



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We Protect Hoosiers and Our Environment.*

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**Eric J. Holcomb**  
Governor

**Bruno Pigott**  
Commissioner

VIA ELECTRONIC MAIL

July 21, 2017

Mr. Thomas Barnett  
ArcelorMittal Indiana Harbor, LLC  
3001 Dickey Rd  
East Chicago, Indiana 46312

Dear Mr. Barnett:

Re: Final NPDES Permit No. IN0000094  
ArcelorMittal Indiana Harbor, LLC –  
Indiana Harbor East  
East Chicago, Lake County, Indiana

Your application for a National Pollutant Discharge Elimination System (NPDES) permit for authorization to discharge into the waters of the State of Indiana has been processed in accordance with Section 402 and 405 of the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251, et seq.), and IC 13-15, IDEM's permitting authority. All discharges from this facility shall be consistent with the terms and conditions of this permit.

One condition of your permit requires periodic reporting of several effluent parameters. You are required to submit both federal discharge monitoring reports (DMRs) and state Monthly Monitoring Reports (MMRs) on a routine basis. The MMR form can be found on IDEM's web site at <http://www.in.gov/idem/cleanwater/2396.htm>.

Once you are on this page, select the "IDEM Forms" page and locate the "Monthly Monitoring Report (MMR) for Industrial Discharge Permits-30530" under the Wastewater Facilities heading. We recommend selecting the "XLS" version because it will complete all of the calculations when you enter the data.

IDEM no longer accepts paper DMR or MMR. All NPDES permit holders are required to submit their monitoring data to IDEM using NetDMR. Please contact Rose McDaniel at (317) 233-2653 or Helen Demmings at (317) 232-8815 for more information on NetDMR. Information is also available on our website at <http://IN.gov/idem/cleanwater/2422.htm>.

Another condition, which needs to be clearly understood, concerns violation of the effluent limitations in the permit. Exceeding the limitations constitutes a violation of



the permit and may subject the permittee to criminal or civil penalties. (See Part II A.2.) It is therefore urged that your office and treatment operator understand this part of the permit.

A response to the comments contained in the letter dated May 26, 2017, from Kevin Doyle of ArcelorMittal, pertaining to the draft NPDES permit is contained in the Post Public Notice Addendum. The Post Public Notice Addendum is located at the end of the Fact Sheet.

It should also be noted that any appeal must be filed under procedures outlined in IC 13-15-6, IC 4-21.5, and the enclosed Public Notice. The appeal must be initiated by filing a petition for administrative review with the Office of Environmental Adjudication (OEA) within fifteen (15) days of the emailing of an electronic copy of this letter or within eighteen (18) days of the mailing of this letter by filing at the following addresses:

Director  
Office of Environmental Adjudication  
Indiana Government Center North  
Room N103  
100 North Senate Avenue  
Indianapolis, Indiana 46204

Commissioner  
Indiana Department of Environmental Management  
Indiana Government Center North  
Room 1301  
100 North Senate Avenue  
Indianapolis, Indiana 46204

If you have any questions concerning the permit, please contact Richard Hamblin at 317/232-8696 or rhamblin@idem.in.gov. Questions concerning appeal procedures should be directed to the Office of Environmental Adjudication, at 317/233-0850.

Sincerely,

A handwritten signature in black ink, appearing to read "Paul Higginbotham", with a long horizontal flourish extending to the right.

Paul Higginbotham  
Deputy Assistant Commissioner  
Office of Water Quality

Enclosures

cc: U.S. EPA, Region V  
Lake County Health Department  
Nick Ream, IDEM NWRO

STATE OF INDIANA  
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
AUTHORIZATION TO DISCHARGE UNDER THE  
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Federal Water Pollution Control Act, as amended, (33 U.S.C. 1251 et seq., the "Act"), and IDEM's authority under IC 13-15,

ARCELORMITTAL USA LLC, INDIANA HARBOR EAST

is authorized to discharge from an integrated iron and steel manufacturing facility that is located at 3210 Watling Street, East Chicago, Indiana to receiving waters identified as the Indiana Harbor and the Indiana Harbor Ship Canal in accordance with effluent limitations, monitoring requirements, and other conditions set forth in Parts I, II, III, IV, and V hereof. This permit may be revoked for the nonpayment of applicable fees in accordance with IC 13-18-20.

Effective Date: September 1, 2017

Expiration Date: August 31, 2022

In order to receive authorization to discharge beyond the date of expiration, the permittee shall submit such information and forms as are required by the Indiana Department of Environmental Management no later than 180 days prior to the date of expiration.

Issued July 21, 2017, for the Indiana Department of Environmental Management.



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Paul Higginbotham  
Deputy Assistant Commissioner  
Office of Water Quality

**ARCELORMITTAL USA LLC, INDIANA HARBOR EAST  
3210 Watling Street, East Chicago, Indiana**

**Table of Contents**

**PART I**

|   |    |
|---|----|
| A. Effluent Limitations and Monitoring  |    |
| Outfall 011.....  | 4  |
| Outfall 014.....  | 7  |
| Outfall 018.....  | 11 |
| Outfall 518.....  | 15 |
| Outfall 618.....  | 16 |
| Stormwater Outfalls.....  | 17 |
| B. Narrative Water Quality Standards.....   | 19 |
| C. Monitoring and Reporting.....  | 19 |
| 1. Representative Sampling.....   | 19 |
| 2. Discharge Monitoring Reports.....  | 19 |
| 3. Definitions.....   | 20 |
| 4. Test Procedures.....   | 23 |
| 5. Recording of Results.....  | 23 |
| 6. Additional Monitoring by Permittee.....  | 24 |
| 7. Records Retention.....   | 24 |
| D. Chronic Biomonitoring Program Requirements.....  | 24 |
| E. Storm Water Monitoring and Non-Numeric Conditions.....   | 30 |
| F. Storm Water Pollution Prevention Plan.....   | 41 |
| G. Reporting Requirements for Solvents, Degreasing Agents, Rolling Oils, Water<br>Treatment Chemicals and Biocides..... | 48 |
| H. Groundwater Remediation Project.....   | 48 |
| I. No. 7 Blast Furnace.....   | 49 |
| J. Pollutant Minimization Program.....  | 49 |
| K. Reopening Clause.....  | 49 |
| L. Zebra and Quagga Mussel Control.....   | 50 |
| M. Dredging Project Effluent.....   | 51 |
| N. No. 6 Dock.....  | 52 |
| O. Discharges to Lake Michigan.....   | 52 |

**PART II      STANDARD CONDITIONS FOR NPDES PERMITS**

|   |    |
|---|----|
| A. General Conditions                                 |    |
| 1. Duty to Comply.....                                | 53 |
| 2. Duty to Mitigate.....                              | 53 |
| 3. Duty to Reapply.....                               | 53 |
| 4. Permit Transfer.....                               | 54 |
| 5. Permit Actions.....                                | 54 |
| 6. Property Rights.....                               | 55 |
| 7. Severability.....                                  | 55 |
| 8. Oil and Hazardous Substance Liability.....         | 56 |
| 9. State Laws.....                                    | 56 |
| 10. Penalties for Violation of Permit Conditions..... | 56 |
| 11. Penalties for Tampering or Falsification.....     | 56 |
| 12. Toxic Pollutants.....                             | 57 |

- 13. Wastewater treatment plant certified operators.....57
- 14. Construction Permit.....57
- 15. Inspection and Entry.....58
- 16. New or Increased Discharge of Pollutants.....58
- B. Management Requirements
  - 1. Property Operations and Maintenance.....59
  - 2. Bypass of Treatment Facilities.....59
  - 3. Upset Conditions.....61
  - 4. Removed Substances.....62
- C. Reporting Requirements
  - 1. Planned Changes in Facility of Discharge.....62
  - 2. Monitoring and Reporting.....62
  - 3. Twenty-Four Hour Reporting Requirements.....62
  - 4. Other Compliance/Noncompliance Reporting.....64
  - 5. Other Information.....64
  - 6. Signatory Requirements.....64
  - 7. Availability of Reports.....66
  - 8. Penalties for Falsification of Reports.....66
  - 9. Changes in Discharge of Toxic Substances.....66
- PART III OTHER REQUIREMENTS**
  - A. Thermal Effluent Requirements.....68
  - B. Biocides Concentration.....68
  - C. Polychlorinated Biphenyl (PCB).....68
- PART IV COOLING WATER INTAKE STRUCTURES (CWIS).....69**
- PART V STREAMLINED MERCURY VARIANCE (SMV).....71**

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. The permittee is authorized to discharge from the outfall listed below in accordance with the terms and conditions of this permit. The permittee is authorized to discharge from Outfall 011. The discharge is limited to the non-contact cooling water(NCCW) from the No. 2 AC Power Station, sinter plant non-contact cooling water; ground water and miscellaneous non-process discharges and storm water runoff through outfall 011 to the Indiana Harbor Turning Basin. Samples taken in compliance with the monitoring requirements below shall be taken at a point representative of the discharge but prior to entry into the Indiana Harbor Turning Basin. Such discharge shall be limited and monitored by the permittee as specified below:

DISCHARGE LIMITATIONS [1][3][4][7]  
 Outfall 011

| Parameter             | Quantity or Loading |               |         | Quality or Concentration |               |       | Monitoring Measurement Frequency | Requirements Sample Type |
|-----------------------|---------------------|---------------|---------|--------------------------|---------------|-------|----------------------------------|--------------------------|
|                       | Monthly Average     | Daily Maximum | Units   | Monthly Average          | Daily Maximum | Units |                                  |                          |
| Flow                  | Report              | Report        | MGD     | ----                     | ----          | ----  | 1 x Daily                        | 24-Hr. Total[13]         |
| Oil and Grease        | ----                | Report        | lbs/day | ----                     | Report        | mg/l  | 1 x Weekly                       | Grab                     |
| Mercury [8][9][10]    | Report              | Report        | lbs/day | Report                   | Report        | ng/l  | 6 x Yearly[10]                   | Grab                     |
| Temperature[5]        |                     |               |         |                          |               |       |                                  |                          |
| Effluent              | ----                | ----          | ----    | Report                   | Report        | °F    | 2 x Weekly                       | Grab                     |
| Influent              | ----                | ----          | ----    | Report                   | Report        | °F    | 2 x Weekly                       | Grab                     |
| TRC[2][6][9][11]      | 3.5                 | 8.3           | lbs/day | 14                       | 33            | ug/l  | 5 x Weekly                       | Grab                     |
| Ammonia (as N) Report | Report              | Report        | lbs/day | Report                   | Report        | mg/l  | 1 X Quarter[12]                  | Grab                     |

| Parameter | Quality or Concentration |               |       | Monitoring Measurement Frequency | Requirements Sample Type |
|-----------|--------------------------|---------------|-------|----------------------------------|--------------------------|
|           | Daily Minimum            | Daily Maximum | Units |                                  |                          |
| pH        | 6.0                      | 9.0           | s.u.  | 1 X Weekly                       | Grab                     |

- [1] There shall be no discharge of process wastewater. The discharge is limited to the non-contact cooling water(NCCW) from the No. 2 AC Power Station, sinter plant non-contact cooling water and storm water runoff.
- [2] The monthly average water quality based effluent limit (WQBEL) for Total Residual Chlorine is less than the limit of quantitation (LOQ) as specified below. Compliance with the monthly average limit will be demonstrated if the monthly average effluent level is less than or equal to the monthly average WQBEL. Daily effluent values that are less than the LOQ, used to determine the monthly average effluent levels

less than the LOQ, may be assigned a value of zero (0), unless, after considering the number of monitoring results that are greater than the limit of detection (LOD), and applying appropriate statistical techniques, a value other than zero (0) is warranted.

The daily maximum WQBEL for Total Residual Chlorine is greater than or equal to the LOD but less than the LOQ as specified below. Compliance with the daily maximum limit will be demonstrated if the observed effluent concentrations are less than the LOQ.

Compliance with the daily maximum mass value will be demonstrated if the calculated mass value is less than 15.7 lbs/day. See [Part I.J.](#) of the permit for Pollutant Minimization Requirements. The compliance value was calculated using a flow of 30.3 MGD.

#### Case-Specific LOD/LOQ

The permittee may determine a case-specific LOD or LOQ using the analytical method specified above, or any other test method which is approved by the Commissioner prior to use. The LOD shall be derived by the procedure specified for method detection limits contained in 40 CFR Part 136, Appendix B, and the LOQ shall be set equal to 3.18 times the LOD. Other methods may be used if first approved by the Commissioner.

- [3] See [Part I.B](#) of the permit for the Narrative Water Quality Standards.
- [4] See [Part I.E](#) of the permit for Storm Water Monitoring Requirements and Non Numeric Condition. See [Part I.F](#) of the permit for Storm Water Pollution Prevention Plan requirements.
- [5] See [Part III.A](#) of the permit for the Thermal Effluent Requirements.
- [6] See [Part I.M](#) of the permit for the Zebra and Quagga Mussel Control Requirements.
- [7] In the event that changes are to be made in the use of water treatment additives that could significantly change the nature of, or increase the discharge concentration of the additive contributing to this Outfall, the permittee shall notify the Indiana Department of Environmental Management as required in Part II.C.1 of this permit. The use of any new or changed water treatment additives or increased dosage rates shall not cause the discharge from any permitted outfall to exhibit chronic or acute toxicity. Acute and chronic aquatic toxicity information must be provided with any notification regarding any new or changed water treatment additives or dosage rates.
- [8] The permittee shall measure and report identified metals as total recoverable metals.

- [9] The following EPA test methods and/or Standard Methods and associated LODs and LOQs are to be used in the analysis of the effluent samples. Alternative methods may be used if first approved by IDEM.

| <u>Parameter</u> | <u>Test Method</u>       | <u>LOD</u> | <u>LOQ</u> |
|------------------|--------------------------|------------|------------|
| Mercury          | 1631, Revision E         | 0.2 ng/l   | 0.5 ng/l   |
| Chlorine         | 4500-Cl-D,E or 4500-Cl-G | 0.02 mg/l  | 0.06 mg/l  |

- [10] Mercury monitoring shall be conducted bi-monthly in the months of February, April, June, August, October, and December of each year for the term of the permit using EPA Test Method 1631, Revision E.

- [11] Limits for Total Residual Chlorine were recalculated using a flow of 30.3 MGD.

- [12] Samples shall be taken once at any time during each of the four annual quarters:

- (A) January-February-March;
- (B) April-May-June;
- (C) July-August-September; and
- (D) October-November-December.

For quarterly monitoring, in the first quarter for example, the permittee may conduct sampling within the month of January, February or March. The result from this reporting timeframe shall be reported on the March DMR, regardless of which of the months within the quarter the sample was taken.

- [13] Flow may be determined based on engineering estimates of dry weather and wet weather discharges to the outfall.

2. The permittee is authorized to discharge from the outfall listed below in accordance with the terms and conditions of this permit. The permittee is authorized to discharge from Outfall 014. The discharge from Outfall 014 is limited to blowdown from the Main Plant Recycle System ground water and miscellaneous non-process discharges and storm water. Samples taken in compliance with the monitoring requirements below shall be taken at a point representative of the discharge but prior to entry into the Indiana Harbor Turning Basin. Such discharge shall be limited and monitored by the permittee as specified below:

DISCHARGE LIMITATIONS [1][3][4][7][8]  
Outfall 014

Table 1

| <u>Parameter</u>              | <u>Quantity or Loading</u> |                      |              | <u>Quality or Concentration</u> |                      |              | <u>Monitoring Frequency</u> | <u>Requirements Sample Type</u> |
|-------------------------------|----------------------------|----------------------|--------------|---------------------------------|----------------------|--------------|-----------------------------|---------------------------------|
|                               | <u>Monthly Average</u>     | <u>Daily Maximum</u> | <u>Units</u> | <u>Monthly Average</u>          | <u>Daily Maximum</u> | <u>Units</u> |                             |                                 |
| Flow                          | Report                     | Report               | MGD          | ----                            | ----                 | ----         | Daily                       | 24 Hour Total                   |
| TSS                           | 6620                       | 17092                | lbs/day      | Report                          | Report               | mg/l         | 3 x Weekly                  | 24 Hr Comp                      |
| Oil and Grease                | 1553                       | 4568                 | lbs/day      | 10                              | 15                   | mg/l         | 3 x Weekly                  | 2 Grab/ 24 Hr[2]                |
| Ammonia(as N)Report           | Report                     | Report               | lbs/day      | Report                          | Report               | mg/l         | 3 x Weekly[19]              | 24 Hr Comp                      |
| T. Cyanide[10][12] Report     | Report                     | Report               | lbs/day      | Report                          | Report               | mg/l         | 3 x Weekly[19]              | Grab                            |
| Free Cyanide[10][12]Report    | Report                     | Report               | lbs/day      | Report                          | Report               | mg/l         | 3 x Weekly[19]              | Grab                            |
| Phenols (4AAP)Report          | Report                     | Report               | lbs/day      | Report                          | Report               | mg/l         | 3 x Weekly[19]              | 24 Hr Comp                      |
| T. Lead[9][22]                | 3.1                        | 6.2                  | lbs/day      | 48                              | 96                   | ug/l         | 3 x Weekly                  | 24 Hr Comp                      |
| Zinc[9][22]                   | 11                         | 22                   | lbs/day      | 170                             | 340                  | ug/l         | 3 x Weekly                  | 24 Hr Comp                      |
| Naphthalene                   | ----                       | 1.80                 | lbs/day      | ----                            | Report               | mg/l         | [17]                        |                                 |
| Tetrachloroethylene --        |                            | 2.69                 | lbs/day      | ----                            | Report               | mg/l         | [17]                        |                                 |
| Mercury[9][10][11][22]        |                            |                      |              |                                 |                      |              |                             |                                 |
| WQBEL                         | 0.000084                   | 0.00021              | lbs/day      | 1.3                             | 3.2                  | ng/l         | 6 X Yearly                  | Grab                            |
| Interim Discharge Limit[21]   | ----                       | ----                 | lbs/day      | 2.4[20]                         | Report               | ng/l         | 6 x Yearly                  | Grab                            |
| Temperature[5]                |                            |                      |              |                                 |                      |              |                             |                                 |
| Effluent                      | ----                       | ----                 | ----         | Report                          | Report               | °F           | 2 x Weekly                  | Grab                            |
| Influent                      | ----                       | ----                 | ----         | Report                          | Report               | °F           | 2 x Weekly                  | Grab                            |
| TRC                           |                            |                      |              |                                 |                      |              |                             |                                 |
| [6][10][13][14][16][22]       | 0.84                       | 2.0                  | lbs/day      | 13                              | 31                   | ug/l         | 5 x Weekly                  | Grab                            |
| Hexavalent Chromium[18]Report | Report                     | Report               | lbs/day      | Report                          | Report               | mg/l         | 2 x Yearly                  | Grab                            |
| Biomonitoring[15]             |                            |                      |              |                                 |                      |              |                             |                                 |

Table 2

| <u>Parameter</u> | <u>Quality or Concentration</u> |                      |              | <u>Monitoring Frequency</u> | <u>Requirements Sample Type</u> |
|------------------|---------------------------------|----------------------|--------------|-----------------------------|---------------------------------|
|                  | <u>Daily Minimum</u>            | <u>Daily Maximum</u> | <u>Units</u> |                             |                                 |
| pH               | 6.0                             | 9.0                  | s.u.         | 2 x Weekly                  | Grab                            |

[1] Except as described in Part I.A.1 of the permit, the discharge of process wastewater from these operations through any other outfall or non-point source is prohibited.

[2] The 24 Hour Oil and Grease values shall be based on an average of not less than two grab samples obtained not less than 6 hours apart. Each sample shall be

analyzed individually, and the arithmetic mean of the concentrations shall be reported as the value for the twenty-four (24) hour period. That value shall be used to assess compliance with the daily maximum effluent limitation, and the arithmetic average of all daily values determined each month shall be used to assess compliance with the monthly average effluent limit.

- [3] See [Part I.B](#) of the permit for the Narrative Water Quality Standards.
- [4] See [Part I.E](#) of the permit for Storm Water Monitoring Requirements and Non Numeric Condition. See [Part I.F](#) of the permit for Storm Water Pollution Prevention Plan requirements.
- [5] See [Part III.A](#) of the permit for the Thermal Effluent Requirements.
- [6] See [Part I.M](#) of the permit for the Zebra and Quagga Mussel Control Requirements.
- [7] In the event that changes are to be made in the use of water treatment additives that could significantly change the nature of, or increase the discharge concentration of the additive contributing to this Outfall, the permittee shall notify the Indiana Department of Environmental Management as required in Part II.C.1 of this permit. The use of any new or changed water treatment additives or increased dosage rates shall not cause the discharge from any permitted outfall to exhibit chronic or acute toxicity. Acute and chronic aquatic toxicity information must be provided with any notification regarding any new or changed water treatment additives or dosage rates.
- [8] The plant shall not use cyanide plating solutions in any metal finishing operations, unless expressly authorized by a modification of the permit.
- [9] The permittee shall measure and report identified metals as total recoverable metals.
- [10] The following EPA test methods and/or Standard Methods and associated LODs and LOQs are to be used in the analysis of the effluent samples. Alternative methods may be used if first approved by IDEM.

| <u>Parameter</u> | <u>Test Method</u>       | <u>LOD</u> | <u>LOQ</u> |
|------------------|--------------------------|------------|------------|
| Mercury          | 1631, Revision E         | 0.2 ng/l   | 0.5 ng/l   |
| Chlorine         | 4500-CI-D,E or 4500-CI-G | 0.02 mg/l  | 0.06 mg/l  |
| Cyanide, Total   | 335.4 or 4500 CN-E       | 5 ug/l     | 16 ug/l    |
| Cyanide, Total   | ASTM D2036-09(A)         | 5 ug/l     | 16 ug/l    |
| Cyanide, Free    | 4500-CN-G                | 5 ug/l     | 16 ug/l    |
| Cyanide, Free    | 1677                     | 0.5 ug/l   | 1.6 ug/l   |
| Cyanide, Free    | ASTM D2036-09(B)         | 0.5 ug/l   | 1.6 ug/l   |

- [11] Mercury monitoring shall be conducted bi-monthly in the months of February, April, June, August, October, and December of each year for the term of the permit using EPA Test Method 1631, Revision E.
- [12] Sample preservation procedures and maximum allowable holding times for total cyanide, or available (free) cyanide are prescribed in Table II of 40 CFR Part 136. Note the footnotes specific to cyanide. Preservation and holding time information in Table II takes precedence over information in specific methods or elsewhere.
- [13] The monthly average water quality based effluent limit (WQBEL) for TRC is less than the limit of quantitation (LOQ) as specified below. Compliance with the monthly average limit will be demonstrated if the monthly average effluent level is less than or equal to the monthly average WQBEL. Daily effluent values that are less than the LOQ, used to determine the monthly average effluent levels less than the LOQ, may be assigned a value of zero (0), unless, after considering the number of monitoring results that are greater than the limit of detection (LOD), and applying appropriate statistical techniques, a value other than zero (0) is warranted.
- [14] The daily maximum WQBEL for TRC is less than the LOD as specified below. Compliance with the daily maximum limit will be demonstrated if the observed effluent concentrations are less than the LOD. Effluent levels greater than or equal to the LOD but less than the LOQ are in compliance with the daily maximum WQBEL, except when confirmed by a sufficient number of analyses of multiple samples and use of appropriate statistical techniques.
- Compliance with the daily maximum mass value will be demonstrated if the calculated mass value is less than 3.86 lbs/day.
- [15] See [Part I.D](#) of the permit for Biomonitoring requirements.
- [16] See [Part I.J](#) of the permit for the Pollutant Minimization Program requirements.
- [17] A monitoring waiver per 40 CFR 122.44 has been granted for this parameter for the term of this permit. IDEM shall be notified if any changes occur at this facility that would require the condition upon which this waiver was granted to be reviewed. Based upon process changes, sampling or other information, if the Permittee has any reason to believe that Naphthalene and Tetrachloroethylene is present, then the Permittee shall notify IDEM and sample for that pollutant at the frequency of one time monthly and will notify the IDEM Compliance Data Section so that these changes can be added to the DMR form.
- [18] Hexavalent Chromium solutions from the Hot Dip Galvanizing Line shall not be discharged in the wastewater collection and treatment systems. Such solutions shall be discharged off site.

Hexavalent Chromium shall be measured and reported as dissolved metal. The

Hexavalent Chromium sample type shall be grab method. The maximum holding time for a Hexavalent Chromium sample is 24 hours (40 CFR 136.3 Table IB). Therefore, the grab sample must be analyzed within 24 hours.

- [19] Monitoring for ammonia-N, total and free cyanide, and phenols (4AAP) is required only when wastewater from No. 7 blast furnace treatment and recycle system may be present. Analysis of samples for free cyanide is not required when the corresponding sample analytical result for total cyanide is not detected at <0.005 mg/l.
- [20] The permittee applied for, and received, a variance from the water quality criterion used to establish the referenced mercury WQBEL under 327 IAC 5-3.5. For the term of this permit, the permittee is subject to the interim discharge limit developed in accordance with 327 IAC 5-3.5-8.

The permittee shall report both a daily maximum concentration and an annual average concentration for total mercury. The annual average value shall be calculated as the average of the measured effluent daily values from the most recent twelve-month period.

Calculating and reporting of the annual average value for mercury is only required for the months when samples are taken for mercury.

The interim discharge limit is an Annual Average. Compliance with the interim discharge limit will be achieved when the annual average measured over the most recent (rolling) twelve-month period is less than the interim discharge limit.

Compliance with the interim discharge limit will demonstrate compliance with mercury discharge limitations of this permit for this outfall.

- [21] See [Part V](#) Streamlined Mercury Variance (SMV) of the permit for the Pollutant Minimization Plan.
- [22] Limits were determined using a flow of 7.7 MGD.

3. The permittee is authorized to discharge from the outfall listed below in accordance with the terms and conditions of this permit. The permittee is authorized to discharge from Outfall 018. The discharge is limited to noncontact cooling water, Outfall 518, Outfall 618, cooling tower blowdown, low volume wastewater from the No. 5 Boiler House, North Lake Energy/No. 17 Turbine and Coke Energy co-generating facility ground water and miscellaneous non-process discharges and stormwater. Samples taken in compliance with the monitoring requirements below shall be taken at a point representative of the discharge but prior to entry into the Indiana Harbor Turning Basin. Such discharge shall be limited and monitored by the permittee as specified below:

DISCHARGE LIMITATIONS [2][3][6][14][17]  
 Outfall 018

| Parameter                 | Quantity or Loading |               | Units   | Quality or Concentration |               | Units | Monitoring Measurement Frequency | Requirements Sample Type |
|---------------------------|---------------------|---------------|---------|--------------------------|---------------|-------|----------------------------------|--------------------------|
|                           | Monthly Average     | Daily Maximum |         | Monthly Average          | Daily Maximum |       |                                  |                          |
| Flow[1]                   | Report              | Report        | MGD     | -                        | -             | -     | Daily                            | 24 Hour Total            |
| Oil and Grease[15]        | ---                 | ---           | lbs/day | ---                      | Report        | mg/l  | 1 x Weekly                       | Grab                     |
| Free Cyanide[8][10][15]   | Report              | Report        | lbs/day | Report                   | Report        | mg/l  | 2 x Monthly                      | Grab                     |
| Ammonia(as N)[15]         | Report              | Report        | lbs/day | Report                   | Report        | mg/l  | 2 x Weekly                       | 24 Hr Comp               |
| Phenols(4,AAP)[15]        | Report              | Report        | lbs/day | Report                   | Report        | mg/l  | 2 x Weekly                       | Grab                     |
| Lead[7][15][18]           | 3.1                 | 6.3           | lbs/day | 23                       | 46            | ug/l  | 2 x Weekly                       | 24 Hr Comp               |
| Zinc[7][15][18]           | Report              | Report        | lbs/day | Report                   | Report        | ug/l  | 2 x Weekly                       | 24 Hr Comp               |
| Mercury[7][8][9][18]      |                     |               |         |                          |               |       |                                  |                          |
| WQBEL                     | 0.00017             | 0.00042       | lbs/day | 1.3                      | 3.2           | ng/l  | 6 X Yearly                       | Grab                     |
| Interim Discharge         |                     |               |         |                          |               |       |                                  |                          |
| Limit[20]                 | ---                 | ---           | lbs/day | 2.5[19]                  | Report        | ng/l  | 6 x Yearly                       | Grab                     |
| TRC[5][8][11][13][15][18] | 1.8                 | 4.2           | lbs/day | 13                       | 31            | ug/l  | 5 x Weekly                       | Grab                     |
| Temperature[4]            |                     |               |         |                          |               |       |                                  |                          |
| Effluent                  | ---                 | ---           | ---     | Report                   | Report        | °F    | 2 x Weekly                       | Grab                     |
| Influent                  | ---                 | ---           | ---     | Report                   | Report        | °F    | 2 x Weekly                       | Grab                     |
| Selenium[7][15]           | Report              | Report        | lbs/day | Report                   | Report        | mg/l  | 2 x Monthly                      | 24 Hr Comp               |
| Biomonitoring[12]         |                     |               |         |                          |               |       |                                  |                          |

| Parameter | Quality or Concentration |               | Units | Monitoring Measurement Frequency | Requirements Sample Type |
|-----------|--------------------------|---------------|-------|----------------------------------|--------------------------|
|           | Daily Minimum            | Daily Maximum |       |                                  |                          |
| pH        | 6.0                      | 9.0           | s.u.  | 1 x Daily                        | Continuous[16]           |

[1] The flow must be measured and recorded using valid flow measurement devices, not estimated.

[2] See [Part I.B](#) of the permit for the Narrative Water Quality Standards.

- [3] See [Part I.E](#) of the permit for Storm Water Monitoring Requirements and Non Numeric Condition. See [Part I.F](#) of the permit for Storm Water Pollution Prevention Plan requirements.
- [4] See [Part III.A](#) of the permit for the Thermal Effluent Requirements.
- [5] See [Part I.M](#) of the permit for the Zebra and Quagga Mussel Control Requirements.
- [6] In the event that changes are to be made in the use of water treatment additives that could significantly change the nature of, or increase the discharge concentration of the additive contributing to this Outfall, the permittee shall notify the Indiana Department of Environmental Management as required in Part II.C.1 of this permit. The use of any new or changed water treatment additives or increased dosage rates shall not cause the discharge from any permitted outfall to exhibit chronic or acute toxicity. Acute and chronic aquatic toxicity information must be provided with any notification regarding any new or changed water treatment additives or dosage rates.
- [7] The permittee shall measure and report identified metals as total recoverable metals.
- [8] The following EPA test methods and/or Standard Methods and associated LODs and LOQs are to be used in the analysis of the effluent samples. Alternative methods may be used if first approved by IDEM.

| <u>Parameter</u> | <u>Test Method</u>       | <u>LOD</u> | <u>LOQ</u> |
|------------------|--------------------------|------------|------------|
| Mercury          | 1631, Revision E         | 0.2 ng/l   | 0.5 ng/l   |
| Chlorine         | 4500-CI-D,E or 4500-CI-G | 0.02 mg/l  | 0.06 mg/l  |
| Cyanide, Free    | 4500-CN-G                | 5 ug/l     | 16 ug/l    |
| Cyanide, Free    | 1677                     | 0.5 ug/l   | 1.6 ug/l   |
| Cyanide, Free    | ASTM D2036-09(B)         | 0.5 ug/l   | 1.6 ug/l   |

- [9] Mercury monitoring shall be conducted bi-monthly in the months of February, April, June, August, October, and December of each year for the term of the permit using EPA Test Method 1631, Revision E.
- [10] Sample preservation procedures and maximum allowable holding times for total cyanide, or available (free) cyanide are prescribed in Table II of 40 CFR Part 136. Note the footnotes specific to cyanide. Preservation and holding time information in Table II takes precedence over information in specific methods or elsewhere.
- [11] The monthly average water quality based effluent limit (WQBEL) for TRC is less than the limit of quantitation (LOQ) as specified below. Compliance with the monthly average limit will be demonstrated if the monthly average effluent level is less than or equal to the monthly average WQBEL. Daily effluent values that are less than the LOQ, used to determine the monthly average effluent levels less than

the LOQ, may be assigned a value of zero (0), unless, after considering the number of monitoring results that are greater than the limit of detection (LOD), and applying appropriate statistical techniques, a value other than zero (0) is warranted.

