permittee can demonstrate compliance with the melt shop VOC emission limit in Condition D.1.6(c) by calculating "Total Organic Compounds (TOC)" using "as carbon" calculation. The Permittee if so desired can subtract the amount of methane observed during the VOC stack test from the TOC to calculate the non-methane VOC emissions to demonstrate compliance with the VOC emissions limit in condition D.1.6 of the permit.

(f) Pursuant to A 127-9642-00036 issued May 30, 2003 (an amendment to CP 127-2326-00036, issued February 24, 1992), the testing on the melt shop exhaust to demonstrate compliance with limits contained in the Conditions D.1.1 through D.1.6, the Permittee shall meet the specifications for stack test protocol as specified in the applicable Method. The Permittee can with prior approval from IDEM, OAQ choose to conduct the stack test in a manner where each test run consists of up to 2 heats (where each heat lasts approximately one (1) hour) in the EAF at the melt shop.

(g) In order to demonstrate compliance with Condition D.1.9, the Permittee shall perform Lead, Chromium, Manganese, and Total Metallic HAP (chromium, cobalt, lead, nickel, arsenic, cadmium, selenium, manganese, beryllium, mercury, and antimony compounds) HAP calculations of the melt shop baghouse (CE-2) controlling emissions from the Melt shop operations consisting of the EAF, LMF, castor, and natural gas combustion units, stack (S-2) no later than 180 days after issuance of Part 70 Permit Renewal No. T127-41023-00036, utilizing methods as approved by the Commissioner. Analysis of the melt
shop baghouse (CE-2) baghouse dust will be performed for Lead, Chromium, Manganese, and Total Metallic HAP (chromium, cobalt, lead, nickel, arsenic, cadmium, selenium, manganese, beryllium, mercury, and antimony compounds) at least once per year. If analysis to comply with this section is performed more than once annually, the average of the analyses shall be used. The analyses will determine the percentage of Lead, Chromium, Manganese, and Total Metallic HAP (chromium, cobalt, lead, nickel, arsenic, cadmium, selenium, manganese, and antimony compounds) found in the dust. These percentages will be multiplied by the PM/PM10 melt shop baghouse (CE-2) emission rate determined by the testing outlined in section D.1.11(a) to calculate the metallic HAP emission rates. These calculations shall be repeated monthly.

Section C - Performance Testing contains the Permittee’s obligation with regards to the performance testing required by this condition.

(h) Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee’s obligation with regard to the performance testing required by this condition.

D.1.12 Particulate and Metallic HAP Control

(a) The melt shop exhaust duct system and baghouse (CE-2) shall be operated at all times when the melt shop is in operation.

(b) 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, replaced, blanked or isolated. 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.

D.1.13 CO and VOC Control

(a) The direct shell evacuation (DSE) system shall be in operation at all times the EAF is in operation in the melting and refining periods to control CO and VOC emissions.

D.1.14 Hazardous Air Pollutants

In order to demonstrate compliance with Condition D.1.9, the Permittee shall use the following equations:

(a) $\text{Lead} = \frac{(\text{MS}_{\text{PM/PM10}} \times \text{Pb\%} \times \text{MS}_{\text{HOURS}})}{2,000 \text{ lb/ton}}$

(b) $\text{Chromium} = \frac{(\text{MS}_{\text{PM/PM10}} \times \text{Cr\%} \times \text{MS}_{\text{HOURS}})}{2,000 \text{ lb/ton}}$

(c) $\text{Manganese} = \frac{(\text{MS}_{\text{PM/PM10}} \times \text{Mn\%} \times \text{MS}_{\text{HOURS}})}{2,000 \text{ lb/ton}}$

(d) $\text{Total Metallic HAPs} = \frac{(\text{MS}_{\text{PM/PM10}} \times \text{TMH\%} \times \text{MS}_{\text{HOURS}})}{2,000 \text{ lb/ton}}$

Where:

$\text{Lead} =$ Lead emissions from the melt shop in tons per month (tons/month)

$\text{Chromium} =$ Chromium emissions from the melt shop in tons per month (tons/month)

$\text{Manganese} =$ Manganese emissions from the melt shop in tons per month (tons/month)

$\text{Total Metallic HAP} =$ Total Metallic HAP emissions from the melt shop in tons per month (tons/month)
MSPM/PM\(_{10}\) = 14.82 pounds of PM/PM\(_{10}\) per hour or the value from the most recent valid stack test

Pb\% = 0.79\% or the value from the most recent valid analysis as determined in D.1.11(g)

Cr\% = 0.25\% or the value from the most recent valid analysis as determined in D.1.11(g)

Mn\% = 2.53\% or the value from the most recent valid analysis as determined in D.1.11(g)

TMH\% = 3.70\% or the value from the most recent valid analysis as determined in D.1.11(g)

**Hours of Operations Emissions:**

Hours each month = hours in each reporting month;

\[ \text{e.g., June (30 days x 24 hrs/day)} = 720 \text{ hrs/month} \]

MS\_HOURS = Hours of EAF operation for the reporting month.

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

**D.1.15 Visible Emission Observations and Continuous Opacity Monitoring [326 IAC 3-5]**

Pursuant to 326 IAC 3-5, the Permittee shall in order to demonstrate compliance with Condition D.1.7:

(a) shall calibrate, certify, operate, and maintain a continuous monitoring system to measure opacity from the Melt Shop stack S-2 in accordance with 326 IAC 3-5-2 and 3-5-3.

(b) In the event that a breakdown of a continuous opacity monitoring system occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem.

(c) Whenever a COMS is malfunctioning or is down for maintenance or repairs for a period of twenty-four (24) hours or more and a backup COMS is not online within twenty-four (24) hours of shutdown or malfunction of the primary COMS, the Permittee shall provide a certified opacity reader, who may be an employee of the Permittee or an independent contractor, to self-monitor the emissions from the emission unit stack.

(1) Visible emission readings shall be performed in accordance with 40 CFR 60, Appendix A, Method 9, for a minimum of five (5) consecutive six (6) minute averaging periods beginning not more than twenty-four (24) hours after the start of the malfunction or down time.

(2) Method 9 opacity readings shall be repeated for a minimum of five (5) consecutive six (6) minute averaging periods at least twice per day during daylight operations, with at least four (4) hours between each set of readings, until a COMS is online.

(3) Method 9 readings may be discontinued once a COMS is online.

(4) All of the opacity readings during this period shall be reported in the Quarterly deviation and Compliance Monitoring Reports.

(d) A furnace static pressure monitoring device is not required on any EAF equipped with a DSE system if observations of the melt shop opacity are performed by a certified visible emission observer as follows:
(1) Shop opacity observations shall be conducted at least once per day when the furnace is operating in the meltdown and refining period.

(2) Shop opacity shall be determined as the arithmetic average of 24 consecutive 15-second opacity observations of emissions from the shop taken in accordance with Method 9.

(3) Shop opacity shall be recorded for any point(s) where visible emissions are observed. Where it is possible to determine that a number of visible emission sites relate to only one incident of visible emissions, only, only one observation of shop opacity will be required.

(4) In this case, the shop opacity observations must be made for the site of highest opacity that directly relates to the cause (or location) of visible emissions observed during a single incident.

D.1.16 Parametric Monitoring [40 CFR 64]

The Permittee shall record the pressure drop across the baghouse used in conjunction with the melt shop operations, at least once per day when the melt shop is in operation and venting to the atmosphere. When, for any one reading, the pressure drop across the baghouse is outside of the normal range, the Permittee shall take a reasonable response. The normal range for this unit is a pressure drop between 1.0 and 9.0 inches of water unless a different upper-bound or lower-bound value for this range is determined during the latest stack test. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

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

D.1.17 Monitoring of Operations [40 CFR 60.274a][40 CFR Part 64]

Pursuant to CP 127-2326-00036, issued February 24, 1992 (as amended in A127-9642-00036, issued May 30, 2003) and 40 CFR 60.274a, the Permittee shall comply with the following monitoring requirements:

(a) Except as provided in paragraph D.1.13 (d), the Permittee shall check and record on a once-per-shift basis the furnace static pressure if direct shell evacuation (DSE) system is in use, and a furnace static pressure gauge is installed as described below and either:

(1) check and record the control system fan motor amperes and damper positions on a once-per-shift basis;

(2) install, calibrate, and maintain a monitoring device that continuously records the volumetric flow rate through each separately ducted hood; or

(3) install, calibrate, and maintain a monitoring device that continuously records the volumetric flow rate at the control device inlet and records damper positions on a once-per-shift basis.

The monitoring device(s) may be installed in any appropriate location in the exhaust duct such that reproducible flow rate monitoring will result. The flow rate monitoring device(s) shall have an accuracy of ± 10 percent over its normal operating range and shall be
calibrated according to the manufacturer's instructions. The IDEM, OAQ, or the U.S. EPA may require the Permittee to demonstrate the accuracy of the monitoring device(s) relative to Methods 1 and 2 of 40 CFR Part 60, Appendix A.

(b) A furnace static pressure monitoring device is not required on any EAF equipped with a DSE system if observations of shop opacity are performed by a certified visible emission observer as specified in Condition D.1.15 (d).

(c) When the Permittee of the EAF is required to demonstrate compliance with the standard in condition in D.1.7, either the control system fan motor amperes and all damper positions or the volumetric flow rate through each separately ducted hood shall be determined during all periods in which a hood is operated for the purpose of capturing emissions from the electric arc furnace.

(d) The Permittee shall perform monthly operational status inspections of the equipment that is important to the performance of the total capture system (i.e., pressure sensors, dampers, and damper switches). This inspection shall include observations of the physical appearance of the equipment (e.g., presence of holes in duct work or hoods, flow constrictions caused by dents or accumulated dust in duct work, and fan erosion). Any deficiencies shall be noted and proper maintenance performed.

(e) Except as provided in Condition D.1.13 (d), the Permittee shall install, calibrate, and maintain a monitoring device that allows the pressure in the free space inside the electric arc furnace to be monitored. The monitoring device may be installed in any appropriate location in the electric arc furnaces or DSE duct prior to the introduction of ambient air such that reproducible results will be obtained. The pressure monitoring device shall have an accuracy of $\pm 5$ millimeter of water gauge over its normal operating range and shall be calibrated according to the manufacturer's instructions.

(f) Except as provided in Condition D.1.13 (d), the pressure in the free space inside the electric arc furnace shall be determined during the melting and refining period(s) using the monitoring device required under item (d) of this condition. The pressure determined during the most recent demonstration of compliance shall be maintained at all times when the electric arc furnaces are operating in a meltdown and refining period.

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

D.1.18 Record Keeping Requirements [326 IAC 3-5-6],[40 CFR 60.276a]

(a) Pursuant to A127-16763-00036 and SSM 127-43932-00036, and to document the compliance status with Conditions D.1.1 through D.1.4, D.1.6, and D.1.7, the Permittee shall maintain a log of information necessary to document compliance with the BACT emission limits of the following:

(1) The throughput, natural gas usage, CO and opacity emission records for the melt shop.

(2) The inspection and maintenance of emission control equipment as set forth in the operation and maintenance program.

(3) All records of scrap purchases and evidence necessary to show compliance with the scrap management plan. This plan is included as Attachment B and C.

(4) These records shall be kept for five (5) year period and made available upon request.
(b) To document the compliance status with Condition D.1.9, the Permittee shall maintain records in accordance with (1) through (6) below. Records maintained for (1) through (6) shall be complete and sufficient to establish compliance with the emission limits established in Condition D.1.9.

1. Calendar dates covered in the compliance determination period.
5. Monthly records of the total metallic HAP emissions.
6. Monthly records of the total hours of operation of the melt shop.

(c) Pursuant to A127-9642-00036 and SSM 127-43932-00036 to document the compliance status with Condition D.1.8, the Permittee shall maintain records of the short term production capacity and long term production capacity for 60 months and submit upon request.

(d) To document the compliance status with operation condition D.1.15, the Permittee shall maintain records:

1. required under 326 IAC 3-5-6 at the source in a manner so that they may be inspected by the IDEM, OAQ, or the U.S. EPA., if so requested or required.
2. of visible emission readings at the melt shop stack and make available upon request to IDEM, OAQ, and the U.S. EPA.

(e) To document the compliance status with Condition D.1.16, the Permittee shall maintain records of the pressure drop in the baghouse during normal operation once per day. The Permittee shall include in its daily record when a reading is not taken and the reason for the lack of a pressure drop (e.g. the process did not operate that day).

(f) Pursuant to 40 CFR 60.276a, records of the measurements required in 40 CFR 60.274a, as also required in condition D.1.17, must be retained for at least 5 years following the date of the measurement.

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

D.1.19 Reporting Requirements [326 IAC 3-5-7][40 CFR 60.276a]

(a) Pursuant to A127-16763-00036 and SSM 127-43932-00036, the Permittee shall submit a quarterly summary of the records required under D.1.18(a). These reports shall be submitted not later than thirty (30) days after the end of the quarter being reported. 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).

(b) A quarterly summary of the information to document the compliance status with Condition D.1.9 shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C.19- General Reporting Requirements contains the Permittee's obligations 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).

(c) The Permittee shall submit a quarterly excess emissions report, if applicable, based on the continuous opacity monitor (COM) data, pursuant to 326 IAC 3-5-7. These reports shall be submitted not later than thirty (30) days after the end of the quarter being reported. 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).

(d) Section C - General Record Keeping Requirements contains the Permittee's obligation with regard to the records required to be maintained by this condition.
SECTION D.2  EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(b) Hot Strip Mill Operations with a maximum capacity of 1.16 MM ton per year steel production, comprised of the following:

(1) One (1) 264.6 MMBtu/hour natural gas fired Reheat Furnace identified as unit 10, constructed in 1992, equipped with low NOx burners and a Selective Catalytic Reduction (SCR) Unit (CE-1), exhausting to Reheat Furnace Stack (S-1).

(2) One (1) 60-inch Hot Strip Mill consisting of unit 11 (Hot Rolling Mill), unit 12 (Strip Cooling Line) and unit 13 (Coiler), constructed in 1991, having a maximum capacity of 170 tons per hour.

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

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

D.2.1 Particulate Matter (PM/PM10) PSD BACT Limits [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3 and CP 127-2326-0003, issued February 24, 1992, (as amended in A127-9642-00036, issued May 30, 2003), the Permittee shall comply with the following Best Available Control Technology (BACT) requirements:

(a) The PM/PM10 (where PM10 includes filterable and condensable components) emissions from the Slab Reheat Furnace shall not exceed 16.3 pounds per MMscf of natural gas burned and 4.2 pounds per hour.

(b) The PM and PM-10 from the hot strip mill shall be limited by using recirculated high pressure water descalers and water cooling sprays. Any particulate matter, in solid or liquid form shall be collected in flumes and transported to the scale pit.

D.2.2 Nitrogen Oxides (NOx) PSD BACT Limits [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3 and A127-9642-00036, issued May 30, 2003 (an amendment to CP 127-2326-00036, issued February 24, 1992), the Permittee shall comply with the following Best Available Control Technology (BACT) requirements:

(a) Only natural gas shall be burned in the slab reheat furnace and the heat input shall not exceed 264.6 MMBtu per hour.

(b) The NOx emissions from Slab Reheat Furnace shall be controlled by NOx control technology consisting of low NOx burners and a Selective Catalytic Reduction (SCR) Unit (CE-1).

(c) NOx emissions shall not exceed 77.06 lbs/MMscf (0.077 lb/ MMBtu) of natural gas burned and 18.88 pounds per hour on a three (3) operating hour average basis except during periods of startup and shutdown.

(d) The following shall apply during periods of startup and shutdown:
(1) Startup is defined as the duration from the first firing of burners in the Reheat Furnace to the time when the exhaust gas temperature is within the optimum ranges of the operation of the control device for NOx emissions.

(2) Shutdown is defined as the duration from first curtailment of fuel input to the Reheat Furnace burners with the intent of full shutdown to the final complete stop of fuel input and complete cessation of combustion in the Reheat Furnace.

(3) The Reheat Furnace shall be operated in a manner consistent with good air pollution control and work practices to minimize emissions during startup and shutdown by operating in accordance with written procedures developed and maintained by the Permittee, which shall include at a minimum the following measures:

(A) Review of operating parameters of the unit during startup, or shutdown as necessary to make adjustments to reduce or eliminate excess emissions;

(B) Operate emission control equipment as soon as the Reheat Furnace exhaust gas temperature reaches the lower value of the optimum temperature range for the control equipment. This operation shall continue until the time the Reheat Furnace shutdown sequence is initiated with the intention of shutdown of the unit; and

(C) Implementation of inspection and repair procedures for the Reheat Furnace and the emissions control equipment prior to attempting startup to ensure proper operation.

D.2.3 Carbon Monoxide (CO) PSD BACT Limits [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3 Best Available Control Technology (BACT) and A127-9600-00036 (an amendment of CP 127-2326-00036 issued February 24, 1992), the CO emissions from the Reheat Furnace shall not exceed 40 lb/MMscf of natural gas burned and 8.5 pounds per hour.

D.2.4 Volatile Organic Compounds (VOC) PSD BACT Limits [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3 Best Available Control Technology (BACT) and CP 127-2326-00036 issued February 24, 1992 (as amended in A127-9642-00036), the VOC emissions from the Reheat Furnace shall not exceed 1.7 lb/MMscf of natural gas burned and 0.4 pounds per hour.

D.2.5 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan is required for the Reheat Furnace (unit 10) and the SCR unit (CE-1). Section B - Preventative Maintenance Plan contains the Permittee’s obligation with regard to the preventative maintenance plan required by this condition.

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

D.2.6 Testing Requirements [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Condition D.2.1, the Permittee shall perform PM and PM10 testing on the Reheat Furnace Stack (S-1), utilizing methods as approved by the Commissioner at least annually from the most recent valid compliance demonstration. PM10 includes filterable and condensible PM10.

