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

**Eric J. Holcomb**
*Governor*

**Brian C. Rockensuess**
*Commissioner*

| | |
|---|---|
| To: | Interested Parties |
| Date: | July 3, 2024 |
| From: | Jenny Acker, Chief<br>Permits Branch<br>Office of Air Quality |
| Source Name: | Cleveland Cliffs New Carlisle |
| Permit Level: | Title V – Significant Permit Modification |
| Permit Number: | 141-47618-00159 |
| Source Location: | 30755 Edison Road New Carlisle, IN 46552 |
| Type of Action Taken: | Modification at an existing source |

# Notice of Decision: Approval - Effective Immediately

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

The final decision is available on the IDEM website at: http://www.in.gov/apps/idem/caats/
To view the document, choose Search Option **by Permit Number**, then enter permit 47618. This search will also provide the application received date, **draft permit** public notice start and end date, **proposed permit** EPA review period start and end date, and **final** permit issuance date.

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

*(continues on next page)*

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

**Eric J. Holcomb**
*Governor*

**Brian C. Rockensuess**
*Commissioner*

July 3, 2024

Mr. Jim Dodson
Cleveland-Cliffs New Carlisle
30755 Edison Rd,
New Carlisle, IN 46552

Re: 141-47618-00159
Significant permit Modification

Dear Mr. Jim Dodson:

Cleveland-Cliffs New Carlisle. was issued Part 70 Operating Permit Renewal No. T141-42030-00159 on February 5, 2021, for a stationary continuous cold mill, a continuous hot dip galvanizing line, and an electrolytic galvanizing line at a metal coil-manufacturing source located at 30755 Edison Rd, New Carlisle, IN 46552. An application requesting changes to this permit was received on February 6, 2024. Pursuant to the provisions of 326 IAC 2-7-12, a Significant Permit Modification to this permit is hereby approved as described in the attached Technical Support Document.

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

Attachment A - Fugitive Dust Control Plan
Attachment B - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units, 40 CFR 60, Subpart Dc
Attachment C - National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Stationary Reciprocating Internal Combustion Engines, 40 CFR 63, Subpart ZZZZ
Attachment D - National Emission Standards for Hazardous Air Pollutants: Area Source Standards for Plating and Polishing Operations, 40 CFR 63, Subpart WWWWWW

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

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

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

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

the Internet at: https://www.in.gov/idem/airpermit/public-participation/; and the Citizens' Guide to IDEM on the Internet at: https://www.in.gov/idem/resources/citizens-guide-to-idem/.

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

If you have any questions regarding this matter, please contact Sidhant Paul, 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) 232-8219 or (800) 451-6027, and ask for Sidhant Paul or (317) 232-8219.

Sincerely,

Brian Williams, Section Chief
Permits Branch
Office of Air Quality

Attachments: Modified Permit and Technical Support Document
cc: File - St Joseph County
St Joseph County Health Department
U.S. EPA, Region 5
Compliance and Enforcement Branch
IDEM Northern Regional Office

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

# Part 70 Operating Permit Renewal
# OFFICE OF AIR QUALITY

## Cleveland-Cliffs New Carlisle
## 30755 Edison Rd.
## New Carlisle, Indiana 46552

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

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

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

| Operation Permit No.: T141-42030-00159<br>Master Agency Interest ID.: 101127 | |
|---|---|
| Issued by: Original signed by:<br>Brian Williams, Section Chief<br>Permits Branch, Office of Air Quality | Issuance Date: October 9, 2020<br><br>Expiration Date: October 9, 2025 |

Administrative Amendment No.: 141-43817-00159, issued on March 11, 2021.
Administrative Amendment No.: 141-44473-00159, issued on January 12, 2022.

| Significant Permit Modification No.: 141-47618-00159 | |
|---|---|
| Issued by:<br><br>Brian Williams, Section Chief<br>Permits Branch<br>Office of Air Quality | Issuance Date: July 3, 2024<br><br>Expiration Date: October 9, 2025 |

# TABLE OF CONTENTS

## SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 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 metal coil manufacturing source.

| | |
|---|---|
| Source Address: | 30755 Edison Road, New Carlisle, Indiana 46552 |
| General Source Phone Number: | (574) 654-1317 |
| SIC Code: | 3316 (Cold-Rolled Steel Sheet, Strip, and Bars)<br>3471 (Electroplating, Plating, Polishing, Anodizing, and Coloring) |
| County Location: | St Joseph |
| Source Location Status: | Attainment for all criteria pollutants |
| Source Status: | Part 70 Operating Permit Program<br>Major Source, under PSD Rules<br>Minor Source, under Section 112 of the Clean Air Act<br>1 of 28 Source Categories |

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

This stationary continuous cold mill, a continuous hot dip galvanizing line, and an electrolytic galvanizing line at a metal coil-manufacturing source consists of two (2) plants:

(a) Cleveland-Cliffs New Carlisle 1 (141-00040) is located at 30755 Edison Road, New Carlisle, Indiana; and

(b) Cleveland-Cliffs New Carlisle 2 (141-00046) is located at 30755 Edison Road, New Carlisle, Indiana.

Since the two (2) plants are located in contiguous properties, Cleveland-Cliffs New Carlisle 1 (formerly known as Cleveland-Cliffs Tek Inc.) supports Cleveland-Cliffs New Carlisle 2 (formerly known as Cleveland-Cliffs Kote Inc.), and both partnerships are owned by subsidiaries of the same companies, they will be considered one (1) source and assigned plant identification number 141-00159. In May 2024 the legal name of the site was changed to Cleveland-Cliffs New Carlisle.

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

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

(a) Cleveland-Cliffs New Carlisle 1 continuous cold mill (CCM) for the production of cold-rolled steel strips in the coil form, constructed in 1987 with a gear modification in 2000 to allow for higher line speed to produce lighter and narrower products for EU1-EU5, consisting of:

(1) One (1) pinch roll leveler, identified as EU1, constructed in 1987, modified in 2000, with a nominal capacity of 881,840 pounds per hour of hot rolled steel strip in coil form, equipped with a hood and exhaust system with a design flow rate of 12,000 scfm using a baghouse for control, and exhausting to stack 1.

(2) One (1) flash butt welder, identified as EU2, constructed in 1987, modified in 2000, with a nominal capacity of 881,840 pounds per hour of hot rolled steel strip in coil form, equipped with a ventilation system with a design flow rate of 7,956 scfm using an in-line separator and a baghouse for control, and exhausting to stack 2.

(3) One (1) descale acid pickling line, identified as EU4, constructed in 1987, modified in 2000, with a nominal capacity of 881,840 pounds per hour of hot rolled steel strip in coil form, equipped with water sealed edge covers and a ventilation system with a design flow rate of 35,235 scfm using a counter-current packed tower scrubber with a mist eliminator installed above the packing for control. and exhausting to stack 4.

(4) One (1) tandem cold mill, identified as EU5, constructed in 1987, modified in 2000, with a nominal capacity of 881,840 pounds per hour of hot rolled steel strip in coil form, equipped with a ventilation system with a design flow rate of 147,667 scfm using two Hitachi Baffle Plate Collision Type 1 (or equivalent) mist eliminators for control, and exhausting to stack 5.

(5) One (1) electrolytic cleaning operation, identified as EU6, constructed in 1987, with a nominal capacity of 540,000 pounds per hour of cold rolled steel strip in coil form, equipped with a ventilation system with a design flow rate of 15,912 scfm using a Ceilcote horizontal air wash (or equivalent) for control, and exhausting to stack 6.

(6) One (1) post treatment pickling operation, identified as EU9, constructed in 1987, with a nominal capacity of 540,000 pounds per hour of cold rolled steel strip in coil form, equipped with a ventilation system with a design flow rate of 9,472 scfm using a counter-current packed tower scrubber with a Chevron or mesh type mist eliminator installed above the packing for control, and exhausting to stack 9.

(7) One (1) natural gas-fired annealing furnace, identified as EU7-1, constructed in 1988, with a rated heat input capacity of 222 MMBtu/hr, using a Bloom 2320 burner or equivalent for NOx control, and exhausting to stack 7.

(8) One (1) natural gas-fired waste heat boiler, identified as EU7-2, constructed in 1988 and permitted in 2022 for modification (burner replacement), with a rated heat input capacity of 45.0 MMBtu/hr, using $NO_x$ suppression design and flue gas recirculation for NOx control, and exhausting to stack 7.

(9) One (1) natural gas-fired package boiler, identified as EU7-3, constructed in 1988, with a rated heat input capacity of 70.8 MMBtu/hr, using $NO_x$ suppression design and flue gas recirculation for NOx control, and exhausting to stack 7.

Units EU6, EU7-1, EU7-2, and EU9 are collectively also identified as the Continuous Annealing Process Line (CAPL).

(b) Cleveland-Cliffs New Carlisle 2 continuous hot dip galvanizing line (CGL), consisting of:

(1) One (1) natural gas-fired CGL heating furnace, identified as EU21, constructed in 1989, with a rated heat input capacity of 113.1 MMBtu/hr, using low-$NO_x$ regenerative burners for NOx control, and exhausting to stack 21.

(2) One (1) natural gas-fired CGL galvannealing furnace, identified as EU22,

constructed in 1989, with a rated heat input capacity of 30.2 MMBtu/hr, using low $NO_x$ burners for NOx control, and exhausting to stack 22.

(3) One (1) natural gas-fired package boiler, identified as EU27, constructed in 1989, with a rated heat input capacity of 71.5 MMBtu/hr, using flue gas recirculation for NOx control, and exhausting to stack 27.

Under the NSPS, 40 CFR 60, Subpart Dc, EU27 is an affected facility.

(4) One (1) CGL electrolytic cleaning operation, identified as EU20, constructed in 1989 and approved for replacement in 2024, with a nominal capacity of 123,800 pounds per hour of uncoated cold rolled steel strip, equipped with a ventilation system with a design flow rate of 24,630 scfm using a scrubber with horizontal mist eliminator for control, and exhausting to stack 20.

(5) One (1) CGL skin pass mill, identified as EU31, constructed in 1989, with a nominal capacity of 123,800 pounds per hour of uncoated cold rolled steel strip, equipped with a ventilation system with a design flow rate of 11,313 scfm using a fume scrubber and a horizontal mist eliminator for control, and exhausting to stack 31.

(6) One (1) CGL sink roll pickling operation, identified as EU32, constructed in 1989, equipped with a ventilation system with a design flow rate of 10,000 scfm using a high efficiency scrubber with vertical mist eliminator for control, and exhausting to stack 32.

(c) Cleveland-Cliffs New Carlisle 2 electrolytic galvanizing line (EGL), consisting of:

(1) One (1) EGL surface activation and plating operation, identified as EU24, constructed in 1989, with a nominal capacity of 135,900 pounds per hour of uncoated cold rolled steel strip, equipped with a ventilation system with a design flow rate of 41,480 scfm using a scrubber with vertical mist eliminator for control, and exhausting to stack 24.

(2) One (1) EGL degreasing operation, identified as EU25, constructed in 1989, with a nominal capacity 135,900 pounds per hour of uncoated cold rolled steel strip with a ventilation system with a design flow rate of 3,117 scfm, using a mist eliminator for control, and exhausting to stack 25.

(3) One (1) EGL pre-cleaning operation, identified as EU26, constructed in 1989, with a nominal capacity 135,900 pounds per hour of uncoated cold rolled steel strip with a ventilation system with a design flow rate of 2,981 scfm, using a mist eliminator for control, and exhausting to stack 26.

(d) Internal combustion engines regulated as part of the stationary source prior to December 1998, as follows:

(1) Three (3) 1,000 horsepower switching locomotives, permitted in 1989, each with a maximum fuel consumption of 26.97 gal/hr of diesel fuel

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

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

(a) Combustion related activities.

(1) Space heaters, process heaters, heat treat furnaces, or boilers using the following fuels:

(A) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour, as follows:

(i) Space heaters at the Cleveland-Cliffs New Carlisle 2 plant, constructed in 1989, modified in 1991, with a combined heat input capacity of 76.30 MMBtu/hr.

(2) Combustion source flame safety purging on startup.

(b) Fuel dispensing activities as follows:

(1) A petroleum fuel other than gasoline dispensing facility, having a storage tank capacity less than or equal to ten thousand five hundred (10,500) gallons, and dispensing three thousand five hundred (3,500) gallons per day or less, as follows:

(A) One (1) non-road diesel fuel tank for locomotives, installed in 1989, with a maximum storage capacity of 28,000 liters (7,400 gallons) and a maximum throughput of 1,942 gal/day.
(B) Six (6) diesel fuel tanks for fueling stationary RICE and service vehicles.

(c) Production related activities, including the following:

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

(2) Cleaners and solvents characterized as having a vapor pressure equal to or less than:

(A) two (2.0) kilo Pascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pound per square inch) measured at thirty-eight (38) degrees Centigrade (one hundred (100) degrees Fahrenheit); or
(B) seven-tenths (0.7) kilo Pascal (five (5) millimeters of mercury or one-tenth (0.1) pound per square inch) measured at twenty (20) degrees Centigrade (sixty-eight (68) degrees Fahrenheit); the use of which, for all cleaners and solvents combined, does not exceed one hundred forty-five (145) gallons per twelve (12) months.

(3) The following equipment related to manufacturing activities not resulting in the emission of HAPs:

(A) Brazing equipment.
(B) Cutting torches.
(C) Soldering equipment.
(D) Welding equipment.

(d) Water based activities, including the following:

(1) Noncontact cooling tower systems, consisting of:

(A) Forced and induced draft cooling tower systems not regulated under a NESHAP, as follows:

(i) One (1) mechanical draft cooling tower, identified as Cleveland-Cliffs New Carlisle 1 cooling tower, constructed in 1987, with a circulating water flow rate of 72.5 $m^3$/min (19,150 gal/min).
(ii) One (1) mechanical draft cooling tower, identified as Cleveland-Cliffs New Carlisle 2 cooling tower, constructed in 1989, with a circulating water flow rate of 94.6 $m^3$/min (25,000 gal/min).

(e) Paved and unpaved roads and parking lots with public access.

(f) Activities associated with emergencies, consisting of:

(1) Emergency generators as follows:

(A) Diesel generators not exceeding one thousand six hundred (1,600) horsepower, as follows:

(i) One (1) Kohler emergency diesel generator, installed in 1991, rated at 750 kW, with an engine power output of 985 hp.
(ii) One (1) GE emergency diesel generator for CAPL, installed in 1990, rated at 240 kW, with an engine power output of 374 hp.

Under the NESHAP, 40 CFR 63, Subpart ZZZZ, the emergency generators are existing affected sources.

(2) Stationary fire pump engines, as follows:

(A) One (1) Cummins Diesel NT855F4 emergency fire pump, installed in 1988, with an engine power output of 340 hp.

Under the NESHAP, 40 CFR 63, Subpart ZZZZ, the emergency fire pump is an existing affected source.

(g) An emission unit or activity whose potential uncontrolled emissions meet the exemption levels specified in 326 IAC 2-1.1-3(e)(1) or the exemption levels specified in the following, whichever is lower:

- For lead or lead compounds measured as elemental lead, the exemption level is six-tenths (0.6) ton per year or three and twenty-nine hundredths (3.29) pounds per day.
- For carbon monoxide (CO), the exemption limit is twenty-five (25) pounds per day.
- For sulfur dioxide, the exemption level is five (5) pounds per hour or twenty-five (25) pounds per day.
- For VOC, the exemption limit is three (3) pounds per hour or fifteen (15) pounds per day.
- For nitrogen oxides (NOx), the exemption limit is five (5) pounds per hour or twenty-five (25) pounds per day.
- For PM10 or direct PM2.5, the exemption level is either five (5) pounds per hour or twenty-five (25) pounds per day.

As follows:

(1) Lime storage silo.
(2) Inspection line electrostatic oiler.
(3) Electric motor ventilation.
(4) Skinpass oil room ventilation.

(5) Wrapping line edge oiler.
(6) CGL quench fume.
(7) One (1) Cleveland-Cliffs New Carlisle 1 CAPL Post Treatment Nickel Process.

Under the NESHAP, 40 CFR 63, Subpart WWWWWW, the CAPL Post Treatment Nickel Process is considered an existing affected source.

(8) One (1) Clark GM cooling tower emergency diesel pump, installed in 1989, with an engine power output of 40 bhp.

Under the NESHAP, 40 CFR 63, Subpart ZZZZ, the emergency pump is an existing affected source.

## 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, T141-42030-00159, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.

(b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, including any permit shield provided in 326 IAC 2-7-15, until the renewal permit has been issued or denied.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

B.9 Annual Compliance Certification [326 IAC 2-7-6(5)]

(a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. All certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted no later than July 1 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) The Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) no later than ninety (90) days after issuance of this permit or ninety (90) days after initial start-up, whichever is later, including the following information on each facility:

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

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

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

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

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

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

The Permittee shall implement the PMPs.

(c) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions. The

PMPs and their submittal do not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

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

B.11 Emergency Provisions [326 IAC 2-7-16]

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

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

(1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;

(2) The permitted facility was at the time being properly operated;

(3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;

(4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ or Northern 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
Northern Regional Office phone: (574) 245-4870; fax: (574) 245-4877.

(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 T141-42030-00159 and issued pursuant to permitting programs approved into the state implementation plan have been either:

(1) incorporated as originally stated,

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

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

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

B.14 Termination of Right to Operate [326 IAC 2-7-10] [326 IAC 2-7-4(a)]

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

B.15 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-7-5(6)(C)] [326 IAC 2-7-8(a)] [326 IAC 2-7-9]

(a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Part 70 Operating Permit modification,

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

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

(1) That this permit contains a material mistake.

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

(3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-7-9(a)(3)]

(c) Proceedings by IDEM, OAQ to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-7-9(b)]

(d) The reopening and revision of this permit, under 326 IAC 2-7-9(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ may provide a shorter time period in the case of an emergency. [326 IAC 2-7-9(c)]

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

(a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and shall include the information specified in 326 IAC 2-7-4. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(42). The renewal application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

Request for renewal shall be submitted to:

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

(b) A timely renewal application is one that is

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

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

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

B.17 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]

(a) Permit amendments and modifications are governed by the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this permit.

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

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

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

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

B.18 Permit Revision Under Economic Incentives and Other Programs [326 IAC 2-7-5(8)] [326 IAC 2-7-12(b)(2)]

(a) No Part 70 permit revision or notice shall be required under any approved economic incentives, marketable Part 70 permits, emissions trading, and other similar programs or processes for changes that are provided for in a Part 70 permit.

(b) Notwithstanding 326 IAC 2-7-12(b)(1) and 326 IAC 2-7-12(c)(1), minor Part 70 permit modification procedures may be used for Part 70 modifications involving the use of economic incentives, marketable Part 70 permits, emissions trading, and other similar approaches to the extent that such minor Part 70 permit modification procedures are explicitly provided for in the applicable State Implementation Plan (SIP) or in applicable requirements promulgated or approved by the U.S. EPA.

B.19 Operational Flexibility [326 IAC 2-7-20] [326 IAC 2-7-10.5]

(a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-7-20(b) or (c) without a prior permit revision, if each of the following conditions is met:

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

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

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

(4) The Permittee notifies the:

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

and

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

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

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

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

(b) The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(37)) without a permit revision, subject to the constraint of 326 IAC 2-7-20(a). For each such Section 502(b)(10) of the Clean Air Act change, the required written notification shall include the following:

(1) A brief description of the change within the source;

(2) The date on which the change will occur;

(3) Any change in emissions; and

(4) Any permit term or condition that is no longer applicable as a result of the change.

The notification which shall be submitted is not considered an application form, report or compliance certification. Therefore, the notification by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

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

(d) Alternative Operating Scenarios [326 IAC 2-7-20(d)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-7-5(9). No prior notification of IDEM, OAQ or U.S. EPA is required.

(e) Backup fuel switches specifically addressed in, and limited under, Section D of this permit

shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

B.20 Source Modification Requirement [326 IAC 2-7-10.5]

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

B.21 Inspection and Entry [326 IAC 2-7-6] [IC 13-14-2-2] [IC 13-30-3-1] [IC 13-17-3-2]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

(a) Enter upon the Permittee's premises where a Part 70 source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

(b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy any records that must be kept under the conditions of this permit;

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

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

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

B.22 Transfer of Ownership or Operational Control [326 IAC 2-7-11]

(a) The Permittee must comply with the requirements of 326 IAC 2-7-11 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.

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

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

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

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

B.23 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-7-5(7)] [326 IAC 2-1.1-7]

(a) The Permittee shall pay annual fees to IDEM, OAQ within thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ the applicable fee is due April 1 of each year.

(b) Except as provided in 326 IAC 2-7-19(e), failure to pay may result in administrative enforcement action or revocation of this permit.

(c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-8590 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

B.24 Credible Evidence [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [62 FR 8314] [326 IAC 1-1-6]

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

**SECTION C SOURCE OPERATION CONDITIONS**

Entire Source

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

C.1 Opacity [326 IAC 5-1]

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

(a) Opacity shall not exceed an average of 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.2 Open Burning [326 IAC 4-1] [IC 13-17-9]

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

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

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

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

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

C.5 Fugitive Particulate Matter 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.6 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted. The provisions of 326 IAC 1-7-1(3), 326 IAC 1-7-2, 326 IAC 1-7-3(c) and (d), 326 IAC 1-7-4, and 326 IAC 1-7-5(a), (b), and (d) are not federally enforceable.

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

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

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

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

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

(A) Asbestos removal or demolition start date;

(B) Removal or demolition contractor; or

(C) Waste disposal site.

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

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

All required notifications shall be submitted to:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

C.10 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.11 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.12 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.13 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.14 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.15 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.16 Emission Statement [326 IAC 2-7-5(3)(C)(iii)] [326 IAC 2-7-5(7)] [326 IAC 2-7-19(c)] [326 IAC 2-6]

Pursuant to 326 IAC 2-6-3(b)(1), starting in 2004 and every three (3) years thereafter, the Permittee shall submit by July 1 an emission statement covering the previous calendar year. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4(c) and shall meet the following requirements:

(1) Indicate estimated actual emissions of all pollutants listed in 326 IAC 2-6-4(a);

(2) Indicate estimated actual emissions of regulated pollutants as defined by 326 IAC 2-7-1(33) (“Regulated pollutant, which is used only for purposes of Section 19 of this rule”) from the source, for purpose of fee assessment.

The statement must be submitted to:

Indiana Department of Environmental Management
Technical Support and Modeling Section, Office of Air Quality

100 North Senate Avenue
MC 61-50 IGCN 1003
Indianapolis, Indiana 46204-2251

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

C.17 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [326 IAC 2-2] [326 IAC 2-3]

(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.18 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11] [326 IAC 2-2] [326 IAC 2-3] [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.19 Compliance with 40 CFR 82 and 326 IAC 22-1

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

## SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

**Emissions Unit Description:**

(a) Cleveland-Cliffs New Carlisle 1 continuous cold mill (CCM) for the production of cold-rolled steel strips in the coil form, constructed in 1987 with a gear modification in 2000 to allow for higher line speed to produce lighter and narrower products for EU1-EU5, consisting of:

(1) One (1) pinch roll leveler, identified as EU1, constructed in 1987, modified in 2000, with a nominal capacity of 881,840 pounds per hour of hot rolled steel strip in coil form, equipped with a hood and exhaust system with a design flow rate of 12,000 scfm using a baghouse for control, and exhausting to stack 1.

(2) One (1) flash butt welder, identified as EU2, constructed in 1987, modified in 2000, with a nominal capacity of 881,840 pounds per hour of hot rolled steel strip in coil form, equipped with a ventilation system with a design flow rate of 7,956 scfm using an in-line separator and a baghouse for control, and exhausting to stack 2.

(3) One (1) descale acid pickling line, identified as EU4, constructed in 1987, modified in 2000, with a nominal capacity of 881,840 pounds per hour of hot rolled steel strip in coil form, equipped with water sealed edge covers and a ventilation system with a design flow rate of 35,235 scfm using a counter-current packed tower scrubber with a mist eliminator installed above the packing for control. and exhausting to stack 4.

(4) One (1) tandem cold mill, identified as EU5, constructed in 1987, modified in 2000, with a nominal capacity of 881,840 pounds per hour of cold rolled steel strip in coil form, equipped with a ventilation system with a design flow rate of 147,667 scfm using two Hitachi Baffle Plate Collision Type 1 (or equivalent) mist eliminators for control, and exhausting to stack 5.

(5) One (1) electrolytic cleaning operation, identified as EU6, constructed in 1987, with a nominal capacity of 540,000 pounds per hour of cold rolled steel strip in coil form, equipped with a ventilation system with a design flow rate of 15,912 scfm using a Ceilcote horizontal air wash (or equivalent) for control, and exhausting to stack 6.

(6) One (1) post treatment pickling operation, identified as EU9, constructed in 1987, with a nominal capacity of 540,000 pounds per hour of cold rolled steel strip in coil form, equipped with a ventilation system with a design flow rate of 9,472 scfm using a counter-current packed tower scrubber with a Chevron or mesh type mist eliminator installed above the packing for control, and exhausting to stack 9.

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

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

D.1.1 PSD BACT Limitations [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3 (PSD) and PSD (71) 1664 (Plant ID 141-00040), issued on October 1, 1987, modified by CP 141-2750-00040/00046, issued on October 28, 1996, and Minor Source Modification No. 141-12209-00040, issued on August 10, 2000, units at the source are subject to the following limits, which are determined to be BACT for the units:

(a) PM emissions from the pinch roll leveler (EU1) shall not exceed 0.5 lbs/hr and 2.2 tpy.

(b) PM emissions from the flash butt welder (EU2) shall not exceed 0.1 lbs/hr and 0.44 tpy.

(c) PM emissions from the descale acid pickling line (EU4) shall not exceed 0.8 lbs/hr and 3.5 tpy.

(d) PM emissions from the tandem cold mill (EU5) shall not exceed 6.6 lbs/hr and 28.9 tpy.

(e) PM emissions from the electrolytic cleaning operation (EU6) shall not exceed 0.28 lb/hr and 1.2 tpy.

(f) PM emissions from the post treatment pickling operation (EU9) shall not exceed 0.2 lbs/hr and 0.88 tpy.

D.1.2 HAP Minor Limits [40 CFR 63]

Pursuant to 326 IAC 2-7-5(1) and 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:

(a) The combined hydrochloric acid emissions from the descale acid pickling line (EU4) and the post-treatment pickling operation (EU9) shall not exceed 2.24 lb/hr.