The daily maximum WQBEL for TRC is less than the LOD as specified below. Compliance with the daily maximum limit will be demonstrated if the observed effluent concentrations are less than the LOD. Effluent levels greater than or equal to the LOD but less than the LOQ are in compliance with the daily maximum WQBEL, except when confirmed by a sufficient number of analyses of multiple samples and use of appropriate statistical techniques.

Compliance with the daily maximum mass value will be demonstrated if the calculated mass value is less than 8.21 lbs/day.

#### Case-Specific LOD/LOQ

The permittee may determine a case-specific LOD or LOQ using the analytical method specified above, or any other test method which is approved by the Commissioner prior to use. The LOD shall be derived by the procedure specified for method detection limits contained in 40 CFR Part 136, Appendix B, and the LOQ shall be set equal to 3.18 times the LOD. Other methods may be used if first approved by the Commissioner.

- [12] See [Part I.D](#) of the permit for Biomonitoring requirements.
- [13] See [Part I.J](#) of the permit for the Pollutant Minimization Program requirements.
- [14] There shall be no discharge of cooling tower basin cleaning wastes.
- [15] Internal outfall 518, 618 and Outfall 018 shall be sampled on the same day.
- [16] In accordance with 40 CFR 401.17, where a permittee continuously measures pH of wastewater, the permittee shall maintain the pH of such wastewater within the range set forth in the applicable effluent limitations guidelines, except when an excursion from the range are permitted subject to the following limitations:
  - 1) the total time during which the pH values are outside the required range of pH the total time during which the pH values are outside the range required of pH values shall not exceed the 7 hours and 26 minutes in any calendar month; and 2) no individual excursion from the range of pH values shall exceed 60 minutes in duration or 0.5 su in magnitude. An excursion is an unintentional and temporary incident in which the pH value of discharge wastewaters exceed the range set forth in the applicable effluent limitations.
- [17] See [Part I.I](#) for No 7 Blast Furnace requirements.

- [18] Limits were developed using a flow of 16.4 MGD.
- [19] The permittee applied for, and received, a variance from the water quality criterion used to establish the referenced mercury WQBEL under 327 IAC 5-3.5. For the term of this permit, the permittee is subject to the interim discharge limit developed in accordance with 327 IAC 5-3.5-8.

The permittee shall report both a daily maximum concentration and an annual average concentration for total mercury. The annual average value shall be calculated as the average of the measured effluent daily values from the most recent twelve-month period.

Calculating and reporting of the annual average value for mercury is only required for the months when samples are taken for mercury.

The interim discharge limit is an Annual Average. Compliance with the interim discharge limit will be achieved when the annual average measured over the most recent (rolling) twelve-month period is less than the interim discharge limit.

Compliance with the interim discharge limit will demonstrate compliance with mercury discharge limitations of this permit for this outfall.

- [20] See [Part V](#) Streamlined Mercury Variance (SMV) of the permit for the Pollutant Minimization Plan.

4. The permittee is authorized to discharge from the outfall listed below in accordance with the terms and conditions of this permit. The permittee is authorized to discharge from Internal Outfall 518. The discharge is limited to treated effluent from the No. 7 Blast Furnace Scrubber System, Blowdown Treatment Plant and ground water and miscellaneous non-process discharges. Samples taken in compliance with the monitoring requirements below shall be taken at a point representative of the discharge but prior to commingling with another wastewater streams. Such discharge shall be limited and monitored by the permittee as specified below:

**DISCHARGE LIMITATIONS [2][4]**  
Outfall 518

| Parameter        | Quantity or Loading      |                          |         | Quality or Concentration |                        |       | Monitoring Measurement Frequency | Requirements Sample Type |
|------------------|--------------------------|--------------------------|---------|--------------------------|------------------------|-------|----------------------------------|--------------------------|
|                  | Monthly                  | Daily                    | Units   | Monthly                  | Daily                  | Units |                                  |                          |
|                  | <u>Average</u><br>Report | <u>Maximum</u><br>Report |         | <u>Average</u><br>----   | <u>Maximum</u><br>---- |       |                                  |                          |
| Flow             | 105                      | 281                      | MGD     | ----                     | ----                   | ----  | Daily                            | Continuous               |
| TSS              | 105                      | 281                      | lbs/day | Report                   | Report                 | mg/l  | 2 x Weekly                       | 24 Hr Comp               |
| Oil and Grease   | ----                     | 70.1                     | lbs/day | ----                     | Report                 | mg/l  | 2 x Weekly                       | Grab                     |
| Ammonia(as N)    | 70.1                     | 210                      | lbs/day | Report                   | Report                 | mg/l  | 2 x Weekly                       | 24 Hr Comp               |
| Total Cyanide[1] | 7.01                     | 14.0                     | lbs/day | Report                   | Report                 | mg/l  | 2 x Weekly                       | Grab                     |
| Phenols(4AAP)    | 0.70                     | 1.40                     | lbs/day | Report                   | Report                 | mg/l  | 2 x Weekly                       | Grab                     |
| Lead[3]          | 2.10                     | 6.31                     | lbs/day | Report                   | Report                 | ug/l  | 2 x Weekly                       | 24 Hr Comp               |
| Zinc[3]          | 3.14                     | 9.46                     | lbs/day | Report                   | Report                 | ug/l  | 2 x Weekly                       | 24 Hr Comp               |
| TRC              | ----                     | 3.50                     | lbs/day | ----                     | Report                 | mg/l  | 2 x Weekly                       | Grab                     |
| Selenium[3]      | Report                   | Report                   | lbs/day | Report                   | Report                 | mg/l  | 2 x Monthly                      | 24 Hr Comp               |

- [1] Sample preservation procedures and maximum allowable holding times for total cyanide, or available (free) cyanide are prescribed in Table II of 40 CFR Part 136. Note the footnotes specific to cyanide. Preservation and holding time information in Table II takes precedence over information in specific methods or elsewhere.
- [2] Internal outfall 518, 618 and Outfall 018 shall be sampled on the same day.
- [3] The permittee shall measure and report identified metals as total recoverable metals.
- [4] See [Part I.I](#) for No 7 Blast Furnace requirements.

5. The permittee is authorized to discharge from the outfall listed below in accordance with the terms and conditions of this permit. The permittee is authorized to discharge from Internal Outfall 618. The discharge is limited to No. 4 Steel Plant Treatment (BOF), vacuum degasser (RHOB), the No. 1 Continuous Caster process water systems and ground water and miscellaneous non-process discharges. Samples taken in compliance with the monitoring requirements below shall be taken at a point representative of the discharge and prior to commingling with another wastestream. Such discharge shall be limited and monitored by the permittee as specified below:

DISCHARGE LIMITATIONS [1][3]  
 Outfall 618

| Parameter      | Quantity or Loading |                |         | Quality or Concentration |                |       | Monitoring Measurement Frequency | Requirements Sample Type |
|----------------|---------------------|----------------|---------|--------------------------|----------------|-------|----------------------------------|--------------------------|
|                | Monthly             | Daily          | Units   | Monthly                  | Daily          | Units |                                  |                          |
|                | <u>Average</u>      | <u>Maximum</u> |         | <u>Average</u>           | <u>Maximum</u> |       |                                  |                          |
| Flow           | Report              | Report         | MGD     | ----                     | ----           | ----  | 2 x Weekly                       | 24 Hr Total              |
| TSS            | 360                 | 720            | lbs/day | Report                   | Report         | mg/l  | 2 x Weekly                       | 24 Hr Comp               |
| Oil and Grease | 102                 | 216            | lbs/day | Report                   | Report         | mg/l  | 2 x Weekly                       | Grab[2]                  |
| Lead[4]        | 2.16                | 6.48           | lbs/day | Report                   | Report         | ug/l  | 2 x Weekly                       | 24 Hr Comp               |
| Zinc[4]        | 3.5                 | 10.5           | lbs/day | Report                   | Report         | ug/l  | 2 x Weekly                       | 24 Hr Comp               |

- [1] Internal outfall 518, 618 and Outfall 018 shall be sampled on the same day.
- [2] The 24 Hr Oil and Grease values shall be based on an average of two or more grab samples and obtained less than 6 hours apart. Each sample shall be analyzed individually, and the arithmetic mean of the concentrations shall be reported as the value for the twenty-four (24) hour period. That value shall be used to assess compliance with the daily maximum effluent limitation, and the arithmetic average of all daily values determined each month shall be used to assess compliance with the monthly average effluent limit.
- [3] The discharge of process wastewater from No. 4 BOF, the vacuum degasser, and No. 1 continuous caster through any other outfall or non-point source is prohibited.
- [4] The permittee shall measure and report identified metals as total recoverable metals.

8. The permittee is authorized to discharge storm water from the outfalls listed below in accordance with the terms and conditions of this permit. The permittee is authorized to discharge from Outfall SW 01, SW 02, SW 03, SW 04, SW 05, SW 06, SW 07, SW 08\*, SW 09, SW 10\*, SW 11, SW 12, SW 13, SW 14 [5]. Samples taken in compliance with the monitoring requirements below shall be taken at a point representative of the discharge but prior to entry into the respective water body (Indiana Harbor Ship Canal\* or the Indiana Harbor Turning Basin) . Such discharge shall be limited and monitored by the permittee as specified below:

DISCHARGE LIMITATIONS [1][2][4]

| <u>Parameter</u>              | <u>Daily</u><br><u>Maximum</u> | <u>Units</u> | <u>Monitoring Requirements</u> |                    |
|-------------------------------|--------------------------------|--------------|--------------------------------|--------------------|
|                               |                                |              | <u>Measurement Frequency</u>   | <u>Sample Type</u> |
| Flow                          | Report                         | MGD          | Annually                       | Estimate Total     |
| Total Suspended Solids        | Report                         | mg/l         | Annually                       | Grab               |
| pH                            | Report                         | s.u.         | Annually                       | Grab               |
| Oil & Grease                  | Report                         | mg/l         | Annually                       | Grab               |
| COD                           | Report                         | mg/l         | Annually                       | Grab               |
| CBOD <sub>5</sub>             | Report                         | mg/l         | Annually                       | Grab               |
| Total Kjeldahl Nitrogen       | Report                         | mg/l         | Annually                       | Grab               |
| Nitrate plus Nitrite Nitrogen | Report                         | mg/l         | Annually                       | Grab               |
| Total Phosphorus              | Report                         | mg/l         | Annually                       | Grab               |
| Copper[3]                     | Report                         | mg/l         | Annually                       | Grab               |
| Iron[3]                       | Report                         | mg/l         | Annually                       | Grab               |
| Lead[3]                       | Report                         | mg/l         | Annually                       | Grab               |
| Zinc[3]                       | Report                         | mg/l         | Annually                       | Grab               |

[1] The Storm Water Monitoring and Non Numeric Effluent Limits and the Storm Water Pollution Prevention Plan (SWPPP) requirements can be found in Part [I.E.](#) and [I.F.](#) of this permit.

[2] All samples shall be collected from the discharge resulting from a storm event that is greater than 0.1 inches and at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event.

For each sample taken, the permittee shall record the duration and total rainfall of the storm event, the number of hours between beginning of the storm measured and the end of the previous measurable rain event, and the outside temperature at the time of sampling.

A grab sample shall be taken during the first thirty (30) minutes of the discharge (or as soon thereafter as practicable).

[3] The permittee shall measure and report the identified metal in total recoverable form.

- [4] See [Part I.B](#) of the permit for the Narrative Water Quality Standards.
- [5] In the event storm water runoff is not discharged from the same location monitored for in the storm water application, the permittee shall monitor storm water runoff from a point or points representative of the discrete storm water drainage areas illustrated in the application and fact sheet.

B. NARRATIVE WATER QUALITY STANDARDS

At all times the discharge from any and all point sources specified within this permit shall not cause receiving waters:

1. including the mixing zone, to contain substances, materials, floating debris, oil, scum, or other pollutants:
  - a. that will settle to form putrescent or otherwise objectionable deposits;
  - b. that are in amounts sufficient to be unsightly or deleterious;
  - c. that produce color, visible oil sheen, odor, or other conditions in such degree as to create a nuisance;
  - d. which are in amounts sufficient to be acutely toxic to , or to otherwise severely injure or kill aquatic life, other animals, plants, or humans;
  - e. which are in concentrations or combinations that will cause or contribute to the growth of aquatic plants or algae to such a degree as to create a nuisance, be unsightly, or otherwise impair the designated uses.
2. outside the mixing zone, to contain substances in concentrations which on the basis of available scientific data are believed to be sufficient to injure, be chronically toxic to, or be carcinogenic, mutagenic, or teratogenic to humans, animals, aquatic life, or plants.

C. MONITORING AND REPORTING

1. Representative Sampling

Samples and measurements taken as required herein shall be representative of the volume and nature of the discharge.

2. Discharge Monitoring Reports

- a. For parameters with monthly average water quality based effluent limitations (WQBELs) below the LOQ, daily effluent values that are less than the limit of quantitation (LOQ) may be assigned a value of zero (0).
- b. For all other parameters for which the monthly average WQBEL is equal to or greater than the LOQ, calculations that require averaging of measurements of daily values (both concentration and mass) shall

use an arithmetic mean. When a daily discharge value is below the LOQ, a value of zero (0) shall be used for that value in the calculation to determine the monthly average unless otherwise specified or approved by the Commissioner.

- c. Effluent concentrations less than the LOD shall be reported on the Discharge Monitoring Report (DMR) forms as < (less than) the value of the LOD. For example, if a substance is not detected at a concentration of 0.1 µg/l, report the value as <0.1 µg/l.
- d. Effluent concentrations greater than or equal to the LOD and less than the LOQ that are reported on a DMR shall be reported as the actual value and annotated on the DMR to indicate that the value is not quantifiable.
- e. Mass discharge values which are calculated from concentrations reported as less than the value of the limit of detection shall be reported as less than the corresponding mass discharge value.
- f. Mass discharge values that are calculated from effluent concentrations greater than the limit of detection shall be reported as the calculated value.

The permittee shall submit federal and state discharge monitoring reports to the Indiana Department of Environmental Management containing results obtained during the previous monitoring period which shall be submitted no later than the 28<sup>th</sup> day of the month following each completed monitoring period. The first report shall be submitted by the 28<sup>th</sup> day of the month following the month in which the permit becomes effective. These reports shall include, but not necessarily be limited to, the Discharge Monitoring Report (DMR) and the Monthly Monitoring Report (MMR). All reports shall be submitted electronically by using the NetDMR application, upon registration, receipt of the NetDMR Subscriber Agreement, and IDEM approval of the proposed NetDMR Signatory. Access the NetDMR website (for initial registration and DMR/MMR submittal) via CDX at: <https://cdx.epa.gov/>. The Regional Administrator may request the permittee to submit monitoring reports to the Environmental Protection Agency if it is deemed necessary to assure compliance with the permit.

### 3. Definitions

#### a. Monthly Average

- (1) Mass Basis - The “monthly average” discharge means the total mass discharge during a calendar month divided by the number of days in the month that the production or commercial facility

was discharging. Where less than daily samples is required by this permit, the monthly average discharge shall be determined by the summation of the measured daily mass discharges divided by the number of days during the calendar month when the measurements were made.

- (2) Concentration Basis - The “monthly average” concentration means the arithmetic average of all daily determinations of concentration made during a calendar month. When grab samples are used, the daily determination of concentration shall be the arithmetic average (weighted by flow value) of all the samples collected during the calendar day.

b. “Daily Discharge”

- (1) Mass Basis – The “daily discharge” means the total mass discharge by weight during any calendar day.
- (2) Concentration Basis – The “daily discharge” means the average concentration over the calendar day or any twenty-four (24) hour period that reasonably represents the calendar day for the purposes of sampling.

c. “Daily Maximum”

- (1) Mass Basis – The “daily maximum” means the maximum daily discharge mass value for any calendar day.
- (2) Concentration Basis – The “daily maximum” means the maximum daily discharge value for any calendar day.
- (3) Temperature Basis – The “daily maximum” means the highest temperature value measured for any calendar day.

d. A 24-hour composite sample consists of at least 3 individual flow-proportioned samples of wastewater, taken by the grab sample method or by an automatic sampler, which are taken at approximately either equally spaced time intervals or time intervals between samples proportional to stream flow for the duration of the discharge within a 24-hour period and which are combined prior to analysis. A flow-proportioned composite sample may be obtained by:

- (1) recording the discharge flow rate at the time each individual sample is taken,

- (2) adding together the discharge flow rates recorded from each individual sampling time to formulate the "total flow" value,
  - (3) the discharge flow rate of each individual sampling time is divided by the total flow value to determine its percentage of the total flow value,
  - (4) then multiply the volume of the total composite sample by each individual sample's percentage to determine the volume of that individual sample which will be included in the total composite sample.
- e. Concentration -The weight of any given material present in a unit volume of liquid. Unless otherwise indicated in this permit, concentration values shall be expressed in milligrams per liter (mg/l).
  - f. The "Regional Administrator" is defined as the Region 5 Administrator, U.S. EPA, located at 77 West Jackson Boulevard, Chicago, Illinois 60604.
  - g. The "Commissioner" is defined as the Commissioner of the Indiana Department of Environmental Management, which is located at the following address: 100 North Senate Avenue, Indianapolis, Indiana 46204.
  - h. "Limit of Detection" or "LOD" means a measurement of the concentration of a substance that can be measured and reported with ninety-nine percent (99%) confidence that the analyte concentration is greater than zero (0) for a particular analytical method and sample matrix. The LOD is equivalent to the method detection level or MDL.
  - i. "Limit of Quantitation" or "LOQ" means a measurement of the concentration of a contaminant obtained by using a specified laboratory procedure calibrated at a specified concentration above the method detection level. It is considered the lowest concentration at which a particular contaminant can be quantitatively measured using a specified laboratory procedure for monitoring of the contaminant. This term is also sometimes called limit quantification or quantification level.
  - j. "Method Detection Level" or "MDL" means the minimum concentration of an analyte (substance) that can be measured and reported with a ninety-nine percent (99%) confidence that the analyte concentration is greater than zero (0) as determined by procedure set forth in 40 CFR 136, Appendix B. The method detection level or MDL is equivalent to the LOD.

4. Test Procedures

The analytical and sampling methods used shall conform to the current version of 40 CFR 136. Multiple editions of Standard Methods for the Examination of Water and Wastewater are currently approved for most methods, however, 40 CFR Part 136 should be checked to ascertain if a particular method is approved for a particular analyte. The approved methods may be included in the texts listed below. However, different but equivalent methods are allowable if they receive the prior written approval of the Commissioner and the U.S. Environmental Protection Agency.

- a. Standard Methods for the Examination of Water and Wastewater 18<sup>th</sup>, 19<sup>th</sup>, or 20<sup>th</sup> Editions, 1992, 1995, or 1998, American Public Health Association, Washington, D.C. 20005.
- b. A.S.T.M. Standards, Parts 23, Water; Atmosphere Analysis 1972 American Society for Testing and Materials, Philadelphia, PA 19103.
- c. Methods for Chemical Analysis of Water and Wastes June 1974, Revised, March 1983, Environmental Protection Agency, Water Quality Office, Analytical Quality Control Laboratory, 1014 Broadway, Cincinnati, OH 45202.

5. Recording of Results

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall maintain records of all monitoring information and monitoring activities, including:

- a. The date, exact place and time of sampling or measurement;
- b. The person(s) who performed the sampling or measurements;
- c. The date(s) and time(s) analyses were performed;
- d. The person(s) who performed the analyses;
- e. The analytical techniques or methods used; and
- f. The results of such measurements and analyses.

6. Additional Monitoring by Permittee

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified above, the results of this monitoring shall be included in the calculation and reporting of the values required in the monthly Discharge Monitoring Report (DMR) and Monthly Monitoring Report (MMR). Such increased frequency shall also be indicated. Other monitoring data not specifically required in this permit (such as internal process or internal waste stream data) which is collected by or for the permittee need not be submitted unless requested by the Commissioner.

7. Records Retention

All records and information resulting from the monitoring activities required by this permit, including all records of analyses performed and calibration and maintenance of instrumentation and recording from continuous monitoring instrumentation, shall be retained for a minimum of three (3) years. In cases where the original records are kept at another location, a copy of all such records shall be kept at the permitted facility. The three years shall be extended:

- a. automatically during the course of any unresolved litigation regarding the discharge of pollutants by the permittee or regarding promulgated effluent guidelines applicable to the permittee; or
- b. as requested by the Regional Administrator or the Indiana Department of Environmental Management.

D. CHRONIC BIOMONITORING PROGRAM REQUIREMENTS

The 1977 Clean Water Act explicitly states, in Section 101(3) that it is the national policy that the discharge of toxic pollutants in toxic amounts be prohibited. In support of this policy the U.S. EPA in 1995 amended 40 CFR 136.3 (Tables IA and II) by adding testing method for measuring acute and short-term chronic toxicity of whole effluents and receiving waters. To adequately assess the character of the effluent, and the effects of the effluent on aquatic life, the permittee shall conduct Whole Effluent Toxicity Testing. Part 1 of this section describes the testing procedures, Part 2 describes the Toxicity Reduction Evaluation (TRE) which is only required if the effluent demonstrated toxicity, as described in section 1.f.

1. Whole Effluent Toxicity Tests

Within 90 days of the effective date of the permit, the permittee shall initiate the series of bioassay tests described below to monitor the toxicity of the

discharge from Outfall(s). The permittee shall conduct the bioassay tests described below to monitor the toxicity of the discharge from Outfalls 014 and 018. If toxicity is demonstrated as defined under section f. below, the permittee is required to conduct a toxicity reduction evaluation (TRE).

a. Bioassay Test Procedures and Data Analysis

- (1) All test organisms, test procedures and quality assurance criteria used shall be in accordance with the Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water to Freshwater Organisms; Fourth Edition Section 13, Cladoceran (*Ceriodaphnia dubia*) Survival and Reproduction Test Method 1002.0 EPA 821-R-02-013, October 2002, or most recent update.
- (2) Any circumstances not covered by the above methods, or that required deviation from the specified methods shall first be approved by the IDEM's Permit Branch.
- (3) The determination of effluent toxicity shall be made in accordance with the Data Analysis general procedures for chronic toxicity endpoints as outlined in Section 9, and in Sections 11 and 13 of the respective Test Method (1000.0 and 1002.0) of Short-term Methods of Estimating the Chronic Toxicity of Effluent and Receiving Water to Freshwater Organisms (EPA-821-R-02-013), Fourth Edition, October 2002, or most recent update.

b. Types of Bioassay Tests

- (1) The permittee shall conduct 7-day Daphnid (*Ceriodaphnia dubia*) Survival and Reproduction Test on samples of final effluent. All tests will be conducted on 24-hour composite samples of final effluent. All test solutions shall be renewed daily. On days three and five fresh 24-hour composite samples of the effluent collected on alternate days shall be used to renew the test solutions.
- (2) If, in any control, more than 10% of the test organisms die in 96 hours, or more than 20% of the test organisms die in 7 days, that test shall be repeated. In addition, if in the *Ceriodaphnia dubia* test control the number of newborns produced per surviving female is less than 15, or if 60% of surviving control females have less than three broods, that test shall also be repeated. Such testing will determine whether the effluent affects the survival, reproduction, and/or growth of the test

organisms. Results of all tests regardless of completion must be reported to IDEM.

c. Effluent Sample Collection and Chemical Analysis

- (1) Samples taken for the purposes of Whole Effluent Toxicity Testing will be taken at a point that is representative of the discharge, but prior to discharge. The maximum holding time for whole effluent is 36 hours for a 24 hour composite sample. Bioassay tests must be started within 36 hours after termination of the 24 hour composite sample collection. Bioassay of effluent sampling may be coordinated with other permit sampling requirements as appropriate to avoid duplication.
- (2) Chemical analysis must accompany each effluent sample taken for bioassay test, especially the sample taken for the repeat or confirmation test as outlined in section f.3. below. The analysis detailed under Part I.A. should be conducted for the effluent sample. Chemical analysis must comply with approved EPA test methods.

d. Testing Frequency and Duration

The chronic toxicity test specified in section b. above shall be conducted annually for the duration of the permit. The annual (once per year) monitoring requirement shall be continued through the duration of the permit term until such time as the permittee is notified by IDEM to increase the monitoring frequency to quarterly based on IDEM's evaluation of the facility changes propose by the permittee. IDEMS' evaluation of any proposed changed to the facility may include, but not limited to, new or increased use of water treatment additives and process changes.

If toxicity is demonstrated as defined under section f., the permittee is required to conduct a toxicity reduction evaluation (TRE) as specified in Section 2.

e. Reporting

- (1) Results shall be reported according to EPA 821-R-02-013, October 2002, Section 10 (Report Preparation). The completed report for each test shall be submitted to the Compliance Data Section of IDEM no later than 60 days after completion of the test.

In lieu of mailing reports, reports may be submitted to IDEM electronically as an e-mail attachment. E-mails should be sent to [wwreports@idem.in.gov](mailto:wwreports@idem.in.gov).

- (2) For quality control, the report shall include the results of appropriate standard reference toxic pollutant tests for chronic endpoints and historical reference toxic pollutant data with mean values and appropriate ranges for the respective test species *Ceriodaphnia dubia*. Biomonitoring reports must also include copies of Chain-of-Custody Records and Laboratory raw data sheets.
- (3) Statistical procedures used to analyze and interpret toxicity data including critical values of significance to evaluate each point of toxicity should be described and included as part of the biomonitoring report.

f. Demonstration of Toxicity

- (1) Acute toxicity will be demonstrated if the effluent is observed to have exceeded 1.0 TU<sub>a</sub> (acute toxic units) based on 100% effluent for the test organism in 48 hours for *Ceriodaphnia dubia*.
- (2) Chronic toxicity will be demonstrated if the effluent is observed to have exceeded the levels specific below for *Ceriodaphnia dubia*:

| <u>OUTFALL</u> | <u>Chronic Toxicity Level (TUc)</u> |
|----------------|-------------------------------------|
| 014            | 12                                  |
| 018            | 6.4                                 |

- (3) If toxicity is found in any of the tests as specified above, a confirmation toxicity test using the specified methodology and same test species shall be conducted within two weeks of the completion of the failed test to confirm results. During the sampling for any confirmation test the permittee shall also collect and preserve sufficient effluent samples for use in any Toxicity Identification Evaluation (TIE) and/or Toxicity Reduction Evaluation (TRE), if necessary. If any two (2) consecutive tests, including any and all confirmation tests, indicate the presence of toxicity, the permittee must begin the implementation of a Toxicity Reduction Evaluation (TRE) as described below. The whole effluent toxicity tests required above may be suspended (upon approval from IDEM) while the TRE/TIE are being conducted.

g. Definitions

- (1)  $TU_c$  is defined as  $100/NOEC$  or  $100/IC_{25}$ , where the  $NOEC$  or  $IC_{25}$  are expressed as a percent effluent in the test medium.
- (2)  $TU_a$  is defined as  $100/LC_{50}$  where the  $LC_{50}$  is expressed as a percent effluent in the test medium of an acute whole effluent toxicity (WET) test that is statistically or graphically estimated to be lethal to fifty percent (50%) of the test organisms.
- (3) "Inhibition concentration 25" or " $IC_{25}$ " means the toxicant (effluent) concentration that would cause a twenty-five percent (25%) reduction in a nonquantal biological measurement for the test population. For example, the  $IC_{25}$  is the concentration of toxicant (effluent) that would cause a twenty-five percent (25%) reduction in mean young per female or in growth for the test population.
- (4) "No observed effect concentration" or "NOEC" is the highest concentration of toxicant (effluent) to which organisms are exposed in a full life cycle or partial life cycle (short term) test, that causes no observable adverse effects on the test organisms, that is, the highest concentration of toxicant (effluent) in which the values for the observed responses are not statistically significantly different from the controls.

2. Toxicity Reduction Evaluation (TRE) Schedule of Compliance

The development and implementation of a TRE (including any post-TRE biomonitoring requirements) is only required if toxicity is demonstrated as defined in Part 1, section f. above.

a. Development of TRE Plan

Within 90 days of determination of toxicity, the permittee shall submit plans for an effluent toxicity reduction evaluation (TRE) to the Compliance Data Section, Office of Water Quality of the IDEM. The TRE plan shall include appropriate measures to characterize the causative toxicants and the variability associated with these compounds. Guidance on conducting effluent toxicity reduction evaluations is available from EPA and from the EPA publications list below:

- (1) Methods for Aquatic Toxicity Identification Evaluations:  
  
Phase I Toxicity Characteristics Procedures, Second Edition (EPA/600/6-91/003, February 1991).  
  
Phase II Toxicity Identification Procedures (EPA 600/R-92/080), September 1993.  
  
Phase III Toxicity Confirmation Procedures (EPA 600/R-92/081), September 1993.
- (2) Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I. EPA/600/6-91/005F, May 1992.
- (3) Generalized Methodology for Conducting Industrial Toxicity Reduction Evaluations (TREs), (EPA/600/2-88/070), April 1989.
- (4) Toxicity Reduction Evaluation Protocol for Municipal Wastewater Treatments Plants (EPA/833-B-99-022) August 1999.

b. Conduct the Plan

Within 30 days after the submission of the TRE plan to IDEM, the permittee must initiate an effluent TRE consistent with the TRE plan. Progress reports shall be submitted every 90 days to the Compliance Data Section, Office of Water Quality of the IDEM beginning 90 days after initiation of the TRE study.

c. Reporting

Within 90 days of the TRE study completion, the permittee shall submit to the Compliance Data Section, Office of Water Quality of the IDEM, the final study results and a schedule for reducing the toxicity to acceptable levels through control of the toxicant source or treatment of whole effluent.

d. Compliance Date

The permittee shall complete items a, b, and c from Section 2 above and reduce the toxicity to acceptable levels as soon as possible, but no later than three years after the date of determination of toxicity.

e. Post-TRE Biomonitoring Requirements (Only Required After Completion of a TRE)

After the TRE, the permittee shall conduct monthly toxicity tests with 2 or more species for a period of three months. Should three consecutive monthly tests demonstrate no toxicity, the permittee may reduce the number of species tested to only include the species demonstrated to be most sensitive to the toxicity in the effluent, (see section 1.d. above for more specifics on this topic), and conduct chronic tests quarterly for the duration of the permit.

If toxicity is demonstrated, as defined in paragraph 1.f. above, after the initial three month period, testing must revert to a TRE as described in Part 2 (TRE) above.

f. In lieu of mailing reports, reports may be submitted to IDEM electronically via e-mail. E-mails should be sent to [wwreports@idem.in.gov](mailto:wwreports@idem.in.gov).

E. STORM WATER MONITORING AND NON-NUMERIC EFFLUENT LIMITS

1. Control Measures and Effluent Limits

In the technology-based limits included in Part E.2-4., the term “minimize” means reduce and/or eliminate to the extent achievable using control measures (including best management practices) that are technologically available and economically practicable and achievable in light of best industry practice.

2. Control Measures

Select, design, install, and implement control measures (including best management practices) to minimize pollutant discharges that address the selection and design considerations in Part E.3 to meet the non-numeric effluent limits in Part E.4. The selection, design, installation, and implementation of these control measures must be in accordance with good engineering practices and manufacturer’s specifications. Any deviation from the manufacturer’s specifications shall be documented. If the control measures are not achieving their intended effect in minimizing pollutant discharges, the control measures must be modified as in accordance with the corrective action requirements in Part I.E.6. Regulated storm water discharges from the facility include storm water run-on that commingles with storm water discharges associated with industrial activity at the facility.

3. Control Measure Selection and Design Considerations

When selecting and designing control measures consider the following:

- a. preventing storm water from coming into contact with polluting materials is generally more effective, and cost-effective, than trying to remove pollutants from storm water;
- b. use of control measures in combination may be more effective than use of control measures in isolation for minimizing pollutants in storm water discharge;
- c. assessing the type and quantity of pollutants, including their potential to impact receiving water quality, is critical to designing effective control measures that will achieve the limits in this permit;
- d. minimizing impervious areas at the facility and infiltrating runoff onsite (including bioretention cells, green roofs, and pervious pavement, among other approaches), can reduce runoff and improve groundwater recharge and stream base flows in local streams, although care must be taken to avoid ground water contamination;
- e. flow can be attenuated by use of open vegetated swales and natural depressions to reduce in-stream impacts of erosive flow;
- f. conservation and/or restoration of riparian buffers will help protect streams from storm water runoff and improve water quality; and
- g. use of treatment interceptors (e.g. swirl separators and sand filters) may be appropriate in some instances to minimize the discharge of pollutants.