(b) In order to demonstrate compliance with Condition D.2.3, the Permittee shall perform CO testing on the Reheat Furnace Stack (S-1), utilizing methods as approved by the Commissioner at least annually from the most recent valid compliance demonstration.
In order to demonstrate compliance with Condition D.2.4, the Permittee shall perform VOC testing on the Reheat Furnace Stack (S-1), utilizing methods as approved by the Commissioner at least annually from the most recent valid compliance demonstration.

Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C -Performance Testing contains the Permittee’s obligation with regard to the performance testing required by this condition.

D.2.7 NOx Emissions Control PSD BACT [326 IAC 2-2-3][40 CFR Part 64]

Pursuant to 326 IAC 2-2-3 PSD BACT, the selective Catalytic Reduction (SCR) unit (CE-1) shall be operated at all times when the Reheat Furnace (unit 10) is in operation.

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

D.2.8 Continuous Emission Monitoring [326 IAC 3-5][40 CFR Part 64]

(a) Pursuant to A127-9642-00036, issued May 30, 2003, no later than twelve (12) months of issuance of A127-9642-00036, the Permittee shall calibrate, certify, operate and maintain a Continuous Emissions Monitoring System (CEMS) for NOx for the Reheat Furnace stack in accordance with 326 IAC 3-5-2 through 326 IAC 3-5-7.

(1) The CEMS shall measure NOx emissions rates in pounds per hour to demonstrate compliance with the limitations established in the BACT analysis and set forth in the permit when the reheat furnace is in operation. The Permittee shall measure the amount of natural gas consumed in terms of million cubic feet per hour at the reheat furnace during the operation. To demonstrate compliance with the NOx limits, the source shall take an average of the pounds of NOx per million cubic feet of natural gas used and pounds of NOx per hour over a three (3) operating hour period. The source shall maintain records of the emissions in pounds of NOx per million cubic feet of natural gas and pounds of NOx per hour.

(2) The Permittee shall determine compliance with Condition D.2.2, using data from the NOx CEMS, the fuel flow meter, and Method 19 calculations.

(3) The Permittee submitted to IDEM, OAQ a complete written Monitoring Plan on September 1, 2004.

(4) The Permittee shall record the output of the system and shall perform the required record keeping, pursuant to 326 IAC 3-5-6, and reporting, pursuant to 326 IAC 3-5-7.

(b) The Permittee shall install, calibrate, certify and operate continuous emissions monitors for carbon dioxide or oxygen at each location where nitrogen oxide emissions are monitored.

(b) The Permittee shall submit the records of excess NOx emissions (defined in 326 IAC 3-5-7 and 40 CFR Part 60.7) from the continuous emissions monitoring system on a quarterly basis. These reports shall be submitted no later than thirty (30) calendar days following the end of each quarter. Section C- General Reporting Requirements of this permit contains the Permittee’s obligation with regard to the reporting required by this condition.

(d) In the event that a breakdown of a continuous emission monitoring system occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem.
(e) Whenever a continuous emission monitor other than an opacity monitor is malfunctioning or will be down for calibration, maintenance, or repairs for a period of twenty-four (24) hours or more, a calibrated backup CEMS shall be brought online within twenty-four (24) hours of shutdown of the primary CEMS, and shall be operated until such time as the primary CEMS is back in operation.

(f) Nothing in this permit shall excuse the Permittee from complying with the requirements to operate a continuous opacity monitoring system pursuant to 326 IAC 3-5, and 40 CFR 60 and/or 40 CFR 63.

D.2.9 NOx Monitoring System Downtime [326 IAC 2-7-6][326 IAC 2-7-5(3)]

Whenever the NOx continuous emissions monitoring system is malfunctioning or down for repairs or adjustments, the Permittee shall use the following method to record information related to NOx emissions:

(a) Monitoring of the SCR operating parameters of the process NOx emissions at the outlet of SCR using the process control NOx analyzer shall be implemented. The Permittee shall record the NOx emissions using the NOx analyzer at least four (4) times per hour until the primary CEMS or backup CEMS is brought online and is functioning properly. The Preventive Maintenance Plan for SCR shall contain troubleshooting contingency and corrective actions for when the readings are outside of the normal range for any one reading during downtime of the NOx CEMS.

(b) The instrument used for determining the NOx emissions at the outlet 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.

Permittee shall take reasonable response steps. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition.

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

D.2.10 Record Keeping Requirements

(a) To document the compliance status with Conditions D.2.1 through D.2.4, the Permittee shall maintain a log of information necessary to document compliance with the BACT emission limits of the following:

(1) The throughput and natural gas usage for the strip mill reheat furnace.

(2) The inspection and maintenance of emission control equipment as set forth in the operation and maintenance program.

(3) These records shall be kept for a five (5) year period and made available upon request to the Office of Air Quality.

(b) To document the compliance status with Condition D.2.9, the Permittee shall maintain records of the output of the system, and perform record keeping pursuant to 326 IAC 3-5-6.

(c) When the NOx CEMS is inoperable, the Permittee shall keep records of the process control NOx analyzer output in order to demonstrate compliance.
(d) Section C- General Record Keeping Requirements contains the Permittee's obligation with regard to the records required by this condition.

D.2.11 Reporting Requirements

(a) The Permittee shall submit a quarterly summary of the records required under D.2.11 (a). These reports shall be submitted not later than thirty (30) days after the end of the quarter being reported.

(b) The Permittee shall submit the records of excess NOx emissions (defined in 326 IAC 3-5-7 and 40 CFR Part 60.7) from the continuous emissions monitoring system or process control NOx analyzer when the CEMs is inoperable on a quarterly basis. These reports shall be submitted not later than thirty (30) days after the end of the quarter being reported.

(c) 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

<table>
<thead>
<tr>
<th>Emissions Unit Description:</th>
</tr>
</thead>
<tbody>
<tr>
<td>(c) Fugitive dust and material handling processes</td>
</tr>
<tr>
<td>(1) Roadways and parking lots are paved.</td>
</tr>
<tr>
<td>(2) Material Handling</td>
</tr>
<tr>
<td>(A) EAF slag pit dig out operations are controlled by a canopy hood exhausted to melt shop baghouse (CE-2) (modified in 2011) through stack S-2, with a COM.</td>
</tr>
<tr>
<td>(B) Slag and materials, except steel scrap are handled in the melt shop building and the PM/PM10 emissions are controlled by the melt shop baghouse (CE-2) (modified in 2011) and exhaust through stack S-2, with a COM.</td>
</tr>
<tr>
<td>(C) Slag and materials, exclusive of steel scrap are stored within the enclosed building and the PM/PM10 emissions are controlled by the melt shop baghouse (CE-2) (modified in 2011) and exhaust through stack S-2, with a COM.</td>
</tr>
<tr>
<td>(D) EAF slag cooling operations are conducted in the enclosed slag cooling area controlled by the melt shop baghouse (CE-2) (modified in 2011) and exhausted through stack S-2 with a COM.</td>
</tr>
</tbody>
</table>

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

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

**D.3.1 Particulate Matter (PM/PM10) Fugitive Dust Plan PSD BACT Limits [326 IAC 2-2-3]**

Pursuant to 326 IAC 2-2-3 and CP 127-2326-0003, issued February 24, 1992, the Permittee shall implement a fugitive dust control plan (Attachment A to the permit) to limit fugitive dust emissions that shall comply with the following Best Available Control Technology (BACT) requirements:

<table>
<thead>
<tr>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Reduce uncontrolled paved road and parking lot fugitive dust emissions by at least ninety percent (90%).</td>
</tr>
<tr>
<td>(b) Treat plant roads as urban roads and limit the silt to 17 pounds per mile of particulate matter less than 75 microns in diameter.</td>
</tr>
<tr>
<td>(c) EAF slag pit dig out operations, located within the slag handling canopy hood shall not exceed three percent (3%) opacity based on a six-minute average (24 readings taken in accordance with 40 CFR Part 60, Appendix A, Method 9).</td>
</tr>
<tr>
<td>(d) Ensure controlled slag processing and storage pile emissions by conducting slag dumping and slag load out operations in an enclosed building exhausted to the melt shop baghouse stack S-2.</td>
</tr>
<tr>
<td>(e) Ensure controlled storage pile emissions by storing excess slag in an enclosed building exhausted to the melt shop baghouse stack S-2.</td>
</tr>
</tbody>
</table>
D.3.2 Particulate Matter (PM/PM10) PSD BACT Limits [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3 Best Available Control Technology (BACT) and CP-127-2326-00036, issued on February 24, 1992, the skull or steel scrap not mechanically reduced in size shall be torch/cut within an enclosed building using the melt shop baghouse (CE-2) as the control device.

D.3.3 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.

D.3.4 Fugitive Dust Particulate Matter (PM/PM10) Emission Limitations [326 IAC 6-5]

Pursuant to A127-9642-00036, issued May 30, 2003 and 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations), the fugitive particulate matter emissions shall be controlled according to the plan submitted on December 10, 1991, Attachment A.

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

D.3.5 Particulate Matter (PM/PM10) Fugitive Dust Control Plan PSD BACT [326 IAC 2-2-3(2)]

Pursuant to CP-127-2326-00036, issued on February 24, 1992 and 326 IAC 2-2-3(2) PSD BACT Fugitive Dust Control Measures in the fugitive dust plan shall be followed to ensure control of the fugitive emissions at the source.
SECTION D.4  EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(a) Specifically regulated insignificant activities

(1) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6.

(2) Cleaners and solvents characterized as follows: Having a vapor pressure equal to or less than 2 kPa; 15 mm Hg; or 0.3 psi measured at 38 degrees C (100°F).

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

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

D.4.1 Volatile Organic Compounds (VOC) Cold Cleaner Operations [326 IAC 8-3-2]

(a) Pursuant to 326 IAC 8-3-2 (Cold Cleaner Degreaser Control Equipment and Operating Requirements), the Permittee shall:

(1) Equip the degreaser with a cover.

(2) Equip the degreaser with a device for draining cleaned parts.

(3) Close the degreaser cover whenever parts are not being handled in the degreaser.

(4) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;

(5) Provide a permanent, conspicuous label that lists the operating requirements in subdivisions (3), (4), (6), and (7).

(6) Store waste solvent only in closed containers.

(7) Prohibit the disposal or transfer of waste solvent in such a manner that could allow greater than twenty percent (20%) of the waste solvent (by weight) to evaporate into the atmosphere.

(b) Ensure the following additional control equipment and operating requirements are met:

(1) Equip the degreaser with one (1) of the following control devices if the solvent is heated to a temperature of greater than forty-eight and nine-tenths (48.9) degrees Celsius (one hundred twenty (120) degrees Fahrenheit):

(A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.

(B) A water cover when solvent used is insoluble in, and heavier than, water.

(C) A refrigerated chiller.

(D) Carbon adsorption.

(E) An alternative system of demonstrated equivalent or better control as those outlined in clauses (A) through (D) that is approved by the department. An alternative system shall be submitted to the U.S. EPA as a SIP revision.
(2) Ensure the degreaser cover is designed so that it can be easily operated with one (1) hand if the solvent is agitated or heated.

(3) If used, solvent spray:
   (A) must be a solid, fluid stream; and
   (B) shall be applied at a pressure that does not cause excessive splashing.

D.4.2 Volatile Organic Compounds (VOC) Material Requirements for Cold Cleaning Degreasers

[326 IAC 8-3-8]

Pursuant to 326 IAC 8-3-8 (Material Requirements for Cold Cleaner Degreasers), the Permittee shall not operate a cold cleaning degreaser with a solvent that has a VOC composite partial vapor pressure that exceeds one (1) millimeter of mercury (nineteen-thousandths (0.019) pound per square inch) measured at twenty (20) degrees Celsius (sixty-eight (68) degrees Fahrenheit).

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

D.4.3 Record Keeping Requirements [326 IAC 8-3-8]

(a) To document the compliance status with Condition D.4.2, the Permittee shall maintain the following records for each purchase of solvent used in the cold cleaner degreasing operations. These records shall be retained on-site or accessible electronically for the most recent three (3) year period and shall be reasonably accessible for an additional two (2) year period.

   (1) The name and address of the solvent supplier.

   (2) The date of purchase.

   (3) The type of solvent purchased.

   (4) The total volume of the solvent purchased.

   (5) The true vapor pressure of the solvent measured in millimeters of mercury at twenty (20) degrees Celsius (sixty-eight (68) degrees Fahrenheit).

(b) Section C - General Record Keeping Requirements contains the Permittee’s obligation with regard to the records required to be maintained by this condition.
SECTION E.1 NSPS

Emissions Unit Description:

(1) One (1) twin shell electric arc furnace (EAF), identified as unit 1, constructed in 1997, having a maximum capacity of 185 tons per hour, equipped with a direct shell evacuation (DSE) control system ("fourth hole" duct), an overhead roof exhaust system consisting of a canopy hood and charge area scavenging canopy hood (installed in 2016), an air gap for controlling carbon monoxide (CO) and volatile organic compounds (VOC) emissions, low-NOx/oxyfuel burners and the melt shop baghouse CE-2 (modified in 2011) controlling PM/PM10 emissions, exhausting through stack S-2 with a continuous opacity monitor (COM).

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

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


(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 Aaa.

(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


The Permittee shall comply with the following provisions of 40 CFR Part 60, Subpart Aaa (included as Attachment D to the operating permit), which are incorporated by reference as 326 IAC 12, for the emissions units listed above:

(1) 40 CFR 60.270a(a), (b)
(2) 40 CFR 60.271a
(3) 40 CFR 60.272a(a)(1) through (a)(3), (b)
(4) 40 CFR 60.273a(a), (b), (c), (d)
(5) 40 CFR 60.274a(a)(1), (a)(2), (b), (c), (d), (e), (h)(1) through (h)(4)
(6) 40 CFR 60.275a(a), (b)(1), (b)(2), (c), (d), (e)(1) through (e)(4), (f), (g), (h)(1) through (h)(3)(i), (j)
(7) 40 CFR 60.276a(a), (b), (c), (d), (e), (f)(1) through (f)(22), (g), (h)(1) through (h)(3)
SECTION E.2       NESHAP

Emissions Unit Description:

(1) One (1) twin shell electric arc furnace (EAF), identified as unit 1, constructed in 1997, a maximum capacity of 185 tons per hour, equipped with a direct shell evacuation (DSE) control system ("fourth hole" duct), an overhead roof exhaust system consisting of a canopy hood and charge area scavenging canopy hood (installed in 2016), an air gap for controlling carbon monoxide (CO) and volatile organic compounds (VOC), low -NOx/oxyfuel burners and the melt shop baghouse CE-2 (modified in 2011) controlling PM/PM10 emissions, exhausting through stack S-2 with a continuous opacity monitor (COM).

(The information describing the process contained in this facility 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)]


(а) 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 emissions unit(s) listed above, except as otherwise specified in 40 CFR Part 63, Subpart YYYY.

(b) Pursuant to 40 CFR 63.4, 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.2.2 National Emission Standards for Hazardous Air Pollutants for Area Sources: Electric Arc Furnace Steelmaking Facilities NESHAP [40 CFR Part 63, Subpart YYYY]

The Permittee shall comply with the following provisions of 40 CFR Part 63, Subpart YYYY, (included as Attachment E to the operating permit), for the emission unit(s) listed above:

(1) 40 CFR 63.10680(a), (b)(1), (c), (d)
(2) 40 CFR 63.10681(a), (b)
(3) 40 CFR 63.10685(a)(1)(i) through (a)(1)(iv), (a)(2), (c)(3)
(4) 40 CFR 63.10686(a), (b)(1), (b)(2), (d)(1)(i) through (d)(1)(v), (d)(2) through (d)(6), (e)
(5) 40 CFR 63.10690(a), (b)(1) through (b)(6)
(6) 40 CFR 63.10691(a), (b), (c)(1) through (c)(6)
(7) 40 CFR 63.10692
(8) Table 1
SECTION E.3  NESHAP

Emissions Unit Description:

(b) Other insignificant activities:

(19) Emergency compression ignition generators as follows: Diesel generators not exceeding 1600 horsepower, constructed in 2004.

(The information describing the process contained in this facility 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)]


(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 emissions unit(s) listed above, except as otherwise specified in 40 CFR Part 63, Subpart ZZZZ.