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

D.1.3 Particulate Matter (PM) [326 IAC 6.5-1-2]

Pursuant to 326 IAC 6.5-1-2(a), the PM emissions from the units listed in the table below shall not exceed three-hundredths (0.03) grain per dry standard cubic foot (dscf).

| Unit |
|---|
| Pinch roll leveler (EU1) |
| Flash butt welder (EU2) |
| Descale acid pickling line (EU4) |
| Tandem cold mill (EU5) |
| Electrolytic cleaning operation (EU6) |
| Post-treatment pickling operation (EU9) |

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

D.1.4 Particulate Matter Control

In order to assure compliance with Conditions D.1.1 and D.1.3, the control devices listed in the table below for particulate matter control shall be in operation and control emissions from the continuous cold mill facilities at all times the associated facilities are in operation.

| Unit ID | Unit Description | Control Device |
|---|---|---|
| EU1 | Pinch roll leveler | Baghouse |
| EU2 | Flash butt welder | In-line separator and baghouse |
| EU4 | Descale acid pickling line | Scrubber and mist eliminator |
| EU5 | Tandem cold mill | Mist eliminator |
| EU6 | Electrolytic cleaning | Scrubber |
| EU9 | Post treatment pickling | Scrubber and mist eliminator |

In the event that bag failure is observed in a multi-compartment baghouse, if operations will

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

D.1.5 Hazardous Air Pollutants Control

In order to assure compliance with Condition D.1.2, the control devices listed in the table below for HAP control shall be in operation and control emissions from the pickling facilities at all times the associated facilities are in operation.

| Unit ID | Unit Description | Control Device |
|---|---|---|
| EU4 | Descale acid pickling line | Scrubber and mist eliminator |
| EU9 | Post treatment pickling | Scrubber and mist eliminator |

D.1.6 Testing Requirements [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Conditions D.1.1(d) and D.1.3, the Permittee shall perform PM testing of the tandem cold mill (EU5) utilizing methods as approved by the Commissioner at least once every 5 years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

(b) In order to demonstrate compliance with Condition D.1.2, the Permittee shall perform HCL testing of the descale acid pickling line (EU4) utilizing methods as approved by the Commissioner at least once every 5 years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

(c) In order to demonstrate compliance with Condition D.1.2, the Permittee shall perform HCL testing of the post treatment pickling operation (EU9) utilizing methods as approved by the Commissioner at least once every 5 years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

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

D.1.7 Baghouse Parametric Monitoring [40 CFR 64]

The Permittee shall record the pressure drop across the baghouse controlling the pinch roll leveler (EU1) at least once per day when the associated pinch roll leveler is in operation. When, for any one reading, the pressure drop across a baghouse is outside the normal range, the Permittee shall take a reasonable response. The normal range for this unit is a pressure drop between 1.0 and 7.0 inches of water. Section C - Response to Excursions and Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

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

The Permittee shall maintain records of the manufacturer specifications, if used.

D.1.8 Broken or Failed Bag Detection

In the event that baghouse failure has been observed:

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

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

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

D.1.9 Scrubber Flow Rate [40 CFR 64]

(a) The Permittee shall monitor and record the flow rate of the scrubber controlling the descale acid pickling line (EU4) at least once per day when the associated processes are in operation.

(b) The Permittee shall determine the minimum flow rate from the latest valid stack test that demonstrates compliance with limits in Condition D.1.2.

(c) On and after the date the stack test results are available, the Permittee shall maintain a flow rate at or above the minimum rate as observed during the latest compliant stack test.

(d) When for any one reading, the flow rate is below the above mentioned minimum, the Permittee shall take a reasonable response. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A reading that is below the above mentioned minimum flow rate is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

D.1.10 Scrubber Flow Rate

The Permittee shall monitor and record the flow rate of the scrubber controlling the electrolytic cleaning operation (EU6) at least once per day when the associated processes are in operation. When for any on reading, the flow rate drops below the minimum the Permittee shall take a reasonable response. The normal minimum for this unit is a flow rate of 24 gallons per minute. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A reading that is below the below the mentioned minimum flow rate is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

D.1.11 Scrubber Flow Rate [40 CFR 64]

(a) The Permittee shall monitor and record the flow rate of the scrubber controlling the post treatment pickling operation (EU9) at least once per day when the associated processes are in operation.

(b) The Permittee shall determine the minimum flow rate from the latest valid stack test that demonstrates compliance with limits in Condition D.1.2.

(c) On and after the date the stack test results are available, the Permittee shall maintain a flow rate at or above the minimum rate as observed during the latest compliant stack test.

(d) When for any one reading, the flow rate is below the above mentioned minimum, the Permittee shall take a reasonable response. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A reading that is below the above mentioned minimum flow rate is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

D.1.12 Scrubber Failure Detection

In the event that a scrubber malfunction has been observed:

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

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

D.1.13 Mist Eliminator Failure Detection

In the event that a mist eliminator malfunction has been observed at EU5:

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

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

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

D.1.14 Record Keeping Requirements

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

(b) To document the compliance status with Condition D.1.9, the Permittee shall maintain daily records of the flow rate for the scrubber. The Permittee shall include in its daily record when the readings are not taken and the reason for the lack of the readings (e.g., the process did not operate that day).

(c) To document the compliance status with Condition D.1.10, the Permittee shall maintain daily records of the flow rate for the scrubber. The Permittee shall include in its daily record when the readings are not taken and the reason for the lack of the readings (e.g., the process did not operate that day).

(d) To document the compliance status with Condition D.1.11, the Permittee shall maintain daily records of the flow rate for the scrubber. The Permittee shall include in its daily record when the readings are not taken and the reason for the lack of the readings (e.g., the process did not operate that day).

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

**SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS**

**Emissions Unit Description:**

(a) Cleveland-Cliffs New Carlisle 1 continuous cold mill (CCM) for the production of cold-rolled steel strips in the coil form, constructed in 1987 with a gear modification in 2000 to allow for higher line speed to produce lighter and narrower products for EU1-EU5, consisting of:

(7) One (1) natural gas-fired annealing furnace, identified as EU7-1, constructed in 1988, with a rated heat input capacity of 222 MMBtu/hr, using a Bloom 2320 burner or equivalent for NOx control, and exhausting to stack 7.

(8) One (1) natural gas-fired waste heat boiler, identified as EU7-2, constructed in 1988 and permitted in 2022 for modification (burner replacement), with a rated heat input capacity of 45.0 MMBtu/hr, using $NO_x$ suppression design and flue gas recirculation for NOx control, and exhausting to stack 7.

(9) One (1) natural gas-fired package boiler, identified as EU7-3, constructed in 1988, with a rated heat input capacity of 70.8 MMBtu/hr, using $NO_x$ suppression design and flue gas recirculation for NOx control, and exhausting to stack 7.

(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 Fuel Type [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3 (PSD) and PSD (71) 1664 (Plant ID 141-00040), issued on October 1, 1987, modified by PC 71-1715 (Plant ID 141-00040), issued on November 1, 1988, and CP 141-2750-00040/00046, issued on October 28, 1996, units at the source are subject to the following limits, which are determined to be BACT for the units:

(a) The annealing furnace (EU7-1) shall only burn natural gas and shall not exceed 222 MMBtu/hr input.

(b) The waste heat boiler (EU7-2) shall only burn natural gas and shall not exceed 95 MMBtu/hr input.

(c) The package boiler (EU7-3) shall only burn natural gas and shall not exceed 70.8 MMBtu/hr heat input.

D.2.2 Particulate Matter (PM) [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3 (PSD) and PSD (71) 1664 (Plant ID 141-00040), issued on October 1, 1987, modified by PC 71-1715 (Plant ID 141-00040), issued on November 1, 1988, and CP 141-2750-00040/00046, issued on October 28, 1996, units at the source are subject to the following limits, which are determined to be BACT for the units:

(a) PM emissions from the annealing furnace (EU7-1) shall not exceed 0.003 pounds per million Btu, 0.66 pounds per hour, and 2.77 tons per year.

(b) PM emissions from the waste heat boiler (EU7-2) shall not exceed 0.003 pounds per million Btu, 0.285 pounds per hour, and 1.25 tons per year.

(c) PM emissions from the package boiler (EU7-3) shall not exceed 0.003 pounds per million

Btu, 0.21 pounds per hour, and 0.93 tons per year.

D.2.3 Particulate Matter (PM) [326 IAC 6.5-1-2]

(a) Pursuant to 326 IAC 6.5-1-2(a), PM emissions from the annealing furnace (EU7-1) shall not exceed three-hundredths (0.03) grain per dry standard cubic foot (dscf).

(b) Pursuant to 326 IAC 6.5-1-2(b)(3), PM emissions from the units listed in the table below shall not exceed one-hundredth (0.01) grain per dry standard cubic foot (dscf).

| Unit |
|---|
| Waste heat boiler (EU7-2) |
| Package boiler (EU7-3) |

D.2.4 Nitrogen Oxides (NOx) [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3 (PSD) and PSD (71) 1664 (Plant ID 141-00040), issued on October 1, 1987, modified by PC 71-1715 (Plant ID 141-00040), issued on November 1, 1988, and CP 141-2750-00040/00046, issued on October 28, 1996, units at the source are subject to the following limits, which are determined to be BACT for the units:

(a) $NO_x$ emissions from the annealing furnace (EU7-1) shall be controlled by Bloom 2320 Burner (or equivalent) and shall not exceed 0.43 pounds per million Btu, 95.5 pounds per hour, and 418.1 tons per year.

(b) $NO_x$ emissions from the waste heat boiler (EU7-2) shall be controlled by $NO_x$ suppression-design and flue gas recirculation and shall not exceed 0.05 pounds per million Btu, 4.75 pounds per hour, and 20.8 tons per year.

(c) $NO_x$ emissions from the package boiler (EU7-3) shall be controlled by $NO_x$ suppression-design and flue gas recirculation and shall not exceed 0.05 pounds per million Btu, 3.54 pounds per hour, and 15.5 tons per year.

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

D.2.5 Testing Requirements [326 IAC 2-1.1-11]

In order to demonstrate compliance with Condition D.2.4(a), the Permittee shall perform NOx testing of the annealing furnace (EU7-1) utilizing methods as approved by the Commissioner at least once every 5 years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

D.2.6 Nitrogen Oxides (NOx) Control

In order to assure compliance with Condition D.2.4, the control devices listed in the table below for NOx control shall be in operation and control emissions from the continuous cold mill facilities at all times the associated facilities are in operation.

| Unit ID | Unit Description | Control Device |
|---|---|---|
| EU7-1 | Annealing furnace | Bloom 2320 (or equivalent) burner |
| EU7-2 | Waste heat boiler | Flue gas recirculation |
| EU-7-3 | Package boiler | Flue gas recirculation |

## SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

**Emissions Unit Description:**

(b) Cleveland-Cliffs New Carlisle 2 continuous hot dip galvanizing line (CGL), consisting of:

(1) One (1) natural gas-fired CGL heating furnace, identified as EU21, constructed in 1989, with a rated heat input capacity of 113.1 MMBtu/hr, using low-$NO_x$ regenerative burners for NOx control, and exhausting to stack 21.

(2) One (1) natural gas-fired CGL galvannealing furnace, identified as EU22, constructed in 1989, with a rated heat input capacity of 30.2 MMBtu/hr, using low $NO_x$ burners for NOx control, and exhausting to stack 22.

(3) One (1) natural gas-fired package boiler, identified as EU27, constructed in 1989, with a rated heat input capacity of 71.5 MMBtu/hr, using flue gas recirculation for NOx control, and exhausting to stack 27.

Under the NSPS, 40 CFR 60, Subpart Dc, EU27 is an affected facility.

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

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

D.3.1 Fuel Type [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3 (PSD) and PC 71-1822 (Plant ID 141-00046), issued on November 20, 1989 as revised on November 15, 1991, modified by CP 141-2750-00040/00046, issued on October 28, 1996, units at the source are subject to the following limits, which are determined to be BACT for the units:

(a) The CGL heating furnace (EU21) shall only burn natural gas and shall not exceed 113.1 MMBtu/hr input.

(b) The CGL galvannealing furnace (EU22) shall only burn natural gas and shall not exceed 30.2 MMBtu/hr input.

(c) The package boiler (EU27) shall only burn natural gas and shall not exceed 71.5 MMBtu/hr input.

D.3.2 Particulate Matter (PM) [326 IAC 6.5-1-2]

(a) Pursuant to 326 IAC 6.5-1-2(a), the PM emissions from the units listed in the table below shall not exceed three-hundredths (0.03) grain per dry standard cubic foot (dscf).

| Unit |
|---|
| CGL heating furnace (EU21) |
| CGL galvannealing furnace (EU22) |

(b) Pursuant to 326 IAC 6.5-1-2(b)(3), the PM emissions from the package boiler (EU27) shall not exceed one-hundredth (0.01) grain per dry standard cubic foot (dscf).

D.3.3 Nitrogen Oxides (NOx) [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3 (PSD) and PC 71-1822 (Plant ID 141-00046), issued on November 20, 1989 as revised on November 15, 1991, modified by CP 141-2750-00040/00046, issued on

October 28, 1996, units at the source are subject to the following limits, which are determined to be BACT for the units:

(a) The $NO_x$ emissions from the CGL heating furnace (EU21) shall be controlled by low-$NO_x$ regenerative burners and limited to 0.2 lbs/MMBtu, 22.62 pounds per hour, and 99.08 tpy.

(b) The $NO_x$ emissions from the CGL galvannealing furnace (EU22) shall be controlled by low $NO_x$ burners and limited to 0.39 pounds per million Btu, 11.78 pounds per hour, and 51.58 tons per year.

(c) The $NO_x$ emissions from the package boiler (EU27) shall be controlled by flue gas recirculation and shall not exceed 0.05 pounds per million Btu, 3.57 pounds per hour, and 15.7 tons per year.

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

D.3.4 Testing Requirements [326 IAC 2-1.1-11]

In order to demonstrate compliance with Condition D.3.3(a), the Permittee shall perform NOx testing of the heating furnace (EU21) utilizing methods as approved by the Commissioner at least once every 5 years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

D.3.5 Nitrogen Oxides (NOx) Control

In order to assure compliance with Condition D.3.3, the control devices listed in the table below for NOx control shall be in operation and control emissions from the continuous hot dip galvanizing line facilities at all times the associated facilities are in operation.

| Unit ID | Unit Description | Control Device |
|---|---|---|
| EU21 | CGL heating furnace | Low-NOx regenerative burners |
| EU22 | CGL galvannealing furnace | Low-NOx burners |
| EU27 | Package boiler | Flue gas recirculation |

## SECTION D.4 EMISSIONS UNIT OPERATION CONDITIONS

**Emissions Unit Description:**

(b) Cleveland-Cliffs New Carlisle 2 continuous hot dip galvanizing line (CGL), consisting of:

(4) One (1) CGL electrolytic cleaning operation, identified as EU20, constructed in 1989 and approved for replacement in 2024, with a nominal capacity of 123,800 pounds per hour of uncoated cold rolled steel strip, equipped with a ventilation system with a design flow rate of 24,630 scfm using a scrubber with horizontal mist eliminator for control, and exhausting to stack 20.

(5) One (1) CGL skin pass mill, identified as EU31, constructed in 1989, with a nominal capacity of 123,800 pounds per hour of uncoated cold rolled steel strip, equipped with a ventilation system with a design flow rate of 11,313 scfm using a fume scrubber and a horizontal mist eliminator for control, and exhausting to stack 31.

(6) One (1) CGL sink roll pickling operation, identified as EU32, constructed in 1989, equipped with a ventilation system with a design flow rate of 10,000 scfm using a high efficiency scrubber with vertical mist eliminator for control, and exhausting to stack 32.

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

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

D.4.1 BACT Limitations [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3 (PSD) and PC 71-1822 (Plant ID 141-00046), issued on November 20, 1989 as revised on November 15, 1991, modified by CP 141-2750-00040/00046, issued on October 28, 1996, units at the source are subject to the following limits, which are determined to be BACT for the units:

(a) PM and $PM_{10}$ (filterable) emissions from the CGL electrolytic cleaning operation (EU20) shall each not exceed 0.60 lbs/hr and 2.63 tpy.

(b) PM and $PM_{10}$ (filterable) emissions from the CGL skin pass mill (EU31) shall each not exceed 0.25 lbs/hr and 1.10 tpy.

(c) PM and $PM_{10}$ (filterable) emissions from the CGL sink roll pickling operation (EU32) shall each not exceed 0.25 lbs/hr and 1.10 tpy.

D.4.2 Minor Limits for PM and $PM_{10}$ [40 CFR 64]

Pursuant to 326 IAC 2-7-5(1) and in order to render the requirements of 40 CFR 64 (Compliance Assurance Monitoring) not applicable, the Permittee shall comply with the following:

(a) The CGL sink roll pickling operation (EU32) shall not exceed 1,000 hours of operation per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with the above limit, combined with the limit in Condition D.4.1(c), shall limit the potential to emit, as defined at 326 IAC 2-7-1(30), of PM and $PM_{10}$ (filterable) from the CGL sink roll pickling operation (EU32) to less than 100 tons per twelve (12) consecutive month period, each, and shall render 40 CFR 64 (CAM) not applicable to the CGL sink roll pickling operation (EU32).

D.4.3 Particulate Matter (PM) [326 IAC 6.5-1-2]

Pursuant to 326 IAC 6.5-1-2(a), the PM emissions from the units listed in the table below shall not exceed three-hundredths (0.03) grain per dry standard cubic foot (dscf).

| Unit |
|---|
| CGL electrolytic cleaning operation (EU20) |
| CGL skin pass mill (EU31) |
| CGL sink roll pickling operation (EU32) |

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

D.4.4 Particulate Matter (PM) Control

In order to assure compliance with Conditions D.4.1 and D.4.3, the control devices listed in the table below for particulate matter control shall be in operation and control emissions from the continuous hot dip galvanizing line facilities at all times the associated facilities are in operation.

| Unit ID | Unit Description | Control Device |
|---|---|---|
| EU20 | CGL electrolytic cleaning | Scrubber and mist eliminator |
| EU31 | CGL skin pass mill | Scrubber and mist eliminator |
| EU32 | CGL sink roll pickling | Scrubber and mist eliminator |

D.4.5 Testing Requirements [326 IAC 2-1.1-11]

In order to demonstrate compliance with Conditions D.4.1(a) and D.4.3, the Permittee shall perform PM and $PM_{10}$ (filterable) testing of the CGL electrolytic cleaning operation (EU 20) utilizing methods as approved by the Commissioner no later than 180 days after the startup of the replacement unit and at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition. PM10 includes filterable PM only.

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

D.4.6 Scrubber Parametric Monitoring

(a) The Permittee shall monitor and record the flow rate of the scrubber controlling the CGL electrolytic cleaning operation (EU20) at least once per day when the associated processes are in operation. The Permittee shall maintain the flow rate at or above the minimum of 42 gallons per minute.

(b) The Permittee shall monitor and record the flow rate of the scrubber controlling the CGL skin pass mill (EU31) at least once per day when the associated processes are in operation. The Permittee shall maintain the flow rate at or above the minimum of 23 gallons per minute.

(c) The Permittee shall monitor and record the flow rate of the scrubber controlling the CGL sink roll pickling operation (EU32) at least once per day when the associated processes are in operation. The Permittee shall maintain the flow rate at or above the minimum of 25 gallons per minute.

(d) When for any one reading, the flow rate is below the above mentioned minimum, the Permittee shall take a reasonable response. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A reading that is below the above mentioned minimum flow rate is not a deviation from this permit. Failure to take response steps shall be

considered a deviation from this permit.

D.4.7 Scrubber Failure Detection

In the event that a scrubber malfunction has been observed:

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

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

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

D.4.8 Record Keeping Requirements

(a) In order to document the compliance status with Condition D.4.2, the Permittee shall maintain records of the hours of operation of the CGL sink roll pickling operation (EU32).

(b) To document the compliance status with Condition D.4.6, the Permittee shall maintain daily records of the flow rate for each scrubber. The Permittee shall include in its daily record when the readings are not taken and the reason for the lack of the readings (e.g., the process did not operate that day).

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

D.4.9 Reporting Requirements

A quarterly report of hours of operation and a quarterly summary of the information to document the compliance status with D.4.2 shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official,” as defined by 326 IAC 2-7-1 (35).

## SECTION D.5 EMISSIONS UNIT OPERATION CONDITIONS

**Emissions Unit Description:**

(c) Cleveland-Cliffs New Carlisle 2 electrolytic galvanizing line (EGL), consisting of:

(1) One (1) EGL surface activation and plating operation, identified as EU24, constructed in 1989, with a nominal capacity of 135,900 pounds per hour of uncoated cold rolled steel strip, equipped with a ventilation system with a design flow rate of 41,480 scfm using a scrubber with vertical mist eliminator for control, and exhausting to stack 24.

(2) One (1) EGL degreasing operation, identified as EU25, constructed in 1989, with a nominal capacity 135,900 pounds per hour of uncoated cold rolled steel strip with a ventilation system with a design flow rate of 3,117 scfm, using a mist eliminator for control, and exhausting to stack 25.

(3) One (1) EGL pre-cleaning operation, identified as EU26, constructed in 1989, with a nominal capacity 135,900 pounds per hour of uncoated cold rolled steel strip with a ventilation system with a design flow rate of 2,981 scfm, using a mist eliminator for control, and exhausting to stack 26.

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

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

D.5.1 BACT Limitations [326 IAC 2-2]

Pursuant to 326 IAC 2-2 (PSD) and PC 71-1822 (Plant ID 141-00046), issued on November 20, 1989 as revised on November 15, 1991, modified by CP 141-2750-00040/00046, issued on October 28, 1996, units at the source are subject to the following limits, which are determined to be BACT for the units:

(a) PM and $PM_{10}$ (filterable) emissions from the EGL surface activation and plating operation (EU24) shall not exceed 2.09 lb/hr and 9.15 tpy.

(b) PM emissions from the EGL degreasing operation (EU25) shall not exceed 0.10 lb/hr and 0.44 tpy.

(c) PM and $PM_{10}$ (filterable) emissions from the EGL pre-cleaning operation (EU26) shall not exceed 0.10 lb/hr and 0.44 tpy.

D.5.2 Particulate Matter (PM) [326 IAC 6.5-1-2]

Pursuant to 326 IAC 6.5-1-2(a), the PM emissions from the units listed in the table below shall not exceed three-hundredths (0.03) grain per dry standard cubic foot (dscf).

| Unit |
|---|
| EGL surface activation and plating operation (EU24) |
| EGL degreasing operation (EU25) |
| EGL pre-cleaning operation (EU26) |

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

D.5.3 Particulate Matter (PM) Control

In order to assure compliance with Conditions D.5.1 and D.5.2, the control devices listed in the

table below for particulate matter control shall be in operation and control emissions from the electrogalvanizing line facilities at all times the associated facilities are in operation.

| Unit ID | Unit Description | Control Device |
|---|---|---|
| EU24 | EGL surface activation and plating | Scrubber and mist eliminator |
| EU25 | EGL degreasing | Mist eliminator |
| EU26 | EGL pre-cleaning | Mist eliminator |

D.5.4 Testing Requirements [326 IAC 2-1.1-11]

In order to demonstrate compliance with Conditions D.5.1(a) and D.5.2, the Permittee shall perform PM testing of the EGL surface activation and plating operation (EU24) utilizing methods as approved by the Commissioner at least once every 5 years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

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

D.5.5 Scrubber Flow Rate [40 CFR 64]

(a) The Permittee shall monitor and record the flow rate of the scrubber controlling the EGL surface activation and plating operation (EU24) at least once per day when the associated processes are in operation.

(b) The Permittee shall determine the minimum flow rate from the latest valid stack test that demonstrates compliance with limits in Condition D.5.5.

(c) On and after the date the stack test results are available, the Permittee shall maintain a flow rate at or above the minimum rate as observed during the latest compliant stack test.

(d) When for any one reading, the flow rate is below the above mentioned minimum, the Permittee shall take a reasonable response. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A reading that is below the above mentioned minimum flow rate is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

D.5.6 Scrubber Failure Detection

In the event that a scrubber malfunction has been observed:

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

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

D.5.7 Mist Eliminator Failure Detection

In the event that a mist eliminator malfunction has been observed at EU25 and EU26:

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

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

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

D.5.8 Record Keeping Requirements

(a) To document the compliance status with Condition D.5.5, the Permittee shall maintain daily records of the flow rate for the scrubber. The Permittee shall include in its daily record when the readings are not taken and the reason for the lack of the readings (e.g., the process did not operate that day).

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

**SECTION D.6 EMISSIONS UNIT OPERATION CONDITIONS**

**Emissions Unit Description:**

**Insignificant Activities:**

(a) Combustion related activities.

(1) Space heaters, process heaters, heat treat furnaces, or boilers using the following fuels:

(A) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour, as follows:

(i) Space heaters at the Cleveland-Cliffs New Carlisle 2 plant, constructed in 1989, modified in 1991with a combined heat input capacity of 76.30 MMBtu/hr.

(c) Production related activities, including the following:

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

(3) The following equipment related to manufacturing activities not resulting in the emission of HAPs:

(A) Brazing equipment.
(B) Cutting torches.
(C) Soldering equipment.
(D) Welding equipment.

(d) Water based activities, including the following:

(1) Noncontact cooling tower systems, consisting of:

(A) Forced and induced draft cooling tower systems not regulated under a NESHAP, as follows:

(i) One (1) mechanical draft cooling tower, identified as Cleveland-Cliffs New Carlisle 1 cooling tower, constructed in 1987, with a circulating water flow rate of 72.5 $m^3$/min (19,150 gal/min).
(ii) One (1) mechanical draft cooling tower, identified as Cleveland-Cliffs New Carlisle 2 cooling tower, constructed in 1989, with a circulating water flow rate of 94.6 $m^3$/min (25,000 gal/min).

(f) Activities associated with emergencies, consisting of:

(1) Emergency generators as follows:

(A) Diesel generators not exceeding one thousand six hundred (1,600) horsepower, as follows:

(i) One (1) Kohler emergency diesel generator, installed in 1991, rated at 750 kW, with an engine power output of 985 hp.

(ii) One (1) GE emergency diesel generator for CAPL, installed in 1990, rated at 240 kW, with an engine power output of 374 hp.

Under the NESHAP, 40 CFR 63, Subpart ZZZZ, the emergency generators are existing affected sources.

(2) Stationary fire pump engines, as follows:

(A) One (1) Cummins Diesel NT855F4 emergency fire pump, installed in 1988, with an engine power output of 340 hp.

Under the NESHAP, 40 CFR 63, Subpart ZZZZ, the emergency fire pump is an existing affected source.