4. Technology-Based Effluent Limits (BPT/BAT/BCT): Non-Numeric Effluent Limits

- a. Minimize Exposure  
Minimize the exposure of manufacturing, processing, and material storage areas (including loading and unloading, storage, disposal, cleaning, maintenance, and fueling operations) to rain, snow, snowmelt, and runoff. To the extent technologically available and economically practicable and achievable, either locate industrial materials and activities inside or protect them with storm resistant coverings in order to minimize exposure to rain, snow, snowmelt, and runoff (although significant enlargement of impervious surface area is not recommended).

Note: Industrial materials do not need to be enclosed or covered if storm water runoff from affected areas will not be discharged to receiving waters.

b. Good Housekeeping

Keep clean all exposed areas that are potential sources of pollutants, using such measures as sweeping at regular intervals, store materials in appropriate containers, identify and control all on-site sources of dust to minimize stormwater contamination from the deposition of dust on areas exposed to precipitation, and ensure that waste, garbage, and floatable debris are not discharged to receiving waters by keeping exposed areas free of such materials or by intercepting them before they are discharged.

Implement a cleaning and maintenance program for all impervious areas of the facility where particulate matter, dust or debris may accumulate to minimize the discharge of pollutants in stormwater. The cleaning and maintenance program must encompass, as appropriate, areas where material loading and unloading, storage, handling and processing occur.

Stabilize unpaved areas using vegetation or paving where there is vehicle traffic or where material loading and unloading, storage, handling and processing occurs, unless feasible.

For paved areas of the facility where particulate matter, dust or debris may accumulate, to minimize the discharge of pollutants in stormwater, implement control measures such as the following, where determined to be feasible (list not exclusive): sweeping or vacuuming at regular intervals; and washing down the area and collecting and/or treating and properly disposing of the washdown water. For unstabilized areas or for stabilized areas where sweeping, vacuuming, or washing down is not possible, to minimize the discharge of particulate matter, dust, or debris or other pollutants in stormwater, implement stormwater management devices such as the following, where determined to be feasible (list not exclusive): sediment traps, vegetative buffer strips, filter fabric fence, sediment filtering boom, gravel outlet protection, and other equivalent measures that effectively trap or remove sediment.

c. Maintenance

Maintain all control measures which are used to achieve the effluent limits required by this permit in effective operating condition. Nonstructural control measures must also be diligently maintained

(e.g., spill response supplies available, personnel appropriately trained). If control measures need to be replaced or repaired, make the necessary repairs or modifications as expeditiously as practicable.

d. Spill Prevention and Response Procedures

Minimize the potential for leaks, spills and other releases that may be exposed to storm water and develop plans for effective response to such spills if or when they occur. At a minimum, implement:

- i. Procedures for plainly labeling containers (e.g., "Used Oil", "Spent Solvents", "Fertilizers and Pesticides", etc.) that could be susceptible to spillage or leakage to encourage proper handling and facilitate rapid response if spills or leaks occur;
- ii. Preventive measures such as barriers between material storage and traffic areas, secondary containment provisions, and procedures for material storage and handling;
- iii. Procedures for expeditiously stopping, containing, and cleaning up leaks, spills, and other releases. Employees who may cause, detect or respond to a spill or leak must be trained in these procedures and have necessary spill response equipment available. If possible, one of these individuals should be a member of the storm water pollution prevention team;
- iv. Procedures for notification of appropriate facility personnel, emergency response agencies, and regulatory agencies. State or local requirements may necessitate reporting spills or discharges to local emergency response, public health, or drinking water supply agencies. Contact information must be in locations that are readily accessible and available; and
- v. A procedure for documenting all significant spills and leaks of oil or toxic or hazardous pollutants that actually occurred at exposed areas, or that drained to a storm water conveyance.

e. Erosion and Sediment Controls

Through the use of structural and/or non-structural control measures stabilize, and contain runoff from, exposed areas to minimize onsite erosion and sedimentation, and the resulting discharge of pollutants. In selecting, designing, installing, and implementing appropriate control measures for erosion and sediment control, check out information from both the State and EPA websites. The following two websites are given as information sources:

<http://www.in.gov/idem/stormwater/2363.htm>

and

<https://www.epa.gov/npdes/stormwater-discharges-industrial-activities>

f. Management of Runoff

Divert, infiltrate, reuse, contain or otherwise reduce storm water runoff, to minimize pollutants in the discharge.

g. Salt Storage Piles or Piles Containing Salt

Enclose or cover storage piles of salt, or piles containing salt, used for deicing or other commercial or industrial purposes, including maintenance of paved surfaces. Implement appropriate measures (e.g., good housekeeping, diversions, containment) to minimize exposure resulting from adding to or removing materials from the pile. Piles do not need to be enclosed or covered if storm water runoff from the piles is not discharged.

h. Employee Training

Train employees with responsibility for environmental management within each department who work in areas where industrial material or activities are exposed to storm water, or who are responsible for implementing activities necessary to meet the conditions of this permit (e.g., inspectors, maintenance personnel), including all members of the Pollution Prevention Team.

The following personnel must understand the requirements of Part I.E. and Part I.F. of this permit and their specific responsibilities with respect to those requirements: Personnel who are responsible for the design, installation, maintenance, and/or repair of controls (including pollution prevention measures); personnel responsible for the storage and handling of chemicals and materials that could become contaminants in stormwater discharges; personnel who are responsible for conducting and documenting monitoring and inspections related to storm water; and personnel who are responsible for taking and documenting corrective actions as required in Part I.E.6.

Personnel must be trained in at least the following if related to the scope of their job duties (e.g., only personnel responsible for conducting inspections need to understand how to conduct inspections): an overview of what is in the SWPPP; spill response procedures, good housekeeping, maintenance requirements, and material management practices; the location of all controls on the site required by this permit, and how they are to be maintained; the proper procedures to follow with respect to the permit's pollution prevention requirements; and when and how to conduct inspections, record applicable findings, and take corrective actions.

i. Non-Storm water Discharges

Determine if any non-storm water discharges not authorized by an NPDES permit exist. Any non-storm water discharges discovered must either be eliminated or modified into this permit.

The following non-storm water discharges are authorized and should be documented when they occur in accordance with Part I.F.2.c. of the permit:

Discharges from fire-fighting activities;  
Fire Hydrant flushings;  
Potable water, including water line flushings;  
Condensate from air conditioners, coolers, and other compressors and from the outside storage of refrigerated gases or liquids;  
Irrigation drainage;  
Landscape watering provided all pesticides, herbicides, and fertilizer have been applied in accordance with the approved labeling;  
Pavement wash water where no detergents are used and no spills or leaks of toxic or hazardous material have occurred (unless all spilled material has been removed);  
Routine external building washdown that does not use detergents;  
Ground water or spring water;  
Foundation or footing drains where flows are not contaminated with process materials;  
Incidental windblown mist from cooling towers that collects on rooftops or adjacent portions of the facility, but not intentional discharges from cooling towers (e.g., "piped cooling tower blowdown or drains); and  
Vehicle wash- waters where detergents or solvents are not utilized.

j. Dust Generation and Vehicle Tracking of Industrial Materials

Minimize generation of dust and off-site tracking of raw, final, or waste materials.

5. Annual Review

At least once every 12 months, prepare an Annual Report which includes the following: the results or a summary of the past year's routine facility inspection documentation and quarterly visual assessment documentation;

information copied or summarized from the corrective action documentation required (if applicable). If corrective action is not yet completed at the time of preparation of this Annual Report, describe the status of any outstanding corrective action(s); and any incidents of noncompliance observed or, if there is no noncompliance, a certification signed by a responsible corporate officer, general partner or the proprietor, executive officer or ranking elected official, stating the facility is in compliance with this permit.

6. Corrective Actions – Conditions Requiring Review

- a. If any of the following conditions occur, review the SWPPP to determine if and where revisions may need to be made to eliminate the condition and prevent its reoccurrence:
  - i. An unauthorized release or discharge (e.g., spill, leak, or discharge of non-stormwater not authorized by this NPDES permit) occurs at the facility;
  - ii. Control measures are not stringent enough for the discharge to meet applicable water quality standards;
  - iii. A required control measure was never installed, was installed incorrectly, or is not being properly operated or maintained;
  - iv. Visual assessments indicate obvious signs of stormwater pollution (e.g., color, odor, floating solids, settled solids, suspended solids, foam); or
- b. If construction or a change in design, operation, or maintenance at the facility significantly changes the nature of pollutants discharged in storm water from the facility, or significantly increases the quantity of pollutants discharge the permittee must review and revise the selection, design, installation, and implementation of the control measures to determine if modifications are necessary to meet the effluent limits in this permit.

7. Corrective Action Deadlines

If additional changes are necessary, a new or modified control must be installed and made operational, or a repair completed, before the next storm event if possible, otherwise as soon as is reasonably practicable given the scope of the corrective action. The reasons for any schedule for a corrective action requiring more than 30 days to complete shall be documented. A schedule for completing the work must also be identified, which must be done as soon as practicable after the 30-day timeframe but no longer than 90 days after discovery.

Where corrective actions result in changes to any of the controls or procedures documented in the SWPPP, the SWPPP must be modified accordingly within 30 calendar days of completing corrective action work.

These time intervals are not grace periods, but are schedules considered reasonable for documenting the findings and for making repairs and improvements. They are included in this permit to ensure that the conditions prompting the need for these repairs and improvements are not allowed to persist indefinitely.

8. Corrective Action Report

The existence of any of the conditions listed in Part I.E.6 must be documented within 24 hours of becoming aware of such condition. The following information must be included in the documentation:

- a. Identification and description of the condition triggering the need for corrective action review. For any spills or leaks, include the following information: a description of the incident including material, date/time, amount, location, and reason for spill, and any leaks, spills or other releases that resulted in discharges of pollutants to waters of U.S., through stormwater or otherwise;
- b. Date the condition was identified; and
- c. A discussion of whether the triggering condition requires corrective action. For any spills or leaks, include response actions, the date/time clean-up completed, notifications made, and staff involved. Also include any measures taken to prevent the reoccurrence of such releases.

Document the corrective actions taken that occurred as a result of the conditions listed in Part I.E.6. within 30 days from the time of discovery of any of those conditions. Provide the dates when each corrective action was initiated and completed (or is expected to be completed). If applicable, document why it is infeasible to complete necessary installations or repairs within the 30-day timeframe and document the schedule for installing the controls and making them operational as soon as practicable after the 30-day timeframe.

9. Inspections

a. Routine Facility Inspections

During normal facility operating hours conduct inspections of areas of the facility covered by the requirements in this permit, including the following:

- i. Areas where industrial materials or activities are exposed to stormwater;
- ii. Areas identified in the SWPPP and those that are potential pollutant sources;
- iii. Areas where spills and leaks have occurred in the past 3 years.
- iv. Discharge points; and
- v. Control measures used to comply with the effluent limits contained in this permit.

Inspections must be conducted at least quarterly (i.e., once each calendar quarter), or in some instances more frequently (e.g., monthly), as appropriate. Increased frequency may be appropriate for some types of equipment, processes and stormwater control measures, or areas of the facility with significant activities and materials exposed to stormwater. At least one of the routine inspections must be conducted during a period when a stormwater discharge is occurring.

Inspections must be performed by qualified personnel with at least one member of the stormwater pollution prevention team participating. Inspectors must consider the results of visual and analytical monitoring (if any) for the past year when planning and conducting inspections.

During the inspection examine or look out for the following:

- vi. Industrial materials, residue or trash that may have or could come into contact with stormwater;
- vii. Leaks or spills from industrial equipment, drums, tanks and other containers;
- viii. Offsite tracking of industrial or waste materials, or sediment where vehicles enter or exit the site;
- ix. Tracking or blowing of raw, final or waste materials from areas of no exposure to exposed areas; and
- x. Control measures needing replacement, maintenance or repair.

During an inspection occurring during a stormwater discharge, control measures implemented to comply with effluent limits must be observed to ensure they are functioning correctly. Discharge outfalls

must also be observed during this inspection. If such discharge locations are inaccessible, nearby downstream locations must be inspected.

b. Routine Facility Inspection Documentation

The findings of facility inspections must be documented and the report maintained with the SWPPP. Findings must be summarized in the annual report. Document all findings, including but not limited to, the following information:

- i. The inspection date and time;
- ii. The name(s) and signature(s) of the inspector(s);
- iii. Weather information;
- iv. All observations relating to the implementation of control measures at the facility, including:
  - (1) A description of any discharges occurring at the time of the inspection;
  - (2) Any previously unidentified discharges and/or pollutants from the site;
  - (3) Any evidence of, or the potential for, pollutants entering the drainage system;
  - (4) Observations regarding the physical condition of and around all outfalls including any flow dissipation devices, and evidence of pollutants in discharges and/or the receiving water;
  - (5) Any control measures needing maintenance, repairs, or replacement;
- v. Any additional control measures needed to comply with the permit requirements; and
- vi. Any incidents of noncompliance observed.

Any corrective action required as a result of a routine facility inspection must be performed consistent with Part I.E.6. of this permit.

If the discharge was visual assessed, as required in Part I.E.9.c., during the facility inspection, include the results of the assessment with the report required in Part I.E.9.a., as long as all components of both types of inspections are included in the report.

c. Quarterly Visual Assessment Procedures

Once each quarter for the entire permit term, collect a stormwater sample from each outfall and conduct a visual assessment of each of these samples. These samples are not required to be collected consistent with 40 CFR Part 136 procedures but should be collected in

such a manner that the samples are representative of the stormwater discharge. Guidance on monitoring is available at:

<http://water.epa.gov/polwaste/npdes/stormwater/EPA-Multi-Sector-General-Permit-MSGP.cfm>

The visual assessment must be made:

- i. Of a sample in a clean, clear glass, or plastic container, and examined in a well-lit area;
- ii. On samples collected within the first 30 minutes of an actual discharge from a storm event. If it is not possible to collect the sample within the first 30 minutes of discharge, the sample must be collected as soon as practicable after the first 30 minutes and document why it was not possible to take samples within the first 30 minutes. In the case of snowmelt, samples must be taken during a period with a measurable discharge from the site; and
- iii. For storm events, on discharges that occur at least 72 hours (3 days) from the previous discharge. The 72-hour (3-day) storm interval does not apply if you document that less than a 72-hour (3-day) interval is representative for local storm events during the sampling period.

Visually inspect or observe the sample for the following water quality characteristics:

- iv. Color;
- v. Odor;
- vi. Clarity (diminished);
- vii. Floating solids;
- viii. Settled solids;
- ix. Suspended solids;
- x. Foam;
- xi. Oil sheen; and
- xii. Other obvious indicators of stormwater pollution.

Whenever the visual assessment shows obvious signs of stormwater pollution, initiate the corrective action procedures in Part I.E.6.

d. Quarterly Visual Assessment Documentation

Results of visual assessments must be documented and the documentation maintained onsite with the SWPPP. Documentation of the visual assessment must include, but is not be limited to:

- i. Sample location(s);
- ii. Sample collection date and time, and visual assessment date and time for each sample;
- iii. Personnel collecting the sample and performing visual assessment, and their signatures;
- iv. Nature of the discharge (i.e., runoff or snowmelt);
- v. Results of observations of the stormwater discharge;
- vi. Probable sources of any observed stormwater contamination; and
- vii. If applicable, why it was not possible to take samples within the first 30 minutes.

Any corrective action required as a result of a quarterly visual assessment must be performed consistent with Part I.E.6. of this permit.

e. Exceptions to Quarterly Visual Assessments

- i. Adverse Weather Conditions: When adverse weather conditions prevent the collection of samples during the quarter, take a substitute sample during the next qualifying storm event. Documentation of the rationale for no visual assessment for the quarter must be included with the SWPPP records. Adverse conditions are those that are dangerous or create inaccessibility for personnel, such as local flooding, high winds, or electrical storms, or situations that otherwise make sampling impractical, such as extended frozen conditions.
- ii. Snow: In areas subject to snow, at least one quarterly visual assessment must capture snowmelt discharge, taking into account the exception described above for climates with irregular stormwater runoff.
- iii. For outfalls that discharge non-contact cooling water and/or process water where the dry weather discharge flow is substantially greater than typical storm water contributions to the overall discharge flow, quarterly visual assessments are not required.

F. STORM WATER POLLUTION PREVENTION PLAN

To the extent other facility contingency plans prepared outside the scope of the NPDES permit (e.g. SPCC, RCRA) address either directly or indirectly storm water prevention measures, those plans are incorporated by reference and may be cited by the permittee as means to comply with the provisions of this section.

1. Development of Plan

Within 18 months from the effective date of this permit, the permittee is required to revise and update the current Storm Water Pollution Prevention Plan (SWPPP) to ensure the SWPPP is appropriate for the permitted facility. The SWPPP does not contain effluent limitations. The SWPPP is intended to document the selection, design, and installation of control measures. As distinct from the SWPPP, the additional documentation requirements are intended to document the implementation (including inspection, maintenance, monitoring, and corrective action) of the permit requirements.

2. Contents

The plan shall include, at a minimum, the following items:

- a. Pollution Prevention Team – The SWPPP must identify the staff members (by name or title) that comprise the facility's stormwater pollution prevention team as well as their individual responsibilities. The stormwater pollution prevention team is responsible for overseeing development of the SWPPP, any later modifications to it, and for compliance with permit Parts I.E. and I.F. of this permit. Each member of the stormwater pollution prevention team must have ready access to either an electronic or paper copy of applicable portions of this permit, the most updated copy of the SWPPP, other relevant documents or information that must be kept with the SWPPP.
- b. Site Description – As a minimum, the plan shall contain the following:
  - i. *Activities at the Facility.* Provide a description of the nature of the industrial activities at the facility.
  - ii. *General location map.* Provide a general location map (e.g., U.S. Geological Survey (USGS) quadrangle map) with enough detail to identify the location of the facility and all receiving waters for the stormwater discharges.
  - iii. *Site map.* Provide a map showing:
    - (A) Boundaries of the property and the size of the property in acres;
    - (B) Location and extent of significant structures and impervious surfaces;
    - (C) Directions of stormwater flow (use arrows);
    - (D) Locations of all stormwater control measures;
    - (E) Locations of all receiving waters, including wetlands, in the immediate vicinity of the facility. Indicate which waterbodies are listed as impaired and which are

- identified by the State of Indiana or EPA as Tier 2 or Tier 2.5 waters;
- (F) Locations of all stormwater conveyances including ditches, pipes, and swales;
  - (G) Locations of potential pollutant sources identified;
  - (H) Locations where significant spills or leaks identified have occurred;
  - (I) Locations of all stormwater monitoring points;
  - (J) Locations of stormwater inlets and outfalls, with a unique identification code for each outfall (e.g., Outfall No. 1, No. 2), indicating if you are treating one or more outfalls as “substantially identical”, and an approximate outline of the areas draining to each outfall;
  - (K) If applicable, municipal separate storm sewer systems and where the stormwater discharges to them;
  - (L) Areas of federally-listed critical habitat for endangered or threatened species, if applicable.
  - (M) Locations of the following activities where such activities are exposed to precipitation:
    - (a) fueling stations;
    - (b) vehicle and equipment maintenance and/or cleaning areas;
    - (c) loading/unloading areas;
    - (d) locations used for the treatment, storage, or disposal of wastes;
    - (e) liquid storage tanks;
    - (f) processing and storage areas;
    - (g) immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or by-products used or created by the facility;
    - (h) transfer areas for substances in bulk; and
    - (i) locations and sources of run-on to the site from adjacent property that contains significant quantities of pollutants.
  - (N) Identify in the SWPPP where any of the following activities may be exposed to precipitation or surface runoff: storage or disposal of wastes such as spent solvents and baths, sand, slag and dross; liquid storage tanks and drums; processing areas including pollution control equipment (e.g., baghouses); and storage areas of raw material such as coal, coke, scrap, sand, fluxes, refractories or metal in any form. In addition, indicate where an accumulation of significant amounts of particulate matter could occur from such sources as

furnace or oven emissions, losses from coal and coke handling operations, etc., and could result in a discharge of pollutants in stormwater.

Include in the inventory of materials handled at the site that potentially may be exposed to precipitation or runoff areas where there is the potential for deposition of particulate matter from process air emissions or losses during material-handling activities.

c. Potential Pollutant Sources:

The SWPPP must document areas at the facility where industrial materials or activities are exposed to stormwater or from which allowable non-stormwater discharges may be released. Industrial materials or activities include, but are not limited to: material handling equipment or activities; industrial machinery; raw materials; industrial production and processes; and intermediate products, by-products, final products, and waste products. *Material handling activities* include, but are not limited to: the storage, loading and unloading, transportation, disposal, or conveyance of any raw material, intermediate product, final product or waste product. For structures located in areas of industrial activity, be aware that the structures themselves are potential sources of pollutants. This could occur, for example, when metals such as aluminum or copper are leached from the structures as a result of acid rain.

For each area identified, the description must include:

- i. *Activities in the Area.* A list of the industrial activities exposed to stormwater (e.g., material storage; equipment fueling, maintenance, and cleaning; cutting steel beams).
- ii. *Pollutants.* A list of the pollutant(s) or pollutant constituents (e.g., crankcase oil, zinc, sulfuric acid, and cleaning solvents) associated with each identified activity, which could be exposed to rainfall or snowmelt and could be discharged from the facility. The pollutant list must include all significant materials that have been handled, treated, stored, or disposed, and that have been exposed to stormwater in the three years prior to the date the SWPPP is prepared or amended.
- iii. *Spills and Leaks.* The SWPPP must document where potential spills and leaks could occur that could contribute pollutants to stormwater discharges, and the corresponding outfall(s) that would be affected by such spills and leaks. The SWPPP must document all significant spills and leaks of oil or toxic or hazardous pollutants that actually occurred at exposed areas,

or that drained to a stormwater conveyance, in the three years prior to the date the SWPPP is prepared or amended.

- iv. *Non-Storm water Discharges* – The SWPPP must document that you have evaluated for the presence of non-storm water discharges not authorized by an NPDES permit. Any non-storm water discharges have either been eliminated or incorporated into this permit. Documentation of non-storm water discharges shall include:

A written non-storm water assessment, including the following:

- (1) The date of the evaluation;
- (2) A description of the evaluation criteria used;
- (3) A list of the outfalls or onsite drainage points that were directly observed during the evaluation; and
- (4) The action(s) taken, such as a list of control measures used to eliminate unauthorized discharge(s), or documentation that a separate NPDES permit was obtained. For example, a floor drain was sealed, a sink drain was re-routed to sanitary, or an NPDES permit application was submitted for an unauthorized cooling water discharge.

- v. *Salt Storage* - The location of any storage piles containing salt used for deicing or other commercial or industrial purposes must be documented in the SWPPP.

- vi. *Sampling Data* - All stormwater discharge sampling data collected at the facility during the previous permit term must be summarized in the SWPPP.

- vii. *Description of Control Measures to Meet Technology-Based Effluent Limits* - The location and type of control measures you have specifically chosen and/or designed to comply with Permit Part I.E. must be documented in the SWPPP. Regarding the control measures, the following must be documented as appropriate:

- (a) How the selection and design considerations of control measures were addressed.
- (b) How the control measures address the pollutant sources identified.

- d. Schedules and Procedures

The following must be documented in the SWPPP:

- i. Good Housekeeping – Any schedule for regular pickup and disposal of waste materials, along with routine inspections for leaks and conditions of drums, tanks and containers;
- ii. Maintenance – Preventative maintenance procedures, including regular inspections, testing, maintenance and repair of all control measures to avoid situations that may result in leaks, spills, and other releases, and any back-up practices in place should a runoff event occur while a control measure is off-line. The SWPPP shall include the schedule or frequency for maintaining all control measures used to comply with the storm water requirements.
- iii. Spill Prevention and Response Procedures – Procedures for preventing and responding to spills and leaks, including notification procedures. For preventing spills, include in the SWPPP the control measures for material handling and storage, and the procedures for preventing spills that can contaminate stormwater. Also specify cleanup equipment, procedures and spill logs, as appropriate, in the event of spills. You may reference the existence of other plans for Spill Prevention Control and Countermeasure (SPCC) developed for the facility under Section 311 of the CWA or BMP programs otherwise required by an NPDES permit for the facility, provided that you keep a copy of that other plan onsite and make it available for review;
- iv. Erosion and Sediment Control – If you use polymers and/or other chemical treatments as part of the controls, identify the polymers and/or chemicals used and the purpose; and
- v. Employee Training – The elements of the employee training plan shall include all, but not be limited to, the requirements set forth in Permit Part.I.E., and also the following:

- (1) The content of the training;
- (2) The frequency/schedule of training for employees within each department with responsibility for environmental management;
- (3) A log of the dates on which specific employees received training.

e. Pertaining to Inspections

Document in the SWPPP the procedures for performing, as appropriate, the types of inspections specified by this permit, including:

- i. Routine facility inspections and;
- ii. Quarterly visual assessment of stormwater discharges.

For each type of inspection performed, the SWPPP must identify:

- iii. Person(s) or positions of person(s) responsible for inspection;
- iv. Schedules for conducting inspections, including tentative schedule for irregular stormwater runoff discharges; and
- v. Specific items to be covered by the inspection, including schedules for specific outfalls.

f. Pertaining to Monitoring

For each type of monitoring, the SWPPP must document:

- i. Locations where samples are collected, including any determination that two or more outfalls are substantially identical;
- ii. Parameters for sampling and the frequency of sampling for each parameter;
- iii. Schedules for monitoring at the facility, including schedule for alternate monitoring periods for climates with irregular stormwater runoff;
- iv. Any numeric control values (effluent limitations guidelines, TMDL-related requirements, or other requirements) applicable to discharges from each outfall; and
- v. Procedures (e.g., responsible staff, logistics, laboratory to be used) for gathering storm event data.

g. General Requirements – The SWPPP must meet the following general requirements:

- i. The SWPPP shall be prepared in accordance with good engineering practices and to industry standards. The SWPPP may be developed by either a person on the staff or a third party, and it shall be certified in accordance with the signature requirements, under Part II.C.6.
- ii. Retain a complete copy of the current SWPPP required by this permit at the facility in any accessible format. A complete SWPPP includes any documents incorporated by reference and all documentation supporting parts I.D. and I.E. of this permit, as well as the signed and dated certification page. Regardless of the format, the SWPPP must be immediately available to facility employees, EPA, a state or tribe, the operator of an MS4 receiving discharges from the site; and representatives of the U.S. Fish and Wildlife Service (USFWS) or the National Marine Fisheries Service (NMFS) at the time of an onsite inspection. The current SWPPP or certain information from the current SWPPP

must also be made available to the public (except any confidential business information (CBI) or restricted information, but clearly identify those portions of the SWPPP that are being withheld from public access.

- iii. Where the SWPPP refers to procedures in other facility documents, such as a Spill Prevention, Control and Countermeasure (SPCC) Plan or an Environmental Management System (EMS), copies of the relevant portions of those documents must be kept with the SWPPP.

G. REPORTING REQUIREMENTS FOR SOLVENTS, DEGREASING AGENTS, ROLLING OILS, WATER TREATMENT CHEMICALS, AND BIOCIDES

The permittee will maintain the following information on site, and report to IDEM if requested; the total quantity (lbs/year) of each solvent, degreasing agent, rolling oil, water treatment chemical, and biocide that was purchased for that year and which can be present in any outfall regulated by this permit. This requirement includes all surfactants, anionic, cationic, and non-ionic, which may be used in part or wholly as a constituent in these compounds.

The permittee will maintain these files for a period of ten years. Files will include the Material Safety Data Sheet, FIFRA label for each biocide, and chemical name and CAS number for each compound used. If these compounds contain proprietary or confidential business information, the permittee may maintain this information in a separate file that can be accessed by the U.S. EPA or IDEM personnel with appropriate authority.

H. GROUNDWATER REMEDIATION PROJECTS

"Compatible Treated Wastewater from Groundwater Remediation Project" for purposes of this permit means ground waters that are contaminated with pollutants that are limited at the respective wastewater treatment facilities. Other ground waters shall be pretreated prior to introduction to the respective wastewater treatment facilities to remove or treat those pollutants that are not limited or that cannot be effectively removed or treated at the respective wastewater treatment facilities.

The permittee shall notify IDEM prior to the date it desires to introduce compatible or pretreated ground waters from any groundwater remediation project to wastewater treatment facilities at ArcelorMittal Steel USA, LLC.- Indiana Harbor East. Such notification shall include the volume of groundwater to be treated and discharged; a description of any groundwater pretreatment facilities; the identity of the receiving wastewater treatment facility and permitted outfall; identification, concentrations and mass loadings of containments in the untreated groundwater; identification, and expected concentrations and mass loadings of containments in the pretreated groundwater prior to introduction of groundwater to the wastewater

treatment facilities; and, identification and expected concentrations and mass loadings of groundwater contaminants to be discharged from the wastewater treatment facilities. IDEM shall evaluate the information submitted to determine if a permit modification is required under 327 IAC 5-2-16. Discharge of this waste stream shall not commence until ArcelorMittal Steel USA, LLC. has received written approval from IDEM.

I. No. 7 BLAST FURNACE

The permittee is prohibited from discharging process wastewater from No. 7 Blast Furnace from any point source except as follows: treated No. 7 Blast Furnace Recycle Blowdown may be discharged from Internal Outfall 518 through Final Outfall 018; and, No. 7 Blast Furnace Recycle Blowdown may be discharged on an intermittent basis to the Master Recycle System that discharges through Outfall 014 and, intermittently, through Outfall 013.

J. POLLUTION MINIMIZATION PROGRAM

This permit contains water quality-based effluent limits for TRC which are less than the LOQ. Therefore, the permittee is required to continue a pollutant minimization program (PMP) for TRC. A PMP has already been conducted for TRC at all Outfalls regulated by this permit, therefore, a new PMP will not be required for TRC.

K. REOPENING CLAUSES

This permit may be modified, or alternately, revoked and reissued, after public notice and opportunity for hearing:

1. to comply with any applicable effluent limitation or standard issued or approved under 301(b)(2)(C),(D) and (E), 304 (b)(2), and 307(a)(2) of the Clean Water Act, if the effluent limitation or standard so issued or approved:
  - a. contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
  - b. controls any pollutant not limited in the permit.
2. to incorporate any of the reopening clause provisions cited at 327 IAC 5- 2-16.
3. to include whole effluent toxicity limitations or to include limitations for specific toxicants if the results of a long-term instream biomonitoring program, and/or the whole effluent toxicity testing program, and or the TRE study indicate that such limitations are necessary to meet Indiana Water Quality Standards.

4. to require initiation of a long term in-stream biomonitoring program in the Indiana Harbor Ship Canal and the Indiana Harbor upon completion of the Indiana Harbor and Indiana Harbor Ship Canal sediment remediation program described in the March 1993 consent decree H90-0328 between Inland Steel Corporation and the U.S. EPA, and completion of the U.S. Army Corps of Engineering dredging.
5. to require the permittee to undertake a sediment monitoring program upon completion of the Indiana Harbor Ship Canal and the Indiana Harbor sediment remediation program described in the March 1993 Consent Decree H90-0328 between Inland Steel Corporation and the U.S. EPA, and completion of the U.S. Army Corps of Engineering dredging.
6. to require investigation and documentation of the source of contamination and establish discharge limits or monitoring requirements, if necessary, after reviewing sediment monitoring data.
7. to revise or remove the requirements of the pollutant minimization program, if supported by information generated as a result of the program.
8. to comply with any applicable standards, regulations and requirements issued or approved under section 316(b) of the Clean Water Act, if the standards, regulations and requirements so issued or approved contains different conditions than those in the permit.