(b) Pursuant to 40 CFR 63.4, 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


The Permittee shall comply with the following provisions of 40 CFR Part 63, Subpart ZZZZ, (included as Attachment F to the operating permit), for the emission unit(s) listed above:

(1) 40 CFR 63.6580
(2) 40 CFR 63.6585(a), (c)
(3) 40 CFR 63.6590(a)(1)(iii)
(4) 40 CFR 63.6595(a)(1)
(5) 40 CFR 63.6603(a)
(6) 40 CFR 63.6604(b)
(7) 40 CFR 63.6605(a), (b)
(8) 40 CFR 63.6620(h)
(9) 40 CFR 63.6640(a), (e), (f)(1), (f)(2)(i), (f)(4)
(10) 40 CFR 63.6650(f)
(11) 40 CFR 63.6655(f)
(12) 40 CFR 63.6660
(13) 40 CFR 63.6665
(14) 40 CFR 63.6670
(15) 40 CFR 63.6675
(16) Table 2d
(17) Table 4
INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
PART 70 OPERATING PERMIT
CERTIFICATION

Source Name: NLMK Indiana
Source Address: 6500 South Boundary Road, Portage, Indiana 46368
Part 70 Permit No.: T127-41023-00036

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:
PART 70 OPERATING PERMIT
EMERGENCY OCCURRENCE REPORT

Source Name: NLMK Indiana
Source Address: 6500 South Boundary Road, Portage, Indiana 46368
Part 70 Permit No.: T127-41023-00036

This form consists of 2 pages

☐ 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

<table>
<thead>
<tr>
<th>Date/Time Emergency started:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Date/Time Emergency was corrected:</td>
<td></td>
</tr>
<tr>
<td>Was the facility being properly operated at the time of the emergency?</td>
<td>Y</td>
</tr>
<tr>
<td>Type of Pollutants Emitted: TSP, PM-10, SO₂, VOC, NOₓ, CO, Pb, other:</td>
<td></td>
</tr>
<tr>
<td>Estimated amount of pollutant(s) emitted during emergency:</td>
<td></td>
</tr>
<tr>
<td>Describe the steps taken to mitigate the problem:</td>
<td></td>
</tr>
<tr>
<td>Describe the corrective actions/response steps taken:</td>
<td></td>
</tr>
<tr>
<td>Describe the measures taken to minimize emissions:</td>
<td></td>
</tr>
</tbody>
</table>

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: NLMK Indiana
Source Address: 6500 South Boundary Road, Portage, Indiana 46368
Part 70 Permit No.: T127-41023-00036
Facility: Reheat Furnace, Ladle Drying Station, East & West Ladle Preheat Stations, Ladle Holding Stations and Tundish Drying Station
Parameter: MMBtu/hr of Natural Gas
Limit: 264.6 MMBtu/hr, 11.5 MMBtu/hr, 11.5 MMBtu/hr, 11.5 MMBtu/hr, 6.0 MMBtu/hr and 3.5 MMBtu/hr, respectively.

QUARTER: _________ YEAR: _________

☐ No deviation occurred in this month.
☐ Deviation/s occurred in this month.
   Deviation has been reported on: ___________________

Submitted by: _____________________________________________________
Title / Position: ____________________________________________________
Signature: ________________________________________________________
Date: ____________________________________________________________
Phone: ____________________________________________________________

<table>
<thead>
<tr>
<th>Month</th>
<th>Hot Strip Mill Reheat Furnace</th>
<th>Ladle Drying Stations</th>
<th>East Ladle Preheat Station</th>
<th>West Ladle Preheat Station</th>
<th>Ladle Holding Station</th>
<th>Tundish Drying Station</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Monthly Total (Mcuft)</td>
<td>Daily Maximum (Mcuft)</td>
<td>Monthly Total (Mcuft)</td>
<td>Daily Maximum (Mcuft)</td>
<td>Monthly Total (Mcuft)</td>
<td>Daily Maximum (Mcuft)</td>
</tr>
<tr>
<td></td>
<td>Qtr. Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>YTD Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE AND ENFORCEMENT BRANCH  

Part 70 Quarterly Report

Source Name: NLMK Indiana  
Source Address: 6500 South Boundary Road, Portage, Indiana 46368  
Part 70 Permit No.: T127-41023-00036  
Facility: Electric Arc Furnace, LMF, Continuous Caster and Hot Strip Mill  
Parameter: Metallic HAP Emissions tons/year  
Limit: The combined Metallic HAP emissions (chromium, cobalt, lead, nickel, arsenic, cadmium, selenium, manganese, beryllium, mercury, and antimony compounds) from the melt shop operations shall not exceed 21.59 tons per 12-consecutive month period with compliance determined at the end of each month.

<table>
<thead>
<tr>
<th>Month</th>
<th>Column 1</th>
<th>Column 2</th>
<th>Column 1 + Column 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>This Month</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Previous 11 Months</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 Month Total</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

☐ 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:** NLMK Indiana  
**Source Address:** 6500 South Boundary Road, Portage, Indiana 46368  
**Part 70 Permit No.:** T127-41023-00036  
**Facility:** Electric Arc Furnace, LMF, Continuous Caster and Hot Strip Mill  
**Parameter:** Chromium HAP Emissions tons/year  
**Limit:** Chromium emissions from the melt shop operations shall not exceed 9.99 tons per 12-consecutive month period with compliance determined at the end of each month.

<table>
<thead>
<tr>
<th>QUARTER:</th>
<th>YEAR:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Month</th>
<th>Column 1</th>
<th>Column 2</th>
<th>Column 1 + Column 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>This Month</td>
<td>Previous 11 Months</td>
<td>12 Month Total</td>
</tr>
</tbody>
</table>

- [ ] 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: NLMK Indiana  
Source Address: 6500 South Boundary Road, Portage, Indiana 46368  
Part 70 Permit No.: T127-41023-00036  
Facility: Electric Arc Furnace, LMF, Continuous Caster and Hot Strip Mill  
Parameter: Manganese HAP Emissions tons/year  
Limit: Manganese emissions from the melt shop operations shall not exceed 9.19 tons per 12-consecutive month period with compliance determined at the end of each month.

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Year</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Month</th>
<th>Column 1</th>
<th>Column 2</th>
<th>Column 1 + Column 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>This Month</td>
<td>Previous 11 Months</td>
<td>12 Month Total</td>
<td></td>
</tr>
</tbody>
</table>

- [ ] 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: NLMK Indiana
Source Address: 6500 South Boundary Road, Portage, Indiana 46368
Part 70 Permit No.: T127-41023-00036
Facility: Electric Arc Furnace, LMF, Continuous Caster and Hot Strip Mill
Parameter: Lead Emissions tons/year
Limit: Lead (Pb) emissions from the melt shop operations shall not exceed 9.94 tons per 12-consecutive month period with compliance determined at the end of each month.

<table>
<thead>
<tr>
<th>Month</th>
<th>Column 1</th>
<th>Column 2</th>
<th>Column 1 + Column 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>This Month</td>
<td>Previous 11 Months</td>
<td>12 Month Total</td>
</tr>
</tbody>
</table>

☐ 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: NLMK Indiana
Source Address: 6500 South Boundary Road, Portage, Indiana 46368
Part 70 Permit No.: T127-41023-00036
Facility: Electric Arc Furnace, LMF, Continuous Caster and Hot Strip Mill
Parameter: Tons of Throughput per year
Limit: 1,100,000 tons per 12-consecutive month period with compliance demonstrated at the end of each month.

QUARTER: _________ YEAR: _________

<table>
<thead>
<tr>
<th>Month</th>
<th>1 Electric Arc Furnace</th>
<th>1 Ladle Metallurgy Furnace</th>
<th>1 Continuous Caster</th>
<th>1 Hot Strip Mill</th>
<th>Operating Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Monthly Total (Tons)</td>
<td>Monthly Total (Mcuft)</td>
<td>Monthly Total (Tons)</td>
<td>Monthly Total (Tons)</td>
<td>Monthly Total (Tons)</td>
</tr>
</tbody>
</table>

Qtr. Total

YTD 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:** NLMK Indiana  
**Source Address:** 6500 South Boundary Road, Portage, Indiana 46368  
**Part 70 Permit No.:** T127-41023-00036  

**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

<table>
<thead>
<tr>
<th>Permit Requirement (specify permit condition #)</th>
<th>Date of Deviation:</th>
<th>Duration of Deviation:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Deviations:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Probable Cause of Deviation:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Response Steps Taken:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
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<tr>
<th>Permit Requirement (specify permit condition #)</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Number of Deviations:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Probable Cause of Deviation:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Response Steps Taken:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Permit Requirement (specify permit condition #)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td>----</td>
<td></td>
</tr>
<tr>
<td>Date of Deviation:</td>
<td>Duration of Deviation:</td>
<td></td>
</tr>
<tr>
<td>Number of Deviations:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Probable Cause of Deviation:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Response Steps Taken:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Permit Requirement (specify permit condition #)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
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<td></td>
</tr>
<tr>
<td>Probable Cause of Deviation:</td>
<td></td>
</tr>
<tr>
<td>Response Steps Taken:</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Permit Requirement (specify permit condition #)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Date of Deviation:</td>
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</tr>
<tr>
<td>Number of Deviations:</td>
<td></td>
</tr>
<tr>
<td>Probable Cause of Deviation:</td>
<td></td>
</tr>
<tr>
<td>Response Steps Taken:</td>
<td></td>
</tr>
</tbody>
</table>

Form Completed by: _______________________________________________________
Title / Position: ___________________________________________________________
Date: ___________________________________________________________________
Phone: _________________________________________________________________
Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a PSD/Part 70 Significant Source Modification and Significant Permit Modification

Source Description and Location

| Source Name: | NLMK Indiana |
| Source Location: | 6500 South Boundary Road, Portage, IN 46368 |
| County: | Porter (Westchester) |
| SIC Code: | 3312 (Steel Works, Blast Furnaces (Including Coke Ovens), and Rolling Mills) |
| Operation Permit No.: | T127-41023-00036 |
| Operation Permit Issuance Date: | May 6, 2021 |
| PSD/Significant Source Modification No.: | 127-43932-00036 |
| Significant Permit Modification No.: | 127-43985-00036 |
| Permit Reviewer: | Travis Flock |

Source Definition

This steel mini mill consists of a source with an on-site contractor:

(a) NLMK Indiana, Plant ID #127-00036, the primary operation, is located at 6500 South Boundary Road, Portage, IN 46368; and

(b) TMS International, LLC - a contractor of NLMK Indiana, Plant ID # 127-00104, the supporting operation, is located at 6500 US Highway 12, Portage IN 46368.

NLMK Indiana and TMS International, LLC are still under the common control of NLMK Indiana. These plants are considered one major source, as defined by 326 IAC 2-7-1(22), based on this contractual control. Therefore, the term “source” in the Part 70 documents refers to both NLMK Indiana and TMS International, LLC as one major source. This conclusion was initially determined under Part 70 Operating Permit Renewal 127-27948-00036 on October 02, 2009.

Separate Part 70 Operating Permit Renewals will be issued to NLMK Indiana and TMS International, LLC solely for administrative purposes.

Existing Approvals

The source was issued Part 70 Operating Permit Renewal No. T127-41023-00036 on May 6, 2021. There have been no subsequent approvals issued.

County Attainment Status

The source is located in Porter County.

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Designation</th>
</tr>
</thead>
<tbody>
<tr>
<td>SO₂</td>
<td>Cannot be classified for the area bounded on the north by Lake Michigan; on the west by the Lake County and Porter County line; on the south by I-80 and I-90; and on the east by the LaPorte County and Porter County line. The remainder of Porter County is better than national standards.</td>
</tr>
<tr>
<td>CO</td>
<td>Unclassifiable or attainment effective November 15, 1990.</td>
</tr>
<tr>
<td>O₃</td>
<td>Serious nonattainment effective September 23, 2019, for the 2008 8-hour ozone standard.</td>
</tr>
<tr>
<td>O₃</td>
<td>Unclassifiable or attainment effective August 3, 2018, for the 2015 8-hour ozone standard.</td>
</tr>
<tr>
<td>Pollutant</td>
<td>Designation</td>
</tr>
<tr>
<td>-----------</td>
<td>-------------</td>
</tr>
<tr>
<td>PM$_{2.5}$</td>
<td>Unclassifiable or attainment effective January 28, 2019, for the 2012 annual PM$_{2.5}$ standard.</td>
</tr>
<tr>
<td>PM$_{2.5}$</td>
<td>Unclassifiable or attainment effective December 13, 2009, for the 2006 24-hour PM$_{2.5}$ standard.</td>
</tr>
<tr>
<td>PM$_{10}$</td>
<td>Unclassifiable effective November 15, 1990.</td>
</tr>
<tr>
<td>NO$_2$</td>
<td>Unclassifiable or attainment effective January 29, 2012, for the 2010 NO$_2$ standard.</td>
</tr>
<tr>
<td>Pb</td>
<td>Unclassifiable or attainment effective December 31, 2011, for the 2008 lead standard.</td>
</tr>
</tbody>
</table>

(a) Ozone Standards
U.S. EPA, in the Federal Register Notice 84 FR 44238 dated August 23, 2019, designated Porter County as serious nonattainment for the 2008 8-hour ozone standard effective September 23, 2019. 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$_{2.5}$
Porter 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 for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(c) Other Criteria Pollutants
Porter 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 a steel mini 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.
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.

<table>
<thead>
<tr>
<th>Source</th>
<th>PM(^1)</th>
<th>PM(_{10})(^1)</th>
<th>PM(_{2.5})^{1,2}</th>
<th>SO(_2)</th>
<th>NO(_X)</th>
<th>VOC</th>
<th>CO</th>
<th>Lead (Pb)</th>
<th>Single HAP(^{3,4})</th>
<th>Total HAPs(^4)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NLMK Indiana</strong></td>
<td>&gt;100</td>
<td>&gt;100</td>
<td>&gt;100</td>
<td>&gt;100</td>
<td>&gt;100</td>
<td>&gt;100</td>
<td>9.94</td>
<td>9.99</td>
<td>9.94</td>
<td>24.10</td>
</tr>
<tr>
<td><strong>TMS International, LLC - a contractor of NLMK</strong></td>
<td>38.82</td>
<td>20.26</td>
<td>11.09</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>negl.</td>
<td>0.80</td>
<td>0.80</td>
<td>0.80</td>
</tr>
<tr>
<td><strong>Total PTE of Entire Source Including Fugitives</strong></td>
<td>&gt;100</td>
<td>&gt;100</td>
<td>&gt;100</td>
<td>&gt;100</td>
<td>&gt;100</td>
<td>&gt;100</td>
<td>9.94</td>
<td>&lt;10</td>
<td>24.90</td>
<td></td>
</tr>
<tr>
<td><strong>Title V Major Source Thresholds</strong></td>
<td>NA</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>50</td>
<td>50</td>
<td>10</td>
<td>10</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td><strong>PSD Major Source Thresholds</strong></td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>25</td>
<td>--</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td><strong>Emission Offset Major Source Thresholds</strong></td>
<td>---</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>50</td>
<td>50</td>
<td>NA</td>
<td>NA</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

\(^1\)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\(_{2.5}\).

\(^3\)Single highest source-wide HAP (Manganese).

\(^4\)Fugitive HAP emissions are always included in the source-wide emissions.

HAP emissions from the meltshop operations at NLMK are required by NSPS, Subpart Aaa, to use controls at all times these units are in operation. HAP emissions have therefore been calculated after use of the federally-mandated control devices.

(a) This existing source is a major stationary source, under PSD (326 IAC 2-2), because a PSD regulated pollutant, PM, PM10, PM2.5, SO2, NOx, VOC, and CO, are each 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, nonattainment regulated pollutants, are each emitted at a rate of 50 tons per year or more.

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

(d) These emissions are based on the TSD of TV Renewal No. T127-41023-00036, issued on May 6, 2021.
The Office of Air Quality (OAQ) has reviewed an application, submitted by NLMK Indiana on March 30, 2021, relating to the re-opening of the existing VOC PSD BACT analysis for the meltshop operations in order to alter the existing tons/hour throughput limit for meltshop operations to 185 net tons of steel per hour. This change is being requested so that NLMK Indiana can meet the annual tons/year limit of net steel which is 1.1 million tons/year. The current net steel limit of 151 tons/hour makes it physically impossible for the source to meet the annual 1.1 million tons/year. The new VOC BACT limit will be 0.13 lbs VOC per ton of steel produced as part of this permitting action with a maximum hourly throughput of 185 tons of steel produced. The PSD BACT limits for PM, PM10, and CO are not pound per ton limits, and instead are just pound per hour limits. Additionally, the PSD BACT limits for SO2 and NOx are both pound per ton and pound per hour limits, combined with the existing throughput limits. For this reason, this application is not re-opening the BACT for other pollutants as the current limitations will not be affected by the change in short-term production limits for melt shop operations.

The following is a list of the modified emission unit and pollution control device(s):

(a) One (1) Melt Shop with a production capacity of 1.1 million tons per year of steel comprised of the following:

(1) One (1) twin shell electric arc furnace (EAF), identified as unit 1, constructed in 1997, having a maximum capacity of 185 tons per hour, equipped with a direct shell evacuation (DSE) control system ("fourth hole" duct), an overhead roof exhaust system consisting of a canopy hood and charge area scavenging canopy hood (installed in 2016), an air gap for controlling carbon monoxide (CO) and volatile organic compound (VOC) emissions, low -NOx/oxyfuel burners and the melt shop baghouse CE-2 (modified in 2011) controlling PM/PM10 emissions, exhausting through stack S-2 with a continuous opacity monitor (COM).

(2) One (1) ladle metallurgical station, identified as unit 2, constructed in 1997, having a maximum capacity of 185 tons per hour, exhausting to a side draft hood ducted to the melt shop baghouse CE-2 (modified in 2011) exhausting through stack S-2 with a COM.

(3) One (1) continuous caster, identified as unit 3, constructed in 1997, having a maximum capacity of 185 tons per hour, with emissions from the hot metal handling and pouring operations exhausting to a canopy hood and ducted to the melt shop baghouse CE-2 (modified in 2011), then through stack S-2 with a COM. Steam from the slab cooling operations is vented through a steam vent in the roof of the Melt Shop Building.

(4) One (1) Slag Air Cooling Bay Area, identified as unit 4, constructed in 1997, having a maximum capacity of 10 tons per hour, exhausting through the Slag Cooling Bays exhaust system to the melt shop baghouse CE-2 (modified in 2011) for controlling PM/PM10 emissions, exhausting through the melt shop Stack (S-2) with a COM.

(5) Three (3) natural gas-fired, ladle preheat holding stations identified as units 5, 6 and 7, constructed in 1997, having a heat input capacity of 11.5 MMBtu per hour each, exhausting to canopy hoods ducted to the melt shop baghouse CE-2 (modified in 2011), exhausting through the melt shop stack S-2 with a COM.