(g) An emission unit or activity whose potential uncontrolled emissions meet the exemption levels specified in 326 IAC 2-1.1-3(e)(1) or the exemption levels specified in the following, whichever is lower:

- For lead or lead compounds measured as elemental lead, the exemption level is six-tenths (0.6) ton per year or three and twenty-nine hundredths (3.29) pounds per day.
- For carbon monoxide (CO), the exemption limit is twenty-five (25) pounds per day.
- For sulfur dioxide, the exemption level is five (5) pounds per hour or twenty-five (25) pounds per day.
- For VOC, the exemption limit is three (3) pounds per hour or fifteen (15) pounds per day.
- For nitrogen oxides (NOx), the exemption limit is five (5) pounds per hour or twenty-five (25) pounds per day.
- For PM10 or direct PM2.5, the exemption level is either five (5) pounds per hour or twenty-five (25) pounds per day.

As follows:

(1) Lime storage silo.
(2) Inspection line electrostatic oiler.
(3) Electric motor ventilation.
(4) Skinpass oil room ventilation.
(5) Wrapping line edge oiler.
(6) CGL quench fume.
(7) One (1) Cleveland-Cliffs New Carlisle 1 CAPL Post Treatment Nickel Process.

Under the NESHAP, 40 CFR 63, Subpart WWWWWW, the CAPL Post Treatment Nickel Process is considered an existing affected source.

(8) One (1) Clark GM cooling tower emergency diesel pump, installed in 1989, with an engine power output of 40 bhp.

Under the NESHAP, 40 CFR 63, Subpart ZZZZ, the emergency pump is an existing affected source.

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

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

D.6.1 Fuel Type [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3 (PSD) and PC 71-1822 (Plant ID 141-00046), issued on November 20,

1989 as revised on November 15, 1991, modified by CP 141-2750-00040/00046, issued on October 28, 1996, modified by Part 70 Operating Permit No. 141-7316-00159, issued on June 30, 2004, units at the source are subject to the following limits, which are determined to be BACT for the units:

(a) The Space Heaters shall burn only natural gas and shall not exceed a total of 76.3 MMBtu/hr heat input at the Cleveland-Cliffs New Carlisle 2 facility only.

D.6.2 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]

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

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

(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 (a)(3), (a)(4), (a)(6), and (a)(7) of this condition.

(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 (b)(1)(A) through (D) of this condition 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.6.3 Particulate Matter (PM) [326 IAC 6.5-1-2]

Pursuant to 326 IAC 6.5-1-2, the particulate emissions from the units listed in the table below shall not exceed three-hundredths (0.03) grain per dry standard cubic foot (dscf).

| Unit |
|---|
| Space heaters at the Cleveland-Cliffs New Carlisle 2 plant |
| Brazing equipment |
| Cutting torches |
| Soldering equipment |
| Welding equipment |
| Cleveland-Cliffs New Carlisle 1 cooling tower |
| Cleveland-Cliffs New Carlisle 2 cooling tower |
| Kohler emergency diesel generator |
| GE emergency diesel generator for CAPL |
| Cummins Diesel NT855F4 emergency fire pump |
| Clark GM cooling tower emergency diesel pump |
| Lime storage silo |
| Inspection line electrostatic oiler |
| Electric motor ventilation |
| Wrapping line edge oiler |
| CGL quench fume |
| Cleveland-Cliffs New Carlisle 1 CAPL Post Treatment Nickel Process |

D.6.4 Volatile Organic Compounds (VOC) [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 cleaner degreaser with a solvent that has a VOC composite partial vapor pressure than 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 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]**

D.6.5 Record Keeping Requirements

(a) To document the compliance status with Condition D.6.4, 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 (or invoice/bill dates of contract servicer indicating service date).

(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 obligations

with regard to the records required by this condition.

## SECTION D.7 EMISSIONS UNIT OPERATION CONDITIONS

**Emissions Unit Description:**

(d) Internal combustion engines regulated as part of the stationary source prior to December 1998, as follows:

(1) Three (3) 1,000 horsepower switching locomotives, permitted in 1989, each with a maximum fuel consumption of 26.97 gal/hr of diesel fuel

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

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

D.7.1 BACT Limitation [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3 (PSD) and PC 71-1822 (Plant ID 141-00046), issued on November 20, 1989 as revised on November 15, 1991, modified by Part 70 Operating Permit No. 141-7316-00159, issued on June 30, 2004, units at the source are subject to the following limits, which are determined to be BACT for the units:

(1) The total input of diesel fuel to the three (3) 1,000 hp diesel fired switching locomotives (internal combustion engines) shall be less than 304,000 total gallons per twelve (12) consecutive month period with compliance determined at the end of each month. This constitutes PSD BACT for PM and $NO_x$ for the locomotives.

**Record Keeping and Reporting Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]**

D.7.2 Record Keeping Requirements

(a) To document the compliance status with Conditions D.7.1, the Permittee shall maintain records of the monthly use of diesel fuel, in gallons.

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

D.7.3 Reporting Requirements

A quarterly report of total input of diesel fuel and a quarterly summary of the information to document the compliance status with D.7.1 shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition.

The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official,” as defined by 326 IAC 2-7-1 (35).

**SECTION E.1 NSPS**

**Emissions Unit Description:**

(b) Cleveland-Cliffs New Carlisle 2 continuous hot dip galvanizing line (CGL), consisting of:

(3) One (1) natural gas-fired package boiler, identified as EU27, constructed in 1989, with a rated heat input capacity of 71.5 MMBtu/hr, using flue gas recirculation for NOx control, and exhausting to stack 27.

Under the NSPS, 40 CFR 60, Subpart Dc, EU27 is an affected facility.

(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)]**

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

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

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

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

E.1.2 Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units NSPS [326 IAC 12] [40 CFR Part 60, Subpart Dc]

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

(1) 40 CFR 60.40c(a), (b) and (c)
(2) 40 CFR 60.41c
(3) 40 CFR 60.48c(a), (f)(4), (g), and (i)

**SECTION E.2 NESHAP**

**Emissions Unit Description:**

**Insignificant Activities:**

(f) Activities associated with emergencies, consisting of:

(1) Emergency generators as follows:

(A) Diesel generators not exceeding one thousand six hundred (1,600) horsepower, as follows:

(i) One (1) Kohler emergency diesel generator, installed in 1991, rated at 750 kW, with an engine power output of 985 hp.
(ii) One (1) GE emergency diesel generator for CAPL, installed in 1990, rated at 240 kW, with an engine power output of 374 hp.

Under the NESHAP, 40 CFR 63, Subpart ZZZZ, the emergency generators are existing affected sources.

(2) Stationary fire pump engines, as follows:

(A) One (1) Cummins Diesel NT855F4 emergency fire pump, installed in 1988, with an engine power output of 340 hp.

Under the NESHAP, 40 CFR 63, Subpart ZZZZ, the emergency fire pump is an existing affected source.

(g) An emission unit or activity whose potential uncontrolled emissions meet the exemption levels specified in 326 IAC 2-1.1-3(e)(1) or the exemption levels specified in the following, whichever is lower:

- For lead or lead compounds measured as elemental lead, the exemption level is six-tenths (0.6) ton per year or three and twenty-nine hundredths (3.29) pounds per day.
- For carbon monoxide (CO), the exemption limit is twenty-five (25) pounds per day.
- For sulfur dioxide, the exemption level is five (5) pounds per hour or twenty-five (25) pounds per day.
- For VOC, the exemption limit is three (3) pounds per hour or fifteen (15) pounds per day.
- For nitrogen oxides (NOx), the exemption limit is five (5) pounds per hour or twenty-five (25) pounds per day.
- For PM10 or direct PM2.5, the exemption level is either five (5) pounds per hour or twenty-five (25) pounds per day.

As follows:

(8) One (1) Clark GM cooling tower emergency diesel pump, installed in 1989, with an engine power output of 40 bhp.

Under the NESHAP, 40 CFR 63, Subpart ZZZZ, the emergency pump is an existing affected source.

(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)]**

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

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

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

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

E.2.2 National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Stationary Reciprocating Internal Combustion Engines NESHAP [40 CFR Part 63, Subpart ZZZZ] [326 IAC 20-82]

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

(1) 40 CFR 63.6580
(2) 40 CFR 63.6585
(3) 40 CFR 63.6590(a)(1)(iii) and (iv)
(4) 40 CFR 63.6595(a)(1), (b), and (c)
(5) 40 CFR 63.6603(a)
(6) 40 CFR 63.6605
(7) 40 CFR 63.6625(e)(3), (f), (h), and (i)
(8) 40 CFR 63.6635
(9) 40 CFR 63.6640(a), (b), (e), (f)(1), f(2)(i), f(3), and f(4)
(10) 40 CFR 63.6645(a)(5)
(11) 40 CFR 63.6650
(12) 40 CFR 63.6655
(13) 40 CFR 63.6660
(14) 40 CFR 63.6665
(15) 40 CFR 63.6670
(16) 40 CFR 63.6675
(17) Table 2d (item 4)
(18) Table 6 (item 9)
(20) Table 8

**SECTION E.3 NESHAP**

**Emissions Unit Description:**

**Insignificant Activities:**

(g) An emission unit or activity whose potential uncontrolled emissions meet the exemption levels specified in 326 IAC 2-1.1-3(e)(1) or the exemption levels specified in the following, whichever is lower:

- For lead or lead compounds measured as elemental lead, the exemption level is six-tenths (0.6) ton per year or three and twenty-nine hundredths (3.29) pounds per day.
- For carbon monoxide (CO), the exemption limit is twenty-five (25) pounds per day.
- For sulfur dioxide, the exemption level is five (5) pounds per hour or twenty-five (25) pounds per day.
- For VOC, the exemption limit is three (3) pounds per hour or fifteen (15) pounds per day.
- For nitrogen oxides (NOx), the exemption limit is five (5) pounds per hour or twenty-five (25) pounds per day.
- For PM10 or direct PM2.5, the exemption level is either five (5) pounds per hour or twenty-five (25) pounds per day.

As follows:

(7) One (1) Cleveland-Cliffs New Carlisle 1 CAPL Post Treatment Nickel Process.

Under the NESHAP, 40 CFR 63, Subpart WWWWWW, the CAPL Post Treatment Nickel Process is considered an existing affected source.

(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)]**

E.3.1 General Provisions Relating to National Emission Standards for Hazardous Air Pollutants under 40 CFR Part 63 [326 IAC 20-1] [40 CFR Part 63, Subpart A]

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

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

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

E.3.2 National Emission Standards for Hazardous Air Pollutants: Area Source Standards for Plating and Polishing Operations NESHAP [40 CFR Part 63, Subpart WWWWWW]

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

(1) 40 CFR 63.11504
(2) 40 CFR 63.11505(a)(1), (b)
(3) 40 CFR 63.11506(a)
(4) 40 CFR 63.11507(a), (g)
(5) 40 CFR 63.11508(a), (b), (c)(2), (c)(4), (d)(1), (d)(2), (d)(4), (d)(7), (d)(8)
(6) 40 CFR 63.11509
(7) 40 CFR 63.11510
(8) 40 CFR 63.11511
(9) 40 CFR 63.11512
(10) Table 1

# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
# OFFICE OF AIR QUALITY
# COMPLIANCE AND ENFORCEMENT BRANCH
## PART 70 OPERATING PERMIT
## CERTIFICATION

Source Name: Cleveland-Cliffs New Carlisle
Source Address: 30755 Edison Road, New Carlisle, Indiana 46552
Part 70 Permit No.: T141-42030-00159

**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: |
| Email Address: |
| Phone: |
| Date: |

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT**
**OFFICE OF AIR QUALITY**
**COMPLIANCE AND ENFORCEMENT BRANCH**
**100 North Senate Avenue**
**MC 61-53 IGCN 1003**
**Indianapolis, Indiana 46204-2251**
**Phone: (317) 233-0178**
**Fax: (317) 233-6865**

## PART 70 OPERATING PERMIT
## EMERGENCY OCCURRENCE REPORT

Source Name: Cleveland-Cliffs New Carlisle
Source Address: 30755 Edison Rd, Bldg 1, New Carlisle, Indiana 46552
Part 70 Permit No.: T141-42030-00159

**This form consists of 2 pages** **Page 1 of 2**

□ This is an emergency as defined in 326 IAC 2-7-1(12)
- The Permittee must notify the Office of Air Quality (OAQ), within four (**4**) daytime business hours (1-800-451-6027 or 317-233-0178, ask for Compliance Section); and
- The Permittee must submit notice in writing or by facsimile within two (**2**) working days (Facsimile Number: 317-233-6865), and follow the other requirements of 326 IAC 2-7-16.

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

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

If any of the following are not applicable, mark N/A **Page 2 of 2**

| |
|---|
| Date/Time Emergency started: |
| Date/Time Emergency was corrected: |
| Was the facility being properly operated at the time of the emergency? Y N |
| Type of Pollutants Emitted: TSP, PM-10, $SO_2$, VOC, $NO_X$, CO, Pb, other: |
| Estimated amount of pollutant(s) emitted during emergency: |
| Describe the steps taken to mitigate the problem: |
| Describe the corrective actions/response steps taken: |
| Describe the measures taken to minimize emissions: |
| If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value: |

Form Completed by: _____

Title / Position: _____

Date: _____

Phone:_____

# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
# OFFICE OF AIR QUALITY
# COMPLIANCE AND ENFORCEMENT BRANCH

## Part 70 Quarterly Report

Source Name: Cleveland-Cliffs New Carlisle
Source Address: 30755 Edison Road, New Carlisle, Indiana 46552
Part 70 Permit No.: T141-42030-00159
Facility: CGL sink roll pickling operation (EU32)
Parameter: Hours of operation
Limit: Less than 1,000 total hours per twelve (12) consecutive month period

QUARTER:_____ YEAR:_____

| Month | Column 1 | Column 2 | Column 1 + Column 2 |
|---|---|---|---|
| | Hours of Operation (hours) | Hours of Operation (hours) | Hours of Operation (hours) |
| | This Month | Previous 11 Months | 12 Month Total |
| | | | |
| | | | |
| | | | |

☐ No deviation occurred in this quarter.
☐ Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone:_____

# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
# OFFICE OF AIR QUALITY
# COMPLIANCE AND ENFORCEMENT BRANCH

## Part 70 Quarterly Report

Source Name: Cleveland-Cliffs New Carlisle
Source Address: 30755 Edison Road, New Carlisle, Indiana 46552
Part 70 Permit No.: T141-42030-00159
Facility: Switching locomotives (internal combustion engines)
Parameter: Gallons of diesel fuel usage
Limit: Less than 304,000 total gallons per twelve (12) consecutive month period

QUARTER:_____ YEAR:_____

| Month | Column 1 | Column 2 | Column 1 + Column 2 |
|---|---|---|---|
| | Gallons of Diesel Fuel Used (gallons) | Gallons of Diesel Fuel Used (gallons) | Gallons of Diesel Fuel Used (gallons) |
| | This Month | Previous 11 Months | 12 Month Total |
| | | | |
| | | | |
| | | | |

☐ No deviation occurred in this quarter.
☐ Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone:_____

# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
# OFFICE OF AIR QUALITY
# COMPLIANCE AND ENFORCEMENT BRANCH
# PART 70 OPERATING PERMIT
# QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: Cleveland-Cliffs New Carlisle
Source Address: 30755 Edison Rd, Bldg 1, New Carlisle, Indiana 46552
Part 70 Permit No.: T141-42030-00159

**Months: _____ to _____ Year: _____**



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

□ NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

□ THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD

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

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

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

Form Completed by:_____

Title / Position: _____

Date:_____

Phone: _____

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

# Addendum to the Technical Support Document (ATSD) for a for a Part 70 Significant Source Modification and Significant Permit Modification

## Source Background and Description

| | |
|---|---|
| **Source Name:** | **Cleveland-Cliffs New Carlisle** |
| **Source Location:** | **30755 Edison Rd, New Carlisle, IN 46552** |
| **County:** | **St Joseph** |
| **SIC Code:** | **3316 (Cold-Rolled Steel Sheet, Strip, and Bars)**<br>**3471 (Electroplating, Plating, Polishing, Anodizing, and Coloring)** |
| **Operation Permit No.:** | **T 141-42030-00159** |
| **Operation Permit Issuance Date:** | **February 5, 2021** |
| **Significant Source Modification No.:** | **141-47501-00159** |
| **Significant Permit Modification No.:** | **141-47618-00159** |
| **Permit Reviewer:** | **Sidhant Paul** |

On May 1, 2024, the Office of Air Quality (OAQ) had a notice posted on IDEM's website (https://www.in.gov/idem/public-notices/), stating that Cleveland-Cliffs New Carlisle (formerly Cleveland-Cliffs Tek Inc. & Cleveland-Cliffs Kote Inc.) had applied for a Significant source and permit modification to conduct a like kind replacement of the CGL electrolytic cleaning operation, identified as EU20. The notice also stated that the OAQ proposed to issue a significant source and permit modification for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

## Comments and Responses

On May,29, 2024, Keramida Inc, consultants to Cleveland-Cliffs New Carlisle (formerly Cleveland-Cliffs Tek Inc. & Cleveland-Cliffs Kote Inc.) submitted comments to IDEM, OAQ on the draft Part 70 Significant Source Modification and Significant Permit Modification.

The Technical Support Document (TSD) is used by IDEM, OAQ for historical purposes. IDEM, OAQ does not make any changes to the original TSD, but the Permit will have the updated changes. The comments and revised permit language are provided below with deleted language as ~~strikeouts~~ and new language **bolded**.

**Comment 1:**

> Cleveland-Cliffs legally made a name change for the site. The legal name of the site is now Cleveland-Cliffs New Carlisle. Please revise the permit to reflect this change. In addition, some of the descriptions of the equipment included the Tek/Kote designations that will also need to be revised – those referencing Tek will now be Cleveland-Cliffs New Carlisle I, and those referencing Kote will now be Cleveland-Cliffs New Carlisle II

**Response to Comment 1:**

IDEM agrees with the recommended changes. The changes made to the naming convention for the emission units can be seen in section A.3 and A.4; these changes are reflected though out the permit. The word Cleveland-Cliffs Tek Inc. & Cleveland-Cliffs Kote Inc. has been replaced with Cleveland-Cliffs New Carlisle throughout the permit.

The permit has been revised as follows:

The company name has been revised throughout the permit as follows:

Company Name: ~~Cleveland-Cliffs Tek Inc. & Cleveland-Cliffs Kote Inc.~~
**Cleveland-Cliffs New Carlisle**

...

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

This stationary continuous cold mill, a continuous hot dip galvanizing line, and an electrolytic galvanizing line at a metal coil-manufacturing source consists of two (2) plants:

(a) Cleveland-Cliffs ~~Tek Inc~~. **New Carlisle 1** (141-00040) is located at 30755 Edison Road, New Carlisle, Indiana; and

(b) Cleveland-Cliffs ~~Kote Inc.~~ **New Carlisle 2** (141-00046) is located at 30755 Edison Road, New Carlisle, Indiana.

Since the two (2) plants are located in contiguous properties, **Cleveland-Cliffs New Carlisle 1 (formerly known as** Cleveland-Cliffs Tek Inc**.)** supports **Cleveland-Cliffs New Carlisle 2 (formerly known as** Cleveland-Cliffs Kote Inc.**)**, and both partnerships are owned by subsidiaries of the same companies, they will be considered one (1) source and assigned plant identification number 141-00159**. In May 2024 the legal name of the site was changed to Cleveland-Cliffs New Carlisle.**

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

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

(a) Cleveland-Cliffs ~~Tek Inc~~. **New Carlisle 1**continuous cold mill (CCM) for the production of cold-rolled steel strips in the coil form, constructed in 1987 with a gear modification in 2000 to allow for higher line speed to produce lighter and narrower products for EU1-EU5, consisting of:

...

(b) Cleveland-Cliffs ~~Kote Inc.~~ **New Carlisle 2** continuous hot dip galvanizing line (CGL), consisting of:

...

(c) Cleveland-Cliffs ~~Kote Inc.~~ **New Carlisle 2** electrolytic galvanizing line (EGL), consisting of:

...

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

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

(a) Combustion related activities.

(1) Space heaters, process heaters, heat treat furnaces, or boilers using the following fuels:

(A) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour, as follows:

(i) Space heaters at the Cleveland-Cliffs ~~Kote Inc.~~ **New Carlisle 2** plant, constructed in 1989, modified in 1991, with a combined heat input capacity of 76.30 MMBtu/hr.

(2) Combustion source flame safety purging on startup.

...

(d) Water based activities, including the following:

(1) Noncontact cooling tower systems, consisting of:

(A) Forced and induced draft cooling tower systems not regulated under a NESHAP, as follows:

(i) One (1) mechanical draft cooling tower, identified as Cleveland-Cliffs ~~Tek Inc~~. **New Carlisle 1** cooling tower, constructed in 1987, with a circulating water flow rate of 72.5 $m^3$/min (19,150 gal/min).

(ii) One (1) mechanical draft cooling tower, identified as Cleveland-Cliffs ~~Kote Inc.~~ **New Carlisle 2** cooling tower, constructed in 1989, with a circulating water flow rate of 94.6 $m^3$/min (25,000 gal/min).

...

(g) An emission unit or activity whose potential uncontrolled emissions meet the exemption levels specified in 326 IAC 2-1.1-3(e)(1) or the exemption levels specified in the following, whichever is lower:

- For lead or lead compounds measured as elemental lead, the exemption level is six-tenths (0.6) ton per year or three and twenty-nine hundredths (3.29) pounds per day.
- For carbon monoxide (CO), the exemption limit is twenty-five (25) pounds per day.
- For sulfur dioxide, the exemption level is five (5) pounds per hour or twenty-five (25) pounds per day.
- For VOC, the exemption limit is three (3) pounds per hour or fifteen (15) pounds per day.
- For nitrogen oxides (NOx), the exemption limit is five (5) pounds per hour or twenty-five (25) pounds per day.
- For PM10 or direct PM2.5, the exemption level is either five (5) pounds per hour or twenty-five (25) pounds per day.

As follows:

(1) Lime storage silo.
(2) Inspection line electrostatic oiler.
(3) Electric motor ventilation.
(4) Skinpass oil room ventilation.
(5) Wrapping line edge oiler.
(6) CGL quench fume.
(7) One (1) Cleveland-Cliffs ~~Tek Inc~~. **New Carlisle 1** CAPL Post Treatment Nickel Process.

Under the NESHAP, 40 CFR 63, Subpart WWWWWW, the CAPL Post Treatment Nickel Process is considered an existing affected source.

(8) One (1) Clark GM cooling tower emergency diesel pump, installed in 1989, with an engine power output of 40 bhp.

Under the NESHAP, 40 CFR 63, Subpart ZZZZ, the emergency pump is an existing affected source.

....

## Additional Changes

IDEM, OAQ has decided to make additional revisions to the permit as described below, with deleted language as ~~strikeouts~~ and new language **bolded**.

(a) The Part 70 Permit Annual Certification Form has been revised to include space for an email address.

| | |
|---|---|
| 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: | |
| **Email Address:** | Phone: |
| Date: | |

## IDEM Contact

(a) If you have any questions regarding this permit, please contact Sidhant Paul, 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) 232-8219 or (800) 451-6027, and ask for Sidhant Paul or (317) 232-8219.