#### L. ZEBRA AND QUAGGA MUSSEL CONTROL

As a means of controlling Zebra and Quagga Mussel colonization within the ArcelorMittal Steel Indiana Harbor East, the permittee chlorinates intake water on a continuous basis during a portion of each year. Wastewater shall be dechlorinated prior to discharge from all external Outfalls 011, 014, and 018. The discharge from each Outfall listed above shall have limitations and monitoring requirements for Total Residual Chlorine (TRC) to meet compliance with the TRC requirements. Monitoring is required only during the period when intake water is being chlorinated for all Outfalls except 014. The wastewater discharge through Outfall 014 is chlorinated year round and shall be dechlorinated prior to discharge. The monthly average water quality based effluent limit (WQBEL) for TRC is less than the limit of quantitation (LOQ) as defined below. Compliance with the monthly average limit will be demonstrated if the monthly average effluent level is less than or equal to the monthly average WQBEL. Daily effluent values that are less than the LOQ, used to determine the monthly average effluent levels less than the LOQ, may be assigned a value of zero (0), unless, after considering the number of

monitoring results that are greater than the limit of detection (LOD), and applying appropriate statistical techniques, a value other than zero (0) is warranted.

The daily maximum WQBEL for TRC is greater than or equal to the LOD but less than the LOQ specified in the permit. Compliance with the daily maximum limit will be demonstrated if the observed effluent concentrations are less than the LOQ.

| <u>Parameter</u> | <u>Test Method</u>         | <u>LOD</u> | <u>LOQ</u> |
|------------------|----------------------------|------------|------------|
| Chlorine         | 4500 – CL-D,E or 4500 CL-G | 0.02 mg/l  | 0.06 mg/l  |

#### Case-Specific LOD/LOQ

The permittee may determine a case-specific LOD or LOQ using the analytical method specified above, or any other test method which is approved by the Commissioner prior to use. The LOD shall be derived by the procedure specified for method detection limits contained in 40 CFR Part 136, Appendix B, and the LOQ shall be set equal to 3.18 times the LOD. Other methods may be used if first approved by the Commissioner.

#### M. DREDGING PROJECT EFFLUENT

For the purposes of this permit, the term "Dredging Project Effluent" means wastewater generated during the dewatering of sediments or other material dredged from the Indiana Harbor or the Indiana Harbor Ship Canal. Beginning on the effective date and lasting until the expiration date of this permit, the permittee is authorized to treat and discharge dredging water effluent through its existing wastewater treatment facilities providing that the pollutant limits in the permit for the affected outfall are met and that treatment is adequate to reduce the concentration and loading of any additional pollutants so that they are below WQS levels and the loadings found in the most recent Wasteload Allocation prepared by IDEM. Dredging water effluents that are contaminated with pollutants that are not limited, or cannot be removed or treated at the respective wastewater treatment facility, must be pretreated for the removal of those pollutants prior to introduction into the wastewater treatment facility.

The permittee shall notify IDEM at least 120 days prior to the introduction of untreated or pretreated dredging project effluents to wastewater treatment facilities at ArcelorMittal Steel USA LLC- Indiana Harbor East. Such notification shall include an estimate of the volume of dredging project effluent to be treated and discharged; a description of any pretreatment facilities; the identity of the receiving wastewater treatment facility and permitted outfall; identification and concentration of contaminants in the untreated dredging project effluent; identification and expected concentrations and mass loadings of contaminants in the pretreated dredging project effluent prior to introduction into the wastewater treatment facility; and, identification and expected concentrations and mass loadings of dredging project contaminants to be discharged from the wastewater treatment facility. The

introduction of untreated or pretreated dredging project effluent to a wastewater treatment facility shall commence only upon written authorization from IDEM.

N. NO. 6 DOCK

Beginning on the effective date of this permit and lasting until a groundwater remediation program is implemented at the No. 6 Dock in accordance with U.S. EPA Consent Decree (H90-0328, March 1993), during the period March through November of each year the permittee shall continue conducting monthly inspections and repair programs at the No. 6 Dock for the purpose of sealing leaks of groundwater to the Indiana Harbor Ship Canal above the water line. The permittee shall report a summary of the leak detection and repair program not later than December 31st of each year of the program for that year. The report shall include the dates of inspection, the findings from each inspection, a description of the repairs undertaken, the approximate location of each repair with respect to a permanent reference location, and the dates the repairs were completed. The permittee shall also maintain a log of inspections and repairs at the facility, and shall make such log available to representatives of IDEM and the U.S. EPA upon request.

The provisions of this paragraph shall terminate automatically upon termination or conclusion of U.S. EPA Consent Decree H90-032, March 1993).

O. DISCHARGES TO THE LAKE MICHIGAN IMPOUNDMENT

The permittee shall not discharge process wastewater or fly ash lagoon leachate to the Lake Michigan Impoundment. Discharges to the Lake Michigan Impoundment shall be limited to storm water from the north portion of the facility, precipitation, groundwater from the facility, and inflows from Lake Michigan. The permittee shall use only service water (Lake Michigan intake water) for blast furnace slag quench near the Lake Michigan Impoundment. For purposes of this permit, the water contained in the Lake Michigan Impoundment constructed by Inland Steel, now ArcelorMittal shall be considered to be part of Lake Michigan.

## PART II

### STANDARD CONDITIONS FOR NPDES PERMITS

#### A. GENERAL CONDITIONS

##### 1. Duty to Comply

The permittee shall comply with all terms and conditions of this permit in accordance with 327 IAC 5-2-8(1) and all other requirements of 327 IAC 5-2-8. Any permit noncompliance constitutes a violation of the Clean Water Act and IC 13 and is grounds for enforcement action or permit termination, revocation and reissuance, modification, or denial of a permit renewal application.

It shall not be a defense for a 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 the permit.

##### 2. Duty to Mitigate

In accordance with 327 IAC 5-2-8(3), the permittee shall take all reasonable steps to minimize or correct any adverse impact to the environment resulting from noncompliance with this permit. During periods of noncompliance, the permittee shall conduct such accelerated or additional monitoring for the affected parameters, as appropriate or as requested by IDEM, to determine the nature and impact of the noncompliance.

##### 3. Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must obtain and submit an application for renewal of this permit in accordance with 327 IAC 5-2-8(2). It is the permittee's responsibility to obtain and submit the application. In accordance with 327 IAC 5-2-3(c), the owner of the facility or operation from which a discharge of pollutants occurs is responsible for applying for and obtaining the NPDES permit, except where the facility or operation is operated by a person other than an employee of the owner in which case it is the operator's responsibility to apply for and obtain the permit. Pursuant to 327 IAC 5-3-2(a)(2), the application must be submitted at least 180 days before the expiration date of this permit. This deadline may be extended if:

- a. permission is requested in writing before such deadline;
- b. IDEM grants permission to submit the application after the deadline; and

c. the application is received no later than the permit expiration date. Under the terms of the proposed Federal E-Reporting Rule, the permittee may be required to submit its application for renewal electronically in the future.

#### 4. Permit Transfers

In accordance with 327 IAC 5-2-8(4)(D), this permit is nontransferable to any person except in accordance with 327 IAC 5-2-6(c). This permit may be transferred to another person by the permittee, without modification or revocation and reissuance being required under 327 IAC 5-2-16(c)(1) or 16(e)(4), if the following occurs:

- a. the current permittee notified the Commissioner at least thirty (30) days in advance of the proposed transfer date;
- b. a written agreement containing a specific date of transfer of permit responsibility and coverage between the current permittee and the transferee (including acknowledgment that the existing permittee is liable for violations up to that date, and the transferee is liable for violations from that date on) is submitted to the Commissioner;
- c. the transferee certifies in writing to the Commissioner their intent to operate the facility without making such material and substantial alterations or additions to the facility as would significantly change the nature or quantities of pollutants discharged and thus constitute cause for permit modification under 327 IAC 5-2-16(d). However, the Commissioner may allow a temporary transfer of the permit without permit modification for good cause, e.g., to enable the transferee to purge and empty the facility's treatment system prior to making alterations, despite the transferee's intent to make such material and substantial alterations or additions to the facility; and
- d. the Commissioner, within thirty (30) days, does not notify the current permittee and the transferee of the intent to modify, revoke and reissue, or terminate the permit and to require that a new application be filed rather than agreeing to the transfer of the permit.

The Commissioner may require modification or revocation and reissuance of the permit to identify the new permittee and incorporate such other requirements as may be necessary under the Clean Water Act or state law.

#### 5. Permit Actions

In accordance with 327 IAC 5-2-16(b) and 327 IAC 5-2-8(4), this permit may be modified, revoked and reissued, or terminated for cause, including, but not limited to, the following:

- a. Violation of any terms or conditions of this permit;

- b. Failure of the permittee to disclose fully all relevant facts or misrepresentation of any relevant facts in the application, or during the permit issuance process; or
- c. A change in any condition that requires either a temporary or a permanent reduction or elimination of any discharge controlled by the permit, e.g., plant closure, termination of discharge by connection to a POTW, a change in state law that requires the reduction or elimination of the discharge, or information indicating that the permitted discharge poses a substantial threat to human health or welfare.

Filing of either of the following items does not stay or suspend any permit condition: (1) a request by the permittee for a permit modification, revocation and reissuance, or termination, or (2) submittal of information specified in Part II.A.3 of the permit including planned changes or anticipated noncompliance.

The permittee shall submit any information that the permittee knows or has reason to believe would constitute cause for modification or revocation and reissuance of the permit at the earliest time such information becomes available, such as plans for physical alterations or additions to the permitted facility that:

- 1. could significantly change the nature of, or increase the quantity of pollutants discharged; or
- 2. the commissioner may request to evaluate whether such cause exists.

In accordance with 327 IAC 5-1-3(a)(5), the permittee must also provide any information reasonably requested by the Commissioner.

## 6. Property Rights

Pursuant to 327 IAC 5-2-8(6) and 327 IAC 5-2-5(b), the issuance of this permit does not convey any property rights of any sort or any exclusive privileges, nor does it authorize any injury to persons or private property or invasion of other private rights, any infringement of federal, state, or local laws or regulations. The issuance of the permit also does not preempt any duty to obtain any other state, or local assent required by law for the discharge or for the construction or operation of the facility from which a discharge is made.

## 7. Severability

In accordance with 327 IAC 1-1-3, the provisions of this permit are severable and, if any provision of this permit or the application of any provision of this permit to any person or circumstance is held invalid, the invalidity shall not affect any other provisions or applications of the permit which can be given effect without the invalid provision or application.

8. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject to under Section 311 of the Clean Water Act.

9. State Laws

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation under authority preserved by Section 510 of the Clean Water Act or state law.

10. Penalties for Violation of Permit Conditions

Pursuant to IC 13-30-4, a person who violates any provision of this permit, the water pollution control laws; environmental management laws; or a rule or standard adopted by the Environmental Rules Board is liable for a civil penalty not to exceed twenty-five thousand dollars (\$25,000) per day of any violation.

Pursuant to IC 13-30-5, a person who obstructs, delays, resists, prevents, or interferes with (1) the department; or (2) the department's personnel or designated agent in the performance of an inspection or investigation performed under IC 13-14-2-2 commits a class C infraction.

Pursuant to IC 13-30-10-1.5(k), a person who willfully or recklessly violates any NPDES permit condition or filing requirement, any applicable standards or limitations of IC 13-18-3-2.4, IC 13-18-4-5, IC 13-18-8, IC 13-18-9, IC 13-18-10, IC 13-18-12, IC 13-18-14, IC 13-18-15, or IC 13-18-16, or who knowingly makes any false material statement, representation, or certification in any NPDES form, notice, or report commits a Class C misdemeanor.

Pursuant to IC 13-30-10-1.5(l), an offense under IC 13-30-10-1.5(k) is a Class D felony if the offense results in damage to the environment that renders the environment unfit for human or vertebrate animal life. An offense under IC 13-30-10-1.5(k) is a Class C felony if the offense results in the death of another person.

11. Penalties for Tampering or Falsification

In accordance with 327 IAC 5-2-8(10), the permittee shall comply with monitoring, recording, and reporting requirements of this permit. The Clean Water Act, as well as IC 13-30-10-1, provides that any person who knowingly or intentionally (a) destroys, alters, conceals, or falsely certifies a record that is required to be maintained under the terms of a permit issued by the department; and may be used to determine the status of compliance, (b) renders inaccurate or inoperative a

recording device or a monitoring device required to be maintained by a permit issued by the department, or (c) falsifies testing or monitoring data required by a permit issued by the department commits a Class B misdemeanor.

12. Toxic Pollutants

If any applicable effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under Section 307(a) of the Clean Water Act for a toxic pollutant injurious to human health, and that standard or prohibition is more stringent than any limitation for such pollutant in this permit, this permit shall be modified or revoked and reissued to conform to the toxic effluent standard or prohibition in accordance with 327 IAC 5-2-8(5). Effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants injurious to human health are effective and must be complied with, if applicable to the permittee, within the time provided in the implementing regulations, even absent permit modification.

13. Wastewater treatment plant and certified operators

The permittee shall have the wastewater treatment facilities under the responsible charge of an operator certified by the Commissioner in a classification corresponding to the classification of the wastewater treatment plant as required by IC 13-18-11-11 and 327 IAC 5-22. In order to operate a wastewater treatment plant the operator shall have qualifications as established in 327 IAC 5-22-7.

327 IAC 5-22-10.5(a) provides that a certified operator may be designated as being in responsible charge of more than one (1) wastewater treatment plant, if it can be shown that he will give adequate supervision to all units involved. Adequate supervision means that sufficient time is spent at the plant on a regular basis to assure that the certified operator is knowledgeable of the actual operations and that test reports and results are representative of the actual operations conditions. In accordance with 327 IAC 5-22-3(11), "responsible charge operator" means the person responsible for the overall daily operation, supervision, or management of a wastewater facility.

Pursuant to 327 IAC 5-22-10(4), the permittee shall notify IDEM when there is a change of the person serving as the certified operator in responsible charge of the wastewater treatment facility. The notification shall be made no later than thirty (30) days after a change in the operator.

14. Construction Permit

In accordance with IC 13-14-8-11.6, a discharger is not required to obtain a state permit for the modification or construction of a water pollution treatment or control facility if the discharger has an effective NPDES permit.

If the discharger modifies their existing water pollution treatment or control facility or constructs a new water pollution treatment or control facility for the treatment or control of any new influent pollutant or increased levels of any existing pollutant, then, within thirty (30) days after commencement of operation, the discharger shall file with the Department of Environment Management a notice of installation for the additional pollutant control equipment and a design summary of any modifications.

The notice and design summary shall be sent to the Office of Water Quality, Industrial NPDES Permits Section, 100 North Senate Avenue, Indianapolis, IN 46204-2251.

#### 15. Inspection and Entry

In accordance with 327 IAC 5-2-8(8), the permittee shall allow the Commissioner, or an authorized representative, (including an authorized contractor acting as a representative of the Commissioner) upon the presentation of credentials and other documents as may be required by law, to:

- a. Enter upon the permittee's premises where a point source, regulated facility, or activity is located or conducted, or where records must be kept pursuant to the conditions of this permit;
- b. Have access to and copy, at reasonable times, any records that must be kept under the terms and conditions of this permit;
- c. Inspect at reasonable times any facilities, equipment or methods (including monitoring and control equipment), practices, or operations regulated or required pursuant to this permit; and
- d. Sample or monitor at reasonable times, any discharge of pollutants or internal wastestreams for the purposes of evaluating compliance with the permit or as otherwise authorized.

#### 16. New or Increased Discharge of Pollutants

This permit prohibits the permittee from undertaking any action that would result in a new or increased discharge of a bioaccumulative chemical of concern (BCC) or a new or increased permit limit for a regulated pollutant that is not a BCC unless one of the following is completed prior to the commencement of the action:

- a. Information is submitted to the Commissioner demonstrating that the proposed new or increased discharges will not cause a significant lowering of water quality as defined under 327 IAC 2-1.3-2(50). Upon review of this information, the Commissioner may request additional information or may determine that the proposed increase is a

significant lowering of water quality and require the submittal of an antidegradation demonstration.

- b. An antidegradation demonstration is submitted to and approved by the Commissioner in accordance with 327 IAC 2-1.3-5 and 327 IAC 2-1.3-6.

## B. MANAGEMENT REQUIREMENTS

### 1. Proper Operation and Maintenance

The permittee shall at all times maintain in good working order and efficiently operate all facilities and systems (and related appurtenances) for the collection and treatment which are installed or used by the permittee and which are necessary for achieving compliance with the terms and conditions of this permit in accordance with 327 IAC 5-2-8(9).

Neither 327 IAC 5-2-8(9), nor this provision, shall be construed to require the operation of installed treatment facilities that are unnecessary for achieving compliance with the terms and conditions of the permit.

### 2. Bypass of Treatment Facilities

Pursuant to 327 IAC 5-2-8(12):

- a. Terms as defined in 327 IAC 5-2-8(12)(A):

- (1) "Bypass" means the intentional diversion of a waste stream from any portion of a treatment facility.
- (2) "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which would cause them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

- b. The permittee may allow a bypass to occur that does not cause a violation of the effluent limitations in the permit, but only if it is also for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Part II.B.2.c., e, and f of this permit.
- c. Bypasses, as defined in (a) above, are prohibited, and the Commissioner may take enforcement action against a permittee for bypass, unless the following occur:

- (1) The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage, as defined above;
  - (2) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance; and
  - (3) The permittee submitted notices as required under Part II.B.2.e; or
  - (4) The condition under Part II.B.2.b above is met.
- d. Bypasses that result in death or acute injury or illness to animals or humans must be reported in accordance with the "Spill Response and Reporting Requirements" in 327 IAC 2-6.1, including calling 888/233-7745 as soon as possible, but within two (2) hours of discovery. However, under 327 IAC 2-6.1-3(1), when the constituents of the bypass are regulated by this permit, and death or acute injury or illness to animals or humans does not occur, the reporting requirements of 327 IAC 2-6.1 do not apply.
- e. The permittee must provide the Commissioner with the following notice:
- (1) If the permittee knows or should have known in advance of the need for a bypass (anticipated bypass), it shall submit prior written notice. If possible, such notice shall be provided at least ten (10) days before the date of the bypass for approval by the Commissioner.
  - (2) The permittee shall orally report an unanticipated bypass that exceeds any effluent limitations in the permit within 24 hours of becoming aware of the bypass noncompliance. The permittee must also provide a written report within five (5) days of the time the permittee becomes aware of the bypass event. The written report must contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times; if the cause of noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate and prevent recurrence of the bypass event. If a complete fax or e-mail

submittal is provided within 24 hours of the time that the permittee became aware of the unanticipated bypass event, then that report will satisfy both the oral and written reporting requirement. E-mails should be sent to [wwreports@idem.in.gov](mailto:wwreports@idem.in.gov).

- f. The Commissioner may approve an anticipated bypass, after considering its adverse effects, if the Commissioner determines that it will meet the conditions listed above in Part II.B.2.c. The Commissioner may impose any conditions determined to be necessary to minimize any adverse effects.

### 3. Upset Conditions

Pursuant to 327 IAC 5-2-8(13):

- a. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
- b. An upset shall constitute an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of Paragraph c of this section, are met.
- c. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence, that:
  - (1) An upset occurred and the permittee has identified the specific cause(s) of the upset;
  - (2) The permitted facility was at the time being properly operated;
  - (3) The permittee complied with any remedial measures required under Part II.A.2; and
  - (4) The permittee submitted notice of the upset as required in the "Twenty-Four Hour Reporting Requirements," Part II.C.3, or 327 IAC 2-6.1, whichever is applicable. However, under 327 IAC 2-6.1-3(1), when the constituents of the discharge are regulated by this permit, and death or acute injury or illness to animals or humans does not occur, the reporting requirements of 327 IAC 2-6.1 do not apply.

- d. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof pursuant to 40 CFR 122.41(n)(4).

4. Removed Substances

Solids, sludges, filter backwash, or other pollutants removed from or resulting from treatment or control of wastewaters shall be disposed of in a manner such as to prevent any pollutant from such materials from entering waters of the State and to be in compliance with all Indiana statutes and regulations relative to liquid and/or solid waste disposal. The discharge of pollutants in treated wastewater is allowed in compliance with the applicable effluent limitations in Part I. of this permit.

C. REPORTING REQUIREMENTS

1. Planned Changes in Facility or Discharge

Pursuant to 327 IAC 5-2-8(11)(F), the permittee shall give notice to the Commissioner as soon as possible of any planned physical alterations or additions to the permitted facility. In this context, permitted facility refers to a point source discharge, not a wastewater treatment facility. Notice is required only when either of the following applies:

- a. The alteration or addition may meet one of the criteria for determining whether the facility is a new source as defined in 327 IAC 5-1.5.
- b. The alteration or addition could significantly change the nature of, or increase the quantity of, pollutants discharged. This notification applies to pollutants that are subject neither to effluent limitations in Part I.A. nor to notification requirements in Part II.C.9. of this permit.

Following such notice, the permit may be modified to revise existing pollutant limitations and/or to specify and limit any pollutants not previously limited.

2. Monitoring Reports

Pursuant to 327 IAC 5-2-8(10) and 327 IAC 5-2-13 through 15, monitoring results shall be reported at the intervals and in the form specified in "Monthly Reporting", Part I.C.2.

3. Twenty-Four Hour Reporting Requirements

Pursuant to 327 IAC 5-2-8(11)(C), the permittee shall orally report to the Commissioner information on the following types of noncompliance within 24 hours from the time permittee becomes aware of such noncompliance. If the

noncompliance meets the requirements of item b (Part II.C.3.b) or 327 IAC 2-6.1, then the report shall be made within those prescribed time frames. However, under 327 IAC 2-6.1-3(1), when the constituents of the discharge that is in noncompliance are regulated by this permit, and death or acute injury or illness to animals or humans does not occur, the reporting requirements of 327 IAC 2-6.1 do not apply.

- a. Any unanticipated bypass which exceeds any effluent limitation in the permit;
- b. Any noncompliance which may pose a significant danger to human health or the environment. Reports under this item shall be made as soon as the permittee becomes aware of the noncomplying circumstances;
- c. Any upset (as defined in Part II.B.3 above) that causes an exceedance of any effluent limitation in the permit;
- d. Violation of a maximum daily discharge limitation for any of the following toxic pollutants: Mercury, Lead, Zinc, Total Cyanide and Phenols.

The permittee can make the oral reports by calling (317)232-8670 during regular business hours or by calling (317) 233-7745 ((888)233-7745 toll free in Indiana) during non-business hours. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and, if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce and eliminate the noncompliance and prevent its recurrence. The Commissioner may waive the written report on a case-by-case basis if the oral report has been received within 24 hours. Alternatively the permittee may submit a "Bypass/Overflow Report" (State Form 48373) or a "Noncompliance 24-Hour Notification Report" (State Form 54215), whichever is appropriate, to IDEM at (317) 232-8637 or [wwreports@idem.in.gov](mailto:wwreports@idem.in.gov). If a complete fax or e-mail submittal is sent within 24 hours of the time that the permittee became aware of the occurrence, then the fax report will satisfy both the oral and written reporting requirements.

Upon its effectiveness, the proposed Federal E-Reporting Rule will require these reports to be submitted electronically.

4. Other Compliance/Noncompliance Reporting

Pursuant to 327 IAC 5-2-8(11)(D), the permittee shall report any instance of noncompliance not reported under the “Twenty-Four Hour Reporting Requirements” in Part II.C.3, or any compliance schedules at the time the pertinent Discharge Monitoring Report is submitted. The report shall contain the information specified in Part II.C.3;

The permittee shall also give advance notice to the Commissioner of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements; and

All reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.

Upon its effectiveness, the proposed Federal E-Reporting Rule will require these reports to be submitted electronically.

5. Other Information

Pursuant to 327 IAC 5-2-8(11)(E), where the permittee becomes aware of a failure to submit any relevant facts or submitted incorrect information in a permit application or in any report, the permittee shall promptly submit such facts or corrected information to the Commissioner.

6. Signatory Requirements

Pursuant to 327 IAC 5-2-22 and 327 IAC 5-2-8(15):

a. All reports required by the permit and other information requested by the Commissioner shall be signed and certified by a person described below or by a duly authorized representative of that person:

- (1) The manager of one (1) or more manufacturing, production, or operating facilities provided the manager is authorized to make management decisions that govern the operation of the regulated facility including having the explicit or implicit duty to make major capital investment recommendations, and initiating and directing other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or

delegated to the manager in accordance with corporate procedures.

- (2) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or
  - (3) For a Federal, State, or local government body or any agency or political subdivision thereof: by either a principal executive officer or ranking elected official.
  - (4) Under the proposed Federal E-Reporting Rule, a method will be developed for submittal of all affected reports and documents using electronic signatures that is compliant with the Cross-Media Electronic Reporting Regulation (CROMERR). Enrollment and use of NetDMR currently provides for CROMERR-compliant report submittal.
- b. A person is a duly authorized representative only if:
- (1) The authorization is made in writing by a person described above.
  - (2) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, or a position of equivalent responsibility. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.); and
  - (3) The authorization is submitted to the Commissioner.
- c. Electronic Signatures. If documents described in this section are submitted electronically by or on behalf of the NPDES-regulated facility, any person providing the electronic signature for such documents shall meet all relevant requirements of this section, and shall ensure that all of the relevant requirements of 40 CFR part 3 (including, in all cases, subpart D to part 3) (Cross-Media Electronic Reporting) and 40 CFR part 127 (NPDES Electronic Reporting Requirements) are met for that submission.
- d. Certification. Any person signing a document identified under Part II.C.6. shall make the following certification:
- “I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a

system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”

7. Availability of Reports

Except for data determined to be confidential under 327 IAC 12.1, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Indiana Department of Environmental Management and the Regional Administrator. As required by the Clean Water Act, permit applications, permits, and effluent data shall not be considered confidential.

8. Penalties for Falsification of Reports

IC 13-30 and 327 IAC 5-2-8(15) provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance, shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than 180 days per violation, or by both.

9. Changes in Discharge of Toxic Substances

Pursuant to 40 CFR 122.42(a)(1), 40 CFR 122.42(a)(2), and 327 IAC 5-2-9, the permittee shall notify the Commissioner as soon as it knows or has reason to believe:

a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any pollutant identified as toxic pursuant to Section 307(a) of the Clean Water Act which is not limited in the permit, if that discharge will exceed the highest of the following “notification levels.”

(1) One hundred micrograms per liter (100µg/l);

(2) Two hundred micrograms per liter (200 µg/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500µg/l) for 2,4-dinitrophenol and 2-methyl-4,6-dinitrophenol; and one milligram per liter (1mg/l) for antimony;

- (3) Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR 122.21(g)(7); or
  - (4) A notification level established by the Commissioner on a case-by-case basis, either at his own initiative or upon a petition by the permittee. This notification level may exceed the level specified in subdivisions (1), (2), or (3) but may not exceed the level which can be achieved by the technology-based treatment requirements applicable to the permittee under the CWA (see 327 IAC 5-5-2).
- b. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following “notification levels”:
- (1) Five hundred micrograms per liter (500 µg/l);
  - (2) One milligram per liter (1 mg/l) for antimony;
  - (3) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with Sec. 122.21(g)(7).
  - (4) A notification level established by the Commissioner on a case-by-case basis, either at his own initiative or upon a petition by the permittee. This notification level may exceed the level specified in subdivisions (1), (2), or (3) but may not exceed the level which can be achieved by the technology-based treatment requirements applicable to the permittee under the CWA (see 327 IAC 5-5-2).
- c. That it has begun or expects to begin to use or manufacture, as an intermediate or final product or byproduct, any toxic pollutant which was not reported in the permit application under 40 CFR 122.21(g)(9).

PART III  
 Other Requirements

A. Thermal Effluent Requirements

Temperature shall be monitored as flows at Outfalls 008, 011, 014, and 018:

DISCHARGE LIMITATIONS  
 (OUTFALLS 008, 011, 014, AND 018)

| <u>Parameter</u>        | <u>Quantity or Loading</u> |                      |              | <u>Quality or Concentration</u> |                      |              | <u>Monitoring Measurement Frequency</u> | <u>Requirements Sample Type</u> |
|-------------------------|----------------------------|----------------------|--------------|---------------------------------|----------------------|--------------|---|---------------------------------|
|                         | <u>Monthly Average</u>     | <u>Daily Maximum</u> | <u>Units</u> | <u>Monthly Average</u>          | <u>Daily Maximum</u> | <u>Units</u> |   |                                 |
| Temperature Effluent[1] | ---                        | ---                  | ---          | Report                          | Report               | °F           | 2 x Weekly                              | Grab                            |
| Intake[2]               | ---                        | ---                  | ---          | Report                          | Report               | °F           | 2 x Weekly                              | Grab                            |

[1] Temperature at Outfalls 011, 014, and 018 shall be sampled. On days when temperature is sampled at the outfall, temperature shall also be sampled at the intake supplying the most significant source of water to the outfall. As an alternative to direct grab measurements during this time period the facility may install a more permanent temperature measuring device that will retain the highest temperature value during any given 24 hour period.

B. Biocides Concentration

The permittee must receive written permission from the IDEM if they desire to use any biocide or molluscicide other than chlorine in once through cooling water. The use of biocides containing tributyl tin oxide in any closed or open cooling system is prohibited.

C. Polychlorinated Biphenyl

There shall be no discharge of polychlorinated biphenyl (PCBs) compounds such as those commonly used for transformer fluid. Therefore, in order to determine compliance with the PCB prohibition, the permittee shall provide the following PCB\* data with the next permit renewal application from at least one sample taken from each final outfall. The corresponding facility water intakes shall be monitored at the same time as the final outfalls.

| <u>Parameter</u> | <u>Test Method</u> | <u>LOD</u> | <u>LOQ</u> |
|------------------|--------------------|------------|------------|
| PCBs*            | 608                | 0.1 ug/l   | 0.3 ug/l   |

\*PCB-1242, PCB-1254, PCB-1221, PCB-1232, PCB-1248, PCB-1260, and PCB- 1016

## PART IV Cooling Water Intake Structures

### A. Best Technology Available (BTA) Determination

In accordance with 40 CFR 401.14, the location, design, construction and capacity of cooling water intake structures of any point source for which a standard is established pursuant to section 301 or 306 of the Act shall reflect the best technology available for minimizing adverse environmental impact.

The EPA promulgated a Clean Water Act (CWA) section 316(b) regulation on August 15, 2014, that establishes standards for cooling water intake structures. 79 Fed. Reg. 48300-439 (August 15, 2014). The regulation establishes best technology available standards to reduce impingement and entrainment of aquatic organisms at existing power generation and manufacturing facilities and it became effective on October 14, 2014.

Based on available information, IDEM has made a Best Technology Available (BTA) determination that the existing cooling water intake structures represent best technology available to minimize adverse environmental impact in accordance with Section 316(b) of the federal Clean Water Act (22 U.S.C section 1326) at this time. This determination will be reassessed at the next permit reissuance to ensure that the CWISs continue to meet the requirements of Section 316(b) of the federal Clean Water Act (33 U.S.C. section 1326).

### B. Permit Requirements

In accordance with 40 CFR 125.95(a)(1), the permittee must submit to the IDEM the information required in the applicable provisions of 40 CFR 122.21(r) when applying for a subsequent permit (consistent with the permittee's duty to reapply pursuant to 40 CFR 122.21(d)). Per 40 CFR 125.95(c) after the initial submission of the 40 CFR 122.21(r) permit application studies after October 14, 2014 the permittee may, in subsequent permit applications, request to reduce the information required, if conditions at the facility and in the waterbody remain substantially unchanged since the previous application so long as the relevant previously submitted information remains representative of current source water, intake structure, cooling water system, and operating conditions. The permittee must submit its request for reduced cooling water intake structure and waterbody application information to the IDEM at least two years and six months prior to the expiration of its NPDES permit. The permittee's request must identify each element of the application requirements that it determines has not substantially changed since the previous permit application and the basis for the determination. IDEM has the discretion to accept or reject any part of the request. The permittee shall comply with requirements below:

1. In accordance with 40 CFR 125.98(b)(1), nothing in this permit authorizes take for the purposes of a facility's compliance with the Endangered Species Act.

2. At all times properly operate and maintain the intake equipment and incorporate management practices and operational measures necessary to ensure proper operation of the CWIS.
3. Provide advance notice to IDEM of any proposed changes to the CWIS or proposed changes to operations at the facility that affect the information taken into account in the current BTA evaluation.
4. There shall be no discharge of debris from intake screen washing which will settle to form objectionable deposits which are in amounts sufficient to be unsightly or deleterious, or which will produce colors or odors constituting a nuisance.
5. All required reports shall be submitted to the IDEM, Office of Water Quality, NPDES Permits Branch.
6. Submit the information required to be considered by the Director per 40 C.F.R. 122.21(r)(2) through (13) to assist IDEM with the fact sheet or statement of basis for entrainment BTA, as soon as practicable, but no later than with the application for the next permit renewal.