(6) One (1) natural gas-fired, ladle preheat holding station, identified as unit 8 constructed in 1997, having a heat input capacity of 6.0 MMBtu per hour. Emissions exhaust to canopy hoods ducted to the melt shop baghouse CE-2 (modified in 2011), then exhausting through stack S-2, with a COM.
(7) One (1) natural gas-fired, Tundish dry out and preheat station identified as unit 9, constructed in 1997, having a heat input capacity of 3.5 MMBtu per hour. Emissions exhaust to canopy hoods ducted to the melt shop baghouse CE-2 (modified in 2011), then exhausting through stack S-2, with a COM.

(8) One (1) CoJet System including oxy-fuel burners.

(9) Oxy-fuel cutoff Torch at the exit end of the continuous caster.

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.

Project Aggregation

NLMK Indiana recently submitted the following permit applications to IDEM between March 30, 2018 and March 30, 2021. When a major source for Prevention of Significant Deterioration (PSD) and/or Emission Offset (EO) submits an application for a source modification, IDEM, OAQ reviews the permitting history of the source to determine if previous projects should be aggregated with the current project.

PSD/SSM No. 127-43932-00036 (Present permitting action – submitted on March 30, 2021)

- Application is re-opening of the existing VOC PSD BACT analysis for the meltshop operations in order to alter the existing tons/hour throughput limit for meltshop operations to 185 net tons of steel per hour. This change is being requested so that NLMK Indiana can meet the annual tons/year limit of net steel which is 1.1 million tons/year. The current net steel limit of 151 tons/hour makes it physically impossible for the source to meet the annual 1.1 million tons/year. The new VOC BACT limit will be 0.13 lbs VOC per ton of steel produced as part of this permitting action with a maximum hourly throughput of 185 tons of steel produced. The PSD BACT limits for PM, PM10, and CO are not pound per ton limits, and instead are just pound per hour limits. Additionally, the PSD BACT limits for SO2 and NOx are both pound per ton and pound per hour limits, combined with the existing throughput limits. For this reason, this application is not re-opening the BACT for other pollutants as the current limitations will not be affected by the change in short-term production limits for melt shop operations.

Part 70 Operating Renewal No. 127-41023-00036 (Issued on May 6, 2021)

- Source submitted application for renewal of Part 70 Operating Permit. Hazardous Air Pollutant (HAP) calculations were also computed for the source, and proper limits were implemented to make the source a Minor Source for HAPs, as defined in Section 112 of the Clean Air Act (CAA).
- HAP limits that were imposed:
  - Lead (Pb) emissions from the melt shop operations shall not exceed 9.94 tons per 12-consecutive month period with compliance determined at the end of each month.
  - Chromium emissions from the melt shop operations shall not exceed 9.99 tons per 12-consecutive month period with compliance determined at the end of each month.
  - Manganese emissions from the melt shop operations shall not exceed 9.19 tons per 12-consecutive month period with compliance determined at the end of each month.
  - The combined Metallic HAP emissions (chromium, cobalt, lead, nickel, arsenic, cadmium, selenium, manganese, beryllium, mercury, and antimony compounds) from the melt shop operations shall not exceed 21.59 tons per 12-consecutive month period with compliance
determined at the end of each month.

Administrative Amendment No. 127-37379-00036 (Issued on September 1, 2016)

- Addition of a scavenging canopy hood for the electric arc furnace (EAF).

Conclusion

All changes being made in this permitting action are unrelated to the previous project(s) within the past three (3) years of construction for the unit being evaluated.

 Permit Level Determination – Part 70 Modification to an Existing Source

There are no new emission units or modifications to existing emission units (i.e., no physical change or change in the method of operation occurring at the source) as a result of this modification. See the "Description of Proposed Modification" section above for more detail.

<table>
<thead>
<tr>
<th>Process / Emission Unit</th>
<th>PM</th>
<th>PM$_{10}$</th>
<th>PM$_{2.5}$$^1$</th>
<th>SO$_2$</th>
<th>NO$_X$</th>
<th>VOC</th>
<th>CO</th>
<th>Pb</th>
<th>Single HAP$^2$</th>
<th>Total HAPs</th>
</tr>
</thead>
<tbody>
<tr>
<td>PTE Before Modification (Meltshop)</td>
<td>257.54</td>
<td>257.54</td>
<td>257.54</td>
<td>181.5</td>
<td>247.5</td>
<td>82.5</td>
<td>3,578.46</td>
<td>9.94</td>
<td>9.99</td>
<td>21.59</td>
</tr>
<tr>
<td>PTE After Modification (Meltshop)</td>
<td>257.54</td>
<td>257.54</td>
<td>257.54</td>
<td>181.5</td>
<td>247.5</td>
<td>71.5</td>
<td>3,578.46</td>
<td>9.94</td>
<td>9.99</td>
<td>21.59</td>
</tr>
<tr>
<td>PTE Increase (Meltshop)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total PTE Increase of the Modified Emission Unit(s)/Process(es) (ton/year)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

$^1$PM$_{2.5}$ listed is direct PM$_{2.5}$.
$^2$Single highest HAP.

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)(1) and (g)(2), a Significant Source Modification is required because this modification is subject to 326 IAC 2-2 (Prevention of Significant Deterioration) and 326 IAC 8-1-6.

(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 Emission Offset

This modification to an existing major PSD stationary source is a major PSD modification, because the source has requested to modify the existing PSD BACT limits for VOC for the existing melt shop operations. Therefore, pursuant to 326 IAC 2-2, the PSD requirements apply to these emission units for VOC.

The modification is not subject to Emission Offset because this modification is re-opening the VOC PSD BACT for meltshop operations and will result in a lower PTE for VOC from the meltshop.

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/or 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.

<table>
<thead>
<tr>
<th>Source-Wide Emissions After Issuance (ton/year)</th>
<th>PM1</th>
<th>PM10</th>
<th>PM2.51, 2</th>
<th>SO2</th>
<th>NOx</th>
<th>VOC</th>
<th>CO</th>
<th>Lead (Pb)</th>
<th>Single HAP3</th>
<th>Total HAPs</th>
</tr>
</thead>
<tbody>
<tr>
<td>NLMK Indiana</td>
<td>&gt;100</td>
<td>&gt;100</td>
<td>&gt;100</td>
<td>&gt;100</td>
<td>&gt;100</td>
<td>&gt;100</td>
<td>9.94</td>
<td>9.99</td>
<td>9.99</td>
<td>24.10</td>
</tr>
<tr>
<td>TMS International, LLC - a contractor of NLMK</td>
<td>38.82</td>
<td>20.26</td>
<td>11.09</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>negl.</td>
<td>0.80</td>
<td>0.80</td>
<td>0.80</td>
</tr>
<tr>
<td>Total PTE of Entire Source Including Fugitives*</td>
<td>&gt;100</td>
<td>&gt;100</td>
<td>&gt;100</td>
<td>&gt;100</td>
<td>&gt;100</td>
<td>&gt;100</td>
<td>9.94</td>
<td>&lt;10</td>
<td>24.90</td>
<td></td>
</tr>
<tr>
<td>Title V Major Source Thresholds</td>
<td>NA</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>50</td>
<td>50</td>
<td>10</td>
<td>10</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>PSD Major Source Thresholds</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>25</td>
<td>--</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>Emission Offset Major Source Thresholds</td>
<td>---</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>50</td>
<td>50</td>
<td>NA</td>
<td>NA</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

1 Under the Part 70 Permit program (40 CFR 70), PM10 and PM2.5, not particulate matter (PM), are each considered as a "regulated air pollutant."
2 PM2.5 listed is direct PM2.5.
3 Single highest source-wide HAP (Manganese and Chromium).
4 HAP emissions from the meltshop operations at NLMK are required by NSPS, Subpart Aaa, to use controls at all times these units are in operation. HAP emissions have therefore been calculated after use of the federally-mandated control devices.

The source opted to take limit(s) in order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) and 326 IAC 2-3 (Emission Offset) not applicable to this source and to render the source an area source of HAP emissions under Section 112 of the Clean Air Act (CAA). See Technical Support Document (TSD) State Rule Applicability - Entire Source section, 326 IAC 2-8 (FESOP), 326 IAC 2-2 (PSD), and 326 IAC 2-3 (Emission Offset), and 326 IAC 20 (Hazardous Air Pollutants) for more information regarding the limit(s).
(a) This existing source is a major stationary source, under PSD (326 IAC 2-2), because a PSD regulated pollutant, PM, PM10, PM2.5, SO2, NOx, VOC, and CO, are each 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, nonattainment regulated pollutants, are each emitted at a rate of 50 tons per year or more.

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

Federal Rule Applicability Determination

Due to the modification at this source, federal rule applicability has been reviewed as follows:

New Source Performance Standards (NSPS):

(a) There are no new or modified 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):

(b) There are no new or modified 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.

(c) Pursuant to 40 CFR 64.3(d), if a continuous emission monitoring system (CEMS) is required pursuant to other federal or state authority, the owner or operator shall use the CEMS to satisfy the requirements of CAM according to the criteria contained in 40 CFR 64.3(d).

The following table is used to identify the applicability of CAM to new and modified emission unit and each emission limitation or standard for a specified pollutant based on the criteria specified under 40 CFR 64.2:
<table>
<thead>
<tr>
<th>Emission Unit/Pollutant</th>
<th>Control Device</th>
<th>Applicable Emission Limitation</th>
<th>Uncontrolled PTE (tons/year)</th>
<th>Controlled PTE (tons/year)</th>
<th>CAM Applicable (Y/N)</th>
<th>Large Unit (Y/N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melt Shop (PM)</td>
<td>Baghouse</td>
<td>Y 326 IAC 2-2</td>
<td>&gt;100</td>
<td>&gt;100</td>
<td>N 1, 2</td>
<td>N</td>
</tr>
<tr>
<td>Melt Shop (PM10)</td>
<td>Baghouse</td>
<td>Y 326 IAC 2-2</td>
<td>&gt;100</td>
<td>&gt;100</td>
<td>N 1, 2</td>
<td>N</td>
</tr>
<tr>
<td>Melt Shop (PM2.5)</td>
<td>Baghouse</td>
<td>N</td>
<td>-</td>
<td>-</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Melt Shop (CO)</td>
<td>DSE and Canopy Hood</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>N 3</td>
<td>N</td>
</tr>
<tr>
<td>Melt Shop (SO2)</td>
<td>DSE and Canopy Hood</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>N 3</td>
<td>N</td>
</tr>
<tr>
<td>Melt Shop (VOC)</td>
<td>DSE and Canopy Hood</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>N 3</td>
<td>N</td>
</tr>
<tr>
<td>Melt Shop (NOx)</td>
<td>Low NOx burners</td>
<td>Y 326 IAC 2-2</td>
<td>&gt;10</td>
<td>&lt;10</td>
<td>N 4</td>
<td>N</td>
</tr>
<tr>
<td>Melt Shop (Pb)</td>
<td>Baghouse</td>
<td>Y 326 IAC 2-2</td>
<td>&gt;10</td>
<td>&lt;10</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Melt Shop (Single HAP)</td>
<td>Baghouse</td>
<td>Y 326 IAC 20</td>
<td>&gt;10</td>
<td>&lt;10</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>Melt Shop (Total HAPs)</td>
<td>Baghouse</td>
<td>Y 326 IAC 20</td>
<td>&gt;25</td>
<td>&lt;25</td>
<td>Y</td>
<td>N</td>
</tr>
</tbody>
</table>

Under the Part 70 Permit program (40 CFR 70), PM is not a regulated air pollutant.

Uncontrolled PTE (tpy) and controlled PTE (tpy) are evaluated against the Major Source Threshold for each pollutant. Major Source Threshold for regulated air pollutants (PM10, PM2.5, SO2, NOx, VOC and CO) is 100 tpy, for a single HAP ten (10) tpy, and for total HAPs twenty-five (25) tpy.

Uncontrolled PTE (tpy) and controlled PTE (tpy) are evaluated against the Major Source Threshold for each pollutant. Major Source Threshold for regulated air pollutants (PM10, PM2.5, SO2, and CO) is 100 tpy, for NOx and VOC 50 tpy, for a single HAP ten (10) tpy, and for total HAPs twenty-five (25) tpy.

PM* For limitations under 326 IAC 6-3-2, 326 IAC 6.5, and 326 IAC 6.8, IDEM OAQ uses PM as a surrogate for the regulated air pollutant PM10. Therefore, uncontrolled PTE and controlled PTE reflect the emissions of the regulated air pollutant PM10.

N1 Under 326 IAC 2-2, PM is not a surrogate for a regulated air pollutant. Therefore, CAM does not apply to these emission units for the 326 IAC 2-2 PM limitation.

N2 The melt shop is required to operate a continuous opacity monitoring system and/or a bag leak detection system under a part 70 permit condition, therefore, pursuant to 40 CFR 64.2(b)(vi), the requirements of CAM do not apply. The melt shop is also subject to a post 1990 NESHAP.

N3 Emissions are controlled or directed to a direct shell evacuation DSE and canopy hood. These control devices are considered passive control measures using process design features, rather than control equipment that actively remove or destroy CO, SO2 or VOC prior to discharge to the atmosphere.

N4 Low NOx burners do not meet the definition of a “control device” per 40 CFR 64.1.

N5 Equipped with a NOx CEMs pursuant to 326 IAC 3-5.

Controls: BH = Baghouse, C = Cyclone, DC = Dust Collection System, RTO = Regenerative or Recuperative Thermal Oxidizer, WS = Wet Scrubber, ESP = Electrostatic Precipitator

Based on this evaluation, the requirements of 40 CFR Part 64, CAM, are applicable to the melt shop operations, which is considered as an “other unit,” for single HAPs for lead, chromium, and manganese, as well as for total HAPs, upon issuance of the Part 70 Permit Renewal. A CAM plan must be submitted as part of the next Part 70 Operating Permit Renewal application.
State Rule Applicability - Entire Source

Due to this modification, state rule applicability has been reviewed as follows:

326 IAC 1-6-3 (Preventive Maintenance Plan)
The source is subject to 326 IAC 1-6-3.

326 IAC 1-5-2 (Emergency Reduction Plans)
The source is subject to 326 IAC 1-5-2.

326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset)
PSD and Emission Offset applicability is discussed under the Potential to Emit After Issuance section of this document.

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The provisions of 326 IAC 2-4.1 apply to any owner or operator who constructs or reconstructs a major source of hazardous air pollutants (HAP), as defined in 40 CFR 63.41, after July 27, 1997, unless the major source has been specifically regulated under or exempted from regulation under a NESHAP that was issued pursuant to Section 112(d), 112(h), or 112(j) of the Clean Air Act (CAA) and incorporated under 40 CFR 63. On and after June 29, 1998, 326 IAC 2-4.1 is intended to implement the requirements of Section 112(g)(2)(B) of the Clean Air Act (CAA).
The operation of this source will emit less than ten (10) tons per year for a single HAP and less than twenty-five (25) tons per year for a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

326 IAC 2-6 (Emission Reporting)
This source is subject to 326 IAC 2-6 (Emission Reporting) because it is located in Porter County and its emissions of VOC and NOx are greater than 25 tons per year. Therefore, pursuant to 326 IAC 2-6-3(a)(1), annual reporting is required. An emission statement shall be submitted in accordance with the compliance schedule in 326 IAC 2-6-3 and every year thereafter. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4.

326 IAC 2-7-6(5) (Annual Compliance Certification)
The U.S. EPA Federal Register 79 FR 54978 notice does not exempt Title V Permittees from the requirements of 40 CFR 70.6(c)(5)(iv) or 326 IAC 2-7-6(5)(D), but the submittal of the Title V annual compliance certification to IDEM satisfies the requirement to submit the Title V annual compliance certifications to EPA. IDEM does not intend to revise any permits since the requirements of 40 CFR 70.6(c)(5)(iv) or 326 IAC 2-7-6(5)(D) still apply, but Permittees can note on their Title V annual compliance certifications that submission to IDEM has satisfied reporting to EPA per Federal Register 79 FR 54978. This only applies to Title V Permittees and Title V compliance certifications.

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

326 IAC 6-4 (Fugitive Dust Emissions Limitations)
The source is subject to the requirements of 326 IAC 6-4, because the includes roadways which have the potential to emit fugitive particulate emissions. 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 (Fugitive Particulate Matter Emission Limitations)
Pursuant to A127-9642-00036, issued May 30, 2003 and 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations), the fugitive particulate matter emissions shall be controlled according to the plan submitted on December 10, 1991. The plan is attached as Attachment A to the permit.
326 IAC 6.5 (Particulate Matter Limitations Except Lake County)
Pursuant to 326 IAC 6.5-1-1(a), this source (located in Porter 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)
Pursuant to 326 IAC 6.8-1-1(a), this source (located in Porter County) is not subject to the requirements of 326 IAC 6.8 because it is not located in Lake County.

326 IAC 20 (Hazardous Air Pollutants)
In order to render the source an area source of HAP emissions under Section 112 of the Clean Air Act (CAA), the Permittee shall comply with the following:

(1) Lead (Pb) emissions from the melt shop operations shall not exceed 9.94 tons per 12-consecutive month period with compliance determined at the end of each month.

(2) Chromium emissions from the melt shop operations shall not exceed 9.99 tons per 12-consecutive month period with compliance determined at the end of each month.

(3) Manganese emissions from the melt shop operations shall not exceed 9.19 tons per 12-consecutive month period with compliance determined at the end of each month.

(4) The combined Metallic HAP emissions (chromium, cobalt, lead, nickel, arsenic, cadmium, selenium, manganese, beryllium, mercury, and antimony compounds) from the melt shop operations shall not exceed 21.59 tons per 12-consecutive month period with compliance determined at the end of each month.

Compliance with these limits, combined with the potential to emit HAP from all other emission units at the source, shall limit the source-wide potential to emit single HAP to less than 10 tons per twelve (12) consecutive month period and the source-wide potential to emit total HAPs to less than 25 tons per twelve (12) consecutive month period, and shall render the source an area source of HAP emissions under Section 112 of the Clean Air Act (CAA).