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

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

**Appendix A: Emissions Calculations**
**PTE Summary**

**Company Name: Cleveland-Cliffs New Carlisle**
**Source Address: 30755 Edison Rd, New Carlisle, Indiana 46552**
**Permit Renewal No.: T 141-42030-00159**
**Significant Source Modifcation No.: 141-47501-00159**
**Signifcant Permit Modification No.: 141-47618-00159**
**Reviewer: Sidhant Paul**

| Uncontrolled Potential to Emit (tons/yr) | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Emission Unit** | **PM** | **$PM_{10}$** | **$PM_{2.5}$[1]** | **$SO_2$** | **NOx** | **VOC** | **CO** |
| Pinch Roll Leveler (EU1) | 182.50 | 182.50 | 182.50 | - | - | - | - |
| Flash Butt Welder (EU2) | 17.52 | 17.52 | 17.52 | - | - | - | - |
| Descale Acid Pickling Line (EU4) | 100.74 | 100.74 | 100.74 | - | - | - | - |
| Post Treatment Pickling Operation (EU9) | 43.80 | 43.80 | 43.80 | - | - | - | - |
| Tandem Cold Mill (EU5) | 72.05 | 72.05 | 72.05 | - | - | - | - |
| Electrolytic Cleaning Operation (EU6) | 35.04 | 35.04 | 35.04 | - | - | - | - |
| CGL Electrolytic Cleaning Operation (EU20)* | 40.30 | 40.30 | 35.92 | - | - | - | - |
| CGL Skin Pass Mill (EU31) | 35.48 | 35.48 | 35.48 | - | - | - | - |
| EGL Surface Activation and Plating Operation (EU24) | 186.88 | 186.88 | 186.88 | - | - | - | - |
| EGL Degreasing Operation (EU25) | 1.20 | 1.20 | 1.20 | - | - | - | - |
| EGL Precleaning Operation (EU26) | 1.03 | 1.03 | 1.03 | - | - | - | - |
| CGL Sink Roll Pickling Operation (EU32) | 260.61 | 260.61 | 260.61 | - | - | - | - |
| Waste Heat Boiler (EU7-2) | 0.37 | 1.47 | 1.47 | 0.12 | 9.86 | 1.06 | 16.23 |
| Package Boiler (EU7-3) | 0.58 | 2.31 | 2.31 | 0.18 | 15.51 | 1.67 | 25.54 |
| CGL Galvannealing Furnace (EU22) | 0.25 | 0.99 | 0.99 | 0.08 | 51.59 | 0.71 | 10.89 |
| Package Boiler (EU27) | 0.58 | 2.33 | 2.33 | 0.18 | 15.66 | 1.69 | 25.79 |
| Space Heaters (I/N Kote facility) | 0.62 | 2.49 | 2.49 | 0.20 | 32.76 | 1.80 | 27.52 |
| Annealing Furnace (EU7-1) | 1.81 | 7.25 | 7.25 | 0.57 | 418.11 | 5.24 | 80.08 |
| CGL Heating Furnace (EU21) | 0.92 | 3.69 | 3.69 | 0.29 | 99.08 | 2.67 | 40.80 |
| Locomotives | 12.75 | 12.75 | 12.75 | 0.16 | 504.14 | 29.26 | 53.02 |
| Emergency engines | 0.59 | 0.51 | 0.51 | 0.39 | 11.75 | 0.65 | 2.61 |
| Cooling towers | 12.10 | 12.10 | 12.10 | - | - | - | - |
| Insignificant Activities | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| **Total** | **1,008.71** | **1,024.03** | **1,019.65** | **3.17** | **1,159.46** | **45.76** | **283.48** |

*Notes:*
*1. $PM_{2.5}$ listed is direct $PM_{2.5}$*

** Replaced in 2024*

| Potential to Emit after Issuance[1] (tons/yr) | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Emission Unit** | **PM** | **$PM_{10}$** | **$PM_{2.5}$[2]** | **$SO_2$** | **NOx** | **VOC** | **CO** |
| Pinch Roll Leveler (EU1)[3] | 2.20 | *2.20* | 182.50 | - | - | - | - |
| Flash Butt Welder (EU2)[3] | 0.44 | *0.44* | 17.52 | - | - | - | - |
| Descale Acid Pickling Line (EU4)[3] | 3.50 | *3.50* | 100.74 | - | - | - | - |
| Post Treatment Pickling Operation (EU9)[3] | 0.88 | *0.88* | 43.80 | - | - | - | - |
| Tandem Cold Mill (EU5)[3] | 28.90 | *28.90* | 72.05 | - | - | - | - |
| Electrolytic Cleaning Operation (EU6)[3] | 2.01 | *2.01* | 35.92 | - | - | - | - |
| CGL Electrolytic Cleaning Operation (EU20) | 2.63 | 2.63 | 32.85 | - | - | - | - |
| CGL Skin Pass Mill (EU31) | 1.10 | 1.10 | 35.48 | - | - | - | - |
| EGL Surface Activation and Plating Operation (EU24) | 9.15 | 9.15 | 186.88 | - | - | - | - |
| EGL Degreasing Operation (EU25) | 0.44 | 0.44 | 1.20 | - | - | - | - |
| EGL Precleaning Operation (EU26) | 0.44 | 0.44 | 1.03 | - | - | - | - |
| CGL Sink Roll Pickling Operation (EU32) | 0.13 | 0.13 | 260.61 | - | - | - | - |
| Waste Heat Boiler (EU7-2) | 1.25 | 1.47 | 1.47 | 0.12 | 20.80 | 1.06 | 16.23 |
| Package Boiler (EU7-3) | 0.93 | 2.31 | 2.31 | 0.18 | 15.50 | 1.67 | 25.54 |
| CGL Galvannealing Furnace (EU22) | 0.25 | 0.99 | 0.99 | 0.08 | 51.58 | 0.71 | 10.89 |
| Package Boiler (EU27) | 0.58 | 2.33 | 2.33 | 0.18 | 15.70 | 1.69 | 25.79 |
| Space Heaters (I/N Kote facility) | 0.62 | 2.49 | 2.49 | 0.20 | 32.76 | 1.80 | 27.52 |
| Annealing Furnace (EU7-1) | 2.77 | 7.25 | 7.25 | 0.57 | 418.10 | 5.24 | 80.08 |
| CGL Heating Furnace (EU21) | 0.92 | 3.69 | 3.69 | 0.29 | 99.08 | 2.67 | 40.80 |
| Locomotives | 3.07 | 3.07 | 3.07 | 0.16 | 121.30 | 29.26 | 53.02 |
| Emergency engines | 0.59 | 0.51 | 0.51 | 0.39 | 11.75 | 0.65 | 2.61 |
| Cooling towers | 12.10 | 12.10 | 12.10 | - | - | - | - |
| Insignificant Activities | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| **Total** | **75.89** | **89.02** | **1,007.78** | **3.17** | **787.58** | **45.76** | **283.48** |

*Notes:*
*1. The shaded cells indicate where limits are included.*
*2. $PM_{2.5}$ listed is direct $PM_{2.5}$*
*3. As noted in the "Manufacturing" tab, PM limits for the unit originating in CP 71-1664, issued October 1, 1987 are considered surrogate limitations on $PM_{10}$ although the permit does not expressly limit $PM_{10}$ for these units.*

**Appendix A: Emissions Calculations**
**HAP Summary**

**Company Name: Cleveland-Cliffs New Carlisle**
**Source Address: 30755 Edison Rd, New Carlisle, Indiana 46552**
**Permit Renewal No.: T 141-42030-00159**
**Significant Source Modifcation No.: 141-47501-00159**
**Signifcant Permit Modification No.: 141-47618-00159**
**Reviewer: Sidhant Paul**

**Uncontrolled Potential to Emit (tons/yr)**

| Emission Unit | Waste Heat Boiler (EU7-2) | Package Boiler (EU7-3) | CGL Galvannealing Furnace (EU22) | Package Boiler (EU27) | Space Heaters (I/N Kote facility) | Annealing Furnace (EU7-1) | CGL Heating Furnace (EU21) | Descale Acid Pickling Line (EU4) | Post Treatment Pickling Operation (EU9) | EGL Surface Activation and Plating Operation (EU24) | CAPL Post Treatment Nickel Process | Locomotives | Emergency Engines | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Organic HAP** | | | | | | | | | | | | | | |
| Acetaldehyde | - | - | - | - | - | - | - | - | - | - | - | 2.32E-03 | 1.06E-03 | **3.37E-03** |
| Acrolein | - | - | - | - | - | - | - | - | - | - | - | 7.25E-04 | 1.36E-04 | **8.60E-04** |
| Benzene | 4.06E-04 | 6.38E-04 | 2.72E-04 | 6.45E-04 | 6.88E-04 | 2.00E-03 | 1.02E-03 | - | - | - | - | 7.14E-02 | 2.57E-03 | **7.96E-02** |
| 1,3-Butadiene | | | | | - | - | - | - | - | - | - | - | 5.16E-05 | **5.16E-05** |
| Dichlorobenzene | 2.32E-04 | 3.65E-04 | 1.56E-04 | 3.68E-04 | 3.93E-04 | 1.14E-03 | 5.83E-04 | - | - | - | - | - | - | **3.24E-03** |
| Formaldehyde | 1.45E-02 | 2.28E-02 | 9.73E-03 | 2.30E-02 | 2.46E-02 | 7.15E-02 | 3.64E-02 | - | - | - | - | 7.26E-03 | 1.69E-03 | **0.21** |
| n-Hexane | 0.35 | 0.55 | 0.23 | 0.55 | 0.59 | 1.72 | 0.87 | - | - | - | - | - | - | **4.86** |
| PAH (total) | | | | - | - | - | - | - | - | - | - | - | 5.87E-04 | **5.87E-04** |
| Toluene | 6.57E-04 | 1.03E-03 | 4.41E-04 | 1.04E-03 | 1.11E-03 | 3.24E-03 | 1.65E-03 | - | - | - | - | 2.58E-02 | 1.02E-03 | **3.61E-02** |
| Xylenes | - | - | - | - | - | - | - | - | - | - | - | 1.78E-02 | 7.09E-04 | **1.85E-02** |
| **Inorganic HAPs** | | | | | | | | | | | | | | |
| Cadmium | 2.13E-04 | 3.34E-04 | 1.43E-04 | 3.38E-04 | 3.60E-04 | 1.05E-03 | 5.34E-04 | - | - | - | - | - | - | **2.97E-03** |
| Chromium | 2.71E-04 | 4.26E-04 | 1.82E-04 | 4.30E-04 | 4.59E-04 | 1.33E-03 | 6.80E-04 | - | - | - | - | - | - | **3.78E-03** |
| Hydrogen chloride | - | - | - | - | - | - | - | 213.85 | 92.98 | - | - | - | - | **306.82** |
| Lead | 9.66E-05 | 1.52E-04 | 6.48E-05 | 1.54E-04 | 1.64E-04 | 4.77E-04 | 2.43E-04 | - | - | - | - | - | - | **1.35E-03** |
| Manganese | 7.34E-05 | 1.16E-04 | 4.93E-05 | 1.17E-04 | 1.25E-04 | 3.62E-04 | 1.85E-04 | - | - | - | - | - | - | **1.03E-03** |
| Nickel | 4.06E-04 | 6.38E-04 | 2.72E-04 | 6.45E-04 | 6.88E-04 | 2.00E-03 | 1.02E-03 | - | - | 1.04 | 1.04 | - | - | **2.09** |
| **Combined** | **0.36** | **0.57** | **0.24** | **0.58** | **0.62** | **1.80** | **0.92** | **213.85** | **92.98** | **1.04** | **1.04** | **1.25E-01** | **7.82E-03** | **314.14** |

**Potential to Emit after Issuance (tons/yr)**

| Emission Unit | Waste Heat Boiler (EU7-2) | Package Boiler (EU7-3) | CGL Galvannealing Furnace (EU22) | Package Boiler (EU27) | Space Heaters (I/N Kote facility) | Annealing Furnace (EU7-1) | CGL Heating Furnace (EU21) | Descale Acid Pickling Line (EU4) | Post Treatment Pickling Operation (EU9) | EGL Surface Activation and Plating Operation (EU24) | CAPL Post Treatment Nickel Process | Locomotives | Emergency Engines | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Organic HAP** | | | | | | | | | | | | | | |
| Acetaldehyde | - | - | - | - | - | - | - | - | - | - | - | 2.32E-03 | 1.06E-03 | **3.37E-03** |
| Acrolein | - | - | - | - | - | - | - | - | - | - | - | 7.25E-04 | 1.36E-04 | **8.60E-04** |
| Benzene | 4.06E-04 | 6.38E-04 | 2.72E-04 | 6.45E-04 | 6.88E-04 | 2.00E-03 | 1.02E-03 | - | - | - | - | 7.14E-02 | 2.57E-03 | **7.96E-02** |
| 1,3-Butadiene | - | - | - | - | - | - | - | - | - | - | - | - | 5.16E-05 | **5.16E-05** |
| Dichlorobenzene | 2.32E-04 | 3.65E-04 | 1.56E-04 | 3.68E-04 | 3.93E-04 | 1.14E-03 | 5.83E-04 | - | - | - | - | - | - | **3.24E-03** |
| Formaldehyde | 1.45E-02 | 2.28E-02 | 9.73E-03 | 2.30E-02 | 2.46E-02 | 7.15E-02 | 3.64E-02 | - | - | - | - | 7.26E-03 | 1.69E-03 | **0.21** |
| n-Hexane | 0.35 | 0.55 | 0.23 | 0.55 | 0.59 | 1.72 | 0.87 | - | - | - | - | - | - | **4.86** |
| PAH (total) | - | - | - | - | - | - | - | - | - | - | - | - | 5.87E-04 | **5.87E-04** |
| Toluene | 6.57E-04 | 1.03E-03 | 4.41E-04 | 1.04E-03 | 1.11E-03 | 3.24E-03 | 1.65E-03 | - | - | - | - | 2.58E-02 | 1.02E-03 | **3.61E-02** |
| Xylenes | - | - | - | - | - | - | - | - | - | - | - | 1.78E-02 | 7.09E-04 | **1.85E-02** |
| **Inorganic HAPs** | | | | | | | | | | | | | | |
| Cadmium | 2.13E-04 | 3.34E-04 | 1.43E-04 | 3.38E-04 | 3.60E-04 | 1.05E-03 | 5.34E-04 | - | - | - | - | - | - | **2.97E-03** |
| Chromium | 2.71E-04 | 4.26E-04 | 1.82E-04 | 4.30E-04 | 4.59E-04 | 1.33E-03 | 6.80E-04 | - | - | - | - | - | - | **3.78E-03** |
| Hydrogen chloride | - | - | - | - | - | - | - | 9.81 | | - | - | - | - | **9.81** |
| Lead | 9.66E-05 | 1.52E-04 | 6.48E-05 | 1.54E-04 | 1.64E-04 | 4.77E-04 | 2.43E-04 | - | - | - | - | - | - | **1.35E-03** |
| Manganese | 7.34E-05 | 1.16E-04 | 4.93E-05 | 1.17E-04 | 1.25E-04 | 3.62E-04 | 1.85E-04 | - | - | - | - | - | - | **1.03E-03** |
| Nickel | 4.06E-04 | 6.38E-04 | 2.72E-04 | 6.45E-04 | 6.88E-04 | 2.00E-03 | 1.02E-03 | - | - | 1.04 | 1.04 | - | - | **2.09** |
| **Combined** | **0.36** | **0.57** | **0.24** | **0.58** | **0.62** | **1.80** | **0.92** | **9.81** | | **1.04** | **1.04** | **1.25E-01** | **7.82E-03** | **17.13** |

**Appendix A: Emissions Calculations**
**Modification Summary**

**Company Name:** Cleveland-Cliffs New Carlisle
**Source Address:** 30755 Edison Rd, New Carlisle, Indiana 46552
**Permit Renewal No.:** T 141-42030-00159
**Significant Source Modifcation No.:** 141-47501-00159
**Signifcant Permit Modification No.:** 141-47618-00159
**Reviewer:** Sidhant Paul

| | PTE Before Controls of the New Emission Units (ton/year) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Emission Unit** | **PM** | **$PM_{10}$** | **$PM_{2.5}$[1]** | **$SO_2$** | **$NO_X$** | **VOC** | **CO** | **Single HAP[2]** | **Total HAPs** |
| EU20 | 40.30 | 40.30 | 35.92 | - | - | - | - | - | - |
| **Total PTE Before Controls of the New Emission Units:** | **40.30** | **40.30** | **35.92** | **-** | **-** | **-** | **-** | **-** | **-** |

**Appendix A: Emissions Calculations**
**Permit Level Determination – PSD Emissions Increase**

**Company Name:** Cleveland-Cliffs New Carlisle
**Source Address:** 30755 Edison Rd, New Carlisle, Indiana 46552
**Permit Renewal No.:** T 141-42030-00159
**Significant Source Modifcation No.:** 141-47501-00159
**Signifcant Permit Modification No.:** 141-47618-00159
**Reviewer:** Sidhant Paul

**Actual to Projected Actual Emissions Data**

| | CGL Electrolytic Cleaning EU20 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Baseline Actual Years** | PM | PM10 | PM2.5 | Throughput | Operating Hours | | PM | PM10 | PM2.5 | | |
| | tons | tons | tons | Ton/yr | Hrs | | tons | tons | tons | | |
| 2013 | 0.29 | 0.29 | 0.26 | 453,491 | 7,385 | | 29 | 29 | 26 | | |
| 2014 | 0.27 | 0.27 | 0.24 | 450,224 | 7,222 | | 27 | 27 | 24 | | |
| **2015** | **0.29** | **0.29** | **0.26** | **467,804** | **7,553** | Highest 2 consecutive year period | 29 | 29 | 26 | | |
| **2016** | **0.29** | **0.29** | **0.26** | **464,892** | **7,812** | January 1, 2015 - December 31, 2016 | 29 | 29 | 26 | | |
| 2017 | 0.28 | 0.28 | 0.25 | 423,987 | 7,152 | | 28 | 28 | 25 | | |
| 2018 | 0.28 | 0.28 | 0.25 | 414,601 | 7,326 | | 28 | 28 | 25 | | |
| 2019 | 0.27 | 0.27 | 0.24 | 396,895 | 6,871 | | 27 | 27 | 24 | | |
| 2020 | 0.23 | 0.23 | 0.20 | 316,893 | 5,393 | | 23 | 23 | 20 | | |
| 2021 | 0.24 | 0.24 | 0.22 | 360,461 | 6,190 | | 24 | 24 | 22 | | |
| 2022 | 0.21 | 0.21 | 0.19 | 328,186 | 5,631 | | 21 | 21 | 19 | | |

**Baseline Actual Emissions**

| | Highest 24-mo (tons) | | | | |
|---|---|---|---|---|---|
| | PM | PM10 | PM2.5 | Throughput | Operating Hours |
| CGL Electrolytic Cleaning EU20 | 0.58 | 0.58 | 0.52 | 932,696 | 15,365 |
| **Total (24-month)** | **0.58** | **0.58** | **0.52** | **932,696** | **15,365** |
| **Average ton/year** | **0.29** | **0.29** | **0.26** | **466,348** | **7,683** |

**Projected Emissions**

| | **PM (Lbs/hr)*** | **PM10 (Lbs/hr)*** | **PM2.5 (Lbs/hr)*** |
|---|---|---|---|
| CGL Electrolytic Cleaning EU20 | 0.46 | 0.46 | 0.41 |

*Emission rate based on projected emissions after 95% scrubber control efficiency

**Projected Actual Emissions**

| | Highest 24-mo (tons) | | |
|---|---|---|---|
| | PM | PM10 | PM2.5 |
| CGL Electrolytic Cleaning EU20 | 2.01 | 2.01 | 1.80 |
| **Total** | **2.01** | **2.01** | **1.80** |

| **ATPA** | PM | PM10 | PM2.5 |
|---|---|---|---|
| | ton/yr | ton/yr | ton/yr |
| **Projected Actual Emissions** | 2.01 | 2.01 | 1.80 |
| **Baseline Actual** | 0.29 | 0.29 | 0.26 |
| **Actual to Projected Actual** | 1.72 | 1.72 | 1.54 |
| **Significant Threshold** | 25 | 15 | 10 |

**Appendix A: Emissions Calculations**
**Uncontrolled Potential Emissions**

**Company Name: Cleveland-Cliffs New Carlisle**
**Source Address: 30755 Edison Rd, New Carlisle, Indiana 46552**
**Permit Renewal No.: T 141-42030-00159**
**Significant Source Modifcation No.: 141-47501-00159**
**Signifcant Permit Modification No.: 141-47(**
**Reviewer: Sidhant Paul**

**1. $PM/PM_{10}/PM_{2.5}$**

| Process | Emission Rate | | | PTE Before Controls | | | Scrubber Control Efficiency | Controled PTE | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | PM | $PM_{10}$ | PM2.5 | PM | $PM_{10}$ | PM2.5 | | PM | $PM_{10}$ | $PM_{2.5}$ |
| | lb/hr | lb/hr | lb/hr | tons/yr | tons/yr | tons/yr | | tons/yr | tons/yr | tons/yr |
| New CGL Electrolytic Cleaning Operation (EU20) | 9.20 | 9.20 | 8.20 | 40.30 | 40.30 | 35.92 | 95% | 2.01 | 2.01 | 1.80 |

**Methodology**

Uncontrolled Potential to Emit (tons/yr) = Emission Rate (lb/hr) x 8,760 (hr/yr) / 2,000 (lb/ton)
Potential to Emit After Control (tons/yr) = PTE (lb/hr) x 8,760 (hr/yr) / 2,000 (lb/ton) x (1- Control Efficiency)
Potential to Emit After Issuance (tons/yr) = Uncontrolled PTE (tons/yr)) *if the unit does not have a lb/hr limit for the pollutant*

**Appendix A: Emissions Calculations**
**Uncontrolled Potential Emissions**

**Company Name: Cleveland-Cliffs New Carlisle**
**Source Address: 30755 Edison Rd, New Carlisle, Indiana 46552**
**Permit Renewal No.: T 141-42030-00159**
**Significant Source Modifcation No.: 141-47501-00159**
**Signifcant Permit Modification No.: 141-47618-00159**
**Reviewer: Sidhant Paul**

**1. $PM/PM_{10}/PM_{2.5}$**

| Process | Emissions After Controls | | | Control Efficiency | Uncontrolled Potential to Emit $PM/PM_{10}/PM_{2.5}$ | Potential to Emit After Issuance | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Stack Test Date | $PM/PM_{10}/PM_{2.5}$ | | | | PM | | $PM_{10}$ | | $PM_{2.5}$ |
| | | Outlet Value (lb/hr) | Controlled Emissions (tons/yr) | | (tons/yr) | (lb/hr) | (tons/yr) | (lb/hr) | (tons/yr) | (tons/yr) |
| Pinch Roll Leveler (EU1)[1] | Oct-90 | 0.25 | 1.10 | 99% | 182.50 | 0.50 | 2.20 | 0.50 | 2.20 | 182.50 |
| Flash Butt Welder (EU2)[1] | Oct-90 | 0.04 | 0.18 | 99% | 17.52 | 0.10 | 0.44 | 0.10 | 0.44 | 17.52 |
| Descale Acid Pickling Line (EU4)[1] | Mar-96 | 0.23 | 1.01 | 99% | 100.74 | 0.80 | 3.50 | 0.80 | 3.50 | 100.74 |
| Post Treatment Pickling Operation (EU9)[1] | Feb-92 | 0.10 | 0.44 | 99% | 43.80 | 0.20 | 0.88 | 0.20 | 0.88 | 43.80 |
| Tandem Cold Mill (EU5)[1] | Oct-90 | 3.29 | 14.41 | 80% | 72.05 | 6.60 | 28.90 | 6.60 | 28.90 | 72.05 |
| Electrolytic Cleaning Operation (EU6)[1] | Feb-92 | 0.08 | 0.35 | 99% | 35.04 | 0.28 | 1.20 | 0.28 | 1.20 | 35.04 |
| ~~CGL Electrolytic Cleaning Operation (EU20)[2]~~ | ~~Sep-92~~ | ~~0.08~~ | ~~0.33~~ | ~~99%~~ | ~~32.85~~ | ~~0.60~~ | ~~2.63~~ | ~~0.60~~ | ~~2.63~~ | ~~32.85~~ |
| CGL Skin Pass Mill (EU31)[2] | Sep-92 | 0.08 | 0.35 | 99% | 35.48 | 0.25 | 1.10 | 0.25 | 1.10 | 35.48 |
| ~~EGL Surface Activation and Plating Operation (EU24)[2]~~ | Sep-92 | 1.28 | 5.61 | 97% | 186.88 | 2.09 | 9.15 | 2.09 | 9.15 | 186.88 |
| EGL Degreasing Operation (EU25)[2] | Sep-92 | 0.06 | 0.24 | 80% | 1.20 | 0.10 | 0.44 | 0.10 | 0.44 | 1.20 |
| EGL Precleaning Operation (EU26)[2] | Sep-92 | 0.05 | 0.21 | 80% | 1.03 | 0.10 | 0.44 | 0.10 | 0.44 | 1.03 |
| CGL Sink Roll Pickling Operation (EU32)[2] | Oct-92 | 0.12 | 0.52 | 99.8% | 260.61 | 0.25 | 1.10 | 0.25 | 1.10 | 260.61 |

*Notes:*

*1. PM limitations pursuant to CP 141-2750-00040/00046, issued on October 28, 1996 considered surrogate limitations for filterable $PM_{10}$ because the PSD construction permit 71-1664, issued October 1, 1987 treated all PM as $PM_{10}$.*

*2. PM and $PM_{10}$ (filterable) limitations pursuant to CP 141-2750-00040/00046, issued on October 28, 1996*

**Methodology**
Controlled Emissions (tons/yr) = Stack Test Outlet Value (lb/hr) x 8,760 (hr/yr) / 2,000 (lb/ton)
Uncontrolled Potential to Emit (tons/yr) = Stack Test Outlet Value (lb/hr) x 8,760 (hr/yr) / 2,000 (lb/ton) / [1 - Control Efficiency (%)/100]
Potential to Emit After Issuance (tons/yr) = PTEAI (lb/hr) x 8,760 (hr/yr) / 2,000 (lb/ton) *if the unit has a lb/hr limit for the pollutant*
Potential to Emit After Issuance (tons/yr) = Uncontrolled PTE (tons/yr)) *if the unit does not have a lb/hr limit for the pollutant*

**2. Hazardous Air Pollutants**

| Process | Emissions After Controls | | | Control Efficiency | Uncontrolled Potential to Emit HCl | Potential to Emit After Issuance | |
|---|---|---|---|---|---|---|---|
| | Stack Test Date | HCl | | | | HCl | |
| | | Outlet Value (lb/hr) | Controlled Emissions (tons/yr) | | (tons/yr) | (lb/hr) | (tons/yr) |
| Descale Acid Pickling Line (EU4) | Mar-96 | 0.83 | 3.64 | 98% | 213.85 | 2.24 | 9.81 |
| Post Treatment Pickling Operation (EU9) | Estimated | 0.36 | 1.58 | 98% | 92.98 | | |

**Methodology**
Controlled Emissions (tons/yr) = Stack Test Outlet Value (lb/hr) x 8,760 (hr/yr) / 2,000 (lb/ton)
Uncontrolled Potential to Emit (tons/yr) = Stack Test Outlet Value (lb/hr) x 8,760 (hr/yr) / 2,000 (lb/ton) / [1 - Control Efficiency (%)/100]
Potential to Emit After Issuance (tons/yr) = PTEAI (lb/hr) x 8,760 (hr/yr) / 2,000 (lb/ton)
(Estimated) Outlet Concentration [EU9] (lb/hr HCl) = Outlet Concentration [EU4] (lb/hr HCl) * Outlet Concentration [EU9] (lb/hr $PM/PM_{10}$) / Outlet Concentration [EU4] (lb/hr $PM/PM_{10}$)

| Process | Emissions After Controls | | | Control Efficiency | Uncontrolled Potential to Emit Ni | | Potential to Emit After Issuance Ni | |
|---|---|---|---|---|---|---|---|---|
| | Control Device | Emission Factor[1] (grains/dscf) | Maximum Air Flow Rate (dscfm) | | (lb/hr) | (tons/yr) | (lb/hr) | (tons/yr) |
| EGL Surface Activation and Plating Operation (EU24) | Baghouse | 6.70E-06 | 41,480.00 | 99% | 0.24 | 1.04 | 2.38E-03 | 0.01 |
| CAPL Post Treatment Nickel Process | | 6.70E-06 | 41,480.00 | 99% | 0.24 | 1.04 | 2.38E-03 | 0.01 |

*Notes:*

*1. Emission Factor is from AP-42, Section 12.20, Tables 12.20-4, SCC #3-09-010-68.*

**Methodology:**
Potential to Emit After Issuance (lb/hr) = Emission Factor (gr/dscf) x Maximum Air Flow Rate (dscfm) x 60 (min/hr) / 7,000 (gr/lb)
Uncontrolled PTE (lb/hr) = PTEAI (lb/hr) / [1 - Control Efficiency (%) / 100]
PTE (tons/yr) = PTE (lb/hr) x 8.760 (hr/yr) / 2,000 (lb/ton)

**Appendix A: Emissions Calculations**
**EU7-2, EU7-3, EU22, EU27 and Space Heaters**

**Company Name: Cleveland-Cliffs New Carlisle**
**Source Address: 30755 Edison Rd, New Carlisle, Indiana 46552**
**Permit Renewal No.: T 141-42030-00159**
**Significant Source Modifcation No.: 141-47501-00159**
**Signifcant Permit Modification No.: 141-47618-00159**
**Reviewer: Sidhant Paul**

| | Heat Input Capacity MMBtu/hr | HHV mmBtu/mmscf | Potential Throughput MMCF/yr |
|---|---|---|---|
| EU7-2 | 45.00 | 1,020.00 | 386.47 |
| EU7-3 | 70.80 | | 608.05 |
| EU22 | 30.20 | | 259.36 |
| EU27 | 71.50 | | 614.06 |
| Space Heaters | 76.30 | | 655.28 |

**1. Uncontrolled Potential to Emit**

| Emission Factor in lb/MMCF | | Pollutant | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | PM* 1.90 | PM10* 7.60 | direct PM2.5* 7.60 | SO2 0.60 | NOx | | VOC 5.50 | CO 84.00 |
| | | | | | | Emission Factor (lb/MMBtu)** | PTE | | |
| Potential Emission in tons/yr | EU7-2 | 0.37 | 1.47 | 1.47 | 0.12 | 0.05 | 9.86 | 1.06 | 16.23 |
| | EU7-3 | 0.58 | 2.31 | 2.31 | 0.18 | 0.05 | 15.51 | 1.67 | 25.54 |
| | EU22 | 0.25 | 0.99 | 0.99 | 0.08 | 0.39 | 51.59 | 0.71 | 10.89 |
| | EU27 | 0.58 | 2.33 | 2.33 | 0.18 | 0.05 | 15.66 | 1.69 | 25.79 |
| | Space Heaters | 0.62 | 2.49 | 2.49 | 0.20 | 100 | 32.76 | 1.80 | 27.52 |

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
PM2.5 emission factor is filterable and condensable PM2.5 combined.
** Vendor EF for EU7-2, EU-7-3, EU22, and EU27 in lb/MMBtu. Conventional EF for space heaters from AP-42 section 1,4 in lb/MMCF

| Emission Factor in lb/MMcf | | HAPs - Organics | | | | |
|---|---|---|---|---|---|---|
| | | Benzene 2.10E-03 | Dichlorobenzene 1.20E-03 | Formaldehyde 0.08 | n-Hexane 1.80 | Toluene 3.40E-03 |
| Potential Emission in tons/yr | EU7-2 | 4.06E-04 | 2.32E-04 | 0.01 | 0.35 | 6.57E-04 |
| | EU7-3 | 6.38E-04 | 3.65E-04 | 0.02 | 0.55 | 1.03E-03 |
| | EU22 | 2.72E-04 | 1.56E-04 | 9.73E-03 | 0.23 | 4.41E-04 |
| | EU27 | 6.45E-04 | 3.68E-04 | 0.02 | 0.55 | 1.04E-03 |
| | Space Heaters | 6.88E-04 | 3.93E-04 | 0.02 | 0.59 | 1.11E-03 |

| Emission Factor in lb/MMcf | | HAPs - Metals | | | | |
|---|---|---|---|---|---|---|
| | | Lead 5.00E-04 | Cadmium 1.10E-03 | Chromium 1.40E-03 | Manganese 3.80E-04 | Nickel 2.10E-03 |
| Potential Emission in tons/yr | EU7-2 | 9.66E-05 | 2.13E-04 | 2.71E-04 | 7.34E-05 | 4.06E-04 |
| | EU7-3 | 1.52E-04 | 3.34E-04 | 4.26E-04 | 1.16E-04 | 6.38E-04 |
| | EU22 | 6.48E-05 | 1.43E-04 | 1.82E-04 | 4.93E-05 | 2.72E-04 |
| | EU27 | 1.54E-04 | 3.38E-04 | 4.30E-04 | 1.17E-04 | 6.45E-04 |
| | Space Heaters | 1.64E-04 | 3.60E-04 | 4.59E-04 | 1.25E-04 | 6.88E-04 |

**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 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03
Potential Throughput (MMCF/yr) = Heat Input Capacity (MMBtu/hr) x 8,760 (hrs/yr) x 1 MMCF/1,020 MMBtu
PTE (tons/yr) = Potential Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
PTE (tons/yr) = Emission Factor (lb/MMBtu) x Heat Input Capacity (MMBtu/hr) x 8,760 (hr/yr) / 2,000 (lb/ton) *Units with NOx factor in lb/MMBtu*
The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.
Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.