PART V  
Streamlined Mercury Variance (SMV)

Introduction

The permittee submitted an application for a streamlined mercury variance (SMV) April 21, 2016 in accordance with the provisions of 327 IAC 5-3.5. The SMV establishes a streamlined process for obtaining a variance from a water quality criterion used to establish a WQBEL for mercury in an NPDES permit. Based on a review of the SMV application, IDEM has determined the application to be complete as outlined in 327 IAC 5-3.5-4(e). Therefore, the SMV has been incorporated into the NPDES permit in accordance with 327 IAC 5-3.5-6.

Term of SMV

The SMV and the interim discharge limit included in Part I.A.1., Discharge limitations Table, will remain in effect until the NPDES permit expires under IC 13-14-8-9 (amended under SEA 620, May 2005). Pursuant to IC 13-14-8-9(d), when the NPDES permit is extended under IC 13-15-3-6 (administratively extended), the SMV will remain in effect as long as the NPDES permit requirements affected by the SMV are in effect.

Annual Reports

The annual report is a condition of the Pollutant Minimization Program Plan (PMPP) requirements of 327 IAC 5-3.5-9(a)(8). The annual report must describe the permittee's progress toward fulfilling each PMPP requirement, the results of all mercury monitoring within the previous year, and the steps taken to implement the planned activities outlined under the PMPP. The annual report may also include documentation of chemical and equipment replacements, staff education programs, and other initiatives regarding mercury awareness or reductions. The complete inventory and complete evaluation required by the PMPP may be submitted as part of the annual report.

The permittee will submit the annual reports to IDEM on the anniversary of the effective date of this NPDES permit renewal, as indicated on Page 1 of this permit. Annual Reports should be submitted to the Office of Water Quality, Industrial NPDES Permits Section, 100 North Senate Avenue, Indianapolis, Indiana 46204 2251.

SMV Renewal

As authorized under 327 IAC 5-3.5-7(a)(1), the permittee may apply for the renewal of an SMV at any time within 180 days prior to the expiration of the NPDES permit. In accordance with 327 IAC 5-3.5-7(c), an application for renewal of the SMV must contain the following:

- All information required for an initial SMV application under 327 IAC 5-3.5-4, including revisions to the PMPP, if applicable.
- A report on implementation of each provision of the PMPP.
- An analysis of the mercury concentrations determined through sampling at the facility's locations that have mercury monitoring requirements in the NPDES permit for the two (2) year period prior to the SMV renewal application.
- A proposed alternative mercury discharge limit, if appropriate, to be evaluated by the department according to 327 IAC 5-3.5-8(b) based on the most recent two (2) years of representative sampling information from the facility.

Renewal of the SMV is subject to a demonstration showing that PMPP implementation has achieved progress toward the goal of reducing mercury from the discharge.

Pollutant Minimization Program Plan (PMPP)

The PMPP is a requirement of the SMV application and is defined in 327 IAC 5-3.5-3(4) as the plan for development and implementation of Pollutant Minimization Program (PMP). The PMPP is defined in 327 IAC 5-3.5-3(3) as the program developed by an SMV applicant to identify and minimize the discharge of mercury into the environment. PMPP requirements (including the enforceable parts of the PMPP) are outlined in 327 IAC 5-3.5-9. In accordance with 327 IAC 5-3.5-6, the permittee's PMPP is hereby incorporated within this permit below:

| Planned Activity  | Goal  | Measure of Performance   | Schedule for Action<br>(from the date SMV is incorporated into NPDES Permit)   |
|---|---|--|--|
| Complete Inventory/Identification   | Update complete inventory/identification of chemicals, materials, equipment and storage areas containing mercury                    | Submittal of complete inventory/identification to IDEM   | <u>6 months</u> : Review of MSDS and other documentation for existing chemicals, materials, equipment and storage areas. Update of inventory for all primary Operations. |
|   |   |  | <u>7 months</u> : Update of inventory for all Finishing operations   |
|   |   |  | <u>8 months</u> : Update of inventory for all Utilities operations   |
|   |   |  | <u>9 months</u> : Update of inventory for all remaining operations.  |
| Review Policies and Procedures for chemical, material, and equipment purchasing | Review MSDS and other documentation from vendors or manufacturers   | Ensure current policies and procedures are adequate to identify and minimize purchase of chemicals, materials and equipment containing mercury                             | Currently implemented  |
|   | Minimize the purchase of chemicals, materials and equipment containing mercury  |  |  |
| Employee Training   | Education and increased awareness   | Evaluation of current employee Environmental and Health and Safety program   | Complete evaluation within <u>6 months</u>   |
|   |   | If necessary, revise current training program to include relevant mercury identification, handling, recycling and disposal information                                     | Implement revised program within <u>7 months</u>   |
| Facility-wide Mercury Disposal and Recycling Program                            | Ensure materials, chemicals and equipment containing mercury are properly stored and recycled or disposed offsite                   | Track and document estimated amount of mercury disposed per applicable mercury disposal and recycling regulations  | Currently implemented  |
| Spill Containment Procedures  | Minimize possibility of accidental spills and releases  | Adequate training of employees on good housekeeping practices that reduce the possibility of accidental spills and releases (see "Staff Training" Activity)                | Currently implemented  |
| Maintenance and Cleaning Practices  | Ensure proper and safe handling of mercury-containing materials, chemicals and equipment during maintenance and cleaning activities | Ensure procedures to minimize the release of mercury from chemicals, materials and equipment containing mercury are implemented during maintenance and cleaning activities | Currently implemented  |

| Planned Activity                        | Goal  | Measure of Performance  | Schedule for Action<br>(from the date SMV is incorporated into NPDES Permit)  |
|---|---|---|---|
| Characterization of Sources to Outfalls | Evaluate levels of mercury present in intake water to plant                       | Data collected as part of the mercury QAPP activities required by the NPDES permit demonstrate the source of mercury in discharges is mercury present in intake water from the Indiana Harbor Ship Canal. | Complete. Data collected in 2012 and 2014 and reported in the Final Plan for Compliance Implementation Report submitted to IDEM in March 2015.  |
|   | Evaluate levels of mercury present in internal Outfalls                           | Conduct periodic monitoring of internal Outfalls for comparison to final Outfall data   | Collect and analyze samples 2/year at Outfalls 518 and 618 and 613. Collect samples concurrent to (same day as) collection of samples at Outfall 014 and 018. Data will be included in annual reports submitted at the end of each calendar year. |
| Alternatives for Mercury Reduction      | Evaluation of alternatives for mercury-bearing chemicals, materials and equipment | Investigate replacement and/or reduction options for in-service chemicals, materials and equipment containing mercury   | Schedule to be developed based on the results of the various source characterization activities   |



**National Pollutant Discharge Elimination System**  
**for**  
**ARCELORMITTAL USA LLC – INDIANA HARBOR EAST**  
**Draft: April 2017**  
**Final: July 2017**

**Indiana Department of Environmental Management**  
 100 North Senate Avenue  
 Indianapolis, Indiana 46204  
 (317) 232-8603  
[www.idem.IN.gov](http://www.idem.IN.gov)

|                                     |   |
|-------------------------------------|---|
| <b>Permittee:</b>                   | ArcelorMittal Steel USA LLC – Indiana Harbor East<br>3210 Watling Street<br>East Chicago, IN 46312                        |
| <b>Existing Permit Information:</b> | Permit Number: IN0000094<br>Administratively Extended Since: 11/30/16   |
| <b>Facility Contact:</b>            | Thomas Barnett<br>(219)399-2380 or <a href="mailto:Thomas.Barnett@arcelormittal.com">Thomas.Barnett@arcelormittal.com</a> |
| <b>Facility Location:</b>           | 3210 Watling Street<br>East Chicago, IN 46312<br>Lake County  |
| <b>Receiving Stream:</b>            | Indiana Harbor and Indiana Harbor Ship Canal  |
| <b>GLI/Non-GLI:</b>                 | GLI   |
| <b>Proposed Permit Action:</b>      | Permit Renewal  |
| <b>Date Application Received:</b>   | June 3, 2016  |
| <b>Source Category</b>              | NPDES Major – Integrated Iron and Steel Manufacturing Facility<br>40 CFR 420 Iron and Steel Manufacturing Point Source    |
| <b>Permit Writer:</b>               | Richard Hamblin<br>(317)232-8696 or <a href="mailto:rhamblin@idem.in.gov">rhamblin@idem.in.gov</a>                        |

## Table of Contents

|   |           |
|---|-----------|
| <b>1.0 Introduction.....</b>  | <b>3</b>  |
| <b>2.0 Facility description.....</b>  | <b>3</b>  |
| 2.1 General .....   | 3         |
| 2.2 Outfall Locations, Receiving Stream, Flows, and Sources of Wastestreams .....                                     | 5         |
| 2.3 Wastewater Treatment.....   | 10        |
| 2.4 Changes in Operation .....  | 11        |
| 2.5 Facility Storm Water .....  | 11        |
| <b>3.0 Permit History.....</b>  | <b>12</b> |
| 3.1 Compliance history .....  | 12        |
| <b>4.0 Permit limitations .....</b>   | <b>12</b> |
| 4.1 Existing Permit Limits .....  | 13        |
| 4.2 Technology-Based Effluent Limits (TBEL).....  | 17        |
| 4.3 Water Quality Based Limits (follow link for detailed information) .....   | 19        |
| 4.4 Permit Limits Narrative By Parameter.....   | 20        |
| 4.5 Discharge Limitations by Outfall, Monitoring Conditions and Rationale .....                                       | 26        |
| 4.6 Antibacksliding .....   | 28        |
| 4.7 Antidegradation.....  | 28        |
| 4.8 Storm Water .....   | 29        |
| 4.9 Water Treatment Additives .....   | 31        |
| <b>5.0 Special Conditions and Other Permit Requirements .....</b>   | <b>31</b> |
| 5.1 Schedule of Compliance.....   | 31        |
| 5.2 Reporting Requirements for Solvents, Degreasing Agents, Rolling Oils, Water Treatment Chemical, and Biocides..... | 31        |
| 5.3 Groundwater Remediation Projects.....   | 32        |
| 5.4 No. 7 Blast Furnace .....   | 32        |
| 5.5 Pollutant Minimization Program.....   | 33        |
| 5.6 Biocides Concentration .....  | 33        |
| 5.7 Clean Water Act Section 316(b) Cooling Water Intake Structure(s) (CWIS).....                                      | 33        |
| 5.8 Polychlorinated Biphenyl (PCB).....   | 35        |
| 5.9 Spill Response and Reporting Requirement.....   | 35        |
| 5.10 Post Public Notice Addendum .....  | 36        |
| Appendix I Flow Diagrams.....   | 37        |
| Appendix II Water Quality Assessment.....   | 52        |
| Appendix III Technology Based Effluent Limits.....  | 64        |
| Appendix IV ArcelorMittal Comments.....   | 67        |
| Appendix V IDEM Response to Comments.....   | 94        |

## **1.0 INTRODUCTION**

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The Indiana Department of Environmental Management (IDEM) received a National Pollutant Discharge Elimination System (NPDES) Permit application from ArcelorMittal Steel USA Inc. on June 3, 2016. A five year permit is proposed in accordance with 327 IAC 5-2-6(a). The current five year permit was issued with an effective date of December 1, 2011, and was modified August 1, 2014, and on September 16, 2016 which addressed the SMV request at 014 and 018 in accordance with 327 IAC 5-2-6(a). The expiration date remains November 30, 2016.

The Federal Water Pollution Control Act of 1972 and subsequent amendments require a NPDES permit for the discharge of wastewater to surface waters. Furthermore, Indiana Code (IC) 13-15-1-2 requires a permit to control or limit the discharge of any contaminants into state waters or into a publicly owned treatment works. This proposed permit action by IDEM complies with both federal and state requirements.

In accordance with Title 40 of the Code of Federal Regulations (CFR) Sections 124.8 and 124.56, as well as Indiana Administrative Code (IAC) 327 Article 5, development of a Fact Sheet is required for NPDES permits. This document fulfills the requirements established in those regulations.

This Fact Sheet was prepared in order to document the factors considered in the development of NPDES Permit effluent limitations. The technical basis for the Fact Sheet may consist of evaluations of promulgated effluent guidelines, existing effluent quality, receiving water conditions, and wasteload allocations to meet Indiana Water Quality Standards. Decisions to award variances to Water Quality Standards or promulgated effluent guidelines are justified in the Fact Sheet where necessary.

## **2.0 FACILITY DESCRIPTION**

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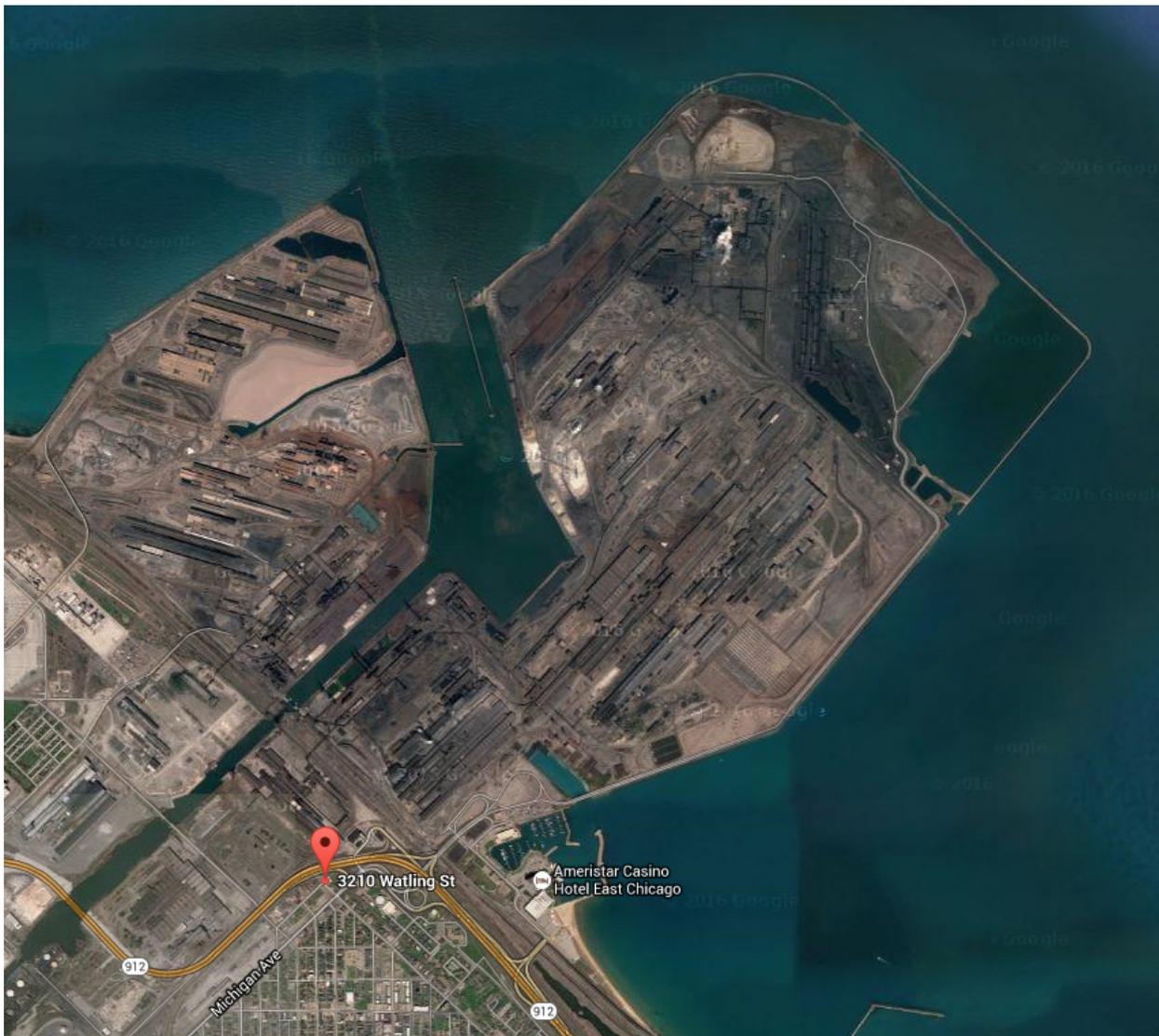
### **2.1 General**

ArcelorMittal Steel USA LLC – Indiana Harbor East is classified under Standard Industrial Classification (SIC) Code 3312 – Steel Mill.

ArcelorMittal USA LLC – Indiana Harbor East is an integrated steel mill. Intermediate and final products include sinter, molten iron, crude steel, cast steel slabs, flat-rolled hot strip, cold rolled steels, and hot dip galvanized steel. Intermediate steel products produced at other ArcelorMittal facilities may be processed at Indiana Harbor East.

A map showing the location of the facility has been included as Figure 1.

**Figure 1: Facility Location**

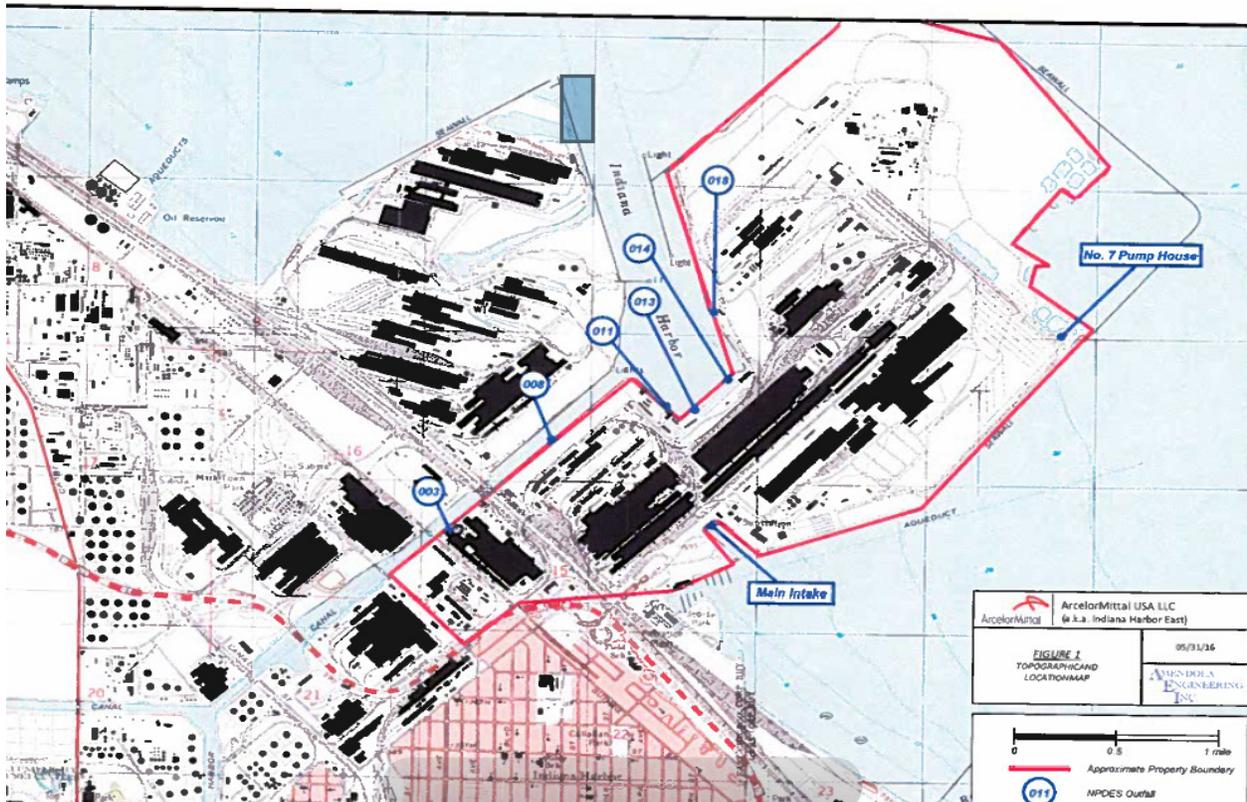


## 2.2 Outfall Locations, Receiving Stream, Flows, and Sources of Wastestreams

| Outfall | Latitude |     |     | Longitude |     |     | Water Body                           | Avg. Flow MGD | Operation   |
|---------|----------|-----|-----|-----------|-----|-----|--------------------------------------|---------------|---|
| 011     | 41°      | 39' | 50" | -87°      | 26' | 23" | Indiana Harbor Turning Basin         | 30.3          | NCCW and boiler blowdown from the No. 2 AC Power Station, and stormwater                        |
| 014     | 41°      | 40' | 02" | -87°      | 26' | 23" | Indiana Harbor Turning Basin         | 7.7           | Blowdown from the Main Plant Recycle System and stormwater                                      |
| 018     | 41°      | 40' | 29" | -87°      | 26' | 08" | Indiana Harbor Turning Basin         | 16.4          | NCCW, Outfall 518, 618, cooling tower blowdown, low volume wastes from Boiler House, stormwater |
| 518     | 41°      | 40' | 50" | -87°      | 27' | 25" | Indiana Harbor Turning Basin via 018 | 0.087         | No. 7 Blast Furnace Scrubber System, Blowdown Treatment Plant                                   |
| 618     | 41°      | 40' | 32" | -87°      | 25' | 52" | Indiana Harbor Turning Basin via 018 | 0.637         | No. 4 Steel Plant Treatment and Recycling System  |

\*Outfalls 613, 003, 007, 008, and 013 have been removed.

Figure 2: Outfall Location



## **Outfall Descriptions**

A simplified water schematic is located in the Appendix, [Figure 2-01](#).

### **OUTFALL 003 - Removed**

Outfall 003 had been an intermittent discharge from the Outfall 003 Scale Pit, which received some low-volume contact cooling water from the Main Machine Shop, storm water from roadways and parking areas adjacent to the Main Machine shop, groundwater, and miscellaneous non-process wastewaters. Outfall 003 normally discharged to the Master Recycle System, but during periods of heavy rainfall could overflow to the Indiana Harbor Ship Canal. The facility has stated that Outfall 003 no longer is a point source and has requested that this outfall be removed. Outfall 003 has been removed from this permit.

### **OUTFALL 007 – Removed**

Outfall 007 was a storm water outfall that discharged to the Indiana Harbor Ship Canal. The outfall was sealed in June 2014 thus it has been removed from the permit.

### **OUTFALL 008 - Removed**

Outfall 008 was comprised of intermittent discharge of non-contact cooling water, boiler blowdown from the No. 2 AC Power Station, groundwater, and miscellaneous non-process wastewaters. No discharges have occurred for several years. The No. 2 AC Power Station is down, and the facility has stated that there is no possibility of a discharge. Therefore, at the permittee's request, Outfall 008 is being removed from this permit.

### **OUTFALL 011**

Outfall 011 is comprised of non-contact cooling water (NCCW), boiler blowdown from the No. 2 AC Power Station, sinter plant non-contact cooling water, storm water runoff, groundwater, and miscellaneous non-process wastewaters. There is no wastewater treatment associated with Outfall 011. The NCCW is chlorinated for zebra mussel control, and dechlorinated prior to discharge. The Wasteload Allocation was based on a flow of 30.3 MGD.

### **OUTFALL 013 - Removed**

Outfall 013 was an intermittent discharge from the Terminal Treatment Plant – West. Terminal Treatment Plant – West is part of the Main Plant Recycle System tributary to Outfall 014. Outfall 013 has only discharged 5 days from January 2013 to December 2015. However, the facility has redesigned Outfall 013 to continue to discharge through Outfall 014 per normal operations. Therefore, Outfall 013 has been removed per the permittee's request.

## **OUTFALL 014**

Outfall 014 is the main discharge from the Terminal Treatment Plant – West. The discharge from Outfall 014 is comprised of the blowdown from the Main Plant Recycle System. The system includes process and cooling water from hot forming operations (80” hot strip mill); pickling operations (No.5 pickle line, continuous anneal line); cold rolling mills (80” tandem mills; Nos. 27, 28 and 29 temper mills); alkaline cleaning lines; hot coating lines (No.5 hot dip galvanizing line); the No. 2 Steel Plant (i.e. BOF); the Nos. 2 & 3 Continuous Casters; treated sanitary wastewaters (No. 1, No. 2 and No. 3 sewage treatment plants); storm water, groundwater, and miscellaneous non-process wastewaters. The NCCW is chlorinated for zebra mussel control, the dechlorinated prior to discharge. Applicable effluent guidelines for the associated discharge from 014 are regulated under 40 CFR 420. Schematics may be found in Figure [2-01](#), [2-04](#), [2-05](#), [2-06](#), [2-14](#). The Wasteload Allocation was based on a flow of 7.7 MGD.

In an amendment to the permit renewal application, the permittee provided the following information and request: Final treatment of process water from the Master Recycle System includes sedimentation in two large settling basins prior to discharge to Outfall 014.

## **OUTFALL 613 – REMOVED**

Outfall 613 was comprised of low-volume blowdown from No. 5 and No.6 Blast Furnace gas cleaning and cooling water treatment and recycle system that discharged to the Terminal Treatment Plant – West. Nos. 5 and 6 Blast Furnaces were permanently shut down in 2013. There is no longer a discharge from Outfall 613 thus it has been removed from the permit.

## **OUTFALL 018**

Outfall 018 is comprised of non-contact cooling water; treated effluents from the No. 4 Steel Plant (BOF), Vacuum Degasser (RHOB), and No. 1 Continuous Caster (internal Outfall 618); treated effluents from the No. 7 Blast Furnace gas scrubber system (internal Outfall 518); cooling tower blowdown and low-volume waste from the No. 5 Boiler House, cooling tower blowdown from the CokEnergy co-generating facility, storm water run-off and non-contact cooling water and storm water run-off from the Indiana Harbor Coke Company, groundwater, and miscellaneous non-process wastewaters. The NCCW is chlorinated for zebra mussel control, the dechlorinated prior to discharge. Applicable effluent guidelines for the associated discharge from 014 are regulated under 40 CFR 420. Schematics may be found in Figure [2-02](#), [2-03](#), [2-07](#), [2-08](#) and [2-09](#). The Wasteload Allocation was based on a flow of 16.4 MGD.

The term *low volume waste sources*, from the No. 5 Boiler House, as defined in 40 CFR 423.11(b), and include primarily water softener regeneration and rinse water and boiler blowdown.

Process water and blowdown treatment for the No. 4 Steel Plant (BOF), the Vacuum Degasser (RHOB) and No. 1 Continuous Caster are described under Outfall 618.

Process water and blowdown treatment for the No. 7 Blast Furnace is described under 518.

## **OUTFALL 518**

Outfall 518 is the internal outfall for the No. 7 Blast Furnace gas scrubbing system. Groundwater and miscellaneous non-process wastewaters may also be present. Treated wastewaters are limited and monitored prior to mixing with non-contact cooling water and storm water for discharge through Outfall 018. Applicable effluent guidelines for the discharge associated with the blast furnace are regulated under 40 CFR 420.34(a). Additional Schematics may be found in the Appendix Figure [2-02](#), [2-03](#).

The gas cleaning system for the No. 7 Blast Furnace is a high rate process water recycle system that supplies water to clean the blast furnace off-gas through a high energy wet scrubber. Dirty water from the Bishoff gas scrubber is treated through two large diameter thickeners and a cooling tower and then recycled back to the scrubber. Blowdown from the scrubber system is sent to the No. 7 Blast Furnace Lafarge slag granulation system. The thickener underflow is dewatered in a recessed chamber filter press. Filtration is returned to the thickener and dry cake is sent off site for disposal.

Excess water from the No. 7 Lafarge slag granulation system is sent to the No. 7 blast furnace blowdown treatment plant, which consists of pH adjustment, cyanide precipitation and alkaline chlorination. The discharge from the No. 7 Blast Furnace blowdown treatment system constitutes Outfall 518.

## **OUTFALL 618**

Outfall 618 is the internal outfall for the No. 4 Steel Plant (BOF), the Vacuum Degasser (RHOB) and the No. 1 continuous caster process water systems. Groundwater and miscellaneous non-process wastewaters may also be present. Treated wastewater is limited and monitored prior to mixing with non-contact cooling water and discharge to Indiana Harbor via Outfall 018. Applicable effluent guidelines for the associated discharge from Outfall 618 are regulated under 40 CFR 420; schematics may be found in the Appendix Figure [2-07](#), [2-08](#), [2-09](#).

The gas cleaning system for No. 4 Steel Plant (BOF) is a high rate process water recycle system that supplies water to clean BOF off-gas through four venturi scrubbers. Gas cleaning water is treated in large diameter thickeners for solids removal and most of the water is returned directly back to the venturi scrubbers. The remainder of the water is blown down to the No. 4 Steel Plant blowdown filtration facility for treatment prior to discharge to Outfall 618. The thickener underflow is dewatered in a recessed chamber filter press. Filtrate is returned to the thickeners and dry cake is returned to the steel making process via the briquetting plant or disposed of off-site.

The RHOB water system is a high rate process water recycle system that supplies contact cooling water to the (vacuum degasser) barometric condensers. Discharge from the condensers returns to a cooling tower and is then recycled back to the condensers. A side stream of water is treated through two inclined plate separators (Lamella clarifiers) for solids removal and then returned to the system. The underflow from the separators is discharged to the No. 4 Steel Plant Grit Boxes (thickeners). This discharge is the only blowdown from the RHOB water treatment system.

The No. 1 Continuous Caster water system is a high rate recycle system that supplies water to the No. 1 Slab Caster and scarfer for machine cooling sprays, roll cooling, scale breaking and flume flushing. A separate system for machine and mold cooling consisting of non-contact cooling tower and heat exchangers blows down to the caster system. Treatment consists of a scale pit with oil and scale recovery, a cooling tower, and high rate multi-media filtration. A small amount of water is blown down from the caster system to the No. 4 Steel Plant Treatment and Recycle System.

The No. 4 Steel Plant Treatment and Recycle System treats the combined blowdown from the No. 4 Steel Plant (BOF) and the No. 1 Continuous Caster and RHOB through high rate multi-media filters prior to discharge at Outfall 618. Blowdown from the filtration facility is from the overflow of the No. 4 Steel Plant thickeners.

## **Description Treatment Plants – West, North and East**

### Terminal Treatment Plant – West (TTPW) [Figure 2-04](#), [2-05](#), [2-06](#)

TTPW consists of two scalping tanks and two settling basins and a cooling tower. Most of the effluent from the TTPW is discharged to the No. 6 Pump House and is then recycled back to the mills as process and cooling water. The remaining water is the only blowdown from the Main Plant Recycle System and constitutes the discharge from Outfall 014.

Gas cleaning waters from the No. 2 Steel Plant (BOF) are treated in thickeners for solids removal and recycled back to the No. 2 Steel Plant scrubbers. A small blowdown from the scrubber system is treated in a blowdown clarifier prior to discharge to the TTPW.

The No. 2 and No. 3 Continuous Casters have closed loop cooling water systems for mold and machine cooling and a separate treatment and recycle system for spray water consisting of a roughing pit, scale pit with oil removal and high rate multi-media filtration followed by a cooling tower. Filter backwash is solidified using lime fines or other appropriate material for off-site disposal. The caster recycle system blows down a small amount of filtered water to TTWP.

Clamshell buckets are used to remove mill scale from scale pits and accumulated solids from wastewater treatment basins. Mill scale is passively dewatered and recycled through the sinter plant. Solids collected from settling basins are landfilled.

Terminal Treatment Plant – North (TTPN), Figure [2-13](#), [2-14](#), [2-15](#), [2-16](#)

TTPN is composed of settling basins (scalping tanks) and a cooling tower located at the north end of the cold strip mill. The discharge from TTPN is recycled directly back to the mill as process and cooling water. TTPN receives process and cooling water from the finishing end of the No. 3 Cold Strip Mill Complex. Overflow from the TTPN is directed to a storm water retention basin from which there is no discharge.