These are existing limits that are not being revised with this modification.

State Rule Applicability – Individual Facilities

Due to this modification, state rule applicability has been reviewed as follows:

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants)
The operation of each emission unit/process will emit less than 10 tons per year of a single HAP and less than 25 tons per year of a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

326 IAC 2-2-3 (Prevention of Significant Deterioration (PSD)) (BACT) Limits
Melt Shop:
Pursuant to 326 IAC 2-2-3 (PSD Control Technology Requirements) and 326 IAC 8-1-6 (New Facilities: General Reduction Requirements) and CP 127-2326-00036, issued on February 24, 1992, A 127-9642-00036, issued May 30, 2003, and PSD SSM 127-43932-00036, the Permittee shall comply with the following Best Available Control Technology (BACT) requirements:

(a) The volatile organic compound (VOC) emissions shall be controlled through a scrap management program to eliminate steel scrap with high residual oil content.

(b) The Permittee shall charge only clean scrap, consistent with the scrap management program.
The combined VOC emissions from the Melt shop processes (consisting of EAF, LMF, Continuous Caster and natural gas units) shall not exceed 0.13 pounds per ton of steel produced from the common stack (S-2).

Pursuant to 326 IAC 2-2-3 (PSD Control Technology Requirements) and 326 IAC 8-1-6 (New Facilities: General Reduction Requirements) and CP 127-2326-00036, issued on February 24, 1992, A 127-9642-00036, issued May 30, 2003, and PSD SSM 127-43932-00036, the Permittee shall comply with the revised SO2, VOC and NOx emissions from the melt shop by limiting the following throughput:

(a) The maximum short term metal production capacity from the melt shop shall not exceed 185 tons per hour, over a period of 24 operating hours rolling average, with compliance demonstrated at the end of each hour; and

(b) The maximum long term metal production capacity from the melt shop shall not exceed 1,100,000 tons per 12-consecutive month period with compliance demonstrated at the end of each month.

See Appendix B of this TSD for the Best Available Control Technology (BACT) analysis for the meltshop. All other existing PSD BACT limits are not being modified as part of this application.

326 IAC 2-2-4 (Air Quality Analysis Requirements) and 326 IAC 2-2-5 (Air Quality Impact Requirements)
A-127-9642-00036 in 2003 included modeling of the modifications proposed by Beta Steel in 2007. At the time the VOC emission rates of the meltshop EAF were considered by the IDEM, OAQ Technical Support & Modeling Section to have a negligible effect on modeling for the area.

An air quality analysis was not performed for ozone (VOC and NOx) because these pollutants are photochemically reactive. Currently, U.S. EPA has no regulatory photochemical models which can take into account small spatial scales or single source PSD modeling for ozone. In addition, the annual VOC emissions will decrease due to this modification.

326 IAC 2-2-6 (Increment Consumption Requirements)
326 IAC 2-2-6(a) requires that any demonstration under section 5 of this rule shall demonstrate that increased emissions caused by the proposed major modification will not exceed eighty percent (80%) of the available maximum allowable increases (MAI) over the baseline concentration of sulfur dioxide, particulate matter, and nitrogen dioxide indicated in subsection (b)(1) of this rule. This modification is exempt from the requirements of 326 IAC 2-2-6 because this PSD re-evaluation is only for VOC emissions and not for sulfur dioxide, PM, and/or nitrogen dioxide.

326 IAC 2-2-7 (Additional Analysis, Requirements)
326 IAC 2-2-7(a) requires an analysis of the impairment to visibility, soils and vegetation. An analysis of the air quality impact projected for the area as a result of general commercial, residential, industrial, and other growth associated with the source was not performed in the PSD BACT analysis in A-127-9642-00036. This was not performed because the concentrations of NO2, SO2, and PM10 were below the threshold limits necessary to have adverse impacts on the surrounding vegetation and soil.

326 IAC 2-2-10 (Source Information)
The Permittee has submitted all information necessary to perform an analysis or make the determination required under this rule.

326 IAC 2-2-12 (Permit Rescission)
The permit issued under this rule shall remain in effect unless and until it is rescinded, modified, revoked, or it expires in accordance with 326 IAC 2-1.1-9.5 or section 8 of this rule.

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-1(c)(1), the melt shop is not subject to the requirements of 326 IAC 6-3, since each is regulated by 326 IAC 2-2-3 PSD limitations.
326 IAC 8-1-6 New Facilities: General Reduction Requirements (BACT)
Pursuant to 326 IAC 8-1-6, new facilities (as of January 1, 1980), which the potential to emit 25 tons or more of VOC per year, located anywhere in the in the state, which are not otherwise regulated by other provisions of this rule (326 IAC 8), shall reduce VOC emissions using best available control technology (BACT). Compliance with the BACT requirements for 326 IAC 2-2-3 (PSD) will demonstrate compliance with the requirements of 326 IAC 8-1-6 for the melt shop operations at this source. See Appendix B of this TSD for the Best Available Control Technology (BACT) analysis for the meltshop.

326 IAC 9-1 (Carbon Monoxide (CO))
Pursuant to A 127-9642-0003, issued on May 30, 2003 (an amendment to CP 127-2326-00036, issued February 24, 1992) and 326 IAC 9-1 (Carbon Monoxide Emission Limits), the CO concentrations shall be less than 20% of the maximum one (1) hour National Ambient Air Quality Standards (NAAQS) of 40 milligrams per cubic meter (40,000 ug/m3, 35 ppm). Modeling results indicated that CO will be less than 180 ug/m3 or 0.5% of the NAAQS.

CO emissions will not increase as part of this permitting action because the pound per hour CO limits are not being revised.

326 IAC 10-3 (Nitrogen Oxide Reduction Program for Specific Source Categories)
The requirements of 326 IAC 10-3 do not apply to the meltshop, since this unit is not a blast furnace gas-fired boiler, a Portland cement kiln, or a facility specifically listed under 326 IAC 10-3-1(a)(2).

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.

The Compliance Determination and Monitoring Requirements are not being revised with this modification. The source will continue to perform annual testing of the meltshop for PM/PM10, SO2, NOx, VOC, and CO.

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. Section A.3 of the permit has been updated to reflect the modified short-term production limit.
2. Section D.1 and D.1.6, and D.1.8, D.1.18, and D.1.19 of the permit has been updated to
reflect the modified short-term production limit under SSM 127-43932-00036.

(3) Condition D.1.17(b) has been revised to correct a typographical error.

(4) Section E.1 and E.2 of the permit have been modified to reflect the modified short-term production limit under SSM 127-43932-00036.

A.3 Emission Units and Pollution Control Equipment Summary

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

(a) One (1) Melt Shop with a production capacity of 1.1 million tons per year of steel comprised of the following:

(1) One (1) twin shell electric arc furnace (EAF), identified as unit 1, constructed in 1997, having a maximum capacity of 15,185 tons per hour, equipped with a direct shell evacuation (DSE) control system ("fourth hole" duct), an overhead roof exhaust system consisting of a canopy hood and charge area scavenging canopy hood (installed in 2016), an air gap for controlling carbon monoxide (CO) and volatile organic compound (VOC) emissions, low-NOx/oxyfuel burners and the melt shop baghouse CE-2 (approved in 2011 for modification modified in 2011) controlling PM/PM10 emissions, exhausting through stack S-2 with a continuous opacity monitor (COM).

(2) One (1) ladle metallurgical station, identified as unit 2, constructed in 1997, having a maximum capacity of 15,185 tons per hour, exhausting to a side draft hood ducted to the melt shop baghouse CE-2 (approved in 2011 for modification modified in 2011) exhausting through stack S-2 with a COM.

(3) One (1) continuous caster, identified as unit 3, constructed in 1997, having a maximum capacity of 15,185 tons per hour, with emissions from the hot metal handling and pouring operations exhausting to a canopy hood and ducted to the melt shop baghouse CE-2 (approved in 2011 for modification modified in 2011), then through stack S-2 with a COM. Steam from the slab cooling operations is vented through a steam vent in the roof of the Melt Shop Building.

(4) One (1) Slag Air Cooling Bay Area, identified as unit 4, constructed in 1997, having a maximum capacity of 10 tons per hour, exhausting through the Slag Cooling Bays exhaust system to the melt shop baghouse CE-2 (approved in 2011 for modification modified in 2011) for controlling PM/PM10 emissions, exhausting through the melt shop Stack (S-2) with a COM.

(5) Three (3) natural gas-fired, ladle preheat holding stations identified as units 5, 6 and 7, constructed in 1997, having a heat input capacity of 11.5 MMBtu per hour each, exhausting to canopy hoods ducted to the melt shop baghouse CE-2 (approved in 2011 for modification modified in 2011), exhausting through the melt shop stack S-2 with a COM.

(6) One (1) natural gas-fired, ladle preheat holding station, identified as unit 8 constructed in 1997, having a heat input capacity of 6.0 MMBtu per hour. Emissions exhaust to canopy hoods ducted to the melt shop baghouse CE-2 (approved in 2011 for modification modified in 2011), then exhausting through stack S-2, with a COM.

(7) One (1) natural gas-fired, Tundish dry out and preheat station identified as unit 9, constructed in 1997, having a heat input capacity of 3.5 MMBtu per hour. Emissions exhaust to canopy hoods ducted to the melt shop baghouse CE-2
SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(a) One (1) Melt Shop with a production capacity of 1.1 million tons per year of steel comprised of the following:

(1) One (1) twin shell electric arc furnace (EAF), identified as unit 1, constructed in 1997, having a maximum capacity of 151,850 tons per hour, equipped with a direct shell evacuation (DSE) control system ("fourth hole" duct), an overhead roof exhaust system consisting of a canopy hood and charge area scavenging canopy hood (installed in 2016), an air gap for controlling carbon monoxide (CO) and volatile organic compound (VOC) emissions, low -NOx/oxyfuel burners and the melt shop baghouse CE-2 (approved in 2011 for modification modified in 2011) controlling PM/PM10 emissions, exhausting through stack S-2 with a continuous opacity monitor (COM).

(2) One (1) ladle metallurgical station, identified as unit 2, constructed in 1997, having a maximum capacity of 151,850 tons per hour, exhausting to a side draft hood ducted to the melt shop baghouse CE-2 (approved in 2011 for modification modified in 2011) exhausting through stack S-2 with a COM.

(3) One (1) continuous caster, identified as unit 3, constructed in 1997, having a maximum capacity of 151,850 tons per hour, with emissions from the hot metal handling and pouring operations exhausting to a canopy hood and ducted to the melt shop baghouse CE-2 (approved in 2011 for modification modified in 2011), then through stack S-2 with a COM. Steam from the slab cooling operations is vented through a steam vent in the roof of the Melt Shop Building.

(4) One (1) Slag Air Cooling Bay Area, identified as unit 4, constructed in 1997, having a maximum capacity of 10 tons per hour, exhausting through the Slag Cooling Bays exhaust system to the melt shop baghouse CE-2 (approved in 2011 for modification modified in 2011) for controlling PM/PM10 emissions, exhausting through the melt shop stack S-2 with a COM.

(5) Three (3) natural gas-fired, ladle preheat holding stations identified as units 5, 6 and 7, constructed in 1997, having a heat input capacity of 11.5 MMBtu per hour each, exhausting to canopy hoods ducted to the melt shop baghouse CE-2 (approved in 2011 for modification modified in 2011), exhausting through the melt shop stack S-2 with a COM.

(6) One (1) natural gas-fired, ladle preheat holding station, identified as unit 8 constructed in 1997, having a heat input capacity of 6 MMBtu per hour. Emissions exhaust to canopy hoods ducted to the melt shop baghouse CE-2 (approved in 2011 for modification modified in 2011), then exhausting through stack S-2, with a COM.

(7) One (1) natural gas-fired, Tundish dry out and preheat station identified as unit 9, constructed in 1997, having a heat input capacity of 3.5 MMBtu per hour. Emissions exhaust to canopy hoods ducted to the melt shop baghouse CE-2 (approved in 2011 for modification modified in 2011), then exhausting through stack S-2, with a COM.
...D.1.6 Volatile Organic Compounds (VOC) BACT Limits [326 IAC 2-2-3][326 IAC 8-1-6]

Pursuant to 326 IAC 2-2-3 and A 127-9642-00036, issued May 30, 2003 (an amendment to CP 127-2326-00036, issued February 24, 1992), the Permittee shall comply with the following Best Available Control Technology (BACT) requirements:

Pursuant to 326 IAC 2-2-3 (PSD Control Technology Requirements) and 326 IAC 8-1-6 (New Facilities: General Reduction Requirements) and CP 127-2326-00036, issued on February 24, 1992, A 127-9642-00036, issued May 30, 2003, and PSD SSM 127-43932-00036, the Permittee shall comply with the following Best Available Control Technology (BACT) requirements:

(a) The volatile organic compound (VOC) emissions shall be controlled through a scrap management program to eliminate steel scrap with high residual oil content.

(b) The Permittee shall charge only clean scrap, consistent with the scrap management program.

(c) The combined VOC emissions from the Melt shop processes (consisting of EAF, LMF, Continuous Caster and natural gas units) shall not exceed 0.13 pounds per ton of steel produced from the common stack (S-2).

D.1.8 Operational Parameters PSD BACT Limits [326 IAC 2-2-3][326 IAC 8-1-6]

Pursuant to 326 IAC 2-2-3(2), Best Available Control Technology (BACT) and A127-9642-00036, issued May 30, 2003 (an amendment to CP 127-2326-00036, issued February 24, 1992), the Permittee shall comply with the revised SO2, VOC and NOx emissions from the melt shop by limiting the following throughput:

Pursuant to 326 IAC 2-2-3 (PSD Control Technology Requirements) and 326 IAC 8-1-6 (New Facilities: General Reduction Requirements) and CP 127-2326-00036, issued on February 24, 1992, A 127-9642-00036, issued May 30, 2003, and PSD SSM 127-43932-00036, the Permittee shall comply with the revised SO2, VOC and NOx emissions from the melt shop by limiting the following throughput:

(a) The maximum short term metal production capacity from the melt shop shall not exceed 151 tons per hour, over a period of 24 operating hours rolling average, with compliance demonstrated at the end of each hour; and

(a) The maximum long term metal production capacity from the melt shop shall not exceed 1,100,000 tons per 12-consecutive month period with compliance demonstrated at the end of each month.

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

...D.1.17 Monitoring of Operations [40 CFR 60.274a][40 CFR Part 64]

Pursuant to CP 127-2326-00036, issued February 24, 1992 (as amended in A127-9642-00036, issued May 30, 2003) and 40 CFR 60.274a, the Permittee shall comply with the following monitoring requirements:

...b) A furnace static pressure monitoring device is not required on any EAF equipped with a DSE system if observations of shop opacity are performed by a certified visible emission observer as specified in Condition D.1.1543(d).
Record Keeping and Reporting Requirement \{326 IAC 2-7-5(3)\}[326 IAC 2-7-19]

D.1.18 Record Keeping Requirements \{326 IAC 3-5-6\}[40 CFR 60.276a]

(a) Pursuant to A127-16763-00036 and SSM 127-43932-00036, and to document the compliance status with Conditions D.1.1 through D.1.4, D.1.6, and D.1.7, the Permittee shall maintain a log of information necessary to document compliance with the BACT emission limits of the following:

...  

(c) Pursuant to A127-9642-00036 and SSM 127-43932-00036 and to document the compliance status with Condition D.1.8, the Permittee shall maintain records of the short term production capacity and long term production capacity for 60 months and submit upon request.

D.1.19 Reporting Requirements \{326 IAC 3-5-7\}[40 CFR 60.276a]

(a) Pursuant to A127-16763-00036 and SSM 127-43932-00036, the Permittee shall submit a quarterly summary of the records required under D.1.18(a). These reports shall be submitted not later than thirty (30) days after the end of the quarter being reported. 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

<table>
<thead>
<tr>
<th>Emissions Unit Description :</th>
</tr>
</thead>
<tbody>
<tr>
<td>(c) Fugitive dust and material handling processes</td>
</tr>
<tr>
<td>(1) Roadways and parking lots are paved.</td>
</tr>
<tr>
<td>(2) Material Handling</td>
</tr>
<tr>
<td>(A) EAF slag pit dig out operations are controlled by a canopy hood exhausted to melt shop baghouse (CE-2) (approved in 2011 for modification modified in 2011) through stack S-2, with a COM.</td>
</tr>
<tr>
<td>(B) Slag and materials, except steel scrap are handled in the melt shop building and the PM/PM10 emissions are controlled by the melt shop baghouse (CE-2) (approved in 2011 for modification modified in 2011) and exhaust through stack S-2, with a COM.</td>
</tr>
<tr>
<td>(C) Slag and materials, exclusive of steel scrap are stored within the enclosed building and the PM/PM10 emissions are controlled by the melt shop baghouse (CE-2) (approved in 2011 for modification modified in 2011) and exhaust through stack S-2, with a COM.</td>
</tr>
<tr>
<td>(D) EAF slag cooling operations are conducted in the enclosed slag cooling area controlled by the melt shop baghouse (CE-2) (approved in 2011 for modification modified in 2011) and exhausted through stack S-2 with a COM.</td>
</tr>
</tbody>
</table>

(The information describing the processes contained in this facility description box is descriptive information and does not constitute enforceable conditions.)
SECTION E.1        NSPS

Emissions Unit Description:

(1) One (1) twin shell electric arc furnace (EAF), identified as unit 1, constructed in 1997, having a maximum capacity of 15,850 tons per hour, equipped with a direct shell evacuation (DSE) control system ("fourth hole" duct), an overhead roof exhaust system consisting of a canopy hood and charge area scavenging canopy hood (installed in 2016), an air gap for controlling carbon monoxide (CO) and volatile organic compounds (VOC) emissions, low-NOx/oxyfuel burners and the melt shop baghouse CE-2 (approved in 2011 for modification modified in 2011) controlling PM/PM10 emissions, exhausting through stack S-2 with a continuous opacity monitor (COM).