**Appendix A: Emissions Calculations**
**EU7-2, EU7-3, EU22, EU27 and Space Heaters**

**Company Name:** Cleveland-Cliffs New Carlisle
**Source Address:** 30755 Edison Rd, New Carlisle, Indiana 46552
**Permit Renewal No.:** T 141-42030-00159
**Significant Source Modifcation No.:** 141-47501-00159
**Signifcant Permit Modification No.:** 141-47618-00159
**Reviewer:** Sidhant Paul

**2. Potential to Emit After Issuance**

Potential to Emit After Issuance is the same as the uncontrolled PTE, except as shown below

| Emissions Unit | Pollutant | | | |
|---|---|---|---|---|
| | PM[1] | | NOx[2] | |
| | (lb/hr) | (tons/yr) | (lb/hr) | (tons/yr) |
| EU7-2 | 0.29 | 1.25 | 4.75 | 20.80 |
| EU7-3 | 0.21 | 0.93 | 3.54 | 15.50 |
| EU22 | - | - | 11.78 | 51.58 |
| EU27 | - | - | 3.57 | 15.70 |

*Notes:*
*1. PM limitations pursuant to CP 141-2750-00040/00046, issued on October 28, 1996*
*2. NOx limitations pursuant to CP 141-2750-00040/00046, issued on October 28, 1996*

**Appendix A: Emission Calculations**
**EU7-1 and EU21**

**Company Name: Cleveland-Cliffs New Carlisle**
**Source Address: 30755 Edison Rd, New Carlisle, Indiana 46552**
**Permit Renewal No.: T 141-42030-00159**
**Significant Source Modifcation No.: 141-47501-00159**
**Signifcant Permit Modification No.: 141-47618-00159**
**Reviewer: Sidhant Paul**

| | Heat Input Capacity (MMBtu/hr) | HHV (MMBtu/MMCF) | Potential Throughput (MMCF/yr) |
|---|---|---|---|
| EU7-1 | 222.00 | 1,020.00 | 1,906.59 |
| EU21 | 113.10 | | 971.33 |

**1. Uncontrolled Potential to Emit**

| | | Pollutant | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Emission Factor in lb/MMCF | | PM* 1.90 | PM10* 7.60 | direct PM2.5* 7.60 | SO2 0.60 | NOx Emission Factor (lb/MMBtu)** | NOx PTE | VOC 5.50 | CO 84.00 |
| Potential Emission in tons/yr | EU7-1 | 1.81 | 7.25 | 7.25 | 0.57 | 0.43 | 418.11 | 5.24 | 80.08 |
| | EU21 | 0.92 | 3.69 | 3.69 | 0.29 | 0.20 | 99.08 | 2.67 | 40.80 |

*PM emission factor is filterable PM only. PM10 emission factor is condensable and filterable PM10 combined.
PM2.5 emission factor is condensable and filterable PM2.5 combined.
**Emission Factors for NOx: Uncontrolled = 280 (pre-NSPS) or 190 (post-NSPS), Low NOx Burner = 140, Flue gas recirculation = 100 (See Table 1.4-1)

| | | HAPs - Organics | | | | |
|---|---|---|---|---|---|---|
| Emission Factor in lb/MMcf | | Benzene 2.10E-03 | Dichlorobenzene 1.20E-03 | Formaldehyde 0.08 | Hexane 1.80 | Toluene 3.40E-03 |
| Potential Emission in tons/yr | EU7-1 | 2.00E-03 | 1.14E-03 | 0.07 | 1.72 | 3.24E-03 |
| | EU21 | 1.02E-03 | 5.83E-04 | 0.04 | 0.87 | 1.65E-03 |

| | | HAPs - Metals | | | | |
|---|---|---|---|---|---|---|
| Emission Factor in lb/MMcf | | Lead 5.00E-04 | Cadmium 1.10E-03 | Chromium 1.40E-03 | Manganese 3.80E-04 | Nickel 2.10E-03 |
| Potential Emission in tons/yr | EU7-1 | 4.77E-04 | 1.05E-03 | 1.33E-03 | 3.62E-04 | 2.00E-03 |
| | EU21 | 2.43E-04 | 5.34E-04 | 6.80E-04 | 1.85E-04 | 1.02E-03 |

**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 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu
Emission Factors from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, and 1.4-3, SCC #1-01-006-01, 1-01-006-04
(AP-42 Supplement D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.

**2. Potential to Emit After Issuance**

Potential to Emit After Issuance is the same as the uncontrolled PTE, except as shown below

| Emissions Unit | Pollutant | | | |
|---|---|---|---|---|
| | PM[1] | | NOx[2] | |
| | (lb/hr) | (tons/yr) | (lb/hr) | (tons/yr) |
| EU7-1 | 0.66 | 2.77 | 95.50 | 418.10 |
| EU21 | - | - | 22.62 | 99.08 |

*Notes:*
*1. PM limitations pursuant to CP 141-2750-00040/00046, issued on October 28, 1996*
*2. NOx limitations pursuant to CP 141-2750-00040/00046, issued on October 28, 1996*

**Appendix A: Emissions Calculations**
**Switching Locomotive Emissions**

**Company Name: Cleveland-Cliffs New Carlisle**
**Source Address: 30755 Edison Rd, New Carlisle, Indiana 46552**
**Permit Renewal No.: T 141-42030-00159**
**Significant Source Modifcation No.: 141-47501-00159**
**Signifcant Permit Modification No.: 141-47618-00159**
**Reviewer: Sidhant Paul**

**1. Uncontrolled Potential to Emit**

*A. Criteria Pollutants*

| Number of Locomotives | Engine Output (bhp) |
|---|---|
| 3 | 1,000 |

| | | Pollutant | | | | |
|---|---|---|---|---|---|---|
| | | $PM/PM_{10}/PM_{2.5}$[1] | $SO_2$[2] | NOx | VOC | CO |
| Emission Factor | (g/bhp-hr)[3] | 0.44 | 1.21E-05 | 17.40 | 1.01 | 1.83 |
| Potential to Emit | (tons/yr) | 12.75 | 0.16 | 504.14 | 29.26 | 53.02 |

*Notes:*
*1. $PM_{10}$ and $PM_{2.5}$ presumed equal to PM as a worst case*
*2. $SO_2$ emission factor is lb/bhp-hr, determined from AP-42 Table 3.4-1, using ULSD maximum 15 ppm sulfur required after 2014 for non-road engines*
*3. Source: U.S. EPA Technical Highlights, Emission Factors for Locomotives, EPA420-F-97-051, Office of Mobile Sources, December 1997*
*4. Conversion Factor: 20.80 (bhp-hr/gal)*

**Methodology**
Potential to Emit (tons/yr) = Emission Factor (g/bhp-hr) x Number of Locomotives x Engine Output (bhp) x 8,760 (hr/yr) x 0.002205 (lb/g) / 2,000 (lb/ton)
Potential to Emit (tons/yr) = Emission Factor (lb/bhp-hr) x Number of Locomotives x Engine Output (bhp) x 8,760 (hr/yr) / 2,000 (lb/ton) $SO_2$

*B. Hazardous Air Pollutants*

| | | Pollutant | | | | | |
|---|---|---|---|---|---|---|---|
| | | Acetaldehyde | Acrolein | Benzene | Formaldehyde | Toluene | Xylenes |
| Emission Factor | (lb/bhp-hr)[1] | 1.76E-07 | 5.52E-08 | 5.43E-06 | 5.52E-07 | 1.97E-06 | 1.35E-06 |
| Potential to Emit | (tons/yr) | 2.32E-03 | 7.25E-04 | 7.14E-02 | 7.26E-03 | 2.58E-02 | 1.78E-02 |

*Notes:*
*1. Calculated from lb/MMBtu values in AP-42 Table 3.4-3 using a BSFC of 7,000Btu/lb*
*2. Conversion Factor: 20.80 (bhp-hr/gal)*
*Source: U.S. EPA Technical Highlights, Emission Factors for Locomotives, EPA420-F-97-051, Office of Mobile Sources, December 1997*

**Methodology:**
Potential to Emit (tons/yr) = Emission Factor (lb/bhp-hr) x Number of Locomotives x Engine Output (bhp) x 8,760 (hr/yr) / 2,000 (lb/ton)

**2. Potential to Emit After Issuance**

| Limited Fuel Usage (gal/yr)[1] |
|---|
| 304,000 |

*Note:*
*1. Locomotive fuel consumption limitation pursuant to CP 71-1822 (Plant ID 141-00046), issued on November 15, 1991 modified by Part 70 Operating Permit No. 141-7316-00159, issued on June 30, 2004, as PSD BACT for $PM/PM_{10}$ and NOx. Other pollutant not considered limited.*

| | | Pollutant | | | | |
|---|---|---|---|---|---|---|
| | | $PM/PM_{10}/PM_{2.5}$[1] | $SO_2$ | NOx | VOC | CO |
| Emission Factor[2] | (g/bhp-hr) | 0.44 | - | 17.40 | - | - |
| | (g/gal)[3] | 9.2 | - | 361.9 | - | - |
| Potential to Emit | (tons/yr) | 3.07 | - | 121.30 | - | - |

*Notes:*
*1. $PM_{10}$ and $PM_{2.5}$ presumed equal to PM as a worst case*
*2. Source: U.S. EPA Technical Highlights, Emission Factors for Locomotives, EPA420-F-97-051, Office of Mobile Sources, December 1997*
*3. Conversion Factor: 20.80 (bhp-hr/gal) from the emission factor reference*

**Methodology**
Emission Factor (g/gal) = Emission Factor (g/bhp-hr) x Conversion Factor (bhp-hr/gal)
Potential to Emit (tons/yr) = Emission Factor (g/gal) x Limited Fuel Usage (gal/yr) x 0.002205 (lb/g) / 2,000 (lb/ton)

**Appendix A: Emission Calculations**
**Diesel Emergency Engines**

**Company Name:** Cleveland-Cliffs New Carlisle
**Source Address:** 30755 Edison Rd, New Carlisle, Indiana 46552
**Permit Renewal No.:** 1-42030-00159
**Significant Source Modifcation No.:** 1-47501-00159
**Signifcant Permit Modification No.:** 1-47618-00159
**Reviewer:** Sidhant Paul

**1. Engines greater than 600 HP**

| Unit | Electrical Output[1] (kW) | Engine Output (HP) |
|---|---|---|
| Emergency generator | 750 | 985 |

*Notes:*

*1. Engine output estimated from electrical outpout using a correlation of published generator characteristics*

**Emissions calculated based on output rating (hp)**

| | |
|---|---|
| Output Horsepower Rating (hp) | 985.0 |
| Maximum Hours Operated per Year | 500 |
| Potential Throughput (hp-hr/yr) | 492,500 |
| Sulfur Content (S) of Fuel (% by weight) | 0.0015 |

| | Pollutant | | | | | | |
|---|---|---|---|---|---|---|---|
| | PM* | PM10* | direct PM2.5* | SO2 | NOx | VOC | CO |
| Emission Factor in lb/hp-hr | 7.00E-04 | 4.01E-04 | 3.89E-04 | 1.21E-05 *(.00809S)* | 2.40E-02 **see below | 7.05E-04 | 5.50E-03 |
| Potential Emission in tons/yr | 0.17 | 0.10 | 0.10 | 2.99E-03 | 5.91 | 0.17 | 1.35 |

*PM emission factor is from AP-42 Table 3.4-1. The PM10 and PM2.5 emission factors for are from AP-42 Table 3.4-2. The PM10 emission factor is the sum of filterable PM10 and condensable particulate. The PM2.5 emission factor is the sum of filterable particulate less than 3 um and condensable particulate. Emission factors in lb/hp-hr were calculated using the emission factor in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Tables 3.3-1 and 3.4-1).

**NOx emission factor: uncontrolled = 0.024 lb/hp-hr, controlled by ignition timing retard = 0.013 lb/hp-hr

**Hazardous Air Pollutants (HAPs)**

| | Pollutant | | | | | | |
|---|---|---|---|---|---|---|---|
| | Benzene | Toluene | Xylenes | Formaldehyde | Acetaldehyde | Acrolein | Total PAH HAPs*** |
| Emission Factor in lb/hp-hr**** | 5.43E-06 | 1.97E-06 | 1.35E-06 | 5.52E-07 | 1.76E-07 | 5.52E-08 | 1.48E-06 |
| Potential Emission in tons/yr | 1.34E-03 | 4.84E-04 | 3.33E-04 | 1.36E-04 | 4.34E-05 | 1.36E-05 | 3.65E-04 |

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

****Emission factors in lb/hp-hr were calculated using emission factors in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Tables 3.3-1 and 3.4-1).

| | |
|---|---|
| **Potential Emission of Total HAPs (tons/yr)** | **2.71E-03** |

**Methodology**

Emission Factors are from AP 42 (Supplement B 10/96) Tables 3.4-1 , 3.4-2, 3.4-3, and 3.4-4.

Potential Throughput (hp-hr/yr) = [Output Horsepower Rating (hp)] * [Maximum Hours Operated per Year]

Potential Emission (tons/yr) = [Potential Throughput (hp-hr/yr)] * [Emission Factor (lb/hp-hr)] / [2,000 lb/ton]

**Appendix A: Emission Calculations**
**Diesel Emergency Engines**

**Company Name: Cleveland-Cliffs New Carlisle**
**Source Address: 30755 Edison Rd, New Carlisle, Indiana 46552**
**Permit Renewal No.: 1-42030-00159**
**Significant Source Modifcation No.: 1-47501-00159**
**Signifcant Permit Modification No.: 1-47618-00159**
**Reviewer: Sidhant Paul**

**2. Engines less than or equal to 600 HP**

| Unit | Electrical Output (kW) | Engine Output (HP) |
|---|---|---|
| CAPL emergency generator[1] | 240 | 374 |
| Cooling tower emergency generator | - | 40 |
| Emergency fire pump | - | 340 |
| Total | | 754 |

*Notes:*
*1. Engine output estimated from electrical outpout using a correlation of published generator characteristics*

**Emissions calculated based on output rating (hp)**

| | |
|---|---|
| Output Horsepower Rating (hp) | 754 |
| Maximum Hours Operated per Year | 500 |
| Potential Throughput (hp-hr/yr) | 377,000 |

| | Pollutant | | | | | | |
|---|---|---|---|---|---|---|---|
| | PM* | PM10* | direct PM2.5* | SO2 | NOx | VOC | CO |
| Emission Factor in lb/hp-hr | 0.0022 | 0.0022 | 0.0022 | 0.00205 | 0.0310 | 0.0025 | 0.00668 |
| Potential Emission in tons/yr | 0.41 | 0.41 | 0.41 | 0.39 | 5.84 | 0.47 | 1.26 |

*PM and PM2.5 emission factors are assumed to be equivalent to PM10 emission factors. No information was given regarding which method was used to determine the factor or the fraction of PM10 which is condensable.

**Hazardous Air Pollutants (HAPs)**

| | Pollutant | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Benzene | Toluene | Xylenes | 1,3-Butadiene | Formaldehyde | Acetaldehyde | Acrolein | Total PAH HAPs*** |
| Emission Factor in lb/hp-hr**** | 6.53E-06 | 2.86E-06 | 2.00E-06 | 2.74E-07 | 8.26E-06 | 5.37E-06 | 6.48E-07 | 1.18E-06 |
| Potential Emission in tons/yr | 1.23E-03 | 5.40E-04 | 3.76E-04 | 5.16E-05 | 1.56E-03 | 1.01E-03 | 1.22E-04 | 2.22E-04 |

***PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)
****Emission factors in lb/hp-hr were calculated using emission factors in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Table 3.3-1).

| | |
|---|---|
| **Potential Emission of Total HAPs (tons/yr)** | **5.11E-03** |

**Methodology**
Emission Factors are from AP 42 (Supplement B 10/96) Tables 3.3-1 and 3.3-2.
Potential Throughput (hp-hr/yr) = [Output Horsepower Rating (hp)] * [Maximum Hours Operated per Year]
Potential Emission (tons/yr) = [Potential Throughput (hp-hr/yr)] * [Emission Factor (lb/hp-hr)] / [2,000 lb/ton]

**3. Total of all engines**

| | Pollutant | | | | | | |
|---|---|---|---|---|---|---|---|
| | PM* | PM10* | direct PM2.5* | SO2 | NOx | VOC | CO |
| Potential to Emit (tons/yr) | 0.59 | 0.51 | 0.51 | 0.39 | 11.75 | 0.65 | 2.61 |

| | Benzene | Toluene | Xylenes | 1,3-Butadiene | Formaldehyde | Acetaldehyde | Acrolein | Total PAH HAPs*** |
|---|---|---|---|---|---|---|---|---|
| Potential to Emit (tons/yr) | 2.57E-03 | 1.02E-03 | 7.09E-04 | 5.16E-05 | 1.69E-03 | 1.06E-03 | 1.36E-04 | 5.87E-04 |

**Appendix A: Emission Calculations**
**Mechanical Draft Cooling Tower**

**Company Name: Cleveland-Cliffs New Carlisle**
**Source Address: 30755 Edison Rd, New Carlisle, Indiana 46552**
**Permit Renewal No.: 141-42030-00159**
**Significant Source Modifcation No.: 141-47501-00159**
**Signifcant Permit Modification No.: 141-47618-00159**
**Reviewer: Sidhant Paul**

| Parameter | I/N Tek | I/N Kote | Total | | |
|---|---|---|---|---|---|
| Circulating water flow rate ($W_c$) | 72.5 | 94.6 | - | $m^3$/min | *provided by the source* |
| | 19,155 | 24,993 | - | gal/min | |
| Drift loss | 0.005% | | | | *ASHRAE Standard 189.1, crossflow towers* |
| Blowdown/drift TDS | 2,500 | | | mg/l | *maximum recommended value from a supplier (BAC)* |
| Total Liquid Drift | 0.42 | | | lb/$10^3$ gal | |
| PM/PM10/PM2.5 Emissions | 1.20 | 1.56 | - | lb/hr | |
| | 5.25 | 6.85 | 12.10 | tons/yr | |

**Methodology**

Methodology ref: par. 2, page 13.4-3, AP-42 (1/95)

Total Liquid Drift (lb/$10^3$ gal) = Drift loss (%) / 100 x 8.34 (lb/gal) x 1,000 (gal/$10^3$ gal)

Emissions (lb/hr) = Total Liquid Drift (lb/$10^3$ gal) x Circulating water flow rate (gal/min) / 1,000 (gal/$10^3$ gal) x 60 (min/hr) x Blowdown/drift TDS (mg/l) / 1,000,000 (mg/l / weight fraction)

Emissions (tons/yr) = Emissions (lb/hr) x 8,760 (hr/yr) / 2,000 (lb/ton)

$W_c$ (gal/min) = $W_c$ ($m^3$/min) x 264.2 (gal/$m^3$)

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

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

## Source Description and Location

| | |
|---|---|
| **Source Name:** | **Cleveland-Cliffs Tek Inc. & Cleveland-Cliffs Kote Inc.** |
| **Source Location:** | **30755 Edison Rd, New Carlisle, IN 46552** |
| **County:** | **St Joseph** |
| **SIC Code:** | **3316 (Cold-Rolled Steel Sheet, Strip, and Bars)**<br>**3471 (Electroplating, Plating, Polishing, Anodizing, and Coloring)** |
| **Operation Permit No.:** | **T 141-42030-00159** |
| **Operation Permit Issuance Date:** | **February 5, 2021** |
| **Significant Source Modification No.:** | **141-47501-00159** |
| **Significant Permit Modification No.:** | **141-47618-00159** |
| **Permit Reviewer:** | **Sidhant Paul** |

## Source Definition

This Source Definition from the Part 70 Operating Permit Renewal was incorporated into this permit as follows:

This stationary continuous cold mill, a continuous hot dip galvanizing line, and an electrolytic galvanizing line at a metal coil-manufacturing source consists of two (2) plants:

(a) Cleveland-Cliffs Tek Inc. (formerly known as I/N Tek), Plant ID 141-00040 is located at 30755 Edison Road, New Carlisle, Indiana; and

(b) Cleveland-Cliffs Kote Inc. (formerly known as I/N Kote), Plant ID 141-00046 is located at 30755 Edison Road, New Carlisle, Indiana.

Since the two (2) plants are located in contiguous properties, Cleveland-Cliffs Tek Inc. supports Cleveland-Cliffs Kote Inc., and both partnerships are owned by subsidiaries of the same companies, they will be considered one (1) source and assigned plant identification number 141-00159.

This determination was initially made under Part 70 Operating Permit No. 141-7316-00159, issued on June 30, 2004.

## Existing Approvals

The source was issued Part 70 Operating Permit Renewal No. 141-42030-00159 on February 5, 2021. The source has since received the following approvals:

(a) Administrative Amendment No. 141-43817-00159, issued on March 11, 2021

(b) Administrative Amendment No. 141-44473-00159, issued on January 12, 2022.

## County Attainment Status

The source is located in St. Joseph County.

Pursuant to amendments to Indiana Code IC 13-17-3-14, effective July 1, 2023, a federal regulation that classifies or amends a designation of attainment, nonattainment, or unclassifiable for any area in Indiana under the federal Clean Air Act is effective and enforceable in Indiana on the effective date of the federal regulation.

| Pollutant | Designation |
|---|---|
| $SO_2$ | Unclassifiable or attainment effective April 9, 2018, for the 2010 primary 1-hour $SO_2$ standard. Better than national secondary standards effective March 3, 1978. |
| CO | Unclassifiable or attainment effective November 15, 1990. |
| $O_3$ | Unclassifiable or attainment effective January 16, 2018, for the 2015 8-hour ozone standard. |
| $PM_{2.5}$ | Unclassifiable or attainment effective April 15, 2015, for the 2012 annual $PM_{2.5}$ standard. |
| $PM_{2.5}$ | Unclassifiable or attainment effective December 13, 2009, for the 2006 24-hour $PM_{2.5}$ standard. |
| $PM_{10}$ | Unclassifiable effective November 15, 1990. |
| $NO_2$ | Unclassifiable or attainment effective January 29, 2012, for the 2010 $NO_2$ standard. |
| Pb | Unclassifiable or attainment effective December 31, 2011, for the 2008 lead standard. |

(a) Ozone Standards
Volatile organic compounds (VOC) and Nitrogen Oxides ($NO_x$) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and $NO_x$ emissions are considered when evaluating the rule applicability relating to ozone. St. Joseph County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and $NO_x$ emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(b) $PM_{2.5}$
St. Joseph 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.

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

## Fugitive Emissions

Since this source is classified as an iron and steel mill it is considered one (1) of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(ff)(1), 326 IAC 2-3-2(g), or 326 IAC 2-7-1(22)(B). Therefore, fugitive emissions are counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

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

## Greenhouse Gas (GHG) Emissions

On June 23, 2014, in the case of *Utility Air Regulatory Group v. EPA*, cause no. 12-1146, (available at http://www.supremecourt.gov/opinions/13pdf/12-1146_4g18.pdf) the United States Supreme Court ruled that the U.S. EPA does not have the authority to treat greenhouse gases (GHGs) as an air pollutant for

the purpose of determining operating permit applicability or PSD Major source status. On July 24, 2014, the U.S. EPA issued a memorandum to the Regional Administrators outlining next steps in permitting decisions in light of the Supreme Court's decision. U.S. EPA's guidance states that U.S. EPA will no longer require PSD or Title V permits for sources "previously classified as 'Major' based solely on greenhouse gas emissions."