Terminal Treatment Plant – East (TTPE); Figure [2-12](#), [2-13](#), [2-15](#)

TTPE consists of two scalping tanks and three settling tanks and three settling basins and a cooling tower. All the effluent from TTPE is discharge to the No. 6 Pump house and is then recycled back to the mills as process and cooling water. The following operations discharge to TTPE:

- The 80” hot strip mill is equipped with four scalping tanks and four large diameter clarifiers for preliminary removal of heavy solids and oil prior to discharge to the TTPE scale pits. ([Figure 2-10](#))
- No. 3 Cold Strip Mill process wastewaters (cold rolling, alkaline cleaning and hot coating lines) are treated in a clarifier and dissolved air floatation to remove emulsified oils and then are combined with 80” hot strip mill wastewater for additional treatment in large diameter clarifiers prior to discharge to the TTPE scalping tanks. ([Figure 2-12](#))
- Pickling rinse water from the No. 5 Pickle Line is neutralized with caustic at the No. 3 Cold Strip Mill neutralization facility prior to discharge to the TTPE scalping tanks. Rinse water from the CAL line discharges directly to the TTPE scalping tanks. ([Figure 2-11](#))

Solids from the scale pits and settling basins are removed by either drag outs or clam shell buckets. They are passively dewatered and most are returned to the process via the sinter plant. Solids (scale) that cannot be used in the sinter plant are solidified using lime fines or other appropriate material for off-site disposal. Underflow from the clarifiers is solidified using lime fines or other appropriate material for off-site disposal.

**2.3 Wastewater Treatment**

| Outfall | Treatment   |
|---------|---|
| 011     | Chlorination, dechlorination,   |
| 014     | Sedimentation, coagulation, dechlorination, rapid sand filtration, trickling filtration, sludge lagoons, pressure filtration, gravity thickening, Recycle or Treated Effluent |
| 018     | Chlorination, dechlorination,   |
| 518     | Flocculation, Rapid Sand Filtration, Sedimentation, carbon absorption, chemical oxidation, Chemical precipitation, Chlorination, Dechlorination, Pressure Filtration          |
| 618     | Rapid Sand Filtration, Multimedia Filtration, Sedimentation, Flotation thickening, Gravity Thickening, Pressure Filtration  |

The permittee shall have the wastewater treatment facilities under the responsible charge of an operator certified by the Commissioner in a classification corresponding to the classification of the wastewater treatment plant as required by IC 13-18-11-11 and 327 IAC 5-22-5. In order to operate a wastewater treatment plant the operator shall have qualifications as established in 327 IAC 5-22-7. IDEM has given the permittee a Class D industrial wastewater treatment plant classification.

**2.4 Changes in Operation**

Removal of Outfall 613

The No. 5 and No. 6 Blast Furnaces were shut down in June 2013. Operations will not resume, thus Outfall 613 has been removed from the permit.

Changes effecting Production Based Limits

- Production operations at the 56” Tandem Mill and No. 4 Pickling Line terminated in February 2006. Operations will not resume.
- No. 27 Tandem Mill idled in February 2006, it is not known if production will resume.
- No. 28 Tandem Mill idled in October of 2015 but is expected to resume operations.

Removal of the Monitoring Program for Total and Free Cyanide and Fluoride

Sampling was required for Cyanide and Fluoride to determine if the discharge of these pollutants required water quality based limits. Based on the sampling data the discharge did not exhibit a reasonable potential to exceed (RPE) for Total and Free Cyanide and Fluoride, thus the monitoring requirements that were required in the permit modification that became effective on August 1, 2014 on page 79 of 83 will not be required in the permit renewal.

Removal of Outfalls 003, 007, 008, and 013

For the reasons identified in Section 2.2, the above mentioned outfalls are not included in this NPDES permit.

**2.5 Facility Storm Water**

| Outfall | Latitude |    |     | Longitude |    |     | Water Body                   |
|---------|----------|----|-----|-----------|----|-----|------------------------------|
| SW14    | 41       | 40 | 962 | 87        | 26 | 783 | Indiana Harbor Turning Basin |
| SW13    | 41       | 40 | 822 | 87        | 24 | 485 | Indiana Harbor Turning Basin |
| SW12    | 41       | 39 | 827 | 87        | 24 | 987 | Indiana Harbor Turning Basin |
| SW11    | 41       | 39 | 532 | 87        | 25 | 355 | Indiana Harbor Turning Basin |
| SW10    | 41       | 39 | 500 | 87        | 27 | 400 | Indiana Harbor Ship Canal    |
| SW9     | 41       | 39 | 617 | 87        | 27 | 72  | Indiana Harbor Turning Basin |
| SW8     | 41       | 39 | 719 | 87        | 26 | 915 | Indiana Harbor Ship Canal    |

|     |    |    |     |    |    |     |                              |
|-----|----|----|-----|----|----|-----|------------------------------|
| SW7 | 41 | 39 | 945 | 87 | 26 | 393 | Indiana Harbor Turning Basin |
| SW6 | 41 | 39 | 878 | 87 | 26 | 305 | Indiana Harbor Turning Basin |
| SW5 | 41 | 40 | 168 | 87 | 26 | 075 | Indiana Harbor Turning Basin |
| SW4 | 41 | 40 | 280 | 87 | 26 | 128 | Indiana Harbor Turning Basin |
| SW3 | 41 | 40 | 387 | 87 | 26 | 200 | Indiana Harbor Turning Basin |
| SW2 | 41 | 40 | 458 | 87 | 26 | 268 | Indiana Harbor Turning Basin |
| SW1 | 41 | 40 | 658 | 87 | 26 | 299 | Indiana Harbor Turning Basin |

SW1 – SW14 have not discharged in the term of the current permit.

### 3.0 PERMIT HISTORY

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#### 3.1 Compliance history

A review of this facility’s discharge monitoring data was conducted for compliance verification. There are no pending or current enforcement actions regarding this NPDES permit.

### 4.0 PERMIT LIMITATIONS

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Two categories of effluent limitations exist for NPDES permits: Technology-Based Effluent Limits (TBELs) and Water Quality-Based Effluent Limits (WQBELs).

TBELs require every individual member of a discharge class or category to operate their water pollution control technologies according to industry-wide standards and accepted engineering practices. TBELs are developed by applying the National Effluent Limitation Guidelines (ELGs) established by USEPA for specific industrial categories. Technology based treatment requirements under section 301(b) of the CWA represent the minimum level of control/treatment using available technology that must be imposed in a section 402 permit (40 CFR 125.3(a)).

In the absence of ELGs, TBELs can also be based upon Best Professional Judgment (BPJ) under 40 CFR 122.43, 122.44, 125.3, and Section 402(a)(1) of the Clean Water Act (CWA).

WQBELs are designed to be protective of the beneficial uses of the receiving water and are independent of the available treatment technology. The WQBELs for this facility are based on water quality criteria in 327 IAC 2-1.5-8 or under the procedures described in 327 IAC 2-1.5-11 through 327 IAC 2-1.5-16 and implementation procedures in 327 IAC 5. Limitations and/or monitoring are required for parameters identified by applications of the reasonable potential to exceed WQBEL under 327 IAC 5-2-11.5.

According to 40 CFR 122.44 and 327 IAC 5, NPDES permit limits are based on either TBELs, where applicable, BPJ, or WQBELs, whichever is most stringent. The decision to limit or monitor the parameters contained in this permit is based on information contained in the permittee’s NPDES application. In addition, when performing a permit renewal, existing permit limits must be considered. These may be TBELs, WQBELs, or limits based on BPJ. When renewing a permit, the antibacksliding provisions identified in 327 IAC 5-2-10(11) are taken into consideration.

#### 4.1 Existing Permit Limits

Table 4.1: Outfall 003 and 013

| Parameter      | Monthly Average | Daily Maximum | Units   | Monthly Average | Daily Maximum | Units |
|----------------|-----------------|---------------|---------|-----------------|---------------|-------|
| Flow           | Report          | Report        | MGD     |                 |               |       |
| TSS            | Report          | Report        | lbs/day | Report          | Report        | mg/l  |
| Oil and Grease | Report          | Report        | lbs/day | Report          | Report        | mg/l  |
| Lead           | Report          | Report        | lbs/day | Report          | Report        | ug/l  |
| Zinc           | Report          | Report        | lbs/day | Report          | Report        | ug/l  |
| Ammonia        | Report          | Report        | lbs/day | Report          | Report        | mg/l  |
| Phenols        | Report          | Report        | lbs/day | Report          | Report        | mg/l  |
| Free Cyanide   | Report          | Report        | lbs/day | Report          | Report        | mg/l  |
| Parameter      | Monthly Average | Daily Maximum | Units   |                 |               |       |
| pH             | 6.0             | 9.0           | s.u.    |                 |               |       |

Table 4.2: Outfall 008

| Parameter      | Monthly Average | Daily Maximum | Units   | Monthly Average | Daily Maximum | Units |
|----------------|-----------------|---------------|---------|-----------------|---------------|-------|
| Flow           | Report          | Report        | MGD     |                 |               |       |
| Oil and Grease | Report          | Report        | lbs/day | Report          | Report        | mg/l  |
| Ammonia        | Report          | Report        | lbs/day | Report          | Report        | mg/l  |
| Lead           | Report          | Report        | lbs/day | Report          | Report        | ug/l  |
| Zinc           | Report          | Report        | lbs/day | Report          | Report        | ug/l  |
| Free Cyanide   | Report          | Report        | lbs/day | Report          | Report        | mg/l  |
| Phenols        | Report          | Report        | lbs/day | Report          | Report        | mg/l  |
| Temp           |                 |               |         |                 |               |       |
| Effluent       |                 |               |         | Report          | Report        | °F    |
| Influent       |                 |               |         | Report          | Report        | °F    |
| TRC            | Report          | Report        | lbs/day | Report          | Report        | mg/l  |
| Parameter      | Monthly Average | Daily Maximum | Units   |                 |               |       |
| pH             | 6.0             | 9.0           | s.u.    |                 |               |       |

Table 4.3 Outfall 011

| Parameter      | Monthly Average  | Daily Maximum | Units   | Monthly Average | Daily Maximum | Units |
|----------------|--|---------------|---------|-----------------|---------------|-------|
| Flow           | Report   | Report        | MGD     |                 |               |       |
| Oil and grease |  |               | Report  |                 |               | mg/l  |
| Ammonia        |  |               | Report  |                 |               | mg/l  |
| Lead           |  |               | Report  |                 |               | ug/l  |
| Zinc           |  |               | Report  |                 |               | ug/l  |
| Phenols        |  |               | Report  |                 |               | mg/l  |
| Mercury        | 0.00092  | 0.0023        | lbs/day | 1.3             | 3.2           | ng/l  |
| Temp           | <a href="#">See Attachment A, Thermal Requirements</a> |               |         |                 |               |       |
| Effluent       |  |               |         | Report          | Report        | °F    |
| Influent       |  |               |         | Report          | Report        | °F    |
| TRC            | 8.5  | 19            | lbs/day | 12              | 27            | ug/l  |
| Parameter      | Monthly Average  | Daily Maximum | Units   |                 |               |       |
| pH             | 6.0  | 9.0           | s.u.    |                 |               |       |

Table 4.4 Outfall 014

|                             | Monthly Average  | Daily Maximum | Units   | Monthly Average | Daily Maximum | Units |
|-----------------------------|--|---------------|---------|-----------------|---------------|-------|
| Flow                        | Report   | Report        | MGD     |                 |               |       |
| TSS                         | 6620   | 17092         | lbs/day | Report          | Report        | mg/l  |
| Oil and Grease              | 1553   | 4568          | lbs/day | 10              | 15            | mg/l  |
| Ammonia                     | Report   | Report        | lbs/day | Report          | Report        | mg/l  |
| T. Cyanide                  | 7.38   | 17.41         | lbs/day | Report          | Report        | mg/l  |
| Free Cyanide                | Report   | Report        | lbs/day | Report          | Report        | mg/l  |
| Phenols                     | Report   | Report        | lbs/day | Report          | Report        | mg/l  |
| T Lead                      | 5.9  | 12            | lbs/day | 61              | 120           | ug/l  |
| T Zinc                      | 14.91  | 35            | lbs/day | Report          | Report        | ug/l  |
| *Naphthalene                |  | 1.8           | lbs/day |                 | Report        | mg/l  |
| *Tetrachloroethylene (PERC) |  | 2.69          | lbs/day |                 | Report        | mg/l  |
| Mercury                     | 0.00012  | 0.00031       | lbs/day | 1.3             | 3.2           | ng/l  |
| TRC                         | 1.2  | 2.9           | lbs/day | 13              | 30            | ug/l  |
| Temperature                 | <a href="#">See Attachment A, Thermal Requirements</a>         |               |         |                 |               |       |
| Effluent                    |  |               |         | Report          | Report        | °F    |
| Influent                    |  |               |         | Report          | Report        | °F    |
| Hex Chrome                  | Report   | Report        | lbs/day | Report          | Report        | mg/l  |
| Biomonitoring               | <a href="#">See Section A, Whole Effluent Toxicity Testing</a> |               |         |                 |               |       |
| Parameter                   | Monthly Average  | Daily Maximum | Units   |                 |               |       |
| pH                          | 6.0  | 9.0           | s.u.    |                 |               |       |

\*a monitoring waiver for Naphthalene and PERC was granted based on data provided from 12/31/2011 – 7/31/2014.

Table 4.5: Internal Outfall 613

The outfall has been removed from this renewed permit; there is no longer a discharge associated with 613.

| Parameter  | Monthly Average | Daily Maximum | Units   | Monthly Average | Daily Maximum | Units |
|------------|-----------------|---------------|---------|-----------------|---------------|-------|
| Flow       | Report          | Report        | MGD     |                 |               |       |
| TSS        | Report          | Report        | lbs/day | Report          | Report        | mg/l  |
| Ammonia    | 100             | 300           | lbs/day | Report          | Report        | mg/l  |
| T. Cyanide | 8.73            | 17.41         | lbs/day | Report          | Report        | mg/l  |
| Phenols    | 0.32            | 0.64          | lbs/day | Report          | Report        | mg/l  |
| T. Lead    | Report          | Report        | lbs/day | Report          | Report        | ug/l  |
| T. Zinc    | Report          | Report        | lbs/day | Report          | Report        | ug/l  |

Table 4.6 Outfall 018

| Parameter      | Monthly Average  | Daily Maximum | Units   | Monthly Average | Daily Maximum | Units |
|----------------|--|---------------|---------|-----------------|---------------|-------|
| Flow           | Report   | Report        | MGD     |                 |               |       |
| Oil and Grease |  |               |         |                 | Report        | mg/l  |
| Free Cyanide   | Report   | Report        | lbs/day | Report          | Report        | mg/l  |
| Ammonia        | Report   | Report        | lbs/day | Report          | Report        | mg/l  |
| Phenols        | Report   | Report        | lbs/day | Report          | Report        | mg/l  |
| T. Lead        | 5.0  | 10            | lbs/day | 38              | 77            | ug/l  |
| T. Zinc        | 24   | 48            | lbs/day | 180             | 360           | ug/l  |
| Mercury        | 0.00017  | 0.00042       | lbs/day | 1.3             | 3.2           | ng/l  |
| TRC            | 1.7  | 4.0           | lbs/day | 13              | 30            | ug/l  |
| Temperature    | <a href="#">See Attachment A, Thermal Requirements</a>         |               |         |                 |               |       |
| Effluent       |  |               |         | Report          | Report        | °F    |
| Influent       |  |               |         | Report          | Report        | °F    |
| Selenium       | Report   | Report        | lbs/day | Report          | Report        | mg/l  |
| Biomonitoring  | <a href="#">See Section A, Whole Effluent Toxicity Testing</a> |               |         |                 |               |       |
| Parameter      | Monthly Average  | Daily Maximum | Units   |                 |               |       |
| pH             | 6.0  | 9.0           | s.u.    |                 |               |       |

Table 4.7: Internal Outfall 518

| Parameter      | Monthly Average | Daily Maximum | Units   | Monthly Average | Daily Maximum | Units |
|----------------|-----------------|---------------|---------|-----------------|---------------|-------|
| Flow           | Report          | Report        | MGD     |                 |               |       |
| TSS            | 91.24           | 243.71        | lbs/day | Report          | Report        | mg/l  |
| Oil and Grease |                 | 60.82         | lbs/day |                 | Report        | mg/l  |
| Ammonia        | 60.82           | 182.47        | lbs/day | Report          | Report        | mg/l  |
| T Cyanide      | 6.08            | 12.16         | lbs/day | Report          | Report        | mg/l  |
| Phenols        | 0.61            | 1.22          | lbs/day | Report          | Report        | mg/l  |
| T Lead         | 1.32            | 2.28          | lbs/day | Report          | Report        | ug/l  |
| T Zinc         | 2.73            | 8.21          | lbs/day | Report          | Report        | ug/l  |
| TRC            |                 | 3.04          | lbs/day |                 | Report        | mg/l  |
| Selenium       | Report          | Report        | lbs/day | Report          | Report        | mg/l  |

Table 4.8: Internal Outfall 618

| Parameter      | Monthly Average | Daily Maximum | Units   | Monthly Average | Daily Maximum | Units |
|----------------|-----------------|---------------|---------|-----------------|---------------|-------|
| Flow           | Report          | Report        | MGD     |                 |               |       |
| TSS            | 360             | 720           | lbs/day | Report          | Report        | mg/l  |
| Oil and Grease | 102             | 216           | lbs/day | Report          | Report        | mg/l  |
| T Lead         | 2.16            | 6.48          | lbs/day | Report          | Report        | ug/l  |
| T Zinc         | 3.5             | 10.5          | lbs/day | Report          | Report        | ug/l  |

## **4.2 Technology-Based Effluent Limits (TBEL)**

The federal effluent guidelines contained in 40 CFR 433; Metal Finishing, are not applicable to discharges from this facility. The ArcelorMittal Steel USA LLC – Indiana Harbor East utilizes a process called “hot dip galvanizing”. On the one hot dip galvanizing line at Indiana Harbor East, cold rolled steel sheet is cleaned with a mild sulfuric acid solution, followed by alkaline cleaning to remove residual acid and iron salts. A fluxing agent is applied to the cleaned sheet and then it is immersed in a molten zinc bath where the sheet surface is coated with zinc. The thickness of the zinc coating is controlled by “air knives” that apply high pressure air to the sheet surface as it leaves molten zinc bath. The sheet is then air dried.

Certain automotive customers require that the galvanized sheet be passivated with a chromate solution to prevent light oxidation of the zinc coating. The chromate solution is not applied on all galvanized coils. The solution is contained in two, 55 gallon drums located near the end of the line. Each drum is equipped with sprays to apply solution. The small amount of excess chromate solution (overspray) is collected in drip pans that are positioned under the sprays and is disposed of off-site when a sufficient quantity is collected. There is no process water application in this part of the process and there is no process wastewater generated.

The chromate passivation step is not a coating or plating operation in the sense of the effluent limitations guidelines for metal finishing (i.e., chromium plating) because the chromate solution in the hot dip galvanizing process is not applied to or chemically bound to the base metal (steel).

The hot dip galvanizing process is regulated by 40 CFR Part 420, Subpart L - Hot Coating Category (see 420.120 for applicability). Footnote 1 to the BAT effluent limitations guidelines states that the ELGs for hexavalent chromium shall be applicable only to hot dip galvanizing operations that discharge wastewaters from the chromate rinse step. Thus, a permit limit for hexavalent chromium is not necessary in the case of the hot dip galvanizing line at Indiana Harbor East. However, for the purpose of confirmation, 2 X Year monitoring for Hexavalent Chromium has been included at Outfall 014.

### **40 CFR 423 Steam Electric Power Generating Point Source Category:**

The federal effluent guidelines contained in 40 CRF 423; Steam Electric Power Plants, are not applicable to discharges from this facility. The provisions of 40 CFR 423 are applicable only to discharges resulting from the operation of a generating unit by an establishment primarily engaged in the generation of electricity for distribution and sale which results primarily from a process utilizing fossil-type fuel (coal, oil, or gas). ArcelorMittal generates power solely for use at ArcelorMittal Indiana Harbor facilities; East and Long Carbon.

#### 40 CFR 420 Iron and Steel Manufacturing Point Source Category:

Attachment C presents the derivation of the applicable technology-based effluent limitations guidelines and standards for the permittee for each process wastewater outfall. For each of the basic steelmaking and steel finishing operations, the NPDES production rates developed by the permittee were used in combination with the BPT, BAT or BCT effluent limitations guidelines or NSPS from 40 CFR Part 420 to compute the allowable federal technology based discharges of the regulated pollutants.

The effluent limitations guidelines and standards applicable to the permittee are found in 40 CFR Part 420 for ironmaking, steelmaking, vacuum degassing, continuous casting, hot forming, acid pickling, cold forming, alkaline cleaning and hot coating operations.

| OUTFALL | Operation                   | Applicable ELGs   | Production (tons/day) |
|---------|-----------------------------|-------------------|-----------------------|
| 518     | No 7 Blast Furnace          | 420.34(a)         | 12,000                |
| 014     | No. 2 BOF                   | 420.42/43(b)      | 5342                  |
| 014     | NO. 3 BOF Casters           | 420.64            | 5278                  |
| 618     | No. 4 BOF                   | 420.42/4( c)      | 8505                  |
| 618     | RHOB(Degasser)              | 420.54            | 5967                  |
| 618     | No. 1 Caster                | 420.62/63         | 8101                  |
| 014     | 80" Hot Strip Mill          | 420.72/77( c)(1)  | 16871                 |
| 014     | 80" Tandem Mill             | 420.102/103(a)(2) | 9955                  |
| 014     | No. 27 Temper Mill          | 420.102/103(a)(5) | 0**                   |
| 014     | No. 28 Temper Mill          | 420.102/103(a)(5) | 4752                  |
| 014     | No. 29 Temper Mill          | 420.102/103(a)(4) | 5421                  |
| 014     | No.5 Pickling Line          | 420.92/93(b)(2)   | 7853                  |
| 014     | Pickling Fume Scrubbers     | 420.92/93(b)(4)   | 1 scrubber            |
| 014     | No. 5 Galvanizing Line      | 420.122/123(a)(1) | 1173                  |
| 014     | No. 3 CAL Alkaline Cleaning | 420.112(b)        | 1117                  |

\*Production operations at the 56" Tandem and the No 4 Pickle Line were terminated in February of 2006 and will not be resuming, they were not included in the table.

\*\*The No. 27 Temper Mill was idled in February of 2006, it is not known if production at the No. 27 Temper Mill will resume, thus remain in the applicable ELGs table. The proposed technology based limits are reflective of the current status of the operations at the facility.

#### Monitoring Waivers for Naphthalene and Tetrachloroethylene

In accordance with 40 CFR 122.44(a)(2), a discharger subject to technology-based effluent limitation guidelines and standards in a NPDES permit may be authorized to forego

sampling of a pollutant found in 40 CFR Subchapter N if the discharger has demonstrated through sampling and other technical factors that the pollutant is not present in the discharge or present only at the background level from the intake water and without any increase in the pollutant due to activities of the discharger. This waiver is good only for the term of the permit. Any request must demonstrate through sampling or other technical information, including information generated during an earlier permit term that the pollutant is not present in the discharge or is present only at background levels from intake water and without any increase in the pollutant due to activities of the discharger. The monitoring waiver must be included in the permit as an express permit condition and the reason supporting the waiver must be documented in the permit's fact sheet or statement of basis. This provision does not supersede certification processes and requirements already established in existing effluent limitation guidelines and standards. The permittee has requested to continue the monitoring waiver for Naphthalene and Tetrachloroethylene and based on the sampling data submitted in 2014 the request to waiver has been approved.

#### **4.3 [Water Quality Based Limits](#)** (follow link for detailed information)

The water quality-based effluent limitations for this facility are based on water quality criteria in 327 IAC 2-1.5-8 or under the procedures described in 327 IAC 2-1.5-11 through 327 IAC 2-1.5-16 and implementation procedures in 327 IAC 5. The need for WQBELs was determined using the Great Lakes system reasonable potential procedures contained in 327 IAC 5-2-11.5. Water quality-based effluent limitations were calculated using the surface water criteria for the Great Lakes system contained in 327 IAC 2-1.5 and the following implementation procedures contained in 327 IAC 5-2-11.4 and the procedures for calculating WQBELs from the wasteload allocations contained in 327 IAC 5-2-11.6.

In addition to establishing WQBELs based on the reasonable potential statistical procedure contained in 327 IAC 5-2-11.5(b), IDEM is also required to establish WQBELs under 327 IAC 5-2-11.5(a) "If the commissioner determines that a pollutant or pollutant parameter (either conventional or nonconventional, toxic substance, or whole effluent toxicity (WET) is or may be discharged into the Great Lakes system at a level that will cause, or have the reasonable potential to cause, or contribute to an excursion above any applicable narrative criteria or numeric water quality criterion or value under 327 IAC 2-1.5."

Once a determination is made using the reasonable potential provisions under 5-2-11.5 that WQBELs must be included in the permit, the WQBELs are calculated in accordance with 5-2-11.5(d). Under this provision, in the absence of an EPA-approved TMDL, WLAs are calculated for the protection of acute and chronic aquatic life, wildlife, and human health in accordance with the WLA provisions under 5-2-11.4. The WLAs are then converted into WQBELs in accordance with the WQBEL provisions under 5-2-11.6. In accordance with 5-2-11.5(e), IDEM may still include monitoring requirements for a pollutant in the permit if the reasonable potential analysis does not show the need for WQBELs for the pollutant.

## **Narrative Water Quality Based Limits**

The narrative water quality contained under 327 IAC 2-1.5-8(b)(1) (A)-(c) have been included in this permit to ensure that the narrative water quality criteria are met.

## **Numeric Water Quality Based Limits**

The numeric water quality criteria and values contained in this permit have been calculated using the tables of water quality criteria under 327 IAC 2-1.5-8(b) & (c).

## **4.4 Permit Limits Narrative By Parameter**

The proposed final effluent limitations are based on the more stringent of the Indiana WQBELs, TBELs, or approved TMDLs and NPDES regulations as appropriate for each regulated outfall.

### **Flow**

The permittee's flow is to be monitored in accordance with 327 IAC 5-2-13(a)2.

### **pH**

Limitations for pH in the proposed permit are taken from 327 IAC 2-1.5-8(c)(2). pH effluent limits at Internal Outfalls 518 and 618 are not proposed because ArcelorMittal requested that those pH limits be applied at Outfall 018 following the provisions of 40 CFR §420.07.

### **TSS**

Effluent limitations for Total Suspended Solids have been retained from the previous permit at final outfall 014 and were developed in accordance with the 40 CFR 420 and the applicable subparts.

TSS limits have been calculated using current production values for internal outfall 518. These limits were developed in accordance with 40 CFR 420.34.

TSS limits have been retained from the previous permit at internal outfall 618. These limits were developed in accordance with 40 CFR 420.42/43(c), 40 CFR 420.62/63, and 40 CFR 420.54.

### **Oil and Grease (O & G)**

O & G limitations at Outfall 014 and 018 have been retained from the previous permit. The limits are 15.0 mg/l Daily Maximum and 10.0 mg/l Monthly Average. Although Indiana does not have a numeric water quality criterion for Oil and Grease,

these limits are considered sufficient to ensure compliance with narrative water quality criteria in 327 IAC 2-1.5-8(b)(1)(C) which prohibits oil or other substances in amounts sufficient to produce color, visible sheen, odor, or other conditions in such a degree to create a nuisance.

O & G limits have been calculated using current production values for internal outfall 518. These limits were developed in accordance with 40 CFR 420.34.

O & G limits have been retained from the previous permit at internal outfall 618. These limits were developed in accordance with 40 CFR 420.42/43(c), 40 CFR 420.62/63, and 40 CFR 420.54.

### **Total Residual Chlorine (TRC)**

Outfall 008, 011, 014, and 018

The facility adds chlorine to the intake water, for zebra and quagga mussel control. The monitoring is required on a daily basis when the facility is chlorinating and for an additional three days after chlorination has ceased.

In accordance with 327 IAC 5-2-11.6(h)(3), compliance with the daily maximum limit will be demonstrated when effluent concentrations for total residual chlorine are less than the LOQ. The permittee must comply with the monthly average limit, but may consider daily values that are less than the LOQ to be zero for purposes of calculating a monthly average value. In accordance with 327 IAC 5-2-11.6(g)(1), mass limits and a mass-based compliance value for TRC are included in the permit.

Water quality-based effluent limitations (WQBELs) for total residual chlorine were calculated for ArcelorMittal Outfalls 011, 014 and 018 as part of the multi-discharger model. The multi-discharger model results in a net lowering of TRC.

Outfall 518: TRC limits have been calculated using current production values for internal outfall 518. These limits were developed in accordance with 40 CFR 420.34.

### **Lead**

Water quality based effluent limits for total lead were re-calculated using updated flow data at Outfall 014 and 018. Water quality-based effluent limitations (WQBELs) for lead was calculated for ArcelorMittal Outfalls 014 and 018 as part of the multi-discharger model.

The discharge from Outfall 014 does not exhibit a reasonable potential to exceed water quality based effluent limitations for Lead. However, WQBELs are included because the calculated TBELs are less stringent. The limits from the previous permit are not appropriate to carry over because they are less stringent than the currently calculated water quality based effluent limits.

The discharge from Outfall 018 exhibits a reasonable potential to exceed water quality based effluent limitations for Lead. WQBELs were recalculated taking into account the updated flow data (16.4 MGD). The limits from the previous permit are not appropriate to carry over because they are less stringent than the currently calculated water quality based effluent limits.

Outfall 518: Lead limits have been calculated using current production values for internal outfall 518. These limits were developed in accordance with 40 CFR 420.34

Outfall 618: Lead limits have been calculated using current production values for internal outfall 618. These limits were developed in accordance with 40 CFR 420.40, 420.50, and 420.60.

## **Zinc**

Water quality-based effluent limitations (WQBELs) for zinc was calculated for ArcelorMittal Outfalls 014 and 018 as part of the multi-discharger model.

Outfall 014: The discharge from outfall 014 exhibits a reasonable potential to exceed water quality based effluent limitations (WQBELs). Thus, the WQBELs were calculated and applied at outfall 014 resulting in a new monthly average and daily maximum mass limits as well as including concentration limits at this outfall. The limits from the previous permit are not appropriate to carry over because they are less stringent than the currently calculated water quality based effluent limits.

The discharge from Outfall 018 does not exhibit a reasonable potential to exceed water quality based effluent limitations for Zinc. Therefore, reporting requirements for zinc at Outfall 018 are included.

Technology based effluent limits for Zinc have been calculated using current production values for internal outfall 518. Technology based effluent limits for Zinc have been retained from the previous permit for Internal Outfall 618. These limits were developed in accordance with 40 CFR 420.34 and 40 CFR 420.42/43(c), 40 CFR 420.62/63, and 40 CFR 420.54.

## **Ammonia**

Water quality-based effluent limitations (WQBELs) for ammonia-N were calculated for ArcelorMittal Outfalls 011, 014 and 018 as part of the multi-discharger model. The discharge at Outfalls 011, 014 and 018 did not exhibit a reasonable potential to exceed water quality, but due to the nature of the discharge the monitoring requirement shall remain in the permit. The permittee requested that ammonia reporting be removed from Outfall 011 because the Nos. 5 and 6 blast furnances have been shut down. IDEM proposes to reduce sampling frequency rather than removing the monitoring requirement at this time.

Technology based effluent limits for Ammonia have been developed in accordance with 40 CFR 420.32/33 and 40 CFR 420.34. In an amendment to the permit renewal application, the permittee provided the following information and request:

\*The No. 7 blast furnace underwent a reline that was completed during mid-2014. Blast furnace relines are conducted from time to time for purposes of replacing and repairing refractory linings and, when possible, to increase the productive capacity of the furnace. The Title V air permit for IH East sets the allowable annual maximum production for the No. 7 furnace at 4,417,000 tons, which is equivalent to an average daily rate of 12,101 tons, assuming 365 operating days per year. ArcelorMittal's business plan calls for maximizing iron (hot metal) production from the No. 7 blast furnace such that the annual production ceiling from the Title V air permit can be approached as market conditions may allow.