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

SECTION E.2       NESHAP

Emissions Unit Description:

(1) One (1) twin shell electric arc furnace (EAF), identified as unit 1, constructed in 1997, a maximum capacity of 15,850 tons per hour, equipped with a direct shell evacuation (DSE) control system ("fourth hole" duct), an overhead roof exhaust system consisting of a canopy hood and charge area scavenging canopy hood (installed in 2016), an air gap for controlling carbon monoxide (CO) and volatile organic compounds (VOC), low-NOx/oxyfuel burners and the melt shop baghouse CE-2 (approved in 2011 for modification modified in 2011) controlling PM/PM10 emissions, exhausting through stack S-2 with a continuous opacity monitor (COM).

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

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 March 30, 2021.

The construction of this proposed modification shall be subject to the conditions of the attached proposed PSD/Part 70 Significant Source Modification No. 127-43932-00036. The operation of this proposed modification shall be subject to the conditions of the attached proposed Significant Permit Modification No. 127-43985-00036.

The staff recommends to the Commissioner that the PSD/Part 70 Significant Source Modification and Significant Permit Modification be approved.

IDEM Contact

(a) If you have any questions regarding this permit, please contact Travis Flock, Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251, or by telephone at (317) 233-1782 or (800) 451-6027, and ask for Travis Flock or (317) 233-1782.

(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: Emission Calculations
Meltshop VOC Increase Summary

Source Name: NLMK Indiana
Source Address: 6500 South Boundary Road, Portage, IN 46368
PSD/SSM Number: 127-43932-00036
SPM Number: 127-43985-00036
Permit Reviewer: Travis Flock

<table>
<thead>
<tr>
<th>Emission Process</th>
<th>VOC (lb/ton)</th>
<th>Limited Throughput (tons/hour)</th>
<th>VOC (lbs/hr)</th>
<th>Annual Limited Throughput (tons/yr)</th>
<th>VOC (tons/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meltshop (Before Modification)</td>
<td>0.15</td>
<td>151</td>
<td>22.65</td>
<td>1,100,000.00</td>
<td>82.5</td>
</tr>
<tr>
<td>Meltshop (After Modification)</td>
<td>0.13</td>
<td>185</td>
<td>24.05</td>
<td>1,100,000.00</td>
<td>71.5</td>
</tr>
<tr>
<td>Increase in VOC from Modification</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.00</td>
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</table>

<table>
<thead>
<tr>
<th>Existing PSD BACT Limits</th>
<th>lb/hr</th>
<th>lb/ton</th>
<th>Annual Limited Throughput (tons/yr)</th>
<th>tons/year</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM/PM10</td>
<td>58.8</td>
<td>-</td>
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<td>257.54</td>
</tr>
<tr>
<td>SO2</td>
<td>49.83</td>
<td>0.33</td>
<td>1,100,000.00</td>
<td>181.50</td>
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<tr>
<td>NOx</td>
<td>67.95</td>
<td>0.45</td>
<td>1,100,000.00</td>
<td>247.50</td>
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<tr>
<td>VOC</td>
<td>0.15</td>
<td>1,100,000.00</td>
<td></td>
<td>82.50</td>
</tr>
<tr>
<td>CO</td>
<td>817</td>
<td>-</td>
<td>1,100,000.00</td>
<td>3,578.46</td>
</tr>
</tbody>
</table>

**Methodology**
VOC tons per year = VOC (lb/ton) * Limited Throughput * (1/2000)
PM/PM10 ton per year = PM/PM10 lb/hr * (8760/2000)
SO2 ton per year = SO2 lb/ton * Limited Throughput * (1/2000)
NOx ton per year = NOx lb/ton * Limited Throughput * (1/2000)
CO ton per year = CO lb/hr * (8760/2000)
### Appendix A: Emission Calculations
#### Source-wide Unlimited HAP Summary

**Source Name:** NLMK Indiana  
**Source Address:** 6500 South Boundary Road, Portage, IN 46368  
**PSD/SSM Number:** 127-43932-00036  
**SPM Number:** 127-43985-00036  
**Permit Reviewer:** Travis Flock

<table>
<thead>
<tr>
<th>Hazardous Air Pollutant</th>
<th>HAPs from Meltshop without Controls (lbs/hr)</th>
<th>HAPs from Meltshop without Controls (tons/yr)</th>
<th>Combustion HAPs (lbs/hr)</th>
<th>Combustion HAPs (tons/yr)</th>
<th>HAPs from TMS International without Controls (tons/year)</th>
<th>HAPs from Generator (lbs/hr)</th>
<th>HAPs from Generator (tons/year)</th>
<th>Total HAPS without Controls From Source (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acrolein</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>5.52E-08</td>
<td>2.21E-05</td>
<td>2.21E-05</td>
<td>NLMK Total Uncontrolled HAPs (tons/year): 687.26</td>
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<tr>
<td>Acetaldehyde</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1.76E-07</td>
<td>7.06E-05</td>
<td>7.06E-05</td>
<td>TMS Total Uncontrolled HAPs (tons/year): 0.80</td>
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<tr>
<td>Antimony</td>
<td>1.27</td>
<td>5.56</td>
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<td>-</td>
<td>NLMK Highest Single HAP Uncontrolled (tons/year): 469.51 (Manganese)</td>
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<tr>
<td>Arsenic</td>
<td>0.63</td>
<td>2.78</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>TMS Highest Single HAP Uncontrolled (tons/year): 0.80 (Manganese)</td>
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<tr>
<td>Beryllium</td>
<td>0.74</td>
<td>3.24</td>
<td>-</td>
<td>-</td>
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<tr>
<td>Cadmium</td>
<td>1.38</td>
<td>6.06</td>
<td>0.01</td>
<td>1.46E-03</td>
<td>-</td>
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<tr>
<td>Chromium</td>
<td>10.57</td>
<td>46.32</td>
<td>0.01</td>
<td>1.86E-03</td>
<td>-</td>
<td>-</td>
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<tr>
<td>Lead</td>
<td>33.41</td>
<td>146.36</td>
<td>2.90E-03</td>
<td>6.36E-04</td>
<td>3.10E-05</td>
<td>-</td>
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</tr>
<tr>
<td>Manganese</td>
<td>107.01</td>
<td>468.71</td>
<td>2.21E-03</td>
<td>5.04E-04</td>
<td>0.80</td>
<td>-</td>
<td>-</td>
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<tr>
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<td>2.48</td>
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<td>Benzene</td>
<td>-</td>
<td>-</td>
<td>1.13E-03</td>
<td>4.96E-03</td>
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<td>1.97E-06</td>
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<tr>
<td>Toluene</td>
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<td>-</td>
<td>1.35E-06</td>
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<tr>
<td><strong>TOTALS</strong></td>
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<td><strong>3.81E-03</strong></td>
<td><strong>688.06</strong></td>
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</tbody>
</table>
### Appendix A: Emission Calculations

#### Source-wide Limited HAP Summary

**Source Name:** NLMK Indiana  
**Source Address:** 6500 South Boundary Road, Portage, IN 46368  
**PSD/SSM Number:** 127-43932-00036  
**SPM Number:** 127-43985-00036  
**Permit Reviewer:** Travis Flock

<table>
<thead>
<tr>
<th>Hazardous Air Pollutant</th>
<th>Combustion HAPs (tons/yr)</th>
<th>HAPs from TMS International without Controls (tons/year)</th>
<th>HAPs from Meltshop After Issuance (lb/hr)</th>
<th>HAPs from Generator After Issuance (ton/year)</th>
<th>Total Source-wide HAP PTE After Issuance (tons/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acrolein</td>
<td></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2.21E-05</td>
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<tr>
<td>Acetaldehyde</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>7.06E-05</td>
</tr>
<tr>
<td>Antimony</td>
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<td>1.27</td>
<td>5.56</td>
<td>-</td>
<td>5.56</td>
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<tr>
<td>Arsenic</td>
<td>-</td>
<td>0.83</td>
<td>2.78</td>
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<td>2.78</td>
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<tr>
<td>Beryllium</td>
<td>-</td>
<td>0.74</td>
<td>3.24</td>
<td>-</td>
<td>3.24</td>
</tr>
<tr>
<td>Cadmium</td>
<td>1.1E-03</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>3.24</td>
</tr>
<tr>
<td>Chromium</td>
<td>1.9E-03</td>
<td>-</td>
<td>2.28</td>
<td>9.99</td>
<td>9.99</td>
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<td>Lead</td>
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<td>Manganese</td>
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<td>9.99</td>
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<td>Mercury</td>
<td>2.11E-03</td>
<td>-</td>
<td>9.26E-03</td>
<td>-</td>
<td>0.01</td>
</tr>
<tr>
<td>Nickel</td>
<td>2.76E-03</td>
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<td>5.67E-01</td>
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<td>2.49</td>
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<tr>
<td>Selenium</td>
<td>7.40E-01</td>
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<td>7.40E-01</td>
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<td>3.24</td>
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<tr>
<td>Dichlorobenzene</td>
<td>2.38E-03</td>
<td>-</td>
<td>-</td>
<td>2.17E-03</td>
<td>0.00</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>0.10</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0.10</td>
</tr>
<tr>
<td>Hexane</td>
<td>2.39</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2.39</td>
</tr>
<tr>
<td>Xylene</td>
<td>5.49E-04</td>
<td>-</td>
<td>5.49E-04</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Total HAPs*</td>
<td>2.50</td>
<td>0.80</td>
<td>4.93</td>
<td>21.59</td>
<td>24.90</td>
</tr>
</tbody>
</table>

#### Methodology

*The total HAP limit for the meltshop is for metallic HAPs only.
HAP lb/hr limit = Limited HAPs from Meltshop (tons/yr) * (2000/8760)
Sourcewide Limited HAP Emissions (tons/yr) = Limited HAPs from Meltshop (tons/yr) + Total Combustion HAPs (tons/yr) + Total HAPs from TMS International (tons/yr)

*Note: Cells shaded in grey indicate where limits are included.*
## Appendix A: Emission Calculations

**Meltshop HAP PTE**

**Source Name:** NLMK Indiana  
**Source Address:** 6500 South Boundary Road, Portage, IN 46368  
**PSD/SSM Number:** 127-43932-00036  
**SPM Number:** 127-43985-00036  
**Permit Reviewer:** Travis Flock

<table>
<thead>
<tr>
<th></th>
<th>2018 EAF Dust Captured (lbs) 20,795,880</th>
<th>Based on hazardous waste manifests</th>
</tr>
</thead>
<tbody>
<tr>
<td>EAF Dust Emitted in 2018 (lbs)</td>
<td>77,782</td>
<td>Based on 2018 Annual Emissions Report</td>
</tr>
<tr>
<td>Total EAF Dust Generated (lbs)</td>
<td>20,795,958</td>
<td>Total of captured and emitted</td>
</tr>
</tbody>
</table>

**2018 Meltshop Production (tons/yr)** 617,385.00  
**Maximum Meltshop Production (tons/yr)** 1,100,000.00  
**Ratio Maximum to 2018 Production** 1.78

<table>
<thead>
<tr>
<th>EAF Dust Generated at Maximum Meltshop Production (lbs/yr)</th>
<th>37,052,331</th>
<th>2018 EAF dust generated times production ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>EAF Dust Generated at Maximum Meltshop Production (tons/yr)</td>
<td>18,526</td>
<td></td>
</tr>
<tr>
<td>EAF Dust Released to Atmosphere at Maximum Meltshop Production using Controls REQUIRED by NSPS (tons/yr)</td>
<td>0.0693</td>
<td>2018 EAF Dust Emitted times production ratio</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hazardous Air Pollutant</th>
<th>Concentration (wt %)</th>
<th>Total Generated (tons/yr)</th>
<th>Potential Emissions with NSPS REQUIRED Controls (tons/yr)</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antimony</td>
<td>0.0300%</td>
<td>5.56</td>
<td>0.00000208</td>
<td>Based on monthly composite samples collected in April 1997 through January 1998</td>
</tr>
<tr>
<td>Arsenic</td>
<td>0.0150%</td>
<td>2.78</td>
<td>0.00000104</td>
<td></td>
</tr>
<tr>
<td>Beryllium</td>
<td>0.0175%</td>
<td>3.24</td>
<td>0.0000121</td>
<td></td>
</tr>
<tr>
<td>Cadmium</td>
<td>0.0327%</td>
<td>6.06</td>
<td>0.0000227</td>
<td></td>
</tr>
<tr>
<td>Chromium</td>
<td>0.2500%</td>
<td>46.32</td>
<td>0.0001732</td>
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<tr>
<td>Lead</td>
<td>0.7900%</td>
<td>146.36</td>
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<td>Manganese</td>
<td>2.5300%</td>
<td>468.71</td>
<td>0.0017531</td>
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</tr>
<tr>
<td>Mercury</td>
<td>0.0001%</td>
<td>0.01</td>
<td>0.000000</td>
<td></td>
</tr>
<tr>
<td>Nickel</td>
<td>0.0134%</td>
<td>2.48</td>
<td>0.0000093</td>
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</tr>
<tr>
<td>Selenium</td>
<td>0.0175%</td>
<td>3.24</td>
<td>0.0000121</td>
<td></td>
</tr>
<tr>
<td><strong>TOTALS</strong></td>
<td></td>
<td>684.75</td>
<td>0.0025611</td>
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</table>

*Particulate controls required pursuant to New Source Performance Standard for Steel Plants (40 CFR 60.270a), Subpart A
HAPs ton/year = Amount of emissions (tons/year) created from EAF based off actual 2018 source data * weight composition percentage of each HAP that is within emission plume
## Emissions Calculations
### Natural Gas Combustion Only

**Source Name:** NLMK Indiana  
**Source Address:** 6500 South Boundary Road, Portage, IN 46368  
**PSD/SSM Number:** 127-43932-00036  
**SPM Number:** 127-43985-00036  
**Permit Reviewer:** Travis Flock

### Unit Description

<table>
<thead>
<tr>
<th>Unit Description</th>
<th>Unit ID</th>
<th>MMBtu/hr</th>
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<tbody>
<tr>
<td>Ladel Preheat Holding Station</td>
<td>5</td>
<td>11.50</td>
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<tr>
<td>Ladel Preheat Holding Station</td>
<td>6</td>
<td>11.50</td>
</tr>
<tr>
<td>Ladel Preheat Holding Station</td>
<td>7</td>
<td>11.50</td>
</tr>
<tr>
<td>Ladel Preheat Holding Station</td>
<td>8</td>
<td>6.00</td>
</tr>
<tr>
<td>Tundish Dry Out and Preheat Station</td>
<td>9</td>
<td>3.50</td>
</tr>
<tr>
<td>Reheating Furnace</td>
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<td>264.60</td>
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**Heat Input Capacity**

<table>
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<th>HHV MMBtu/hr</th>
<th>Potential Throughput MMCF/yr</th>
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<td>308.6</td>
<td>1020</td>
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<tr>
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<td>2650.3</td>
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### Hazardous Air Pollutants (HAPs)

#### HAPs - Organics

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<th></th>
<th>Benzeno</th>
<th>Dichlorobenzene</th>
<th>Formaldehyde</th>
<th>Hexane</th>
<th>Toluene</th>
<th>Total - Organics</th>
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</thead>
<tbody>
<tr>
<td>Emission Factor in lb/MMcf</td>
<td>2.1E-03</td>
<td>1.2E-03</td>
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<td>1.8E+00</td>
<td>3.4E-03</td>
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<tr>
<td>Potential Emission in tons/yr</td>
<td>2.8E-03</td>
<td>1.6E-03</td>
<td>9.9E-02</td>
<td>2.39</td>
<td>4.5E-03</td>
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#### HAPs - Metals

<table>
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<tr>
<th></th>
<th>Lead</th>
<th>Cadmium</th>
<th>Chromium</th>
<th>Manganese</th>
<th>Nickel</th>
<th>Total - Metals</th>
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</thead>
<tbody>
<tr>
<td>Emission Factor in lb/MMcf</td>
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<td>1.1E-03</td>
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<td>3.8E-04</td>
<td>2.1E-03</td>
<td>7.3E-03</td>
</tr>
<tr>
<td>Potential Emission in tons/yr</td>
<td>6.8E-04</td>
<td>1.5E-03</td>
<td>1.9E-03</td>
<td>5.0E-04</td>
<td>2.8E-03</td>
<td>7.3E-03</td>
</tr>
</tbody>
</table>

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

### Methodology

All emission factors are based on normal firing.  
**MMBtu = 1,000,000 Btu**  
**MMCF = 1,000,000 Cubic Feet of Gas**

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-3 and 1.4-4

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

**Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/(2,000 lb/ton)**
Appendix A: Emission Calculations
Large Reciprocating Internal Combustion Engines - Diesel Fuel
Output Rating (>600 HP)
Maximum Input Rate (>4.2 MMBtu/hr)

Source Name: NLMK Indiana
Source Address: 6500 South Boundary Road, Portage, IN 46368
PSD/SSM Number: 127-43932-00036
SPM Number: 127-43985-00036
Permit Reviewer: Travis Flock

Emissions calculated based on output rating (hp)

| Output Horsepower Rating (hp) | 1600.0 |
| Maximum Hours Operated per Year | 500    |
| Potential Throughput (hp-hr/yr) | 800,000|

Hazardous Air Pollutants (HAPs)

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Total PAH HAPs***</th>
</tr>
</thead>
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<tr>
<td>Benzene</td>
<td>5.43E-06</td>
</tr>
<tr>
<td>Toluene</td>
<td>1.97E-06</td>
</tr>
<tr>
<td>Xylene</td>
<td>1.35E-06</td>
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<tr>
<td>Formaldehyde</td>
<td>5.52E-07</td>
</tr>
<tr>
<td>Acetaldehyde</td>
<td>1.76E-07</td>
</tr>
<tr>
<td>Acrolein</td>
<td>5.52E-08</td>
</tr>
<tr>
<td></td>
<td>1.48E-06</td>
</tr>
</tbody>
</table>

***PAH = Polyaromatic Hydrocarbon  (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)

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 Emission (tons/yr) = [Potential Throughput (hp-hr/yr)] * [Emission Factor (lb/hp-hr)] / [2,000 lb/ton]
Indiana Department of Environmental Management
Office of Air Quality

Appendix B
Best Available Control Technology (BACT) Determination

Technical Support Document (TSD) for a
PSD/Part 70 Significant Source Modification and
Part 70 Significant Permit Modification

<table>
<thead>
<tr>
<th>Source Description and Location</th>
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<tbody>
<tr>
<td>Source Name: NLMK Indiana</td>
</tr>
<tr>
<td>Source Location: 6500 South Boundary Road, Portage, IN 46368</td>
</tr>
<tr>
<td>County: Porter (Westchester)</td>
</tr>
<tr>
<td>SIC Code: 3312 (Steel Works, Blast Furnaces (Including Coke Ovens), and Rolling Mills)</td>
</tr>
<tr>
<td>PSD/Significant Source Modification No.: 127-43932-00036</td>
</tr>
<tr>
<td>Significant Permit Modification 127-43985-00036</td>
</tr>
<tr>
<td>Permit Reviewer: Travis Flock</td>
</tr>
</tbody>
</table>

Introduction

On March 30, 2021, NLMK Indiana submitted an application to the OAQ for a modification to increase the short-term production limit for tons of steel produced per hour and the associated VOC limit for the Melt Shop operations.