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

## Source Status - Existing Source

The table below summarizes the potential to emit of the entire source, prior to the proposed modification, after consideration of all enforceable limits established in the effective permits. If the control equipment has been determined to be integral, the table reflects the potential to emit (PTE) after consideration of the integral control device.

| | Source-Wide Emissions Prior to Modification (ton/year) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | **PM[1]** | **$PM_{10}$[1]** | **$PM_{2.5}$[1, 2]** | **$SO_2$** | **$NO_X$** | **VOC** | **CO** | **Single HAP[3]** | **Total HAPs** |
| **Total PTE of Entire Source Including Fugitives*** | 75.08 | 88.21 | 1,006.90 | 3.17 | 787.58 | 45.76 | 283.48 | 9.81 | 17.13 |
| Title V Major Source Thresholds | NA | 100 | 100 | 100 | 100 | 100 | 100 | 10 | 25 |
| PSD Major Source Thresholds | 100 | 100 | 100 | 100 | 100 | 100 | 100 | -- | -- |

[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, hydrogen chloride.

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

(a) This existing source is a major stationary source, under PSD (326 IAC 2-2), because a PSD regulated pollutant(s), PM2.5, NOx and CO, is emitted at a rate of 100 tons per year or more, and it is one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(ff)(1).

(b) This existing source is 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.

(c) These emissions are based on the TSD of Part 70 Operating Permit Administrative Amendment No. 141-44473-00159, issued on January 12, 2022.

## Description of Proposed Modification

The Office of Air Quality (OAQ) has reviewed an application, submitted by Cleveland-Cliffs Tek Inc. & Cleveland-Cliffs Kote Inc. on February 6, 2024, relating to the replacement of the existing CGL Electrolytic Cleaning Operation (EU20), with a replacement CGL Electrolytic Cleaning Operation.

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

(b) Cleveland-Cliffs Kote Inc. continuous hot dip galvanizing line (CGL), consisting of:

(4) One (1) CGL electrolytic cleaning operation, identified as EU20, constructed in 1989 and approved in 2024 for replacement, with a nominal capacity of 123,800 pounds per hour of uncoated cold rolled steel strip, equipped with a ventilation system with a design flow rate of 24,630 scfm using a scrubber with horizontal mist eliminator for control, and exhausting to stack 20.

## Enforcement Issues

There are no pending enforcement actions related to this modification.

## Emission Calculations

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

## Permit Level Determination – Part 70 Modification to an Existing Source

Pursuant to 326 IAC 2-1.1-1(12), Potential to Emit is defined as "the maximum capacity of a stationary source or emission unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, IDEM, or the appropriate local air pollution control agency."

The following table is used to determine the appropriate permit level under 326 IAC 2-7-10.5. This table reflects the PTE before controls. If the control equipment has been determined to be integral, the table reflects the potential to emit (PTE) after consideration of the integral control device.

| | PTE Before Controls of the New Emission Units (ton/year) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Process / Emission Unit** | **PM** | **$PM_{10}$** | **$PM_{2.5}$[1]** | **$SO_2$** | **$NO_X$** | **VOC** | **CO** | **Single HAP[2]** | **Total HAPs** |
| EU20 | 40.30 | 40.30 | 35.92 | - | - | - | - | - | - |
| **Total PTE Before Controls of the New Emission Units:** | 40.30 | 40.30 | 35.92 | - | - | - | - | - | - |

[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)(4), a Significant Source Modification is required because this modification has the potential to emit PM/PM10/direct PM2.5 at equal to or greater than twenty-five (25) tons per year.

(b) Approval to Operate

Pursuant to 326 IAC 2-7-12(d)(1), this change to the permit is being made through a Significant Permit Modification because this modification does not qualify as a Minor Permit Modification or as an Administrative Amendment.

**Permit Level Determination – PSD Emissions Increase**

(a) Actual to Projected Actual (ATPA) Applicability Test
Since this project only involves existing emissions units, an Actual to Projected Actual (ATPA) test, specified in 326 IAC 2-2-2(d)(3), is used to determine if the project results in a Significant Emissions Increase.

The source has provided information and emission calculations as part of the application for this ATPA test. IDEM, OAQ reviewed the emission calculations provided by the source to verify the emissions factors and methodology used, but has not made any determination regarding the validity and accuracy of certain information such as actual throughput, actual usage and actual hours of operation.

(b) Existing Emissions Units Affected by the Modification
This project only involves existing emissions units affected by the modification. The following emissions units will be considered existing for the purpose of this ATPA test:
(1) Replacement emissions units. A new emissions unit, that replaces an existing emissions unit and is identical to or functionally equivalent to the replaced emissions unit is a replacement unit. A replacement emissions unit is an existing emissions unit. [326 IAC 2-2-1(tt)]

The following proposed replacement unit(s) will be considered as existing emissions units for this evaluation.

(1) One (1) CGL electrolytic cleaning operation, identified as EU20, constructed in 1989 and approved in 2024 for replacement, with a nominal capacity of 123,800 pounds per hour of uncoated cold rolled steel strip, equipped with a ventilation system with a design flow rate of 24,630 scfm using a scrubber with horizontal mist eliminator for control, and exhausting to stack 20.

(c) Baseline Actual Emissions
The baseline actual emissions from the existing emissions units involved in this ATPA applicability test are based on their emissions from January 1, 2015 through December 31, 2016.

(d) Actual to Projected Actual (ATPA) Summary
The Emissions Increase of the project is the sum of the difference between the Projected Actual Emissions and the baseline emissions for **each existing emissions unit.**

ATPA $_{(existing\ unit)}$ = Projected Actual Emissions - Baseline Emissions

| **Existing Emissions Unit ATPA (tons/year)** | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Process/Emissions Unit** | **PM** | **$PM_{10}$** | **$PM_{2.5}$** | **$SO_2$** | **$NO_X$** | **VOC** | **CO** | **GHGs** |
| EU20 | | | | | | | | |
| Projected Actual Emissions | **2.01** | **2.01** | **1.80** | - | - | - | - | - |
| Baseline Actual Emissions | **0.29** | **0.29** | **0.26** | - | - | - | - | - |
| **ATPA** | 1.72 | 1.72 | 1.54 | - | - | - | - | - |

| Project Emissions Increase (tons/year) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Process/Emissions Unit** | **PM** | **$PM_{10}$** | **$PM_{2.5}$*** | **$SO_2$** | **$NO_X$** | **VOC** | **CO** | **GHGs** |
| EU20 (ATPA) | 1.72 | 1.72 | 1.54 | - | - | - | - | - |
| **Project Emissions Increase** | 1.72 | 1.72 | 1.54 | - | - | - | - | - |
| Significant Levels | 25 | 15 | 10 | 40 | 40 | 40 | 100 | 75,000 $CO_2e$ |
| *PM2.5 listed is direct PM2.5. | | | | | | | | |

See Technical Support Document (TSD) State Rule Applicability - Entire Source section, 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset) applicability determination for more information regarding the limits.

(e) Conclusion

The Permittee has provided information as part of the application for this approval that based on Actual to Projected Actual test in 326 IAC 2-2-2 that this modification to an existing major PSD stationary source will not be major because the Emissions Increase of each PSD regulated pollutant is less than the PSD significant levels levels (i.e., the modification does not cause a Significant Emissions Increase). The applicant will be required to keep records and report in accordance with 326 IAC 2-2-8 (Prevention of Significant Deterioration (PSD) Requirements: Source Obligation).

The source has stated that the replacement of the CGL electrolytic cleaning operation will not increase the demand for any upstream or downstream emission units.

**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.

| | Source-Wide Emissions After Issuance (ton/year) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | **PM[1]** | **$PM_{10}$[1]** | **$PM_{2.5}$[1, 2]** | **$SO_2$** | **$NO_X$** | **VOC** | **CO** | **Single HAP[3]** | **Total HAPs** |
| **Total PTE of Entire Source Including Fugitives*** | **74.46** | **87.59** | **1,009.97** | **3.17** | **787.58** | **45.76** | **283.48** | 9.81 | 17.13 |
| Title V Major Source Thresholds | NA | 100 | 100 | 100 | 100 | 100 | 100 | 10 | 25 |
| PSD Major Source Thresholds | 100 | 100 | 100 | 100 | 100 | 100 | 100 | -- | -- |

[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 ; Hydrogen Chloride

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

The source opted to take limit(s) in order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable to this source 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 2-2 (PSD) and 326 IAC 20 (Hazardous Air Pollutants) for more information regarding the limit(s).

(a) This existing major PSD stationary source will continue to be major under 326 IAC 2-2 because at least one pollutant, PM2.5 , NOx and CO, has emissions equal to or greater than the PSD major source threshold.

(a) This existing area source of HAP will continue to be an area source of HAP, as defined in 40 CFR 63.2, because HAP emissions will continue to be 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) The requirements of the Standards of Performance for Metal Coil Surface Coating, 40 CFR 60, Subpart TT and 326 IAC 12, are not included in the permit for EU20 as the unit is not a metal coil surface coating operation as defined at 40 CFR 60.461. The unit does not apply an organic coating to the surface of any continuous metal strip with thickness of 0.15 millimeter (mm) (0.006 in.) or more that is packaged in a roll or coil.

**(**b**)** There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in the permit for this proposed modification.

**National Emission Standards for Hazardous Air Pollutants (NESHAP):**

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

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:

| Emission Unit/Pollutant | Control Device | Applicable Emission Limitation | Uncontrolled PTE (tons/year) | Controlled PTE (tons/year) | CAM Applicable (Y/N) | Large Unit (Y/N) |
|---|---|---|---|---|---|---|
| EU20 – PM* | ME | 326 IAC 6.5 | <100 | <100 | N [1] | N |

| Emission Unit/Pollutant | Control Device | Applicable Emission Limitation | Uncontrolled PTE (tons/year) | Controlled PTE (tons/year) | CAM Applicable (Y/N) | Large Unit (Y/N) |
|---|---|---|---|---|---|---|
| EU20 – PM | ME | 326 IAC 2-2 | <100 | <100 | N [2] | N |
| EU20 – $PM_{10}$ | ME | 326 IAC 2-2 | <100 | <100 | N [2] | N |
| Under the Part 70 Permit program (40 CFR 70), PM is not a regulated air pollutant.<br>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. | | | | | | |
| 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. | | | | | | |
| N [1] CAM does not apply for PM as a surrogate for $PM_{10}$ because the uncontrolled PTE of PM is less than the major source threshold. | | | | | | |
| N [2] CAM does not apply for the regulated pollutant because the uncontrolled PTE is less than the major source threshold. | | | | | | |
| Controls: BH = Baghouse, C = Cyclone, DC = Dust Collection System, RTO = Regenerative or Recuperative Thermal Oxidizer, WS = Wet Scrubber, ESP = Electrostatic Precipitator, ME = Mist Eliminator | | | | | | |
| Emission units without air pollution controls are not subject to CAM. Therefore, they are not listed. | | | | | | |

Based on this evaluation, the requirements of 40 CFR Part 64, CAM, are not applicable to EU 20 as part of this modification.

**State Rule Applicability - Entire Source**

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

**326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset)**
PSD and Emission Offset applicability is discussed under the and the Permit Level Determination - PSD Emissions Increase section of this document.

(c) Pursuant to 326 IAC 2-2-3 (PSD) and PC 71-1822 (Plant ID 141-00046), issued on November 20, 1989, as revised on November 15, 1991, modified by CP 141-2750-00040/00046, issued on October 28, 1996, units at the source are subject to the following limits, which are determined to be BACT for the units:

.....
(7) PM and $PM_{10}$ (filterable) emissions from the CGL electrolytic cleaning operation (EU20) shall each not exceed 0.60 lbs/hr and 2.63 tpy.
....

These are existing limits that are not being revised with this modification. As such the replacement unit (EU20) will have to continue to comply with this limit.

**326 IAC 2-2-8 (Prevention of Significant Deterioration (PSD) Requirements: Source Obligation)**
This source will be required to keep records and report in accordance with 326 IAC 2-2-8 (Prevention of Significant Deterioration (PSD) Requirements: Source Obligation) to document that the project is not a part of a PSD major modification as defined by 326 IAC 2-2-1(dd).

**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 EU20 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 the requirements of 326 IAC 2-6 (Emission Reporting), since it is required to have an operating permit under 326 IAC 2-7, Part 70 Permit Program. Pursuant to 326 IAC 2-6-3(a)(2), the Permittee shall submit triennially, by July 1, an emission statement covering the previous calendar year in accordance with the compliance schedule in 326 IAC 2-6-3. 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 they 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)**
This source was constructed after December 13, 1985, and has potential fugitive particulate emissions of twenty-five (25) tons per year or more. Pursuant to 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations), fugitive particulate matter emissions shall be controlled according to the Fugitive Dust Control Plan that is included as Attachment A to the Part 70 Operating Permit Renewal No. 141-42030-00159 on February 5, 2021.

**326 IAC 6.5 (Particulate Matter Limitations Except Lake County)**
This source (located in St. Joseph County) is located in one of the counties listed in 326 IAC 6.5, but is not one of the sources specifically listed in 326 IAC 6.5-2 through 326 IAC 6.5-10. The source-wide PTE of PM is 10 tons per year or more. Therefore, this source is subject to the requirements of 326 IAC 6.5-1-2 because the source-wide actual emissions of PM can be 10 tons per year or more.

**326 IAC 6.8 (Particulate Matter Limitations for Lake County)**
Pursuant to 326 IAC 6.8-1-1(a), this source (located in St. Joseph County) is not subject to the requirements of 326 IAC 6.8 because it is not located in Lake County.

**326 IAC 6.8 (Lake County: Fugitive Particulate Matter)**
Pursuant to 326 IAC 6.8-10-1, this source (located in St. Joseph County) is not subject to the requirements of 326 IAC 6.8-10 because it is not located in Lake County.

## State Rule Applicability – Individual Facilities

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

EU 20

**326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)**
Pursuant to 326 IAC 6-3-1(c)(1) and (3), the unit is not subject to the requirements of 326 IAC 6-3, since these units are subject to particulate matter limitations that are as stringent or more stringent than the particulate limitations established in this rule that are established as PSD BACT under 326 IAC 2-2-3.

**326 IAC 6.5 PM Limitations Except Lake County**
Pursuant to 326 IAC 6.5-1-2(a), particulate matter emissions from the unit shall not exceed seven-hundredths (0.07) gram per dry standard cubic meter (g/dscm) (three-hundredths (0.03) grain per dry standard cubic foot (dscf)).

## Compliance Determination and Monitoring Requirements

Permits issued under 326 IAC 2-7 are required to assure that sources can demonstrate compliance with all applicable state and federal rules on a continuous basis. All state and federal rules contain compliance provisions; however, these provisions do not always fulfill the requirement for a continuous demonstration. When this occurs, IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, Compliance Determination Requirements are included in the permit. The Compliance Determination Requirements in Section D of the permit are those conditions that are found directly within state and federal rules and the violation of which serves as grounds for enforcement action.

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

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

The control devices listed in the table below for particulate matter control shall be in operation and control emissions from the continuous hot dip galvanizing line facilities at all times the associated facilities are in operation.

| Unit ID | Unit Description | Control Device |
|---|---|---|
| EU20 | CGL electrolytic cleaning | Scrubber and mist eliminator |

*Testing Requirements:*

| Summary of Testing Requirements | | | | | |
|---|---|---|---|---|---|
| **Emission Unit** | **Control Device** | **Timeframe for Testing or Date of Initial Valid Demonstration)** | **Pollutant/ Parameter** | **Frequency of Testing** | **Authority** |
| EU 20 | Scrubber and mist eliminator | *180 | PM and $PM_{10}$ (filterable) | Every 5 years | 326 IAC 2-2 |
| *No later than 180 days after the startup of the replacement unit. | | | | | |

(b) The Compliance Monitoring Requirements applicable to this proposed modification are as follows:

| Control Device | Type of Parametric Monitoring | Frequency | Range or Specification |
|---|---|---|---|
| CGL electrolytic cleaning operation (EU20) scrubber | Scrubber flow rate | Daily | At or above 42 gallons per minute |

These monitoring conditions are necessary because the scrubber for the EU20 must operate properly to assure compliance with 326 IAC 2-2 and 326 IAC 6.5-1-2.

**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) Sections A.3 and D.4 have been revised to reflect the replacement of EU20.

(2) An initial and repeat testing requirements were added for EU20 to show compliance.

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

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

**...**

(b) Cleveland-Cliffs Kote Inc. continuous hot dip galvanizing line (CGL), consisting of:

...

(4) One (1) CGL electrolytic cleaning operation, identified as EU20, constructed in 1989 **and approved for replacement in 2024**, with a nominal capacity of 123,800 pounds per hour of uncoated cold rolled steel strip, equipped with a ventilation system with a design flow rate of 24,630 scfm using a scrubber with horizontal mist eliminator for control, and exhausting to stack 20.

....

**....**

**SECTION D.4 EMISSIONS UNIT OPERATION CONDITIONS**

**Emissions Unit Description:**

(b) Cleveland-Cliffs Kote Inc. continuous hot dip galvanizing line (CGL), consisting of:

(4) One (1) CGL electrolytic cleaning operation, identified as EU20, constructed in 1989 **and approved for replacement in 2024**, with a nominal capacity of 123,800 pounds per hour of uncoated cold rolled steel strip, equipped with a ventilation system with a design flow rate of 24,630 scfm using a scrubber with horizontal mist eliminator for control, and exhausting to stack 20.

(5) One (1) CGL skin pass mill, identified as EU31, constructed in 1989, with a nominal capacity of 123,800 pounds per hour of uncoated cold rolled steel strip, equipped with a ventilation system with a design flow rate of 11,313 scfm using a fume scrubber and a horizontal mist eliminator for control, and exhausting to stack 31.

(6) One (1) CGL sink roll pickling operation, identified as EU32, constructed in 1989, equipped with a ventilation system with a design flow rate of 10,000 scfm using a high efficiency scrubber with vertical mist eliminator for control, and exhausting to stack 32.

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

**....**

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

...

**D.4.5 Testing Requirements [326 IAC 2-1.1-11]**

**In order to demonstrate compliance with Conditions D.4.1(a) and D.4.3, the Permittee shall perform PM and $PM_{10}$ (filterable) testing of the CGL electrolytic cleaning operation (EU 20) utilizing methods as approved by the Commissioner no later than 180 days after the startup of the replacement unit and at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition. PM10 includes filterable PM only.**

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

D.4.~~5~~**6** Scrubber Parametric Monitoring

....

D.4.~~6~~**7** Scrubber Failure Detection

In the event that a scrubber malfunction has been observed:

...

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

D.4.~~7~~**8** Record Keeping Requirements

...

(b) To document the compliance status with Condition D.4.~~5~~**6**, the Permittee shall maintain daily records of the flow rate for each scrubber. The Permittee shall include in its daily record when the readings are not taken and the reason for the lack of the readings (e.g., the process did not operate that day).

...

D.4.~~8~~**9** Reporting Requirements

A quarterly report of hours of operation and a quarterly summary of the information to document the compliance status with D.4.2 shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official,” as defined by 326 IAC 2-7-1 (35).

**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 the information was received on February 6, 2024.

The construction of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. 141-47501-00159. The operation of this proposed

modification shall be subject to the conditions of the attached proposed Significant Permit Modification No. 141-47618-00159.

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

**IDEM Contact**

(a) If you have any questions regarding this permit, please contact Sidhant Paul, 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) 232-8219 or (800) 451-6027, and ask for Sidhant Paul or (317) 232-8219.

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

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

**Appendix A: Emissions Calculations**
**PTE Summary**

**Company Name: Cleveland-Cliffs Tek Inc. & Cleveland-Cliffs Kote Inc.**
**Source Address: 30755 Edison Rd, New Carlisle, Indiana 46552**
**Permit Renewal No.: T 141-42030-00159**
**Significant Source Modifcation No.: 141-47501-00159**
**Signifcant Permit Modification No.: 141-47618-00159**
**Reviewer: Sidhant Paul**

| Uncontrolled Potential to Emit (tons/yr) | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Emission Unit** | **PM** | **$PM_{10}$** | **$PM_{2.5}$[1]** | **$SO_2$** | **NOx** | **VOC** | **CO** |
| Pinch Roll Leveler (EU1) | 182.50 | 182.50 | 182.50 | - | - | - | - |
| Flash Butt Welder (EU2) | 17.52 | 17.52 | 17.52 | - | - | - | - |
| Descale Acid Pickling Line (EU4) | 100.74 | 100.74 | 100.74 | - | - | - | - |
| Post Treatment Pickling Operation (EU9) | 43.80 | 43.80 | 43.80 | - | - | - | - |
| Tandem Cold Mill (EU5) | 72.05 | 72.05 | 72.05 | - | - | - | - |
| Electrolytic Cleaning Operation (EU6) | 35.04 | 35.04 | 35.04 | - | - | - | - |
| CGL Electrolytic Cleaning Operation (EU20)* | 40.30 | 40.30 | 35.92 | - | - | - | - |
| CGL Skin Pass Mill (EU31) | 35.48 | 35.48 | 35.48 | - | - | - | - |
| EGL Surface Activation and Plating Operation (EU24) | 186.88 | 186.88 | 186.88 | - | - | - | - |
| EGL Degreasing Operation (EU25) | 1.20 | 1.20 | 1.20 | - | - | - | - |
| EGL Precleaning Operation (EU26) | 1.03 | 1.03 | 1.03 | - | - | - | - |
| CGL Sink Roll Pickling Operation (EU32) | 260.61 | 260.61 | 260.61 | - | - | - | - |
| Waste Heat Boiler (EU7-2) | 0.37 | 1.47 | 1.47 | 0.12 | 9.86 | 1.06 | 16.23 |
| Package Boiler (EU7-3) | 0.58 | 2.31 | 2.31 | 0.18 | 15.51 | 1.67 | 25.54 |
| CGL Galvannealing Furnace (EU22) | 0.25 | 0.99 | 0.99 | 0.08 | 51.59 | 0.71 | 10.89 |
| Package Boiler (EU27) | 0.58 | 2.33 | 2.33 | 0.18 | 15.66 | 1.69 | 25.79 |
| Space Heaters (I/N Kote facility) | 0.62 | 2.49 | 2.49 | 0.20 | 32.76 | 1.80 | 27.52 |
| Annealing Furnace (EU7-1) | 1.81 | 7.25 | 7.25 | 0.57 | 418.11 | 5.24 | 80.08 |
| CGL Heating Furnace (EU21) | 0.92 | 3.69 | 3.69 | 0.29 | 99.08 | 2.67 | 40.80 |
| Locomotives | 12.75 | 12.75 | 12.75 | 0.16 | 504.14 | 29.26 | 53.02 |
| Emergency engines | 0.59 | 0.51 | 0.51 | 0.39 | 11.75 | 0.65 | 2.61 |
| Cooling towers | 12.10 | 12.10 | 12.10 | - | - | - | - |
| Insignificant Activities | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| **Total** | **1,008.71** | **1,024.03** | **1,019.65** | **3.17** | **1,159.46** | **45.76** | **283.48** |

*Notes:*
*1. $PM_{2.5}$ listed is direct $PM_{2.5}$*

** Replaced in 2024*

| Potential to Emit after Issuance[1] (tons/yr) | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Emission Unit** | **PM** | **$PM_{10}$** | **$PM_{2.5}$[2]** | **$SO_2$** | **NOx** | **VOC** | **CO** |
| Pinch Roll Leveler (EU1)[3] | 2.20 | *2.20* | 182.50 | - | - | - | - |
| Flash Butt Welder (EU2)[3] | 0.44 | *0.44* | 17.52 | - | - | - | - |
| Descale Acid Pickling Line (EU4)[3] | 3.50 | *3.50* | 100.74 | - | - | - | - |
| Post Treatment Pickling Operation (EU9)[3] | 0.88 | *0.88* | 43.80 | - | - | - | - |
| Tandem Cold Mill (EU5)[3] | 28.90 | *28.90* | 72.05 | - | - | - | - |
| Electrolytic Cleaning Operation (EU6)[3] | 2.01 | *2.01* | 35.92 | - | - | - | - |
| CGL Electrolytic Cleaning Operation (EU20) | 2.63 | 2.63 | 32.85 | - | - | - | - |
| CGL Skin Pass Mill (EU31) | 1.10 | 1.10 | 35.48 | - | - | - | - |
| EGL Surface Activation and Plating Operation (EU24) | 9.15 | 9.15 | 186.88 | - | - | - | - |
| EGL Degreasing Operation (EU25) | 0.44 | 0.44 | 1.20 | - | - | - | - |
| EGL Precleaning Operation (EU26) | 0.44 | 0.44 | 1.03 | - | - | - | - |
| CGL Sink Roll Pickling Operation (EU32) | 0.13 | 0.13 | 260.61 | - | - | - | - |
| Waste Heat Boiler (EU7-2) | 1.25 | 1.47 | 1.47 | 0.12 | 20.80 | 1.06 | 16.23 |
| Package Boiler (EU7-3) | 0.93 | 2.31 | 2.31 | 0.18 | 15.50 | 1.67 | 25.54 |
| CGL Galvannealing Furnace (EU22) | 0.25 | 0.99 | 0.99 | 0.08 | 51.58 | 0.71 | 10.89 |
| Package Boiler (EU27) | 0.58 | 2.33 | 2.33 | 0.18 | 15.70 | 1.69 | 25.79 |
| Space Heaters (I/N Kote facility) | 0.62 | 2.49 | 2.49 | 0.20 | 32.76 | 1.80 | 27.52 |
| Annealing Furnace (EU7-1) | 2.77 | 7.25 | 7.25 | 0.57 | 418.10 | 5.24 | 80.08 |
| CGL Heating Furnace (EU21) | 0.92 | 3.69 | 3.69 | 0.29 | 99.08 | 2.67 | 40.80 |
| Locomotives | 3.07 | 3.07 | 3.07 | 0.16 | 121.30 | 29.26 | 53.02 |
| Emergency engines | 0.59 | 0.51 | 0.51 | 0.39 | 11.75 | 0.65 | 2.61 |
| Cooling towers | 12.10 | 12.10 | 12.10 | - | - | - | - |
| Insignificant Activities | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| **Total** | **75.89** | **89.02** | **1,007.78** | **3.17** | **787.58** | **45.76** | **283.48** |

*Notes:*
*1. The shaded cells indicate where limits are included.*
*2. $PM_{2.5}$ listed is direct $PM_{2.5}$*
*3. As noted in the "Manufacturing" tab, PM limits for the unit originating in CP 71-1664, issued October 1, 1987 are considered surrogate limitations on $PM_{10}$ although the permit does not expressly limit $PM_{10}$ for these units.*