Although blast furnaces are operated more or less continuously, there are short term outages for maintenance and to balance production with downstream production units. Consequently, the No. 7 furnace is operated at production rates higher than 12,101 tons/day for sustained periods of time. This is illustrated in Attachment A which is a chart of No. 7 furnace hot metal production for the period August 2014 to December 2016. As shown, daily production often exceeds 12,101 tons and there are a number of days when hot metal production between 13,000 and 14,000 tons occurred. Based on this assessment, ArcelorMittal requests that monthly average and daily maximum technology-based effluent limits for the No. 7 blast furnace that apply at Outfall 518 be calculated with an average value of 12,000 tons and a maximum value of 13,000 tons. Attachment B shows ArcelorMittal calculation of Outfall 518 technology based effluent limits on this basis.

Permittees Proposed Ammonia-N Effluent Limits at Outfall 518

The current IH East NPDES permit contains effluent limits for ammonia-N at Outfalls 518 (No. 7 blast furnace) and at Outfall 613 (Nos. 5 & 6 blast furnaces). Outfall 613 is tributary to the Outfall 014 master treatment and recycle system. The Nos. 5 & 6 blast furnace are no longer operable and ArcelorMittal has not applied for authorization to discharge process wastewaters through Outfall 613 for the renewal NPDES permit. ArcelorMittal is requesting to transfer the Outfall 613 ammonia-N effluent limits to Outfall 518 in the renewal NPDES permit as follows:

| Outfall | Monthly Average (lbs/day) | Daily Maximum (lbs/day) | Basis                                      |
|---------|---------------------------|-------------------------|--|
| 518     | 70.1                      | 227.8                   | Attachment B – updated No. 7 BF TBELs      |
| 613     | 100                       | 300                     | Current NPDES permit                       |
| 518     | 170.1                     | 527.8                   | Proposed renewal permit Outfall 518 limits |

The current NPDES permit Outfall 613 ammonia-N effluent limits were based on a prior Section 301(g) variance. The combination of Outfall 518 and Outfall 613 ammonia-N effluent limits are far below any water quality based effluent limits that could apply to Outfall 018. Consequently, there should be no water quality-related issues with this request.

IDEM has determined that this request can't be granted because the limits from Outfall 518 must be based on New Source Performance Standards (NSPS). Technology based effluent limits for ammonia-N have been calculated using current production values for internal outfall 518.

Although the internal outfall 613 where the technology based limits were applied has been removed, reporting for ammonia at Outfall 014 shall be retained from the previous permit.

### **Phenols**

The calculated NSPS limits at Outfall 518, which are the main source of Phenols at the final Outfall 018, will be limited at the internal outfall 518. These limits were developed in accordance with 40 CFR 420.34.

### **Free Cyanide**

Based on the presence of Free Cyanide on the 2010 303(d) list for the Indiana Harbor, monitoring for Free Cyanide is being included at Outfall 018 because it is the outfall that contains process (Outfall 518) wastewater.

Based on the updated wasteload allocation, the requirement to report free cyanide has been removed from outfall 008.

### **T. Cyanide**

Numeric limits at Outfall 014 were removed based on the revised WLA which took into account that the discharge from internal 613 has been eliminated. The update waste load indicated that there was no longer a Reasonable Potential to Exceed water quality for T. Cyanide at 014. Monitoring for T. Cyanide is required to when wastewater from No.7 Blast Furnace treatment and recycle system may be present.

Outfall 012 has been removed, thus the numeric limit has been removed but the reporting requirement shall continue to monitor for T. Cyanide.

Total Cyanide limits have been calculated using current production values for internal outfall 518. These limits were developed in accordance with 40 CPR 420.34.

## **Fluoride**

The previous permit application identified Fluoride as potentially present in the discharge. The previous permit required the permittee to sample fluoride to establish a data based at 011, 014 and 018. A RPE analysis was done using the discharge data taken during the monitoring program and there was not an RPE for fluoride at these outfalls. Thus, Fluoride has been removed from the permit.

## **Temperature**

### *Outfalls 011, 014, and 018*

Effluent Limitations for temperature are based on 327 IAC 2-1.5-8(b) and shall be monitored at Outfalls 011, 014, and 018. Temperature is discussed in depth in [Attachment A, Thermal Requirements](#) of this fact sheet.

## **Selenium**

Monitoring for selenium at Outfall 018 shall be retained from the previous permit. The requirement was based on data reported for this pollutant at Internal Outfall 518 and, as shown on the April 2011 Form 2C update, the potential that the flow at Internal Outfall 518 may increase above current levels.

## **Mercury**

The discharge from Outfalls 014 and 018 exhibits a reasonable potential to exceed water quality based effluent limits for mercury, therefore limits had been placed in the permit.

### *Outfall 014 and 018*

IDEM's reviewed the data submitted for these two outfalls; the review supported the SMV and the interim discharge limitations of 2.4 mg/l (Outfall 014) and 2.5 ng/l (Outfall 018). The limits were approved in the modification dated September 1, 2016.

### *Outfall 011*

Mercury limitations were previously included at Outfall 011. However, a review of the most recent three (3) years data indicates that there is no Reasonable Potential to Exceed (RPE) Indiana Water Quality Standards at this Outfall. Therefore, the limitations have been removed from this permit. Reporting requirements are still included to ensure the discharge from this outfall does not exhibit an RPE in the future.

## **Naphthalene/TCE**

Naphthalene and TCE limits have been are more stringent than the WQBEL and have been retained from the previous permit at Outfall 014. These limits were

developed in accordance with 40 CFR 420.102/103. In accordance with 40 CFR 122.44(a)(2), the facility has been granted a monitoring waiver of these pollutants.

**Blast Furnace Monitoring at Outfall 014, Ammonia, total and free cyanide, and phenols (4AAP)**

Monitoring for ammonia-N, total and free cyanide, and phenols (4AAP) is required only when wastewater from No. 7 blast furnace treatment and recycle system may be present. Analysis of samples for free cyanide is not required when the corresponding sample analytical result for total cyanide is not detected at <0.005 mg/l.

**4.5 Discharge Limitations by Outfall, Monitoring Conditions and Rationale**

Analytical and sampling methods used shall conform to the version of 40 CFR 136 as referenced in 327 IAC 5-2-13(d)(1). The monitoring frequencies proposed are comparable to the monitoring frequencies included in permits regulating similar types of discharges.

**Outfall 011**

| Parameter                                     | Monthly Average | Daily Maximum | Units   | Monthly Average | Daily Maximum | Units | Monitoring frequency | Sample Type |
|---|-----------------|---------------|---------|-----------------|---------------|-------|----------------------|-------------|
| Flow  |                 |               |         | Report          | Report        | MGD   | 1 x Daily            | 24 Hr Total |
| Oil and Grease                                | ---             | Report        | lbs/day | ---             | Report        | mg/l  | 1 x Weekly           | Grab        |
| Mercury                                       | Report          | Report        | lbs/day | Report          | Report        | ng/l  | 6 x Yearly           | Grab        |
| <a href="#">Temperature Influent/Effluent</a> | ---             | ---           | ---     | Report          | Report        | °F    | 2 x Weekly           | Grab        |
| TRC   | 3.5             | 8.3           | lbs/day | 14              | 33            | ug/l  | 5 x Weekly           | Grab        |
| Ammonia (asN)                                 | Report          | Report        | lbs/day | Report          | Report        | mg/l  | 1 x Quarter          | Grab        |

| Parameter | Daily Min | Daily Maximum | Units | Monitoring frequency | Sample Type |
|-----------|-----------|---------------|-------|----------------------|-------------|
| pH        | 6.0       | 9.0           | s.u.  | 1 x Weekly           | Grab        |

**Outfall 014**

| Parameter             | Monthly Average | Daily Maximum | Units   | Monthly Average | Daily Maximum | Units | Monitoring frequency | Sample Type   |
|-----------------------|-----------------|---------------|---------|-----------------|---------------|-------|----------------------|---------------|
| Flow                  |                 |               |         | Report          | Report        | MGD   | 1 x Daily            | 24 Hr Total   |
| TSS                   | 6620            | 17092         | lbs/day | Report          | Report        | mg/l  | 3 x weekly           | 24 Hr Comp    |
| Oil and Grease        | 1553            | 4568          | lbs/day | 10              | 15            | mg/l  | 3 x weekly           | 2 Grab/ 24 Hr |
| Ammonia*              | Report          | Report        | lbs/day | Report          | Report        | mg/l  | 3 x weekly           | 24 Hr Comp    |
| T. Cyanide*           | Report          | Report        | lbs/day | Report          | Report        | mg/l  | 3 x weekly           | Grab          |
| Cyanide, Free*        | Report          | Report        | lbs/day | Report          | Report        | mg/l  | 3 x weekly           | Grab          |
| Phenols*              | Report          | Report        | lbs/day | Report          | Report        | mg/l  | 3 x weekly           | 24 Hr Comp    |
| Lead                  | 3.1             | 6.2           | lbs/day | 48              | 96            | ug/l  | 3 x weekly           | 24 Hr Comp    |
| Zinc                  | 11              | 22            | lbs/day | 170             | 340           | ug/l  | 3 x weekly           | 24 Hr Comp    |
| Naphthalene**         |                 | 1.8           | lbs/day |                 | Report        | mg/l  | [3]                  | Grab          |
| Tetrachloroethylene** |                 | 2.69          | lbs/day |                 | Report        | mg/l  | [3]                  | Grab          |
| Mercury               | 0.00084         | 0.00021       | lbs/day | 1.3             | 3.2           | ng/l  | 6 x yearly           | Grab          |
| Interim Limit         |                 |               |         | 2.4             | Report        | ng/l  | 6 x yearly           | Grab          |
| TRC                   | 0.84            | 2.0           | lbs/day | 13              | 31            | ug/l  | 5 x weekly           | Grab          |

|   |                                  |        |         |        |        |                 |            |      |
|---|----------------------------------|--------|---------|--------|--------|-----------------|------------|------|
| <a href="#">Temperature Influent/Effluent</a> | ----                             | ----   | ----    | Report | Report | °F              | 2 x weekly | Grab |
| Hex. Chrome                                   | Report                           | Report | lbs/day | Report | Report | mg/l            | 2 x Yearly | Grab |
| Biomonitoring                                 | See <a href="#">Attachment A</a> |        |         |        |        | TU <sub>c</sub> |            |      |

| Parameter | Daily Min | Daily Maximum | Units | Monitoring frequency | Sample Type |
|-----------|-----------|---------------|-------|----------------------|-------------|
| pH        | 6.0       | 9.0           | s.u.  | 2 x weekly           | Grab        |

\*Sampling is required when wastewater from blast furnace No. 7 is being discharged.

\*\*Naphthalene and TCE limits have been are more stringent than the WQBEL and have been retained from the previous permit at Outfall 014. These limits were developed in accordance with 40 CFR 420.102/103. In accordance with 40 CFR 122.44(a)(2), the facility has been granted a monitoring waiver of these pollutants.

## Outfall 018

| Parameter                                     | Monthly Average                  | Daily Maximum | Units   | Monthly Average | Daily Maximum | Units           | Monitoring frequency | Sample Type  |
|---|----------------------------------|---------------|---------|-----------------|---------------|-----------------|----------------------|--------------|
| Flow  |                                  |               |         | Report          | Report        | MGD             | Daily                | 24 Hr Total  |
| Oil and Grease                                | ----                             | ----          | ----    | ----            | Report        | mg/l            | 1 x weekly           | Grab         |
| Cyanide, Free                                 | Report                           | Report        | lbs/day | Report          | Report        | mg/l            | 2 x monthly          | Grab         |
| Ammonia                                       | Report                           | Report        | lbs/day | Report          | Report        | mg/l            | 2 x weekly           | 24 Hr. Comp. |
| Phenols                                       | Report                           | Report        | lbs/day | Report          | Report        | mg/l            | 2 x weekly           | Grab         |
| Lead  | 3.1                              | 6.3           | lbs/day | 23              | 46            | ug/l            | 2 x weekly           | 24 Hr. Comp. |
| Zinc  | Report                           | Report        | lbs/day | Report          | Report        | ug/l            | 2 x weekly           | 24 Hr. Comp. |
| Mercury**                                     | 0.0017                           | 0.0042        | lbs/day | 1.3             | 3.2           | ng/l            | 6 x yearly           | Grab         |
| Interim Limit                                 |                                  |               |         | 2.5             |               | ng/l            | 6 x yearly           | Grab         |
| TRC   | 1.8                              | 4.2           | lbs/day | 13              | 31            | ug/l            | 5 x weekly           | Grab         |
| <a href="#">Temperature Influent/Effluent</a> | ----                             | ----          | ----    | Report          | Report        | °F              | 2 x weekly           | Grab         |
| Selenium                                      | Report                           | Report        | lbs/day | Report          | Report        | mg/l            | 2 x monthly          | 24 Hr. Comp  |
| <a href="#">Biomonitoring</a>                 | See <a href="#">Attachment A</a> |               |         |                 |               | TU <sub>c</sub> |                      |              |

| Parameter | Daily Min | Daily Maximum | Units | Monitoring frequency | Sample Type |
|-----------|-----------|---------------|-------|----------------------|-------------|
| pH        | 6.0       | 9.0           | s.u.  | 1 x Daily            | Continuous  |

## Outfall 518

| Parameter      | Monthly Average | Daily Maximum | Units   | Monthly Average | Daily Maximum | Units | Monitoring frequency | Sample Type |
|----------------|-----------------|---------------|---------|-----------------|---------------|-------|----------------------|-------------|
| Flow           |                 |               |         | Report          | Report        | MGD   | Daily                | Continuous  |
| TSS            | 105             | 281           | lbs/day | Report          | Report        | mg/l  | 2 x weekly           | 24 Hr Comp  |
| Oil and Grease |                 | 70.1          | lbs/day | ----            | Report        | mg/l  | 2 x weekly           | Grab        |
| Ammonia (as N) | 70.1            | 210           | lbs/day | Report          | Report        | mg/l  | 2 x weekly           | 24 Hr Comp  |
| T. Cyanide     | 7.01            | 14.0          | lbs/day | Report          | Report        | mg/l  | 2 x weekly           | Grab        |
| Phenols (4AAP) | 0.70            | 1.40          | lbs/day | Report          | Report        | mg/l  | 2 x weekly           | Grab        |
| Lead           | 2.10            | 6.31          | lbs/day | Report          | Report        | ug/l  | 2 x weekly           | 24 Hr Comp  |
| Zinc           | 3.14            | 9.46          | lbs/day | Report          | Report        | ug/l  | 2 x weekly           | 24 Hr Comp  |
| TRC            |                 | 3.50          | lbs/day |                 | Report        | mg/l  | 2 x weekly           | Grab        |
| Selenium       | Report          | Report        | lbs/day | Report          | Report        | mg/l  | 2 x monthly          | 24 Hr Comp  |

## Outfall 618

| Parameter      | Monthly Average | Daily Maximum | Units   | Monthly Average | Daily Maximum | Units | Monitoring frequency | Sample Type       |
|----------------|-----------------|---------------|---------|-----------------|---------------|-------|----------------------|-------------------|
| Flow           |                 |               |         | Report          | Report        | MGD   | 2 x weekly           | 24 Hr Total       |
| TSS            | 360             | 720           | lbs/day | Report          | Report        | mg/l  | 2 x weekly           | 24 Hr Comp        |
| Oil and Grease | 102             | 216           | lbs/day | Report          | Report        | mg/l  | 2 x weekly           | 2 Grabs/<br>24 Hr |
| Lead           | 2.16            | 6.48          | lbs/day | Report          | Report        | ug/l  | 2 x weekly           | 24 Hr Comp        |
| Zinc           | 3.50            | 10.5          | lbs/day | Report          | Report        | ug/l  | 2 x weekly           | 24 Hr Comp        |

### 4.6 Antibacksliding

None of the limits included in this permit conflict with antibacksliding regulations found in 327 IAC 5-2-10(11), therefore, backsliding is not an issue.

### 4.7 Antidegradation

327 IAC 2-1.3 outlines the state's Antidegradation Standards and Implementation procedures. The Tier 1 antidegradation standard found in 327 IAC 2-1.3-3(a) applies to all surface waters of the state regardless of their existing water quality. Based on this standard, for all surface waters of the state, the existing uses and level of water quality necessary to protect those existing uses shall be maintained and protected. IDEM implements the Tier 1 antidegradation standard by requiring NPDES permits to contain effluent limits and best management practices (BMPs) for regulated pollutants that ensure the narrative and numeric water quality criteria applicable to each of the designated uses are achieved in the water and any designated uses of the downstream water are maintained and protected.

The Tier 2 antidegradation standard found in 327 IAC 2-1.3-3(b) applies to surface waters of the state where the existing quality for a parameter is better than the water quality criterion for that parameter established in 327 IAC 2-1-6 or 327 IAC 2-1.5. These surface waters are considered high quality for the parameter and this high quality shall be maintained and protected unless the commissioner finds that allowing a significant lowering of water quality is necessary and accommodates important social or economic development in the area in which the waters are located. IDEM implements the Tier 2 antidegradation standard for regulated pollutants with numeric water quality criteria quality adopted in or developed pursuant to 327 IAC 2-1-6 or 327 IAC 2-1.5 and utilizes the antidegradation implementation procedures in 327 IAC 2-1.3-5 and 2-1.3-6. According to 327 IAC 2-1.3-1(b), the antidegradation implementation procedures in 327 IAC 2-1.3-5 and 2-1.3-6 apply to a proposed new or increased loading of a regulated pollutant to surface waters of the state from a deliberate activity subject to the Clean Water Act (CWA), including a change in process or operation that will result in a significant lowering of water quality.

The NPDES permit does not propose to establish a new or increased loading of a regulated pollutant; therefore, the Antidegradation Implementation Procedures in 327 IAC 2-1.3-5 and 2-1.3-6 do not apply to the permitted discharge.

The permittee is prohibited from undertaking any deliberate action that would result in a new or increased discharge of a bioaccumulative chemical of concern (BCC) or a new or increased permit limit for a regulated pollutant that is not a BCC unless information is submitted to the commissioner demonstrating that the proposed new or increased discharge will not cause a significant lowering of water quality, or an antidegradation demonstration submitted and approved in accordance 327 IAC 2-1.3.

## **4.8 Storm Water**

According to 40 CFR 122.26(b)(14)(ii) and 327 IAC 5-4-6(b)(1) facilities classified under Industrial Classification (SIC) Code 3312, are considered to be engaging in “industrial activity” for purposes of 40 CFR 122.26(b). Therefore, the permittee is required to have all storm water discharges associated with industrial activity permitted. Treatment for storm water discharges associated with industrial activities is required to meet, at a minimum, best available technology economically achievable/best conventional pollutant control technology (BAT/BCT) requirements. EPA has determined that non-numeric technology-based effluent limits have been determined to be equal to the best practicable technology (BPT) or BAT/BCT for storm water associated with industrial activity.

Storm water associated with industrial activity must be assessed to determine compliance with all water quality standards. The non-numeric storm water conditions and effluent limits contain the technology-based effluent limitations. Effluent limitations, as defined in the CWA, are restrictions on quantities, rates, and concentrations of constituents which are discharged. Effective implementation of these requirements should meet the applicable water quality based effluent limitations. Violation of any of these effluent limitations constitutes a violation of the permit.

Additionally, IDEM has determined that with the appropriate implementation of the required control measures and Best Management Practices (BMPs) found in Part I.D. of the permit, the discharge of storm water associated with industrial activity from this facility will meet applicable water quality standards and will not cause a significant lowering of water quality. Therefore, the storm water discharge is in compliance with Antidegradation Standards and Implementation Procedures found in 327 IAC 2-1.3 and an Antidegradation Demonstration is not required.

The TBELs require the permittee to minimize exposure of raw, final, or waste materials to rain, snow, snowmelt, and runoff. In doing so, the permittee is required, to the extent technologically available and economically achievable, to either locate industrial materials and activities inside or to protect them with storm resistant coverings. In addition, the permittee is required to: (1) use good housekeeping practices to keep exposed areas clean, (2) regularly inspect, test, maintain and repair all industrial equipment and systems to avoid situations that may result in leaks, spills, and other releases of pollutants in storm water discharges, (3) minimize the potential for leaks, spills and other releases that may be exposed to storm water and develop plans for effective response to such spills if or when they occur, (4) stabilize exposed area and contain runoff using structural and/or non-

structural control measures to minimize onsite erosion and sedimentation, and the resulting discharge of pollutants, (5) divert, infiltrate, reuse, contain or otherwise reduce storm water runoff, to minimize pollutants in the permitted facility discharges, (6) enclose or cover storage piles of salt or piles containing salt used for deicing or other commercial or industrial purposes, including maintenance of paved surfaces, (7) train all employees who work in areas where industrial materials or activities are exposed to storm water, or who are responsible for implementing activities necessary to meet the conditions of this permit (e.g., inspectors, maintenance personnel), including all members of your Pollution Prevention Team, (8) ensure that waste, garbage and floatable debris are not discharged to receiving waters by keeping exposed areas free of such materials or by intercepting them before they are discharged, and (9) minimize generation of dust and off-site tracking of raw, final or waste materials.

To meet the non-numeric effluent limitations in Part I.D.4, the permit requires the facility to select control measures (including BMPs) to address the selection and design considerations in Part I.D.3.

The permittee must control its discharge as necessary to meet applicable water quality standards. It is expected that compliance with the non-numeric effluent limitations and other terms and conditions in this permit will meet this effluent limitation. However, if at any time the permittee, or IDEM, determines that the discharge causes or contributes to an exceedance of applicable water quality standards, the permittee must take corrective actions, and conduct follow-up monitoring.

### **“Terms and Conditions” to Provide Information in a Storm Water Pollution Prevention Plan (SWPPP)**

Distinct from the effluent limitation provisions in the permit, the permit requires the discharger to prepare a SWPPP for the permitted facility. The SWPPP is intended to document the selection, design, installation, and implementation (including inspection, maintenance, monitoring, and corrective action) of control measures being used to comply with the effluent limits set forth in Part I.D. of the permit. In general, the SWPPP must be kept up-to-date, and modified when necessary, to reflect any changes in control measures that were found to be necessary to meet the effluent limitations in the permit.

The requirement to prepare a SWPPP is not an effluent limitation, rather it documents what practices the discharger is implementing to meet the effluent limitations in Part I.D. of the permit. The SWPPP is not an effluent limitation because it does not restrict quantities, rates, and concentrations of constituents which are discharged. Instead, the requirement to develop a SWPPP is a permit “term or condition” authorized under sections 402(a)(2) and 308 of the Act. Section 402(a)(2) states, “[t]he Administrator shall prescribe conditions for [NPDES] permits to assure compliance with the requirements of paragraph (1) of this subsection, including conditions on data and information collection, reporting, and such other requirements as he deems appropriate.” The SWPPP requirements set forth in this permit are terms or conditions under the CWA because the discharger is documenting information on how it intends to comply with the effluent limitations (and inspection and evaluation requirements) contained elsewhere in the permit. Thus, the requirement to

develop a SWPPP and keep it up-to-date is no different than other information collection conditions, as authorized by section 402(a)(2).

It should be noted that EPA has developed a guidance document, "Developing your Storm Water Pollution Prevention Plan – A guide for Industrial Operators (EPA 833-B09-002), February 2009, to assist facilities in developing a SWPPP. The guidance contains worksheets, checklists, and model forms that should assist a facility in developing a SWPPP.

### **Public availability of documents**

Part I.E.2.d(2) of the permit requires that the permittee retain a copy of the current SWPPP at the facility and it must be immediately available, at the time of an onsite inspection or upon request, to IDEM. Additionally, interested persons can request a copy of the SWPPP through IDEM. By requiring members of the public to request a copy of the SWPPP through IDEM, the Agency is able to provide the permittees with assurance that any Confidential Business Information contained within the permitted facility's SWPPP is not released to the public.

### **4.9 Water Treatment Additives**

In the event that changes are to be made in the use of water treatment additives that could significantly change the nature of, or increase the discharge concentration of any of the additives contributing to Outfalls, the permittee shall notify the IDEM as required in Part II.C.1 of the permit. The use of any new or changed water treatment additives/chemicals or dosage rates shall not cause the discharge from any permitted outfall to exhibit chronic or acute toxicity. Acute and chronic aquatic toxicity information must be provided with any notification regarding any new or changed water treatment additives or dosage rates.

## **5.0 SPECIAL CONDITIONS AND OTHER PERMIT REQUIREMENTS**

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### **5.1 Schedule of Compliance**

The circumstances in this NPDES permit do not qualify for a schedule of compliance.

### **5.2 Reporting Requirements for Solvents, Degreasing Agents, Rolling Oils, Water Treatment Chemical, and Biocides**

The permittee will maintain the following information on site, and report to IDEM if requested; the total quantity (lbs/year) of each solvent, degreasing agent, rolling oil, water treatment chemical, and biocide that was purchased for that year and which can be present in any outfall regulated by this permit. This requirement includes all surfactants, anionic, cationic, and non-ionic, which may be used in part or wholly as a constituent in these compounds.

### **5.3 Groundwater Remediation Projects**

"Compatible Treated Wastewater from Groundwater Remediation Project" for purposes of this permit means groundwaters that are contaminated with pollutants that are limited at the respective wastewater treatment facilities. Other groundwaters shall be pretreated prior to introduction to the respective wastewater treatment facilities to remove or treat those pollutants that are not limited or that cannot be effectively removed or treated at the respective wastewater treatment facilities.

The permittee shall notify IDEM prior to the date it desires to introduce compatible or pretreated groundwaters from any groundwater remediation project to wastewater treatment facilities at ArcelorMittal Steel USA, Inc.- Indiana Harbor East. Such notification shall include the volume of groundwater to be treated and discharged; a description of any groundwater pretreatment facilities; the identity of the receiving wastewater treatment facility and permitted outfall; identification, concentrations and mass loadings of containments in the untreated groundwater; identification, and expected concentrations and mass loadings of containments in the pretreated groundwater prior to introduction of groundwater to the wastewater treatment facilities; and, identification and expected concentrations and mass loadings of groundwater contaminants to be discharged from the wastewater treatment facilities. IDEM shall evaluate the information submitted to determine if a permit modification is required under 327 IAC 5-2-16. Discharge of this waste stream shall not commence until ArcelorMittal Steel USA, Inc. has received written approval from IDEM. This condition has been retained from the previous permit.

### **5.4 No. 7 Blast Furnace**

The permittee is in the process of designing scrubbers to control emissions of sulfur dioxide (SO<sub>2</sub>) as additions to each of the two No. 7 blast furnace cast house emission control systems. Each scrubber will treat a portion of the exhaust gas from the existing bag houses that are used for control of cast house particulate emissions. The SO<sub>2</sub> scrubbers will be designed with recirculating alkaline scrubbing systems, and each is expected to have a long term average scrubber water recirculating system blowdown flow rate of approximately 8 gpm. The permittee anticipates that the scrubbers will be installed sometime within the first two years of the renewal NPDES permit term. There are no federal categorical effluent limitations guidelines that apply to the scrubber water blowdown streams.

These will be the first such scrubbers installed at any blast furnace located in the United States, so there are no available data to characterize scrubber water blowdown quality for purposes of an NPDES permit application. Upon installation and startup of the scrubbers, the permittee plans to discharge the scrubber recycle system blowdowns to the City of East Chicago sewerage system on an interim basis. An application to the City for these discharges has been submitted. Once

the quality of the scrubber water has been characterized, with respect to the magnitude and variability of flow and pollutants that may be present, the permittee may request authorization to discharge the scrubber water under NPDES permit IN0000094. This would be accomplished through a future permit modification request made to IDEM.

## **5.5 Pollutant Minimization Program**

This permit contains water quality-based effluent limits for Total Residual Chlorine at Outfalls 011, 014, and 018. The permittee is required to develop and conduct a pollutant minimization program (PMP) for each pollutant with a WQBEL below the LOQ.

## **5.6 Biocides Concentration**

The permittee must receive written permission from the IDEM if they desire to use any biocide or molluscicide other than chlorine in once through cooling water. The use of any biocide containing tributyl tin oxide in any closed or open cooling system is prohibited.

## **5.7 Clean Water Act Section 316(b) Cooling Water Intake Structure(s) (CWIS)**

### **Introduction**

In accordance with 40 CFR 401.14, the location, design, construction and capacity of cooling water intake structures of any point source for which a standard is established pursuant to section 301 or 306 of the Act shall reflect the best technology available for minimizing adverse environmental impact.

The EPA promulgated a Clean Water Act (CWA) section 316(b) regulation on August 15, 2014, that establishes standards for cooling water intake structures. 79 Fed. Reg. 48300-439 (August 15, 2014). The regulation establishes best technology available standards to reduce impingement and entrainment of aquatic organisms at existing power generation and manufacturing facilities and it became effective on October 14, 2014.

For permits expiring prior to July 2018, the permittee can (1) negotiate an alternative schedule for submitting required information with the Director (IDEM) after demonstrating need, or (2) request waiver(s) for submitting required information. The permittee requested and was granted an alternative schedule for submitting the required information. The request was submitted in a letter dated August 23, 2016. Until the time the required information/reports are submitted and the permit is renewed or modified following public notice, the IDEM is required to make a BTA determination using Best Professional Judgment (BPJ) to comply with CWA Section 316(b) based on existing information. The BTA determination is subject to change after the required information is submitted in accordance with the federal regulations.

## **Conclusions**

A copy of the Arcelor Mittal USA LLC – Indiana Harbor East permit renewal application was sent to U.S. Fish and Wildlife on May 5, 2016. No comments were received.

ArcelorMittal submitted the facility specific information 40 CFR 122.21(r) (2) through (r) (8) through a series of submittals, as required by Section 316(b) of the federal Clean Water Act (33 U.S.C. section 1326). IDEM has made a Best Technology Available (BTA) determination that the existing cooling water intake structures represent best technology available to minimize adverse environmental impact in accordance with Section 316(b) of the federal Clean Water Act (33 U.S.C. section 1326) based on information available at this time. This determination is based on Best Professional Judgment (BPJ) and will be reassessed at the next permit reissuance to ensure that the CWISs continue to meet the requirements of Section 316(b) of the federal Clean Water Act (33 U.S.C. section 1326).

## **Permit Conditions**

In accordance with 40 CFR 125.95(a)(1), the permittee must submit to the IDEM the information required in the applicable provisions of 40 CFR 122.21(r) when applying for a subsequent permit (consistent with the permittee's duty to reapply pursuant to 40 CFR 122.21(d)). Per 40 CFR 125.95(c), after the initial submission of the 40 CFR 122.21(r) permit application studies the permittee may, in subsequent permit applications, request to reduce the information required, if conditions at the facility and in the waterbody remain substantially unchanged since the previous application so long as the relevant previously submitted information remains representative of current source water, intake structure, cooling water system, and operating conditions. The permittee must submit its request for reduced cooling water intake structure and waterbody application information to the IDEM at least two years and six months prior to the expiration of its NPDES permit. The permittee's request must identify each element of the application requirements that it determines has not substantially changed since the previous permit application and the basis for the determination. IDEM has the discretion to accept or reject any part of the request. The permittee shall comply with requirements below:

1. In accordance with 40 CFR 125.98(b)(1), nothing in this permit authorizes take for the purposes of a facility's compliance with the Endangered Species Act.
2. At all times properly operate and maintain the intake equipment and incorporate management practices and operational measures necessary to ensure proper operation of the CWIS.
3. Provide advance notice to IDEM of any proposed changes to the CWIS or proposed changes to operations at the facility that affect the information taken into account in the current BTA evaluation.

4. There shall be no discharge of debris from intake screen washing which will settle to form objectionable deposits which are in amounts sufficient to be unsightly or deleterious, or which will produce colors or odors constituting a nuisance.
5. All required reports shall be submitted to the IDEM, Office of Water Quality, NPDES Permits Branch.
6. Submit the information required to be considered by the Director per 40 C.F.R. 122.21(r)(2) through (13) to assist IDEM with the fact sheet or statement of basis for entrainment BTA, as soon as practicable, but no later than with the application for the next permit renewal.