The source is requesting this increase to the short-term production limit for melt shop operations because the source has two limits for the steel production operations: a short-term limit that is 151 tons/hour and an annual limit which is 1.1 million tons/year. With periods of scheduled and unscheduled maintenance of operations at NLMK Indiana, the source cannot operate for 8,760 hours per year, as was being assumed for the existing short-term production limit. Due to these periods of maintenance, the source is not exceeding the annual limit of 1.1 million tons per year. However, there are instances where the source is exceeding the short-term production limit of 151 tons per hour, in order to properly fulfill orders from clients, without ever exceeding the annual production limit. This is the underlying reason for why the source wants to revise the existing short-term limit to 185 tons per hour, and the source will still comply with the existing annual production limit, which is not being revised as part of this permitting action. The other existing BACT and PSD limits for NOx and SO2 are not pound per ton limits, and instead are just pound per hour limits. For this reason, this application is not re-opening the BACT for NOx and SO2 as the pound per hour limitations will not be affected by the change in short-term production limits for melt shop operations.

VOC emissions from the melt shop operations are generated due to the volatilization of organic compounds (e.g., oils and paints) present in the scrap metal during charging of the scrap into the furnace. As a result, the Melt Shop operations are subject to the requirements of 326 2-2-3 (Prevention of Significant Deterioration) and IAC 8-1-6 (BACT), since the potential emissions of volatile organic compounds (VOC) from the melt shop operations is equal or greater than twenty-five (25) tons per year when producing the existing limit of 151 tons of steel per hour, and the proposed limit that NLMK has submitted, which is 185 tons of steel produced per hour, would further exceed the provisions of 326 IAC 2-2-3 and 326 IAC 8-1-6.
As a result of this application, the Office of Air Quality (OAQ) has performed the following 326 IAC 2-2-3 (PSD) and 326 IAC 8-1-6 (VOC) Best Available Control Technology (BACT) review for NLMK Indiana relating to its existing melt shop.

Description of Process

Evaluations of the Best Available Control Technology analyses for VOCs were performed for the following emissions units:

(a) One (1) Melt Shop with a production capacity of 1.1 million tons per year of steel comprised of the following:

   (1) One (1) twin shell electric arc furnace (EAF), identified as unit 1, constructed in 1997, having a maximum capacity of 185 tons per hour, equipped with a direct shell evacuation (DSE) control system ("fourth hole" duct), an overhead roof exhaust system consisting of a canopy hood and charge area scavenging canopy hood (installed in 2016), an air gap for controlling carbon monoxide (CO) and volatile organic compound (VOC) emissions, low -NOx/oxyfuel burners and the melt shop baghouse CE-2 (modified in 2011) controlling PM/PM10 emissions, exhausting through stack S-2 with a continuous opacity monitor (COM).

   (2) One (1) ladle metallurgical station, identified as unit 2, constructed in 1997, having a maximum capacity of 185 tons per hour, exhausting to a side draft hood ducted to the melt shop baghouse CE-2 (modified in 2011) exhausting through stack S-2 with a COM.

   (3) One (1) continuous caster, identified as unit 3, constructed in 1997, having a maximum capacity of 185 tons per hour, with emissions from the hot metal handling and pouring operations exhausting to a canopy hood and ducted to the melt shop baghouse CE-2 (modified in 2011), then through stack S-2 with a COM. Steam from the slab cooling operations is vented through a steam vent in the roof of the Melt Shop Building.

   (4) One (1) Slag Air Cooling Bay Area, identified as unit 4, constructed in 1997, having a maximum capacity of 10 tons per hour, exhausting through the Slag Cooling Bays exhaust system to the melt shop baghouse CE-2 (modified in 2011) for controlling PM/PM10 emissions, exhausting through the melt shop Stack (S-2) with a COM.

   (5) Three (3) natural gas-fired, ladle preheat holding stations identified as units 5, 6 and 7, constructed in 1997, having a heat input capacity of 11.5 MMBtu per hour each, exhausting to canopy hoods ducted to the melt shop baghouse CE-2 (modified in 2011), exhausting through the melt shop stack S-2 with a COM.

   (6) One (1) natural gas-fired, ladle preheat holding station, identified as unit 8 constructed in 1997, having a heat input capacity of 6 MMBtu per hour. Emissions exhaust to canopy hoods ducted to the melt shop baghouse CE-2 (modified in 2011), then exhausting through stack S-2, with a COM.

   (7) One (1) natural gas-fired, Tundish dry out and preheat station identified as unit 9, constructed in 1997, having a heat input capacity of 3.5 MMBtu per hour. Emissions exhaust to canopy hoods ducted to the melt shop baghouse CE-2 (modified in 2011), then exhausting through stack S-2, with a COM.
(8) One (1) CoJet System including oxy-fuel burners.
(9) Oxy-fuel cutoff Torch at the exit end of the continuous caster.

Current Best Available Control Technology (BACT) Limits

Currently, BACT for the melt shop is the following:

Pursuant to 326 IAC 2-2-3 and A 127-9642-00036, issued May 30, 2003 (an amendment to CP 127-2326-00036, issued February 24, 1992), the Permittee shall comply with the following Best Available Control Technology (BACT) requirements:

(a) PM/PM10 (where PM-10 includes filterable and condensable components) from the melt shop baghouse stack S-2 (exhausting EAF, LMF, Caster and natural gas combustion units) shall not exceed 0.0052 grains per dry standard cubic feet (gr/dscf) and 58.8 pounds per hour. The EAF shall be controlled by a direct shell evacuation (DSE) control system. The DSE and canopy hoods shall be ducted to the melt shop baghouse rated at least 1.0 million actual cubic feet per minute (MM acfm), demonstrating 100% capture.

(b) PM/PM-10 emissions from the one (1) continuous caster (unit 3) shall be captured by a canopy hood and exhausted to the melt shop baghouse.

(c) PM/PM-10 emissions from the one (1) ladle metallurgical station (unit 2) shall be captured by a side draft hood and exhausted to the melt shop baghouse.

(d) The fugitive PM/PM10 emissions during furnace operations shall be captured by the roof canopies or contained and collected within the melt shop building.

(e) Except for scrap steel, slag and raw material handling and storage shall be conducted inside the melt shop.

(f) The NOx emissions from the melt shop operations (consisting of the EAF, LMF, Caster and natural gas combustion units) shall not exceed forty five hundredths (0.45) pound per ton of steel produced and 67.95 pounds per hour through the melt shop stack (S-2).

(g) The (3) Ladle Preheat/Holding Stations shall be limited to the use of low NOx natural gas fired burners. Each Ladle Preheat/Holding Station shall not exceed 11.5 MMBtu per hour heat input. Emissions from the three (3) stations shall be exhausted to the melt shop baghouse exhaust S-2.

(h) The (1) ladle/preheat station shall be limited to the use of low NOx natural gas fired burners and not exceed 6.0 MMBtu per hour heat input. Emissions from the one (1) ladle/preheat station shall be exhausted to the melt shop baghouse exhaust S-2.

(i) The one (1) Tundish, Dry out and Preheat Station shall be limited to the use of low NOx natural gas fired burners and not exceed 3.5 MMBtu per hour heat input. Emissions from the one (1) Tundish, Dry out and Preheat Station shall be exhausted to the melt shop baghouse exhaust S-2.

(j) The EAF shall be controlled by a direct shell evacuation (DSE) control system. The combustion elbow at the DSE shall be designed to provide 200% excess air for the oxidation of CO and other present gaseous pollutants.

(k) The total Melt Shop Stack (S-2) (exhausting EAF, LMF, Caster and natural gas combustion units) CO emissions shall not exceed 817 pounds per hour.
(l) The volatile organic compound (VOC) emissions shall be controlled through a scrap management program to eliminate steel scrap with high residual oil content.

(m) The Permittee shall charge only clean scrap, consistent with the scrap management program.

(n) The combined VOC emissions from the Melt shop processes (consisting of EAF, LMF, Continuous Caster and natural gas units) shall not exceed 0.15 pounds per ton of steel produced from the common stack (S-2).

(o) Visible emissions from any building opening as a result of EAF operation shall be limited to 3% opacity based on a six-minute average (24 readings taken in accordance with 40 CFR Part 60, Appendix A, Method 9).

(p) Visible emissions shall not be allowed (3% opacity) from any roof building opening as a result of the EAF dust handling system operation based on a six-minute average (24 readings taken in accordance with 40 CFR Part 60, Appendix A, Method 9).

(q) The SO$_2$ emissions from the melt shop stack (S-2) (exhausting EAF, LMF, Caster and natural gas combustion units) shall not exceed 0.33 pounds per ton of steel produced and 49.83 pounds per hour from the baghouse stack.

(r) The maximum short term metal production capacity from the melt shop shall not exceed 151 tons per hour, over a period of 24 operating hours rolling average, with compliance demonstrated at the end of each hour; and

(s) The maximum long term metal production capacity from the melt shop shall not exceed 1,100,000 tons per 12-consecutive month period with compliance demonstrated at the end of each month.

Summary of the Best Available Control Technology (BACT) Process

BACT is an emissions limitation based on the maximum degree of pollution reduction of emissions, which is achievable on a case-by-case basis. BACT analysis takes into account the energy, environmental, and economic impacts on the source. These reductions may be determined through the application of available control techniques, process design, work practices, and operational limitations. Such reductions are necessary to demonstrate that the emissions remaining after application of BACT will not cause or contribute significantly to air pollution, thereby protecting public health and the environment.

Federal guidance on BACT requires an evaluation that follows a “top down” process. In this approach, the applicant identifies the best-controlled similar source on the basis of controls required by regulation or permit, or controls achieved in practice. The highest level of control is then evaluated for technical feasibility.

The five (5) basic steps of a top-down BACT analysis are listed below:

Step 1: Identify Potential Control Technologies

The first step is to identify potentially “available” control options for each emission unit and for each pollutant under review. Available options should consist of a comprehensive list of those technologies with a potentially practical application to the emissions unit in question. The list should include lowest achievable emission rate (LAER) technologies, innovative technologies, and controls applied to similar source categories.
Step 2: Eliminate Technically Infeasible Options

The second step is to eliminate technically infeasible options from further consideration. To be considered feasible, a technology must be both available and applicable. It is important in this step that any presentation of a technical argument for eliminating a technology from further consideration be clearly documented based on physical, chemical, engineering, and source-specific factors related to safe and successful use of the controls. Innovative control means a control that has not been demonstrated in a commercial application on similar units. Innovative controls are normally given a waiver from the BACT requirements due to the uncertainty of actual control efficiency. A control technology is considered available when there are sufficient data indicating that the technology results in a reduction in emissions of regulated pollutants.

Step 3: Rank the Remaining Control Technologies by Control Effectiveness

The third step is to rank the technologies not eliminated in Step 2 in order of descending control effectiveness for each pollutant of concern. The ranked alternatives are reviewed in terms of environmental, energy, and economic impacts specific to the proposed modification. If the analysis determines that the evaluated alternative is not appropriate as BACT due to any of the impacts, then the next most effective is evaluated. This process is repeated until a control alternative is chosen as BACT. If the highest ranked technology is proposed as BACT, it is not necessary to perform any further technical or economic evaluation, except for the environmental analyses.

Step 4: Evaluate the Most Effective Controls and Document the Results

The fourth step entails an evaluation of energy, environmental, and economic impacts for determining a final level of control. The evaluation begins with the most stringent control option and continues until a technology under consideration cannot be eliminated based on adverse energy, environmental, or economic impacts.

For the technologies determined to be feasible, there may be several different limits that have been set as BACT for the same control technology. The permitting agency has to choose the most stringent limit as BACT unless the applicant demonstrates in a convincing manner why that limit is not feasible. BACT must, at a minimum, be no less stringent than the level of control required by any applicable New Source Performance Standard (NSPS) and National Emissions Standard for Hazardous Air Pollutants (NESHAP) or state regulatory standards applicable to the emission units included in the permits.

Step 5: Select BACT

The Office of Air Quality (OAQ) makes final BACT determinations by following the five steps identified above.

Volatile Organic Compounds (VOC) BACT - Melt Shop Operations

Step 1 – Identify Potential Control Options

Based on the information reviewed for this BACT determination, the following potentially available control technologies were identified for controlling VOC emissions from the melt shop operations:

(a) 4th Hole Direct Shell Evacuation (DEC) with Air Gap and Canopy Hood
In the steel industry, DEC systems are the primary control technology for controlling CO and VOC emissions from EAFs (which in this case are the primary emission unit concerned for VOC BACT as part of this permitting action). A DEC system consists of a water-cooled duct connected to the EAF through the furnace roof's "fourth hole." This duct is connected to the melt shop canopy hood collector system. During melting and refining, a slight negative pressure is maintained within the furnace to withdraw exhaust gases through the DEC duct. At the point where the DEC duct meets the "fourth hole", there is an adjustable gap that allows combustion air to enter, providing
oxygen to the oxidize the CO which is present. The DEC system allows excellent process emissions capture and combustion of CO, and requires the lowest air volume of other EAF capture devices.

In the steel industry, DEC systems are the primary control technology for controlling CO and VOC emissions from EAFs (which in this case are the primary emission unit concerned for VOC BACT as part of this permitting action). A DEC system consists of a water-cooled duct connected to the EAF through the furnace roof's "fourth hole." This duct is connected to the melt shop canopy hood collector system. This canopy hood collector system is therefore part of the 4th hole direct shell evacuating with air gap. Collectively, the DEC system allows excellent process emissions capture and combustion of CO, and requires the lowest air volume of other EAF capture devices. Therefore, DEC system with canopy hood control is considered a potential control option.

(b) Scrap Management Plan
In the steel industry, the steel mill will utilize a scrap management program to eliminate the purchase of scrap steel that is heavily oiled or painted. A broker or mill representative (responsible representative) will be responsible for inspecting shipments of scrap that are received at the facility. The responsible representative visually inspects the shipments and determines the category of the scrap. Typically, lathe turnings require the greatest amount of attention due to the higher probability of encountering oils, grease, or paints.

c) Catalytic Oxidation
In a catalytic oxidizer, a catalyst is used to lower the activation energy for oxidation. When a preheated gas stream is passed through a catalytic oxidizer, the catalyst bed initiates and promotes the oxidation of VOCs without being permanently altered itself. In catalytic oxidation, combustion occurs at significantly lower temperatures than that of direct flame units and can also achieve a destruction efficiency of 95%. However, steps must be taken to ensure complete combustion. The types of catalysts used include platinum, platinum alloys, copper chromate, copper oxide, chromium, manganese, and nickel. These catalysts are deposited in thin layers on an inert substrate, usually a honeycomb shaped ceramic.

d) Thermal Oxidation
An efficient thermal oxidizer design must provide adequate residence time for complete combustion, sufficiently high temperatures for VOC destruction, and adequate velocities to ensure proper mixing without quenching combustion. The type of burners and their arrangement affect combustion rates and residence time. The more thorough the contact between the flame and VOC, the shorter the time required for complete combustion. Natural gas is required to ignite the flue gas mixtures and maintain combustion temperatures. Typically, a heat exchanger upstream of the oxidizer uses the heat content of the oxidizer flue gas to preheat the incoming VOC-laden gas stream to improve the efficiency of the oxidizer.

Step 2 – Eliminate Technically Infeasible Control Options
The test for technical feasibility of any control option is whether it is both available and applicable to reducing VOC emissions from the melt shop operation's EAF. The control technologies listed in the previous section are discussed and evaluated below for their technical feasibility.

(a) 4th Hole Direct Shell Evacuation (DEC) with Air Gap and Canopy Hood
Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of the DEC with 4th hole and canopy hood is a technically feasible option for the melt shop operations, specifically the EAF.