**Appendix A: Emissions Calculations**
**HAP Summary**

**Company Name: Cleveland-Cliffs Tek Inc. & Cleveland-Cliffs Kote Inc.**
**Source Address: 30755 Edison Rd, New Carlisle, Indiana 46552**
**Permit Renewal No.: T 141-42030-00159**
**Significant Source Modifcation No.: 141-47501-00159**
**Signifcant Permit Modification No.: 141-47618-00159**
**Reviewer: Sidhant Paul**

**Uncontrolled Potential to Emit (tons/yr)**

| Emission Unit | Waste Heat Boiler (EU7-2) | Package Boiler (EU7-3) | CGL Galvannealing Furnace (EU22) | Package Boiler (EU27) | Space Heaters (I/N Kote facility) | Annealing Furnace (EU7-1) | CGL Heating Furnace (EU21) | Descale Acid Pickling Line (EU4) | Post Treatment Pickling Operation (EU9) | EGL Surface Activation and Plating Operation (EU24) | CAPL Post Treatment Nickel Process | Locomotives | Emergency Engines | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Organic HAP** | | | | | | | | | | | | | | |
| Acetaldehyde | - | - | - | - | - | - | - | - | - | - | - | 2.32E-03 | 1.06E-03 | **3.37E-03** |
| Acrolein | - | - | - | - | - | - | - | - | - | - | - | 7.25E-04 | 1.36E-04 | **8.60E-04** |
| Benzene | 4.06E-04 | 6.38E-04 | 2.72E-04 | 6.45E-04 | 6.88E-04 | 2.00E-03 | 1.02E-03 | - | - | - | - | 7.14E-02 | 2.57E-03 | **7.96E-02** |
| 1,3-Butadiene | | | | | - | - | - | - | - | - | - | - | 5.16E-05 | **5.16E-05** |
| Dichlorobenzene | 2.32E-04 | 3.65E-04 | 1.56E-04 | 3.68E-04 | 3.93E-04 | 1.14E-03 | 5.83E-04 | - | - | - | - | - | - | **3.24E-03** |
| Formaldehyde | 1.45E-02 | 2.28E-02 | 9.73E-03 | 2.30E-02 | 2.46E-02 | 7.15E-02 | 3.64E-02 | - | - | - | - | 7.26E-03 | 1.69E-03 | **0.21** |
| n-Hexane | 0.35 | 0.55 | 0.23 | 0.55 | 0.59 | 1.72 | 0.87 | - | - | - | - | - | - | **4.86** |
| PAH (total) | | | | - | - | - | - | - | - | - | - | - | 5.87E-04 | **5.87E-04** |
| Toluene | 6.57E-04 | 1.03E-03 | 4.41E-04 | 1.04E-03 | 1.11E-03 | 3.24E-03 | 1.65E-03 | - | - | - | - | 2.58E-02 | 1.02E-03 | **3.61E-02** |
| Xylenes | - | - | - | - | - | - | - | - | - | - | - | 1.78E-02 | 7.09E-04 | **1.85E-02** |
| **Inorganic HAPs** | | | | | | | | | | | | | | |
| Cadmium | 2.13E-04 | 3.34E-04 | 1.43E-04 | 3.38E-04 | 3.60E-04 | 1.05E-03 | 5.34E-04 | - | - | - | - | - | - | **2.97E-03** |
| Chromium | 2.71E-04 | 4.26E-04 | 1.82E-04 | 4.30E-04 | 4.59E-04 | 1.33E-03 | 6.80E-04 | - | - | - | - | - | - | **3.78E-03** |
| Hydrogen chloride | - | - | - | - | - | - | - | 213.85 | 92.98 | - | - | - | - | **306.82** |
| Lead | 9.66E-05 | 1.52E-04 | 6.48E-05 | 1.54E-04 | 1.64E-04 | 4.77E-04 | 2.43E-04 | - | - | - | - | - | - | **1.35E-03** |
| Manganese | 7.34E-05 | 1.16E-04 | 4.93E-05 | 1.17E-04 | 1.25E-04 | 3.62E-04 | 1.85E-04 | - | - | - | - | - | - | **1.03E-03** |
| Nickel | 4.06E-04 | 6.38E-04 | 2.72E-04 | 6.45E-04 | 6.88E-04 | 2.00E-03 | 1.02E-03 | - | - | 1.04 | 1.04 | - | - | **2.09** |
| **Combined** | **0.36** | **0.57** | **0.24** | **0.58** | **0.62** | **1.80** | **0.92** | **213.85** | **92.98** | **1.04** | **1.04** | **1.25E-01** | **7.82E-03** | **314.14** |

**Potential to Emit after Issuance (tons/yr)**

| Emission Unit | Waste Heat Boiler (EU7-2) | Package Boiler (EU7-3) | CGL Galvannealing Furnace (EU22) | Package Boiler (EU27) | Space Heaters (I/N Kote facility) | Annealing Furnace (EU7-1) | CGL Heating Furnace (EU21) | Descale Acid Pickling Line (EU4) | Post Treatment Pickling Operation (EU9) | EGL Surface Activation and Plating Operation (EU24) | CAPL Post Treatment Nickel Process | Locomotives | Emergency Engines | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Organic HAP** | | | | | | | | | | | | | | |
| Acetaldehyde | - | - | - | - | - | - | - | - | - | - | - | 2.32E-03 | 1.06E-03 | **3.37E-03** |
| Acrolein | - | - | - | - | - | - | - | - | - | - | - | 7.25E-04 | 1.36E-04 | **8.60E-04** |
| Benzene | 4.06E-04 | 6.38E-04 | 2.72E-04 | 6.45E-04 | 6.88E-04 | 2.00E-03 | 1.02E-03 | - | - | - | - | 7.14E-02 | 2.57E-03 | **7.96E-02** |
| 1,3-Butadiene | - | - | - | - | - | - | - | - | - | - | - | - | 5.16E-05 | **5.16E-05** |
| Dichlorobenzene | 2.32E-04 | 3.65E-04 | 1.56E-04 | 3.68E-04 | 3.93E-04 | 1.14E-03 | 5.83E-04 | - | - | - | - | - | - | **3.24E-03** |
| Formaldehyde | 1.45E-02 | 2.28E-02 | 9.73E-03 | 2.30E-02 | 2.46E-02 | 7.15E-02 | 3.64E-02 | - | - | - | - | 7.26E-03 | 1.69E-03 | **0.21** |
| n-Hexane | 0.35 | 0.55 | 0.23 | 0.55 | 0.59 | 1.72 | 0.87 | - | - | - | - | - | - | **4.86** |
| PAH (total) | - | - | - | - | - | - | - | - | - | - | - | - | 5.87E-04 | **5.87E-04** |
| Toluene | 6.57E-04 | 1.03E-03 | 4.41E-04 | 1.04E-03 | 1.11E-03 | 3.24E-03 | 1.65E-03 | - | - | - | - | 2.58E-02 | 1.02E-03 | **3.61E-02** |
| Xylenes | - | - | - | - | - | - | - | - | - | - | - | 1.78E-02 | 7.09E-04 | **1.85E-02** |
| **Inorganic HAPs** | | | | | | | | | | | | | | |
| Cadmium | 2.13E-04 | 3.34E-04 | 1.43E-04 | 3.38E-04 | 3.60E-04 | 1.05E-03 | 5.34E-04 | - | - | - | - | - | - | **2.97E-03** |
| Chromium | 2.71E-04 | 4.26E-04 | 1.82E-04 | 4.30E-04 | 4.59E-04 | 1.33E-03 | 6.80E-04 | - | - | - | - | - | - | **3.78E-03** |
| Hydrogen chloride | - | - | - | - | - | - | - | 9.81 | | - | - | - | - | **9.81** |
| Lead | 9.66E-05 | 1.52E-04 | 6.48E-05 | 1.54E-04 | 1.64E-04 | 4.77E-04 | 2.43E-04 | - | - | - | - | - | - | **1.35E-03** |
| Manganese | 7.34E-05 | 1.16E-04 | 4.93E-05 | 1.17E-04 | 1.25E-04 | 3.62E-04 | 1.85E-04 | - | - | - | - | - | - | **1.03E-03** |
| Nickel | 4.06E-04 | 6.38E-04 | 2.72E-04 | 6.45E-04 | 6.88E-04 | 2.00E-03 | 1.02E-03 | - | - | 1.04 | 1.04 | - | - | **2.09** |
| **Combined** | **0.36** | **0.57** | **0.24** | **0.58** | **0.62** | **1.80** | **0.92** | **9.81** | | **1.04** | **1.04** | **1.25E-01** | **7.82E-03** | **17.13** |

**Appendix A: Emissions Calculations**
**Modification Summary**

**Company Name:** Cleveland-Cliffs Tek Inc. & Cleveland-Cliffs Kote Inc.
**Source Address:** 30755 Edison Rd, New Carlisle, Indiana 46552
**Permit Renewal No.:** T 141-42030-00159
**Significant Source Modifcation No.:** 141-47501-00159
**Signifcant Permit Modification No.:** 141-47618-00159
**Reviewer:** Sidhant Paul

| | PTE Before Controls of the New Emission Units (ton/year) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Emission Unit** | **PM** | **$PM_{10}$** | **$PM_{2.5}$[1]** | **$SO_2$** | **$NO_X$** | **VOC** | **CO** | **Single HAP[2]** | **Total HAPs** |
| EU20 | 40.30 | 40.30 | 35.92 | - | - | - | - | - | - |
| **Total PTE Before Controls of the New Emission Units:** | **40.30** | **40.30** | **35.92** | **-** | **-** | **-** | **-** | **-** | **-** |

**Appendix A: Emissions Calculations**
**Permit Level Determination – PSD Emissions Increase**

**Company Name: Cleveland-Cliffs Tek Inc. & Cleveland-Cliffs Kote Inc.**
**Source Address: 30755 Edison Rd, New Carlisle, Indiana 46552**
**Permit Renewal No.: T 141-42030-00159**
**Significant Source Modifcation No.: 141-47501-00159**
**Signifcant Permit Modification No.: 141-47618-00159**
**Reviewer: Sidhant Paul**

**Actual to Projected Actual Emissions Data**

| | CGL Electrolytic Cleaning EU20 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Baseline Actual Years** | PM | PM10 | PM2.5 | Throughput | Operating Hours | | PM | PM10 | PM2.5 | | |
| | tons | tons | tons | Ton/yr | Hrs | | tons | tons | tons | | |
| 2013 | 0.29 | 0.29 | 0.26 | 453,491 | 7,385 | | 29 | 29 | 26 | | |
| 2014 | 0.27 | 0.27 | 0.24 | 450,224 | 7,222 | | 27 | 27 | 24 | | |
| **2015** | **0.29** | **0.29** | **0.26** | **467,804** | **7,553** | Highest 2 consecutive year period | 29 | 29 | 26 | | |
| **2016** | **0.29** | **0.29** | **0.26** | **464,892** | **7,812** | January 1, 2015 - December 31, 2016 | 29 | 29 | 26 | | |
| 2017 | 0.28 | 0.28 | 0.25 | 423,987 | 7,152 | | 28 | 28 | 25 | | |
| 2018 | 0.28 | 0.28 | 0.25 | 414,601 | 7,326 | | 28 | 28 | 25 | | |
| 2019 | 0.27 | 0.27 | 0.24 | 396,895 | 6,871 | | 27 | 27 | 24 | | |
| 2020 | 0.23 | 0.23 | 0.20 | 316,893 | 5,393 | | 23 | 23 | 20 | | |
| 2021 | 0.24 | 0.24 | 0.22 | 360,461 | 6,190 | | 24 | 24 | 22 | | |
| 2022 | 0.21 | 0.21 | 0.19 | 328,186 | 5,631 | | 21 | 21 | 19 | | |

**Baseline Actual Emissions**

| | Highest 24-mo (tons) | | | | |
|---|---|---|---|---|---|
| | PM | PM10 | PM2.5 | Throughput | Operating Hours |
| CGL Electrolytic Cleaning EU20 | 0.58 | 0.58 | 0.52 | 932,696 | 15,365 |
| **Total (24-month)** | **0.58** | **0.58** | **0.52** | **932,696** | **15,365** |
| **Average ton/year** | **0.29** | **0.29** | **0.26** | **466,348** | **7,683** |

**Projected Emissions**

| | **PM (Lbs/hr)*** | **PM10 (Lbs/hr)*** | **PM2.5 (Lbs/hr)*** |
|---|---|---|---|
| CGL Electrolytic Cleaning EU20 | 0.46 | 0.46 | 0.41 |

*Emission rate based on projected emissions after 95% scrubber control efficiency

**Projected Actual Emissions**

| | Highest 24-mo (tons) | | |
|---|---|---|---|
| | PM | PM10 | PM2.5 |
| CGL Electrolytic Cleaning EU20 | 2.01 | 2.01 | 1.80 |
| **Total** | **2.01** | **2.01** | **1.80** |

| **ATPA** | PM | PM10 | PM2.5 |
|---|---|---|---|
| | ton/yr | ton/yr | ton/yr |
| **Projected Actual Emissions** | 2.01 | 2.01 | 1.80 |
| **Baseline Actual** | 0.29 | 0.29 | 0.26 |
| **Actual to Projected Actual** | 1.72 | 1.72 | 1.54 |
| **Significant Threshold** | 25 | 15 | 10 |

**Appendix A: Emissions Calculations**
**Uncontrolled Potential Emissions**

**Company Name: Cleveland-Cliffs Tek Inc. & Cleveland-Cliffs Kote Inc.**
**Source Address: 30755 Edison Rd, New Carlisle, Indiana 46552**
**Permit Renewal No.: T 141-42030-00159**
**Significant Source Modifcation No.: 141-47501-00159**
**Signifcant Permit Modification No.: 141-47(**
**Reviewer: Sidhant Paul**

**1. PM/$PM_{10}$/$PM_{2.5}$**

| Process | Emission Rate | | | PTE Before Controls | | | Scrubber Control Efficiency | Controled PTE | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | PM | $PM_{10}$ | PM2.5 | PM | $PM_{10}$ | PM2.5 | | PM | $PM_{10}$ | $PM_{2.5}$ |
| | lb/hr | lb/hr | lb/hr | tons/yr | tons/yr | tons/yr | | tons/yr | tons/yr | tons/yr |
| New CGL Electrolytic Cleaning Operation (EU20) | 9.20 | 9.20 | 8.20 | 40.30 | 40.30 | 35.92 | 95% | 2.01 | 2.01 | 1.80 |

**Methodology**

Uncontrolled Potential to Emit (tons/yr) = Emission Rate (lb/hr) x 8,760 (hr/yr) / 2,000 (lb/ton)
Potential to Emit After Control (tons/yr) = PTE (lb/hr) x 8,760 (hr/yr) / 2,000 (lb/ton) x (1- Control Efficiency)
Potential to Emit After Issuance (tons/yr) = Uncontrolled PTE (tons/yr)) *if the unit does not have a lb/hr limit for the pollutant*

**Appendix A: Emissions Calculations**
**Uncontrolled Potential Emissions**

**Company Name: Cleveland-Cliffs Tek Inc. & Cleveland-Cliffs Kote Inc.**
**Source Address: 30755 Edison Rd, New Carlisle, Indiana 46552**
**Permit Renewal No.: T 141-42030-00159**
**Significant Source Modifcation No.:**
**Signifcant Permit Modification No.:**
**Reviewer: Sidhant Paul**

**1. $PM/PM_{10}/PM_{2.5}$**

| Process | Emissions After Controls | | | Control Efficiency | Uncontrolled Potential to Emit $PM/PM_{10}/PM_{2.5}$ (tons/yr) | Potential to Emit After Issuance | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Stack Test Date | $PM/PM_{10}/PM_{2.5}$ | | | | PM | | $PM_{10}$ | | $PM_{2.5}$ (tons/yr) |
| | | Outlet Value (lb/hr) | Controlled Emissions (tons/yr) | | | (lb/hr) | (tons/yr) | (lb/hr) | (tons/yr) | |
| Pinch Roll Leveler (EU1)[1] | Oct-90 | 0.25 | 1.10 | 99% | 182.50 | 0.50 | 2.20 | 0.50 | 2.20 | 182.50 |
| Flash Butt Welder (EU2)[1] | Oct-90 | 0.04 | 0.18 | 99% | 17.52 | 0.10 | 0.44 | 0.10 | 0.44 | 17.52 |
| Descale Acid Pickling Line (EU4)[1] | Mar-96 | 0.23 | 1.01 | 99% | 100.74 | 0.80 | 3.50 | 0.80 | 3.50 | 100.74 |
| Post Treatment Pickling Operation (EU9)[1] | Feb-92 | 0.10 | 0.44 | 99% | 43.80 | 0.20 | 0.88 | 0.20 | 0.88 | 43.80 |
| Tandem Cold Mill (EU5)[1] | Oct-90 | 3.29 | 14.41 | 80% | 72.05 | 6.60 | 28.90 | 6.60 | 28.90 | 72.05 |
| Electrolytic Cleaning Operation (EU6)[1] | Feb-92 | 0.08 | 0.35 | 99% | 35.04 | 0.28 | 1.20 | 0.28 | 1.20 | 35.04 |
| ~~CGL Electrolytic Cleaning Operation (EU20)[2]~~ | ~~Sep-92~~ | ~~0.08~~ | ~~0.33~~ | ~~99%~~ | ~~32.85~~ | ~~0.60~~ | ~~2.63~~ | ~~0.60~~ | ~~2.63~~ | ~~32.85~~ |
| CGL Skin Pass Mill (EU31)[2] | Sep-92 | 0.08 | 0.35 | 99% | 35.48 | 0.25 | 1.10 | 0.25 | 1.10 | 35.48 |
| ~~EGL Surface Activation and Plating Operation (EU24)[2]~~ | Sep-92 | 1.28 | 5.61 | 97% | 186.88 | 2.09 | 9.15 | 2.09 | 9.15 | 186.88 |
| EGL Degreasing Operation (EU25)[2] | Sep-92 | 0.06 | 0.24 | 80% | 1.20 | 0.10 | 0.44 | 0.10 | 0.44 | 1.20 |
| EGL Precleaning Operation (EU26)[2] | Sep-92 | 0.05 | 0.21 | 80% | 1.03 | 0.10 | 0.44 | 0.10 | 0.44 | 1.03 |
| CGL Sink Roll Pickling Operation (EU32)[2] | Oct-92 | 0.12 | 0.52 | 99.8% | 260.61 | 0.25 | 1.10 | 0.25 | 1.10 | 260.61 |

*Notes:*

*1. PM limitations pursuant to CP 141-2750-00040/00046, issued on October 28, 1996 considered surrogate limitations for filterable $PM_{10}$ because the PSD construction permit 71-1664, issued October 1, 1987 treated all PM as $PM_{10}$.*

*2. PM and $PM_{10}$ (filterable) limitations pursuant to CP 141-2750-00040/00046, issued on October 28, 1996*

**Methodology**
Controlled Emissions (tons/yr) = Stack Test Outlet Value (lb/hr) x 8,760 (hr/yr) / 2,000 (lb/ton)
Uncontrolled Potential to Emit (tons/yr) = Stack Test Outlet Value (lb/hr) x 8,760 (hr/yr) / 2,000 (lb/ton) / [1 - Control Efficiency (%)/100]
Potential to Emit After Issuance (tons/yr) = PTEAI (lb/hr) x 8,760 (hr/yr) / 2,000 (lb/ton) *if the unit has a lb/hr limit for the pollutant*
Potential to Emit After Issuance (tons/yr) = Uncontrolled PTE (tons/yr)) *if the unit does not have a lb/hr limit for the pollutant*

**2. Hazardous Air Pollutants**

| Process | Emissions After Controls | | | Control Efficiency | Uncontrolled Potential to Emit HCl (tons/yr) | Potential to Emit After Issuance | |
|---|---|---|---|---|---|---|---|
| | Stack Test Date | HCl | | | | HCl | |
| | | Outlet Value (lb/hr) | Controlled Emissions (tons/yr) | | | (lb/hr) | (tons/yr) |
| Descale Acid Pickling Line (EU4) | Mar-96 | 0.83 | 3.64 | 98% | 213.85 | 2.24 | 9.81 |
| Post Treatment Pickling Operation (EU9) | Estimated | 0.36 | 1.58 | 98% | 92.98 | | |

**Methodology**
Controlled Emissions (tons/yr) = Stack Test Outlet Value (lb/hr) x 8,760 (hr/yr) / 2,000 (lb/ton)
Uncontrolled Potential to Emit (tons/yr) = Stack Test Outlet Value (lb/hr) x 8,760 (hr/yr) / 2,000 (lb/ton) / [1 - Control Efficiency (%)/100]
Potential to Emit After Issuance (tons/yr) = PTEAI (lb/hr) x 8,760 (hr/yr) / 2,000 (lb/ton)
(Estimated) Outlet Concentration [EU9] (lb/hr HCl) = Outlet Concentration [EU4] (lb/hr HCl) * Outlet Concentration [EU9] (lb/hr $PM/PM_{10}$) / Outlet Concentration [EU4] (lb/hr $PM/PM_{10}$)

| Process | Emissions After Controls | | | Control Efficiency | Uncontrolled Potential to Emit Ni | | Potential to Emit After Issuance Ni | |
|---|---|---|---|---|---|---|---|---|
| | Control Device | Emission Factor[1] (grains/dscf) | Maximum Air Flow Rate (dscfm) | | (lb/hr) | (tons/yr) | (lb/hr) | (tons/yr) |
| EGL Surface Activation and Plating Operation (EU24) | Baghouse | 6.70E-06 | 41,480.00 | 99% | 0.24 | 1.04 | 2.38E-03 | 0.01 |
| CAPL Post Treatment Nickel Process | | 6.70E-06 | 41,480.00 | 99% | 0.24 | 1.04 | 2.38E-03 | 0.01 |

*Notes:*

*1. Emission Factor is from AP-42, Section 12.20, Tables 12.20-4, SCC #3-09-010-68.*

**Methodology:**
Potential to Emit After Issuance (lb/hr) = Emission Factor (gr/dscf) x Maximum Air Flow Rate (dscfm) x 60 (min/hr) / 7,000 (gr/lb)
Uncontrolled PTE (lb/hr) = PTEAI (lb/hr) / [1 - Control Efficiency (%) / 100]
PTE (tons/yr) = PTE (lb/hr) x 8.760 (hr/yr) / 2,000 (lb/ton)

**Appendix A: Emissions Calculations**
**EU7-2, EU7-3, EU22, EU27 and Space Heaters**

**Company Name: Cleveland-Cliffs Tek Inc. & Cleveland-Cliffs Kote Inc.**
**Source Address: 30755 Edison Rd, New Carlisle, Indiana 46552**
**Permit Renewal No.: T 141-42030-00159**
**Significant Source Modifcation No.: 141-47501-00159**
**Signifcant Permit Modification No.: 141-47618-00159**
**Reviewer: Sidhant Paul**

| | Heat Input Capacity MMBtu/hr | HHV mmBtu/mmscf | Potential Throughput MMCF/yr |
|---|---|---|---|
| EU7-2 | 45.00 | 1,020.00 | 386.47 |
| EU7-3 | 70.80 | | 608.05 |
| EU22 | 30.20 | | 259.36 |
| EU27 | 71.50 | | 614.06 |
| Space Heaters | 76.30 | | 655.28 |

**1. Uncontrolled Potential to Emit**

| Emission Factor in lb/MMCF | | Pollutant | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | PM* 1.90 | PM10* 7.60 | direct PM2.5* 7.60 | SO2 0.60 | NOx | | VOC 5.50 | CO 84.00 |
| | | | | | | Emission Factor (lb/MMBtu)** | PTE | | |
| Potential Emission in tons/yr | EU7-2 | 0.37 | 1.47 | 1.47 | 0.12 | 0.05 | 9.86 | 1.06 | 16.23 |
| | EU7-3 | 0.58 | 2.31 | 2.31 | 0.18 | 0.05 | 15.51 | 1.67 | 25.54 |
| | EU22 | 0.25 | 0.99 | 0.99 | 0.08 | 0.39 | 51.59 | 0.71 | 10.89 |
| | EU27 | 0.58 | 2.33 | 2.33 | 0.18 | 0.05 | 15.66 | 1.69 | 25.79 |
| | Space Heaters | 0.62 | 2.49 | 2.49 | 0.20 | 100 | 32.76 | 1.80 | 27.52 |

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
PM2.5 emission factor is filterable and condensable PM2.5 combined.
** Vendor EF for EU7-2, EU-7-3, EU22, and EU27 in lb/MMBtu. Conventional EF for space heaters from AP-42 section 1,4 in lb/MMCF

| Emission Factor in lb/MMcf | | HAPs - Organics | | | | |
|---|---|---|---|---|---|---|
| | | Benzene 2.10E-03 | Dichlorobenzene 1.20E-03 | Formaldehyde 0.08 | n-Hexane 1.80 | Toluene 3.40E-03 |
| Potential Emission in tons/yr | EU7-2 | 4.06E-04 | 2.32E-04 | 0.01 | 0.35 | 6.57E-04 |
| | EU7-3 | 6.38E-04 | 3.65E-04 | 0.02 | 0.55 | 1.03E-03 |
| | EU22 | 2.72E-04 | 1.56E-04 | 9.73E-03 | 0.23 | 4.41E-04 |
| | EU27 | 6.45E-04 | 3.68E-04 | 0.02 | 0.55 | 1.04E-03 |
| | Space Heaters | 6.88E-04 | 3.93E-04 | 0.02 | 0.59 | 1.11E-03 |

| Emission Factor in lb/MMcf | | HAPs - Metals | | | | |
|---|---|---|---|---|---|---|
| | | Lead 5.00E-04 | Cadmium 1.10E-03 | Chromium 1.40E-03 | Manganese 3.80E-04 | Nickel 2.10E-03 |
| Potential Emission in tons/yr | EU7-2 | 9.66E-05 | 2.13E-04 | 2.71E-04 | 7.34E-05 | 4.06E-04 |
| | EU7-3 | 1.52E-04 | 3.34E-04 | 4.26E-04 | 1.16E-04 | 6.38E-04 |
| | EU22 | 6.48E-05 | 1.43E-04 | 1.82E-04 | 4.93E-05 | 2.72E-04 |
| | EU27 | 1.54E-04 | 3.38E-04 | 4.30E-04 | 1.17E-04 | 6.45E-04 |
| | Space Heaters | 1.64E-04 | 3.60E-04 | 4.59E-04 | 1.25E-04 | 6.88E-04 |

**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 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03
Potential Throughput (MMCF/yr) = Heat Input Capacity (MMBtu/hr) x 8,760 (hrs/yr) x 1 MMCF/1,020 MMBtu
PTE (tons/yr) = Potential Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
PTE (tons/yr) = Emission Factor (lb/MMBtu) x Heat Input Capacity (MMBtu/hr) x 8,760 (hr/yr) / 2,000 (lb/ton) *Units with NOx factor in lb/MMBtu*
The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.
Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.