(b) Scrap Management Plan
Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of a scrap management plan is a technically feasible option for the melt shop operations.
(c) Catalytic Oxidation
Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of catalytic oxidation is not a technically feasible option for the melt shop operations. This is not a technically feasible control option for the melt shop operations because of several reasons. Paramount to this is because there is no known application of oxidation catalysts to control VOC emissions from an EAF as part of steel mill melt shop operations. The optimal working temperature range for a VOC oxidization catalyst is between 850F - 1,100F with a minimum exhaust gas stream temperature of 500F. Exhaust gases from the EAF will undergo rapid cooling as they are ducted from the EAF. The temperature will be far below the minimum of 500F for proper operation of a catalytic oxidation control. The particulate loading in the exhaust gas stream from the EAF is also anticipated to be too great for efficient operation of a VOC oxidation catalyst. This could likely also result in impractical maintenance requirements and would significantly reduce the performance of the catalyst. For these reasons, a catalytic oxidation control system is considered infeasible for this BACT determination.

(d) Thermal Oxidation
Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of thermal oxidation is not a technically feasible option for the melt shop operations. This is primarily due to the design and placement of a thermal oxidizer for the melt shop operations. Two locations are practical for this control: upstream or downstream of the EAF baghouse. Locating upstream of the baghouse would take advantage of slightly elevated temperatures in the exhaust gas stream. However, at this location, the post combustion chamber would be subject to high particulate loading. Thus, the installation of the VOC control at this location would make it technically infeasible. Conversely, the post combustion can be installed downstream of the EAF baghouse. However, even at this location, fouling due to particulate matter will occur and more importantly, cooler temperatures would be encountered. These cooler temperatures would greatly increase the auxiliary fuel usage requirements for the thermal oxidizer, which would result in higher collateral emissions from the combustion of fuel to power the thermal oxidizer control. Additionally, there are no known applications of thermal oxidizer controls in the steel mill industry. For these reasons, a thermal oxidation control system is considered infeasible for the melt shop operations as part of this BACT determination.

Step 3 – Rank Remaining Control Technologies by Control Effectiveness
IDEM, OAQ has ranked the technically feasible control technologies and combinations of control technologies in Table 1 below as follows:

<table>
<thead>
<tr>
<th>Control Technology</th>
<th>Overall Control Efficiency (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Shell Evacuation with Canopy Hood</td>
<td>Varies</td>
</tr>
<tr>
<td>Scrap Management</td>
<td>Varies</td>
</tr>
</tbody>
</table>

Step 4 – Evaluate the Most Effective Controls and Document Results
RBLC
The U.S. EPA RACT/BACT/LAER Clearinghouse (RBLC) database has been reviewed to determine the available control options for melt shop operations at steel mills.

Six (6) relevant entries are found in the RBLC for sources located in Indiana and each of these uses a scrap management plan. Thirteen (13) relevant entries are found in the RBLC for sources located within the United States of America over the last ten (10) years. Five (5) of these sources use a direct scrap management plan, two (2) use a DEC, and six (6) of these sources use Good Work Practices or Good Combustion and Operating Practices Plan.
The U.S. EPA RACT/BACT/LAER Clearinghouse (RBLC) database search results are based on the following criteria:

(A) Process Type - Steel Production (Excludes Steel and Iron Foundry Processes);
(B) Process Code 81.120 (Electric Arc Furnaces);
(C) Pollutant name - Volatile Organic Compounds;
(D) Facilities listed since 2011 across United States.

and;

(A) Process Type - Steel Production (Excludes Steel and Iron Foundry Processes);
(B) Process Code 81.120 (Electric Arc Furnaces);
(C) Pollutant name - Volatile Organic Compounds;
(D) Facilities listed since 01/01/1970 within Indiana.

Table 2. Existing VOC RACT/BACT/LAER Determinations for Steel Mill Melt Shop Operations

<table>
<thead>
<tr>
<th>Company</th>
<th>RBLC ID or Permit #</th>
<th>Facility</th>
<th>Date Issued / State</th>
<th>Control Technology</th>
<th>VOC and Operational Limit(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proposed Limits: NLMK Indiana</td>
<td>(Proposed)</td>
<td>Melt Shop</td>
<td>Pending IN</td>
<td>Scrap Management Plan</td>
<td>0.130 lbs VOC/ton steel</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>185 tons steel/hr and</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1,100,000 tons steel/yr</td>
</tr>
<tr>
<td>Current Limits: NLMK Indiana (formerly Beta Steel Corp.)</td>
<td>IN-1019</td>
<td>Melt Shop</td>
<td>5/30/2003 IN</td>
<td>Scrap Management Plan</td>
<td>0.150 lbs VOC/ton steel</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>151 tons steel/hour and</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1,100,000 tons steel/yr</td>
</tr>
<tr>
<td>NUCOR Steel Gallatin, LLC</td>
<td>KY-0115</td>
<td>Meltshop #1</td>
<td>04/19/2021</td>
<td>Good Work Practices or Good Combustion and Operating Practices Plan</td>
<td>0.090 lbs VOC/ton steel</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>250 tons steel/hour</td>
</tr>
<tr>
<td>NUCOR Steel Gallatin, LLC</td>
<td>KY-0115</td>
<td>Meltshop #2</td>
<td>04/19/2021</td>
<td>Good Work Practices or Good Combustion and Operating Practices Plan</td>
<td>0.090 lbs VOC/ton steel</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>250 tons steel/hour</td>
</tr>
<tr>
<td>NUCOR Steel Bradenburg</td>
<td>KY-0110</td>
<td>Meltshop</td>
<td>07/23/2020</td>
<td>Good Work Practices or Good Combustion and Operating Practices Plan</td>
<td>0.090 lbs VOC/ton steel</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>250 tons steel/hour</td>
</tr>
<tr>
<td>Steel Dynamics Southwest, LLC</td>
<td>TX-0882</td>
<td>EAF</td>
<td>01/17/2020</td>
<td>Clean Scrap</td>
<td>0.093 lbs VOC/ton steel</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>400 tons steel/hour</td>
</tr>
<tr>
<td>Company</td>
<td>RBLC ID or Permit #</td>
<td>Facility</td>
<td>Date Issued / State</td>
<td>Control Technology</td>
<td>VOC and Operational Limit(s)</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>---------------------</td>
<td>----------------</td>
<td>--------------------</td>
<td>------------------------------------------------------------------------------------</td>
<td>------------------------------</td>
</tr>
<tr>
<td>Optimus Steel, LLC</td>
<td>TX-0867</td>
<td>EAF</td>
<td>01/02/2020</td>
<td>Work Practices and Material Inspections</td>
<td>0.220 lbs VOC/ton steel</td>
</tr>
<tr>
<td>Northstar Bluestone Steel, LLC</td>
<td>OH-0381</td>
<td>EAF</td>
<td>09/27/2019</td>
<td>Scrap Management Plan</td>
<td>0.350 lbs VOC/ton steel for all meltpshop operations 250 tons steel/hour</td>
</tr>
<tr>
<td>NUCOR Steel Decatur, LLC</td>
<td>AL-0327</td>
<td>EAF</td>
<td>08/14/2019</td>
<td>Scrap Management Plan</td>
<td>0.130 lbs VOC/ton steel</td>
</tr>
<tr>
<td>NUCOR Steel Florida, Inc.</td>
<td>FL-0368</td>
<td>Meltshop Baghouse</td>
<td>02/14/2019</td>
<td>Good Combustion Practice and Process Control Along with Scrap Management Plan</td>
<td>0.300 lbs VOC/ton steel 450,000.00 tons of steel per year</td>
</tr>
<tr>
<td>NUCOR Steel Decatur, LLC</td>
<td>AL-0309</td>
<td>EAF</td>
<td>03/02/2016</td>
<td>Scrap Management Plan</td>
<td>0.130 lbs VOC/ton steel</td>
</tr>
<tr>
<td>NUCOR Corporation Steel Mill</td>
<td>TX-0651</td>
<td>EAF</td>
<td>10/02/2013</td>
<td>Good Combustion Practice and Process Control</td>
<td>0.430 lbs VOC/ton steel 316.00 tons steel/hour</td>
</tr>
<tr>
<td>Gerdau Macsteel, Inc.</td>
<td>MI-0404</td>
<td>Meltshop</td>
<td>01/04/2013</td>
<td>DEC and VOC Reaction Chamber</td>
<td>0.130 lbs VOC/ton steel 130.00 tons steel/hour</td>
</tr>
<tr>
<td>Republic Steel</td>
<td>OH-0350</td>
<td>EAF</td>
<td>07/18/2012</td>
<td>Scrap Management Plan and DEC</td>
<td>0.100 lbs VOC/ton steel</td>
</tr>
<tr>
<td>CF &amp; I Steel L.P. dba Evraz Rocky Mountain Steel Erms Pueblo</td>
<td>CO-0066</td>
<td>EAF</td>
<td>11/30/2011</td>
<td>Scrap Management Plan</td>
<td>0.130 lbs VOC/ton steel 185.00 tons steel/hour</td>
</tr>
<tr>
<td>NUCOR Steel, IN</td>
<td>IN-0108</td>
<td>EAF, AOD Vessels, Desulfurization, and Other Processes</td>
<td>11/21/2003 IN</td>
<td>Scrap Management Plan</td>
<td>0.090 lbs VOC/ton steel 502.00 tons steel/hour</td>
</tr>
<tr>
<td>Qualitech Steel Corp.</td>
<td>IN-0073</td>
<td>EAF</td>
<td>10/31/1996 IN</td>
<td>Scrap Management Plan</td>
<td>0.150 lbs VOC/ton steel 135.00 tons/hour</td>
</tr>
<tr>
<td>Steel Dynamics, Inc.</td>
<td>IN-0061</td>
<td>EAF</td>
<td>10/7/1994 IN</td>
<td>Scrap Management Plan</td>
<td>0.130 lbs/VOC ton steel 225.00 tons steel/hour</td>
</tr>
</tbody>
</table>
**Comparison with other BACT Limitations:**

Although NUCOR Steel, Indiana has a 0.09 lb VOC/ton of steel produced BACT limit, this facility, located in Crawfordsville, IN, follows a scrap management plan for automotive steels. This type of steel operation requires a very high quality grade of scrap that is not comparable to the scrap grades that are received for NLMK Indiana’s products. Consequently, it is not reasonable to assume that the VOC emissions from NUCOR Steel in Crawfordsville, IN are comparable to those from the NLMK Indiana facility.

Additionally, stack test results at NLMK Indiana over time do not demonstrate that NLMK Indiana is capable of consistently meeting a 0.09 lbs VOC per ton steel produced limit for VOC BACT. The scrap mix drives the stack test results, and the scrap mix available in the ordinary course of business for 1 or 2 annual stack test results over time is important to the VOC BACT decision. NLMK Indiana has not made any changes to its existing scrap management plan since 2012. The stack test results for VOC since 2012 at NLMK Indiana are below:

<table>
<thead>
<tr>
<th>Year</th>
<th>lb VOC/ton</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>0.040</td>
</tr>
<tr>
<td>2013</td>
<td>0.090</td>
</tr>
<tr>
<td>2014</td>
<td>0.060</td>
</tr>
<tr>
<td>2015</td>
<td>0.082</td>
</tr>
<tr>
<td>2016</td>
<td>0.09</td>
</tr>
<tr>
<td>2017</td>
<td>0.071</td>
</tr>
<tr>
<td>2018</td>
<td>0.146</td>
</tr>
<tr>
<td>2019</td>
<td>0.0155</td>
</tr>
<tr>
<td>2020</td>
<td>0.005</td>
</tr>
</tbody>
</table>

NLMK Indiana exceeded the 0.09 lbs VOC/ton of steel in 2018 and was at the limit in 2013. This history of stack test results does not demonstrate that the scrap mix required for operations at NLMK Indiana’s production can consistently meet a limit of 0.09 lbs VOC/ton steel. NLMK Indiana’s proposed limit of 0.13 lbs VOC/ton steel is lower than the existing limit for the source prior to the re-opening of this BACT analysis and is supported by evidence. For these reasons, the proposed BACT limit for VOC will exceed 0.09 lbs VOC/ton steel but not exceed 0.15 lbs VOC/ton steel from melt shop operations.

**Step 5 – Select BACT**

Pursuant to 326 IAC 2-2-3 (PSD Control Technology Requirements) and 326 IAC 8-1-6 (New Facilities: General Reduction Requirements) and CP 127-2326-00036, issued on February 24, 1992, A 127-9642-00036, issued May 30, 2003, and PSD SSM 127-43932-00036, the Permittee shall comply with the following Best Available Control Technology (BACT) requirements:

(a) The volatile organic compound (VOC) emissions shall be controlled through a scrap management program to eliminate steel scrap with high residual oil content.

(b) The Permittee shall charge only clean scrap, consistent with the scrap management program.

(c) The combined VOC emissions from the Melt shop processes (consisting of EAF, LMF, Continuous Caster and natural gas units) shall not exceed 0.13 pounds per ton of steel produced from the common stack (S-2).
Pursuant to 326 IAC 2-2-3 (PSD Control Technology Requirements) and 326 IAC 8-1-6 (New Facilities: General Reduction Requirements) and CP 127-2326-00036, issued on February 24, 1992, A 127-9642-00036, issued May 30, 2003, and PSD SSM 127-43932-00036, the Permittee shall comply with the revised SO2, VOC and NOx emissions from the melt shop by limiting the following throughput:

(a) The maximum short term metal production capacity from the melt shop shall not exceed 185 tons per hour, over a period of 24 operating hours rolling average, with compliance demonstrated at the end of each hour; and

(b) The maximum long term metal production capacity from the melt shop shall not exceed 1,100,000 tons per 12-consecutive month period with compliance demonstrated at the end of each month.

**IDEM Contact**

(a) Questions regarding this BACT Analysis can be directed to Travis Flock at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 233-1782 or toll free at 1-800-451-6027 extension 2-1782.

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

(c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM Air Permits page on the Internet at: [http://www.in.gov/idem/airquality/2356.htm](http://www.in.gov/idem/airquality/2356.htm); and the Citizens’ Guide to IDEM on the Internet at: [http://www.in.gov/idem/6900.htm](http://www.in.gov/idem/6900.htm).
June 10, 2021

Robert Passalacqua
NLMK Indiana
6500 S Boundary Rd
Portage, IN 46368

Re: Public Notice
NLMK Indiana
Permit Level: Title V Sig Source Mod Major PSD
Title V Sig Permit Mod
Permit Number: 127-43932-00036
127-43985-00036

Dear Mr. Passalacqua:

Enclosed is the Notice of 30-Day Period for Public Comment for your draft air permit.

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. The Notice of 30-Day Period for Public Comment has also been sent to the OAQ Permits Branch Interested Parties List and, if applicable, your Consultant/Agent and/or Responsible Official/Authorized Individual.

The preliminary findings, including the draft permit, technical support document, emission calculations, and other supporting documents, are available electronically at:

IDEM’s online searchable database: [http://www.in.gov/apps/idem/caats/](http://www.in.gov/apps/idem/caats/) . Choose Search Option by Permit Number, then enter permit 43932 or 43985

and

IDEM’s Virtual File Cabinet (VFC): [https://www.IN.gov/idem](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.

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

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

OAQ has submitted the draft permit package to the Westchester Public Library, 200 West Indiana Avenue in Chesterton, IN. As a reminder, you are obligated by 326 IAC 2-1.1-6(c) to place a copy of the complete permit application at this library no later than ten (10) days after submittal of the application or additional information to our department. We highly recommend that even if you have already placed these materials at the library, that you confirm with the library that these materials are available for review and request that the library keep the materials available for review during the entire permitting process.
Please review the draft permit documents carefully. This is your opportunity to comment on the draft permit and notify the OAQ of any corrections that are needed before the final decision. Questions or comments about the enclosed documents should be directed to Travis Flock, Indiana Department of Environmental Management, Office of Air Quality, 100 N. Senate Avenue, Indianapolis, Indiana, 46204 or call (800) 451-6027, and ask for extension 3-1782 or dial (317) 233-1782.

Sincerely,

Theresa Weaver

Theresa Weaver
Permits Branch
Office of Air Quality

Enclosures
PN Applicant Cover Letter access via website 8/10/2020
June 10, 2021

To: Westchester Public Library

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

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

Applicant Name: NLMK Indiana
Permit Number: 127-43932-00036 & 127-43985-00036

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

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

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

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

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

Enclosures
PN Library updated 4/2019
June 10, 2021
NLMK Indiana
127-43932-00036 & 127-43985-00036

Dear Concerned Citizen(s):

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

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

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

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

Please Note: If you feel you have received this Notice in error, or would like to be removed from the Air Permits mailing list, please contact 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
PN AAA Cover Letter 2/28/2020
AFFEECTED STATE NOTIFICATION OF PUBLIC COMMENT PERIOD
DRAFT INDIANA AIR PERMIT

June 10, 2021

A 30-day public comment period has been initiated for:

**Permit Number:**  127-43932-00036 & 127-43985-00036  
**Applicant Name:** NLMK Indiana  
**Location:** Portage, Porter County, Indiana

The public notice, draft permit and technical support documents can be accessed via the IDEM Air Permits Online site at: 
[http://www.in.gov/ai/appfiles/idem-caats/](http://www.in.gov/ai/appfiles/idem-caats/)

Questions or comments on this draft permit should be directed to the person identified in the public notice by telephone or in writing to:

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

Questions or comments regarding this email notification or access to this information from the EPA Internet site can be directed to Chris Hammack at chammack@idem.IN.gov or (317) 233-2414.
# Mail Code 61-53

| IDEM Staff | TAWEAVER 6/10/2021 | NLMK Indiana 127-43932-00036 & 127-43985-00036 (draft) | AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING |

## Name and address of Sender

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<th>Line</th>
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<td>Mr. Les Chapman OCS Environmental, Inc. 130 Lincoln Street, Suite 1 Porter IN 46304 (Consultant)</td>
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