**Appendix A: Emissions Calculations**
**EU7-2, EU7-3, EU22, EU27 and Space Heaters**

**Company Name:** Cleveland-Cliffs Tek Inc. & Cleveland-Cliffs Kote Inc.
**Source Address:** 30755 Edison Rd, New Carlisle, Indiana 46552
**Permit Renewal No.:** T 141-42030-00159
**Significant Source Modifcation No.:** 141-47501-00159
**Signifcant Permit Modification No.:** 141-47618-00159
**Reviewer:** Sidhant Paul

**2. Potential to Emit After Issuance**

Potential to Emit After Issuance is the same as the uncontrolled PTE, except as shown below

| Emissions Unit | Pollutant | | | |
|---|---|---|---|---|
| | PM[1] | | NOx[2] | |
| | (lb/hr) | (tons/yr) | (lb/hr) | (tons/yr) |
| EU7-2 | 0.29 | 1.25 | 4.75 | 20.80 |
| EU7-3 | 0.21 | 0.93 | 3.54 | 15.50 |
| EU22 | - | - | 11.78 | 51.58 |
| EU27 | - | - | 3.57 | 15.70 |

*Notes:*
*1. PM limitations pursuant to CP 141-2750-00040/00046, issued on October 28, 1996*
*2. NOx limitations pursuant to CP 141-2750-00040/00046, issued on October 28, 1996*

**Appendix A: Emission Calculations**
**EU7-1 and EU21**

**Company Name: Cleveland-Cliffs Tek Inc. & Cleveland-Cliffs Kote Inc.**
**Source Address: 30755 Edison Rd, New Carlisle, Indiana 46552**
**Permit Renewal No.: T 141-42030-00159**
**Significant Source Modifcation No.: 141-47501-00159**
**Signifcant Permit Modification No.: 141-47618-00159**
**Reviewer: Sidhant Paul**

| | Heat Input Capacity (MMBtu/hr) | HHV (MMBtu/MMCF) | Potential Throughput (MMCF/yr) |
|---|---|---|---|
| EU7-1 | 222.00 | 1,020.00 | 1,906.59 |
| EU21 | 113.10 | | 971.33 |

**1. Uncontrolled Potential to Emit**

| | | Pollutant | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Emission Factor in lb/MMCF | | PM* 1.90 | PM10* 7.60 | direct PM2.5* 7.60 | SO2 0.60 | NOx Emission Factor (lb/MMBtu)** | NOx PTE | VOC 5.50 | CO 84.00 |
| Potential Emission in tons/yr | EU7-1 | 1.81 | 7.25 | 7.25 | 0.57 | 0.43 | 418.11 | 5.24 | 80.08 |
| | EU21 | 0.92 | 3.69 | 3.69 | 0.29 | 0.20 | 99.08 | 2.67 | 40.80 |

*PM emission factor is filterable PM only. PM10 emission factor is condensable and filterable PM10 combined.
PM2.5 emission factor is condensable and filterable PM2.5 combined.
**Emission Factors for NOx: Uncontrolled = 280 (pre-NSPS) or 190 (post-NSPS), Low NOx Burner = 140, Flue gas recirculation = 100 (See Table 1.4-1)

| | | HAPs - Organics | | | | |
|---|---|---|---|---|---|---|
| Emission Factor in lb/MMcf | | Benzene 2.10E-03 | Dichlorobenzene 1.20E-03 | Formaldehyde 0.08 | Hexane 1.80 | Toluene 3.40E-03 |
| Potential Emission in tons/yr | EU7-1 | 2.00E-03 | 1.14E-03 | 0.07 | 1.72 | 3.24E-03 |
| | EU21 | 1.02E-03 | 5.83E-04 | 0.04 | 0.87 | 1.65E-03 |

| | | HAPs - Metals | | | | |
|---|---|---|---|---|---|---|
| Emission Factor in lb/MMcf | | Lead 5.00E-04 | Cadmium 1.10E-03 | Chromium 1.40E-03 | Manganese 3.80E-04 | Nickel 2.10E-03 |
| Potential Emission in tons/yr | EU7-1 | 4.77E-04 | 1.05E-03 | 1.33E-03 | 3.62E-04 | 2.00E-03 |
| | EU21 | 2.43E-04 | 5.34E-04 | 6.80E-04 | 1.85E-04 | 1.02E-03 |

**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 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu
Emission Factors from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, and 1.4-3, SCC #1-01-006-01, 1-01-006-04
(AP-42 Supplement D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.

**2. Potential to Emit After Issuance**

Potential to Emit After Issuance is the same as the uncontrolled PTE, except as shown below

| Emissions Unit | Pollutant | | | |
|---|---|---|---|---|
| | PM[1] | | NOx[2] | |
| | (lb/hr) | (tons/yr) | (lb/hr) | (tons/yr) |
| EU7-1 | 0.66 | 2.77 | 95.50 | 418.10 |
| EU21 | - | - | 22.62 | 99.08 |

*Notes:*
*1. PM limitations pursuant to CP 141-2750-00040/00046, issued on October 28, 1996*
*2. NOx limitations pursuant to CP 141-2750-00040/00046, issued on October 28, 1996*

**Appendix A: Emissions Calculations**
**Switching Locomotive Emissions**

**Company Name: Cleveland-Cliffs Tek Inc. & Cleveland-Cliffs Kote Inc.**
**Source Address: 30755 Edison Rd, New Carlisle, Indiana 46552**
**Permit Renewal No.: T 141-42030-00159**
**Significant Source Modifcation No.: 141-47501-00159**
**Signifcant Permit Modification No.: 141-47618-00159**
**Reviewer: Sidhant Paul**

**1. Uncontrolled Potential to Emit**

*A. Criteria Pollutants*

| Number of Locomotives | Engine Output (bhp) |
|---|---|
| 3 | 1,000 |

| | | Pollutant | | | | |
|---|---|---|---|---|---|---|
| | | $PM/PM_{10}/PM_{2.5}$[1] | $SO_2$[2] | NOx | VOC | CO |
| Emission Factor | (g/bhp-hr)[3] | 0.44 | 1.21E-05 | 17.40 | 1.01 | 1.83 |
| Potential to Emit | (tons/yr) | 12.75 | 0.16 | 504.14 | 29.26 | 53.02 |

*Notes:*
*1. $PM_{10}$ and $PM_{2.5}$ presumed equal to PM as a worst case*
*2. $SO_2$ emission factor is lb/bhp-hr, determined from AP-42 Table 3.4-1, using ULSD maximum 15 ppm sulfur required after 2014 for non-road engines*
*3. Source: U.S. EPA Technical Highlights, Emission Factors for Locomotives, EPA420-F-97-051, Office of Mobile Sources, December 1997*
*4. Conversion Factor: 20.80 (bhp-hr/gal)*

**Methodology**
Potential to Emit (tons/yr) = Emission Factor (g/bhp-hr) x Number of Locomotives x Engine Output (bhp) x 8,760 (hr/yr) x 0.002205 (lb/g) / 2,000 (lb/ton)
Potential to Emit (tons/yr) = Emission Factor (lb/bhp-hr) x Number of Locomotives x Engine Output (bhp) x 8,760 (hr/yr) / 2,000 (lb/ton) $SO_2$

*B. Hazardous Air Pollutants*

| | | Pollutant | | | | | |
|---|---|---|---|---|---|---|---|
| | | Acetaldehyde | Acrolein | Benzene | Formaldehyde | Toluene | Xylenes |
| Emission Factor | (lb/bhp-hr)[1] | 1.76E-07 | 5.52E-08 | 5.43E-06 | 5.52E-07 | 1.97E-06 | 1.35E-06 |
| Potential to Emit | (tons/yr) | 2.32E-03 | 7.25E-04 | 7.14E-02 | 7.26E-03 | 2.58E-02 | 1.78E-02 |

*Notes:*
*1. Calculated from lb/MMBtu values in AP-42 Table 3.4-3 using a BSFC of 7,000Btu/lb*
*2. Conversion Factor: 20.80 (bhp-hr/gal)*
*Source: U.S. EPA Technical Highlights, Emission Factors for Locomotives, EPA420-F-97-051, Office of Mobile Sources, December 1997*

**Methodology:**
Potential to Emit (tons/yr) = Emission Factor (lb/bhp-hr) x Number of Locomotives x Engine Output (bhp) x 8,760 (hr/yr) / 2,000 (lb/ton)

**2. Potential to Emit After Issuance**

| Limited Fuel Usage (gal/yr)[1] |
|---|
| 304,000 |

*Note:*
*1. Locomotive fuel consumption limitation pursuant to CP 71-1822 (Plant ID 141-00046), issued on November 15, 1991 modified by Part 70 Operating Permit No. 141-7316-00159, issued on June 30, 2004, as PSD BACT for $PM/PM_{10}$ and NOx. Other pollutant not considered limited.*

| | | Pollutant | | | | |
|---|---|---|---|---|---|---|
| | | $PM/PM_{10}/PM_{2.5}$[1] | $SO_2$ | NOx | VOC | CO |
| Emission Factor[2] | (g/bhp-hr) | 0.44 | - | 17.40 | - | - |
| | (g/gal)[3] | 9.2 | - | 361.9 | - | - |
| Potential to Emit | (tons/yr) | 3.07 | - | 121.30 | - | - |

*Notes:*
*1. $PM_{10}$ and $PM_{2.5}$ presumed equal to PM as a worst case*
*2. Source: U.S. EPA Technical Highlights, Emission Factors for Locomotives, EPA420-F-97-051, Office of Mobile Sources, December 1997*
*3. Conversion Factor: 20.80 (bhp-hr/gal) from the emission factor reference*

**Methodology**
Emission Factor (g/gal) = Emission Factor (g/bhp-hr) x Conversion Factor (bhp-hr/gal)
Potential to Emit (tons/yr) = Emission Factor (g/gal) x Limited Fuel Usage (gal/yr) x 0.002205 (lb/g) / 2,000 (lb/ton)

**Appendix A: Emission Calculations**
**Diesel Emergency Engines**

**Company Name: Cleveland-Cliffs Tek Inc. & Cleveland-Cliffs Kote Inc.**
**Source Address: 30755 Edison Rd, New Carlisle, Indiana 46552**
**Permit Renewal No.: 1-42030-00159**
**Significant Source Modifcation No.: 1-47501-00159**
**Signifcant Permit Modification No.: 1-47618-00159**
**Reviewer: Sidhant Paul**

**1. Engines greater than 600 HP**

| Unit | Electrical Output[1] (kW) | Engine Output (HP) |
|---|---|---|
| Emergency generator | 750 | 985 |

*Notes:*

*1. Engine output estimated from electrical outpout using a correlation of published generator characteristics*

**Emissions calculated based on output rating (hp)**

| | |
|---|---|
| Output Horsepower Rating (hp) | 985.0 |
| Maximum Hours Operated per Year | 500 |
| Potential Throughput (hp-hr/yr) | 492,500 |
| Sulfur Content (S) of Fuel (% by weight) | 0.0015 |

| | Pollutant | | | | | | |
|---|---|---|---|---|---|---|---|
| | PM* | PM10* | direct PM2.5* | SO2 | NOx | VOC | CO |
| Emission Factor in lb/hp-hr | 7.00E-04 | 4.01E-04 | 3.89E-04 | 1.21E-05 *(.00809S)* | 2.40E-02 **see below | 7.05E-04 | 5.50E-03 |
| Potential Emission in tons/yr | 0.17 | 0.10 | 0.10 | 2.99E-03 | 5.91 | 0.17 | 1.35 |

*PM emission factor is from AP-42 Table 3.4-1. The PM10 and PM2.5 emission factors for are from AP-42 Table 3.4-2. The PM10 emission factor is the sum of filterable PM10 and condensable particulate. The PM2.5 emission factor is the sum of filterable particulate less than 3 um and condensable particulate. Emission factors in lb/hp-hr were calculated using the emission factor in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Tables 3.3-1 and 3.4-1).

**NOx emission factor: uncontrolled = 0.024 lb/hp-hr, controlled by ignition timing retard = 0.013 lb/hp-hr

**Hazardous Air Pollutants (HAPs)**

| | Pollutant | | | | | | |
|---|---|---|---|---|---|---|---|
| | Benzene | Toluene | Xylenes | Formaldehyde | Acetaldehyde | Acrolein | Total PAH HAPs*** |
| Emission Factor in lb/hp-hr**** | 5.43E-06 | 1.97E-06 | 1.35E-06 | 5.52E-07 | 1.76E-07 | 5.52E-08 | 1.48E-06 |
| Potential Emission in tons/yr | 1.34E-03 | 4.84E-04 | 3.33E-04 | 1.36E-04 | 4.34E-05 | 1.36E-05 | 3.65E-04 |

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

****Emission factors in lb/hp-hr were calculated using emission factors in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Tables 3.3-1 and 3.4-1).

| | |
|---|---|
| **Potential Emission of Total HAPs (tons/yr)** | **2.71E-03** |

**Methodology**

Emission Factors are from AP 42 (Supplement B 10/96) Tables 3.4-1 , 3.4-2, 3.4-3, and 3.4-4.

Potential Throughput (hp-hr/yr) = [Output Horsepower Rating (hp)] * [Maximum Hours Operated per Year]

Potential Emission (tons/yr) = [Potential Throughput (hp-hr/yr)] * [Emission Factor (lb/hp-hr)] / [2,000 lb/ton]

**Appendix A: Emission Calculations**
**Diesel Emergency Engines**

**Company Name: Cleveland-Cliffs Tek Inc. & Cleveland-Cliffs Kote Inc.**
**Source Address: 30755 Edison Rd, New Carlisle, Indiana 46552**
**Permit Renewal No.: 1-42030-00159**
**Significant Source Modifcation No.: 1-47501-00159**
**Signifcant Permit Modification No.: 1-47618-00159**
**Reviewer: Sidhant Paul**

**2. Engines less than or equal to 600 HP**

| Unit | Electrical Output (kW) | Engine Output (HP) |
|---|---|---|
| CAPL emergency generator[1] | 240 | 374 |
| Cooling tower emergency generator | - | 40 |
| Emergency fire pump | - | 340 |
| Total | | 754 |

*Notes:*
*1. Engine output estimated from electrical outpout using a correlation of published generator characteristics*

**Emissions calculated based on output rating (hp)**

| | |
|---|---|
| Output Horsepower Rating (hp) | 754 |
| Maximum Hours Operated per Year | 500 |
| Potential Throughput (hp-hr/yr) | 377,000 |

| | Pollutant | | | | | | |
|---|---|---|---|---|---|---|---|
| | PM* | PM10* | direct PM2.5* | SO2 | NOx | VOC | CO |
| Emission Factor in lb/hp-hr | 0.0022 | 0.0022 | 0.0022 | 0.00205 | 0.0310 | 0.0025 | 0.00668 |
| Potential Emission in tons/yr | 0.41 | 0.41 | 0.41 | 0.39 | 5.84 | 0.47 | 1.26 |

*PM and PM2.5 emission factors are assumed to be equivalent to PM10 emission factors. No information was given regarding which method was used to determine the factor or the fraction of PM10 which is condensable.

**Hazardous Air Pollutants (HAPs)**

| | Pollutant | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Benzene | Toluene | Xylenes | 1,3-Butadiene | Formaldehyde | Acetaldehyde | Acrolein | Total PAH HAPs*** |
| Emission Factor in lb/hp-hr**** | 6.53E-06 | 2.86E-06 | 2.00E-06 | 2.74E-07 | 8.26E-06 | 5.37E-06 | 6.48E-07 | 1.18E-06 |
| Potential Emission in tons/yr | 1.23E-03 | 5.40E-04 | 3.76E-04 | 5.16E-05 | 1.56E-03 | 1.01E-03 | 1.22E-04 | 2.22E-04 |

***PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)
****Emission factors in lb/hp-hr were calculated using emission factors in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Table 3.3-1).

| | |
|---|---|
| **Potential Emission of Total HAPs (tons/yr)** | **5.11E-03** |

**Methodology**
Emission Factors are from AP 42 (Supplement B 10/96) Tables 3.3-1 and 3.3-2.
Potential Throughput (hp-hr/yr) = [Output Horsepower Rating (hp)] * [Maximum Hours Operated per Year]
Potential Emission (tons/yr) = [Potential Throughput (hp-hr/yr)] * [Emission Factor (lb/hp-hr)] / [2,000 lb/ton]

**3. Total of all engines**

| | Pollutant | | | | | | |
|---|---|---|---|---|---|---|---|
| | PM* | PM10* | direct PM2.5* | SO2 | NOx | VOC | CO |
| Potential to Emit (tons/yr) | 0.59 | 0.51 | 0.51 | 0.39 | 11.75 | 0.65 | 2.61 |

| | Benzene | Toluene | Xylenes | 1,3-Butadiene | Formaldehyde | Acetaldehyde | Acrolein | Total PAH HAPs*** |
|---|---|---|---|---|---|---|---|---|
| Potential to Emit (tons/yr) | 2.57E-03 | 1.02E-03 | 7.09E-04 | 5.16E-05 | 1.69E-03 | 1.06E-03 | 1.36E-04 | 5.87E-04 |

**Appendix A: Emission Calculations**
**Mechanical Draft Cooling Tower**

**Company Name: Cleveland-Cliffs Tek Inc. & Cleveland-Cliffs Kote Inc.**
**Source Address: 30755 Edison Rd, New Carlisle, Indiana 46552**
**Permit Renewal No.: 141-42030-00159**
**Significant Source Modifcation No.: 141-47501-00159**
**Signifcant Permit Modification No.: 141-47618-00159**
**Reviewer: Sidhant Paul**

| Parameter | I/N Tek | I/N Kote | Total | | |
|---|---|---|---|---|---|
| Circulating water flow rate ($W_c$) | 72.5 | 94.6 | - | $m^3$/min | *provided by the source* |
| | 19,155 | 24,993 | - | gal/min | |
| Drift loss | 0.005% | | | | *ASHRAE Standard 189.1, crossflow towers* |
| Blowdown/drift TDS | 2,500 | | | mg/l | *maximum recommended value from a supplier (BAC)* |
| Total Liquid Drift | 0.42 | | | lb/$10^3$ gal | |
| PM/PM10/PM2.5 Emissions | 1.20 | 1.56 | - | lb/hr | |
| | 5.25 | 6.85 | 12.10 | tons/yr | |

**Methodology**

Methodology ref: par. 2, page 13.4-3, AP-42 (1/95)

Total Liquid Drift (lb/$10^3$ gal) = Drift loss (%) / 100 x 8.34 (lb/gal) x 1,000 (gal/$10^3$ gal)

Emissions (lb/hr) = Total Liquid Drift (lb/$10^3$ gal) x Circulating water flow rate (gal/min) / 1,000 (gal/$10^3$ gal) x 60 (min/hr) x Blowdown/drift TDS (mg/l) / 1,000,000 (mg/l / weight fraction)

Emissions (tons/yr) = Emissions (lb/hr) x 8,760 (hr/yr) / 2,000 (lb/ton)

$W_c$ (gal/min) = $W_c$ ($m^3$/min) x 264.2 (gal/$m^3$)

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

**Eric J. Holcomb**
*Governor*

**Brian C. Rockensuess**
*Commissioner*

**SENT VIA U.S. MAIL: CONFIRMED DELIVERY AND SIGNATURE REQUESTED**

TO: Jim Dodson
Cleveland Cliffs New Carlisle
30755 Edison Road
New Carlisle, IN 46552

DATE: July 3, 2024

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

SUBJECT: Final Decision
Title V – Significant Permit Modification
141-47618-00159

This notice is to inform you that a final decision has been issued for the air permit application referenced above.

Our records indicate that you are the contact person for this application. However, if you are not the appropriate person within your company to receive this document, please forward it to the correct person. In addition, the Notice of Decision has been sent to the OAQ Permits Branch Interested Parties List and, if applicable, the Consultant/Agent and/or Responsible Official/Authorized Individual.

**The final decision and supporting materials are available electronically**; the original signature page is enclosed for your convenience. The final decision and supporting materials available electronically at:

**IDEM's online searchable database:** http://www.in.gov/apps/idem/caats/ . Choose Search Option **by Permit Number**, then enter permit 47618

and

**IDEM's Virtual File Cabinet (VFC):** https://www.in.gov/idem. Enter VFC in the search box, then search for permit documents using a variety of criteria, such as Program area, date range, permit #, Agency Interest Number, or Source ID.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178, or toll-free at 1-800-451-6027 (ext. 3-0178), and ask to speak to the permit reviewer who prepared the permit. If you think you have received this document in error, or have difficulty accessing the documents online, please contact Joanne Smiddie-Brush of my staff at 1-800-451-6027 (ext 3-0185), or via e-mail at jbrush@idem.IN.gov.

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

**Eric J. Holcomb**
*Governor*

**Brian C. Rockensuess**
*Commissioner*

July 3, 2024

TO: New Carlisle and Olive Township Public Library

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

Subject: **Important Information for Display Regarding a Final Determination**

**Applicant Name: Cleveland Cliffs New Carlisle**
**Permit Number: 141-47618-00159**

You previously received information to make available to the public during the public comment period of a draft permit. Enclosed is a copy of the final decision and supporting materials for the same project. Please place the enclosed information along with the information you previously received. To ensure that your patrons have ample opportunity to review the enclosed permit, **we ask that you retain this document for at least 60 days.**

The applicant is responsible for placing a copy of the application in your library. If the permit application is not on file, or if you have any questions concerning this public review process, please contact Joanne Smiddie-Brush, OAQ Permits Administration Section at 1-800-451-6027, extension 3-0185.

Enclosures
Final Library 1/9/2017

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

**Eric J. Holcomb**
*Governor*

**Brian C. Rockensuess**
*Commissioner*

**July 3, 2024**
**Cleveland Cliffs New Carlisle**
**141-47618-00159**

To: Interested Parties

This notice is to inform you that a final decision has been issued for the air permit application referenced above. This notice is for informational purposes only. You are not required to take any action.

You are receiving this notice because you asked to be on IDEM's notification list for this company and/or county; or because your property is nearby the company being permitted; or because you represent a local/regional government entity.

The enclosed Notice of Decision Letter provides additional information about the final permit decision.

The final decision and supporting materials are available electronically at:

IDEM's online searchable database: http://www.in.gov/apps/idem/caats/ . Choose Search Option by Permit Number, then enter permit 47618

and

IDEM's Virtual File Cabinet (VFC): https://www.in.gov/idem. Enter VFC in the search box, then search for permit documents using a variety of criteria, such as Program area, date range, permit #, Agency Interest Number, or Source ID.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178, or toll-free at 1-800-451-6027 (ext. 3-0178), and ask to speak to the permit reviewer who prepared the permit.

**Please Note:** *If you would like to be removed from the Air Permits mailing list, please contact Joanne Smiddie-Brush with the Air Permits Administration Section at 1-800-451-6027, ext. 3-0185 or via e-mail at JBRUSH@IDEM.IN.GOV. If you have recently moved and this Notice has been forwarded to you, please notify us of your new address and if you wish to remain on the mailing list. Mail that is returned to IDEM by the Post Office with a forwarding address in a different county will be removed from our list unless otherwise requested.*

Enclosure
Final Interested Parties Cover Letter 10/13/2023

# Mail Code 61-53

| IDEM Staff | KBOURQUE 7/3/2024<br>Cleveland Cliffs New Carlisle 141-47618-00159 (final) | | AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING |
|---|---|---|---|
| Name and address of Sender |  | Indiana Department of Environmental Management<br>Office of Air Quality – Permits Branch<br>100 N. Senate<br>Indianapolis, IN 46204 | Type of Mail:<br>**CERTIFICATE OF MAILING ONLY** |

| Line | Article Number | Name, Address, Street and Post Office Address | Postage | Handing Charges | Act. Value (If Registered) | Insured Value | Due Send if COD | R.R. Fee | S.D. Fee | S.H. Fee | Rest. Del. Fee<br>Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | Jim Dodson Cleveland Cliffs New Carlisle 30755 Edison Rd New Carlisle IN 46552 (Source CAATS) Sent Via UPS Campus Ship | | | | | | | | | |
| 2 | | Aaron Langness General Manager Cleveland Cliffs New Carlisle 30755 Edison Rd New Carlisle IN 46552 *(RO CAATS)* | | | | | | | | | |
| 3 | | Mishawaka City Council and Mayors Office 100 Lincolnway W Mishawaka IN 46544 *(Local Official)* | | | | | | | | | |
| 4 | | Mr. Wayne Falda South Bend Tribune PO Box 11148 South Bend IN 46634-0148 *(Affected Party)* | | | | | | | | | |
| 5 | | New Carlisle Town Council PO Box 6 New Carlisle IN 46552 *(Local Official)* | | | | | | | | | |
| 6 | | St. Joseph County Board of Commissioners 227 W Jefferson Blvd South Bend IN 46601 *(Local Official)* | | | | | | | | | |
| 7 | | Mark Espich St. Joseph County Health Department County-City Bldg, 227 W Jefferson Blvd, 8th Floor South Bend IN 46601 *(Health Department)* | | | | | | | | | |
| 8 | | Kathy Moore Keramida Environmental Inc 401 N College Ave Indianapolis IN 46202 *(Consultant)* | | | | | | | | | |
| 9 | | New Carlisle & Olive Township Public Library 408 S Bray St New Carlisle IN 46552 *(Library)* | | | | | | | | | |
| 10 | | Jeff Mayes News-Dispatch 422 Franklin St Michigan City IN 46360 *(Affected Party)* | | | | | | | | | |
| 11 | | Mr. Roger Schneider The Goshen News 114 S Main St Goshen IN 46526 *(Affected Party)* | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |
| 14 | | | | | | | | | | | |
| 15 | | | | | | | | | | | |

| Total number of pieces Listed by Sender | Total number of Pieces Received at Post Office | Postmaster, Per (Name of Receiving employee) | The full declaration of value is required on all domestic and international registered mail. The maximum indemnity payable for the reconstruction of nonnegotiable documents under Express Mail document reconstructing insurance is $50,000 per piece subject to a limit of $50, 000 per occurrence. The maximum indemnity payable on Express mil merchandise insurance is $500. The maximum indemnity payable is $25,000 for registered mail, sent with optional postal insurance. See ***Domestic Mail Manual*** **R900, S913**, and **S921** for limitations of coverage on inured and COD mail. See ***International Mail Manual*** for limitations o coverage on international mail. Special handling charges apply only to Standard Mail (A) and Standard Mail (B) parcels. |
|---|---|---|---|

FACSIMILIE OF PS Form 3877