### 5.8 Polychlorinated Biphenyl (PCB)

There shall be no discharge of polychlorinated biphenyl (PCB) compounds attributable to facility operations such as those historically used in transformer fluids. In order to determine compliance with the PCB discharge prohibition, the permittee shall provide the following PCB data with the next NPDES permit renewal application for at least one sample taken from each final outfall. The corresponding facility water intakes shall be monitored at the same time as the final outfalls.

| <u>Pollutant</u> | <u>Test Method</u> | <u>LOD</u> | <u>LOQ</u> |
|------------------|--------------------|------------|------------|
| PCBs*            | EPA 608            | 0.1 ug/L   | 0.3 ug/L   |

\*PCB 1242, 1254, 1221, 1232, 1248, 1260, 1016

### 5.9 Spill Response and Reporting Requirement

Reporting requirements associated with the Spill Reporting, Containment, and Response requirements of 327 IAC 2-6.1 are included in Part II.B.2.(d), Part II.B.3.(c), and Part II.C.3. of the NPDES permit. Spills from the permitted facility meeting the definition of a spill under 327 IAC 2-6.1-4(15), the applicability requirements of 327 IAC 2-6.1-1, and the Reportable Spills requirements of 327 IAC 2-6.1-5 (other than those meeting an exclusion under 327 IAC 2-6.1-3 or the criteria outlined below) are subject to the Reporting Responsibilities of 327 IAC 2-6.1-7.

It should be noted that the reporting requirements of 327 IAC 2-6.1 do not apply to those discharges or exceedances that are under the jurisdiction of an applicable permit when the substance in question is covered by the permit and death or acute injury or illness to animals or humans does not occur. In order for a discharge or exceedance to be under the jurisdiction of this NPDES permit, the substance in question (a) must have been discharged in the normal course of operation from an outfall listed in this permit, and (b) must have been discharged from an outfall for which the permittee has authorization to discharge that substance.

## **5.10 Post Public Notice Addendum**

The draft NPDES permit for the facility was made available for public comment from April 12, 2017, through May 29, 2017, as part of Public Notice No. 2017-4C-RD. During this comment period, a comment letter dated May 26, 2017, from Kevin Doyle, Environmental Manager, was received. The comments submitted by Mr. Doyle is included as Attachment B of this Fact Sheet. This Office's corresponding responses are summarized in Attachment C. Any changes to the permit and/or fact sheet are so noted in Attachment C.

Appendix I  
Figure 2-01

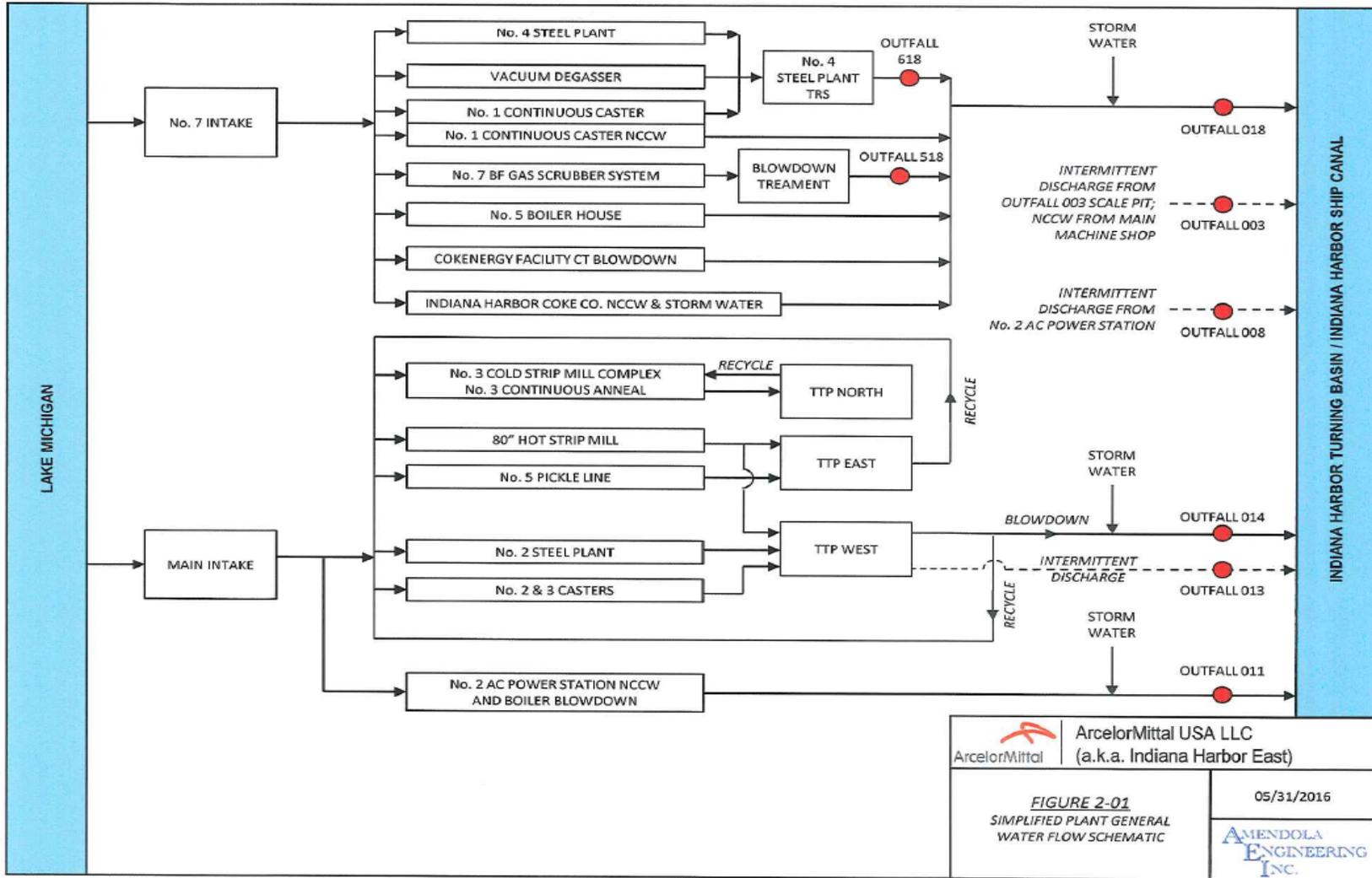


Figure 2-02

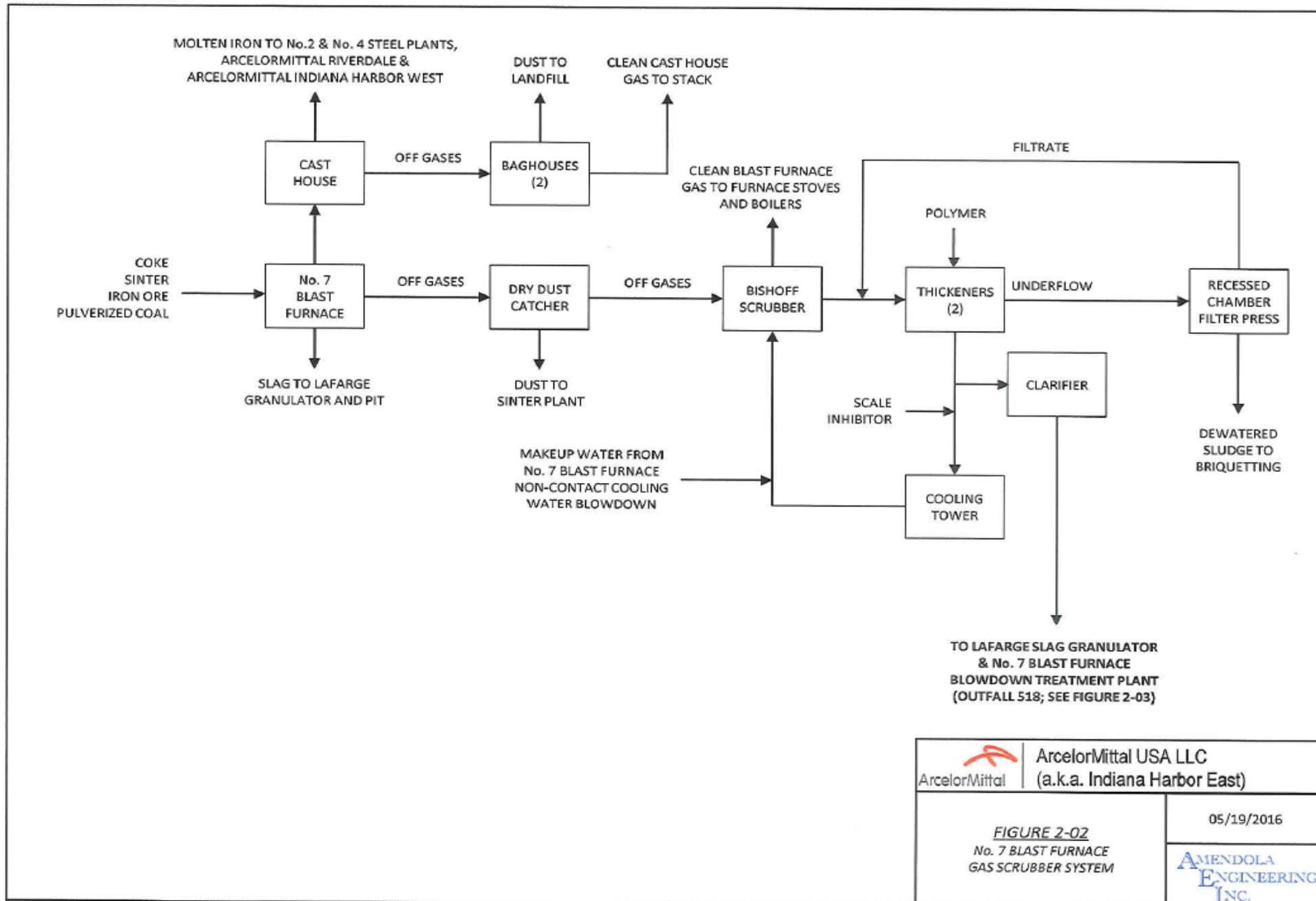


Figure 2-03

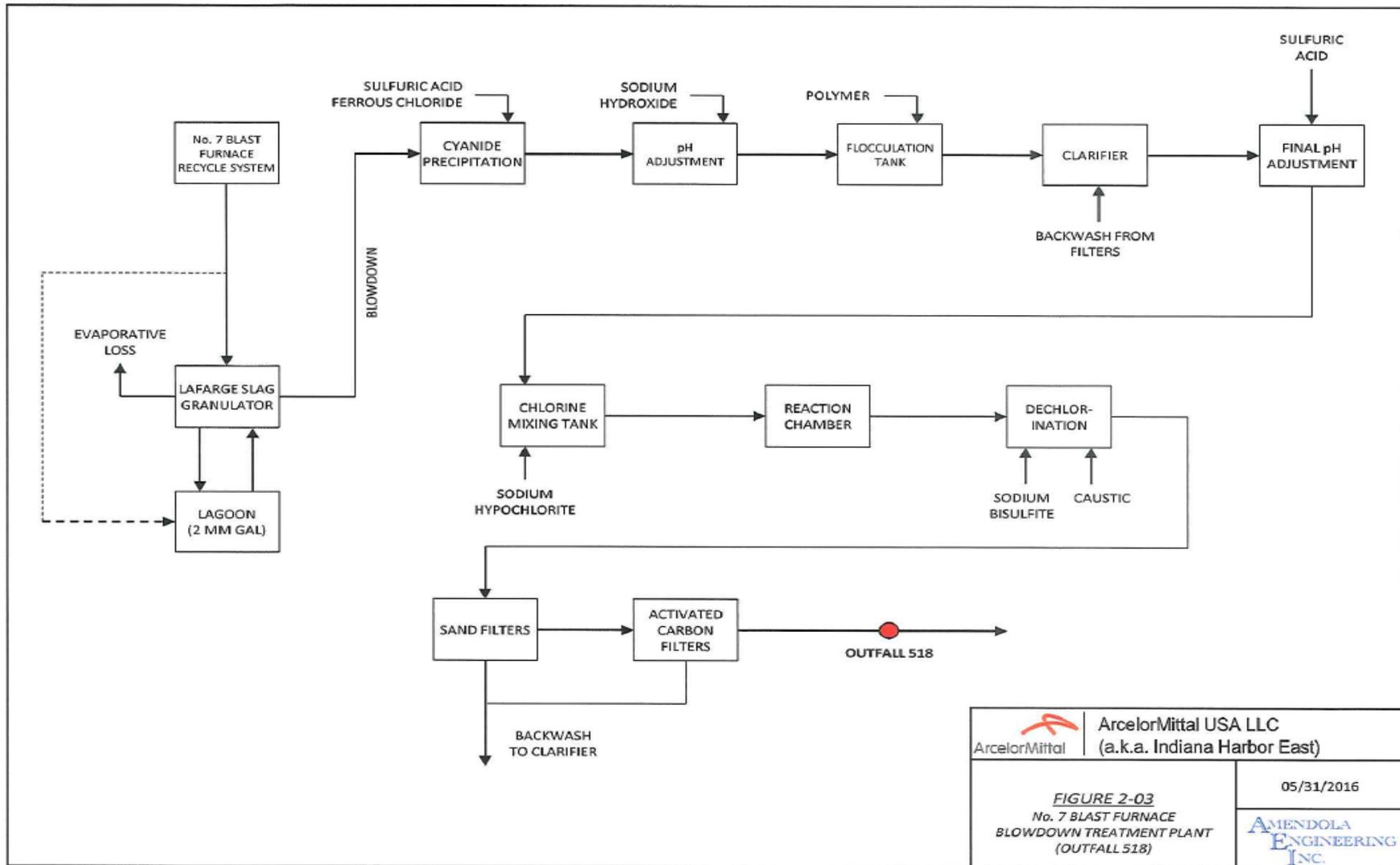


Figure 2-04

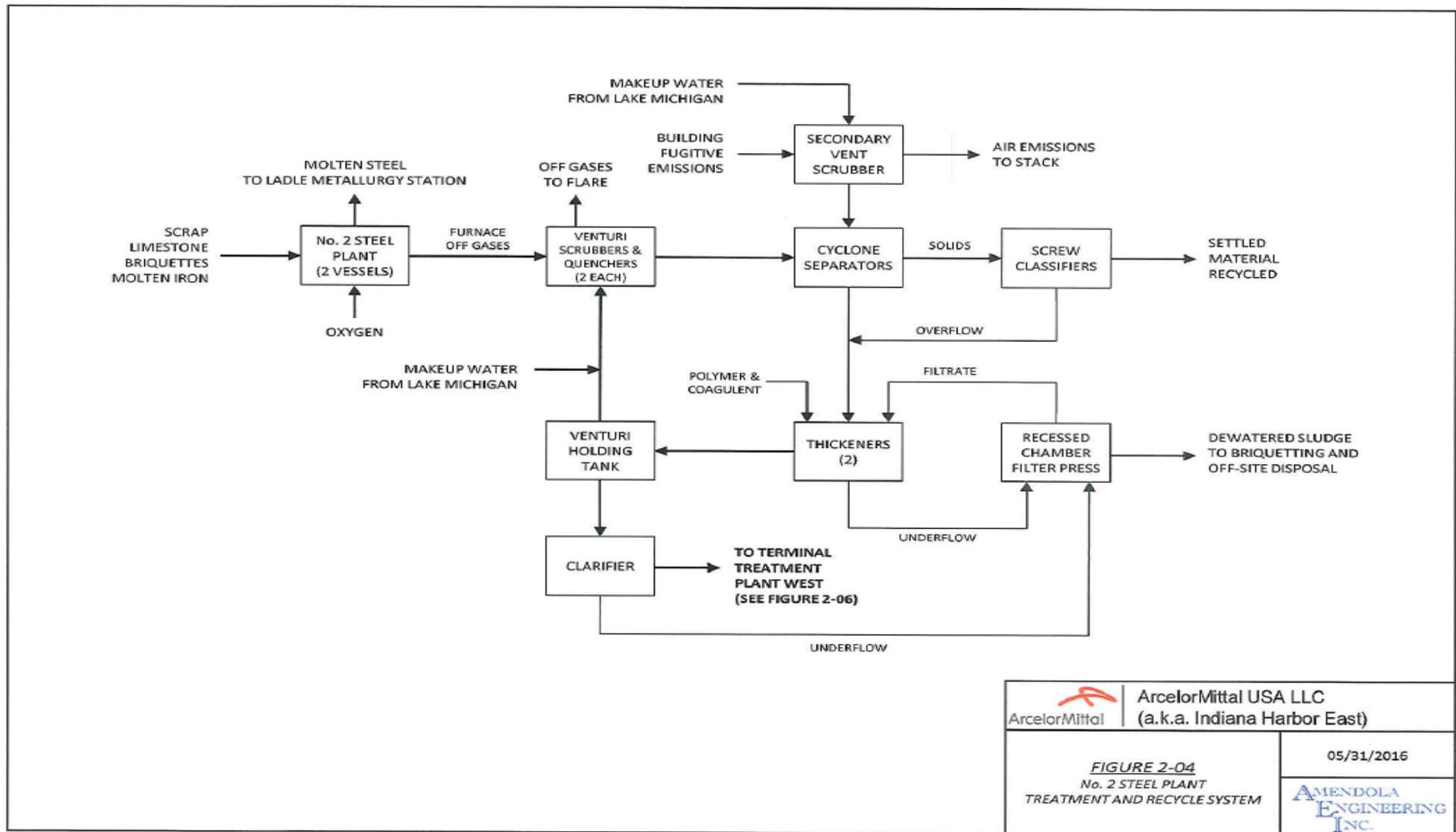


Figure 2-05

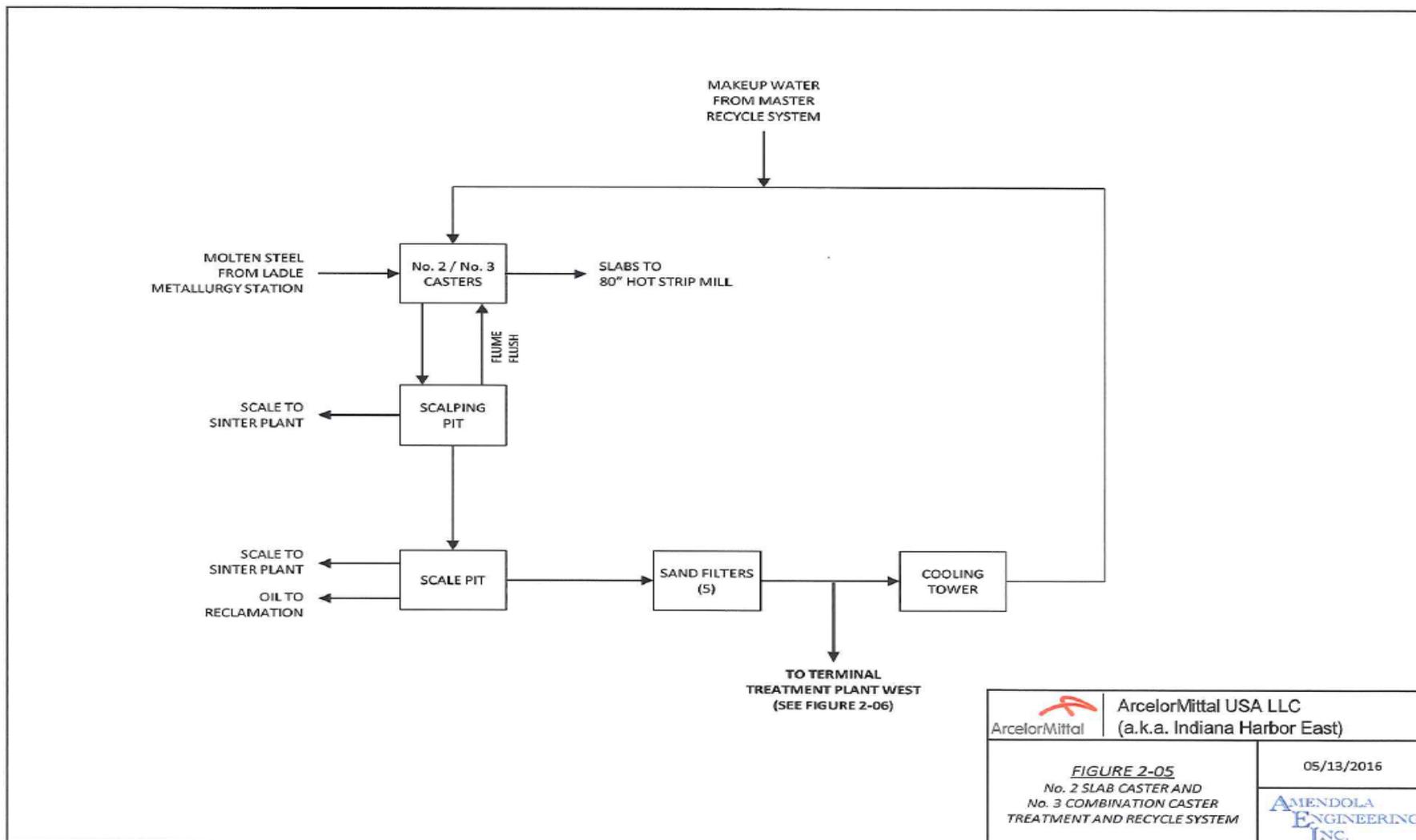


Figure 2-06

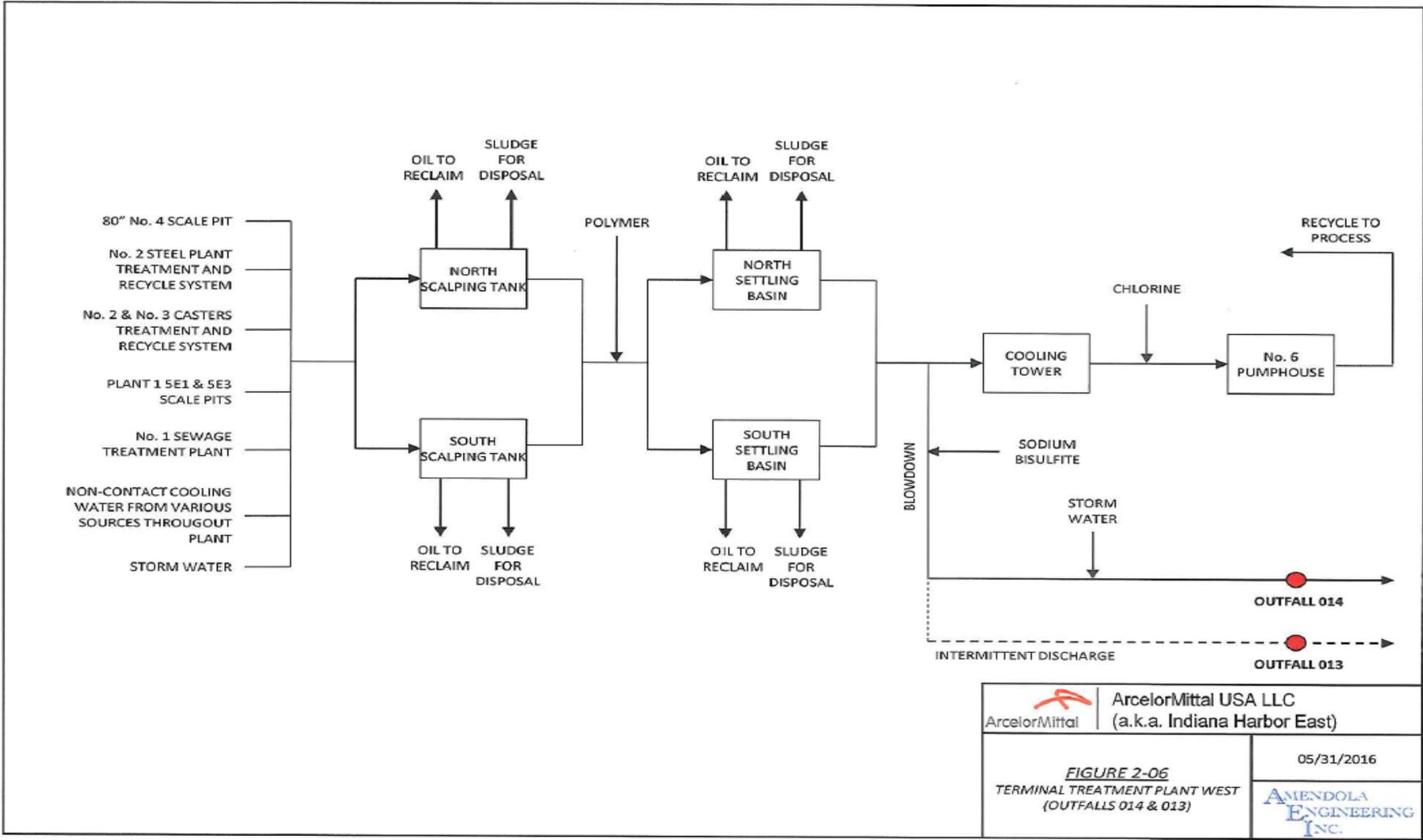


Figure 2-07

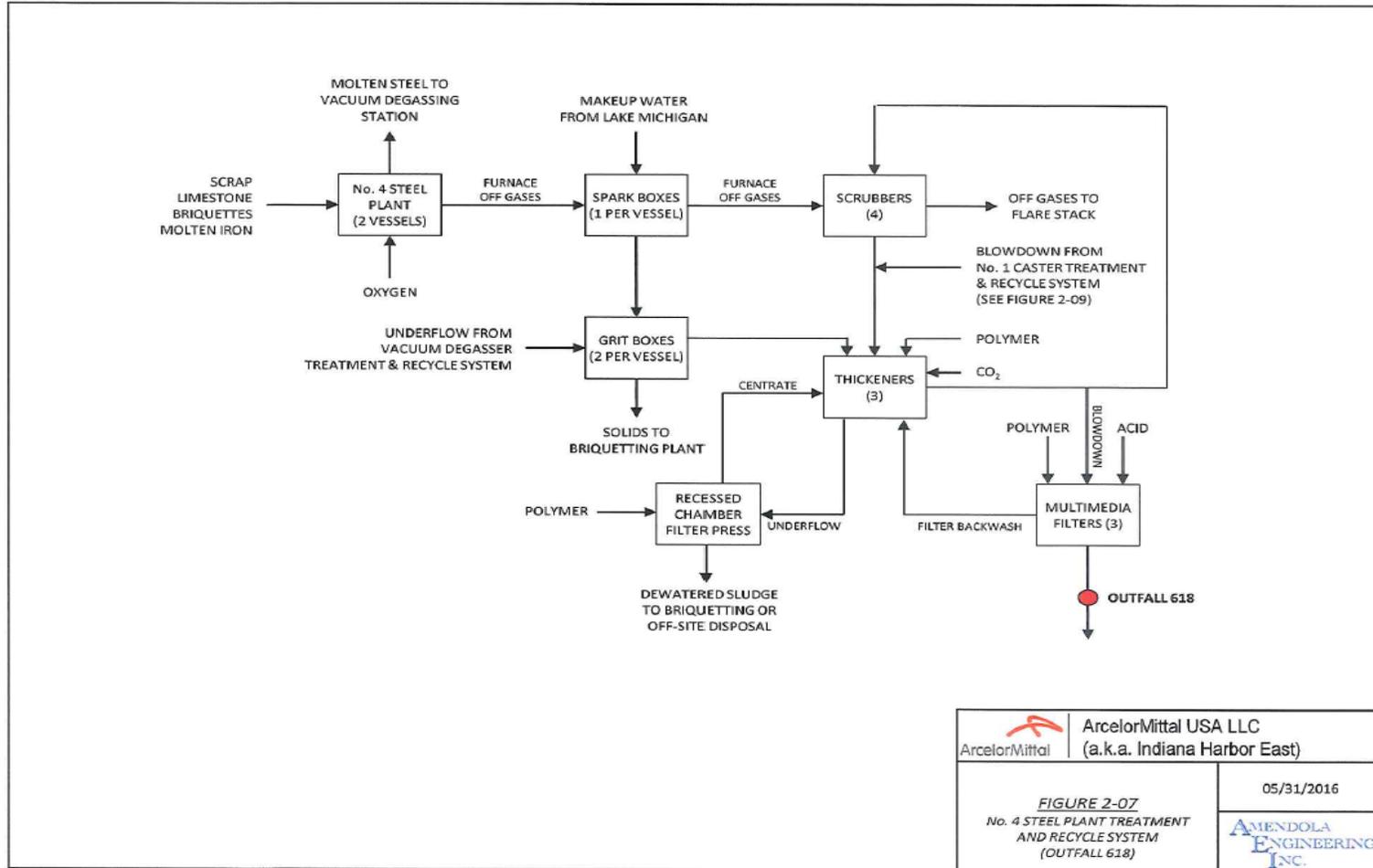


Figure 2-08

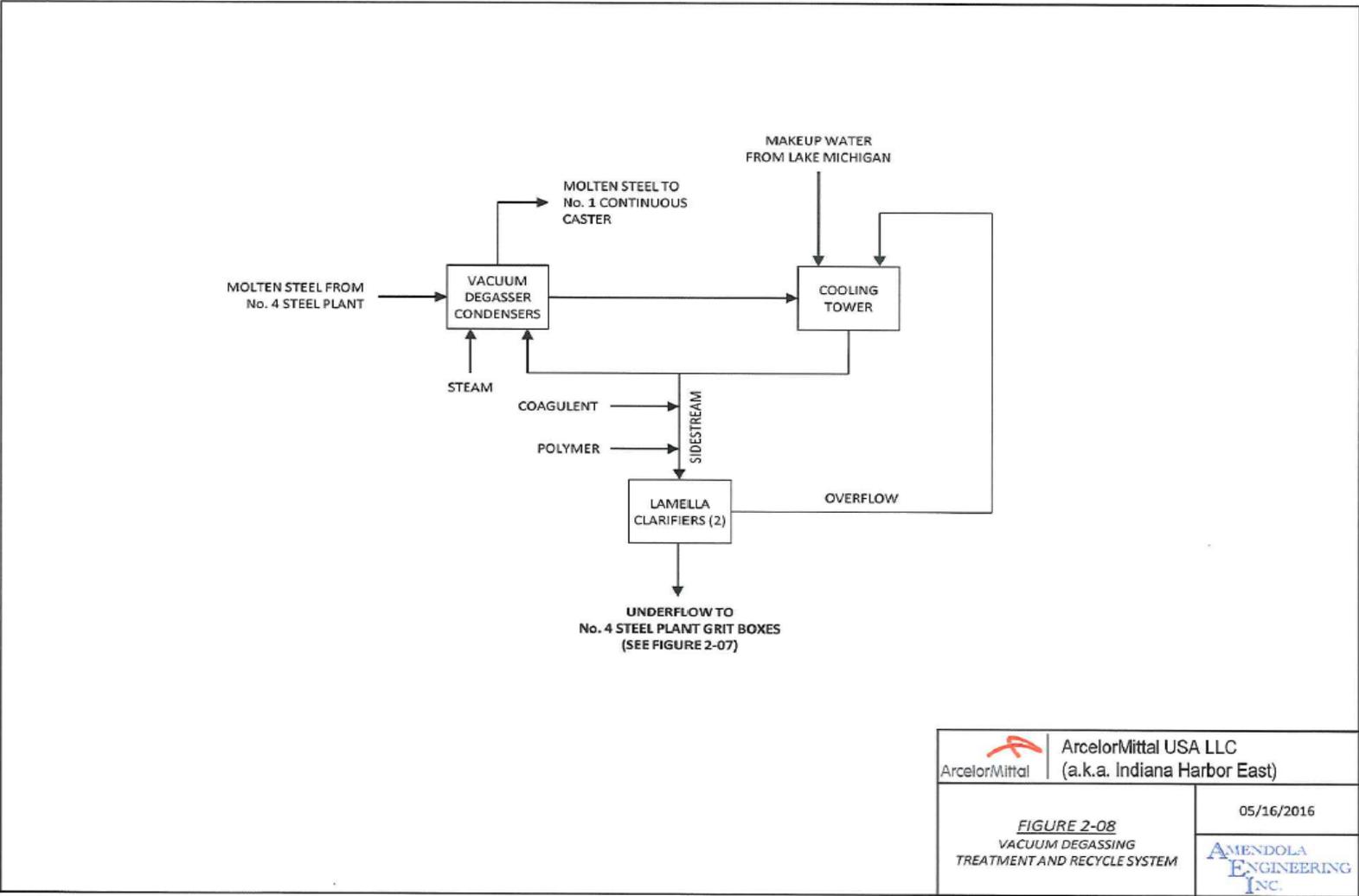


Figure 2-09

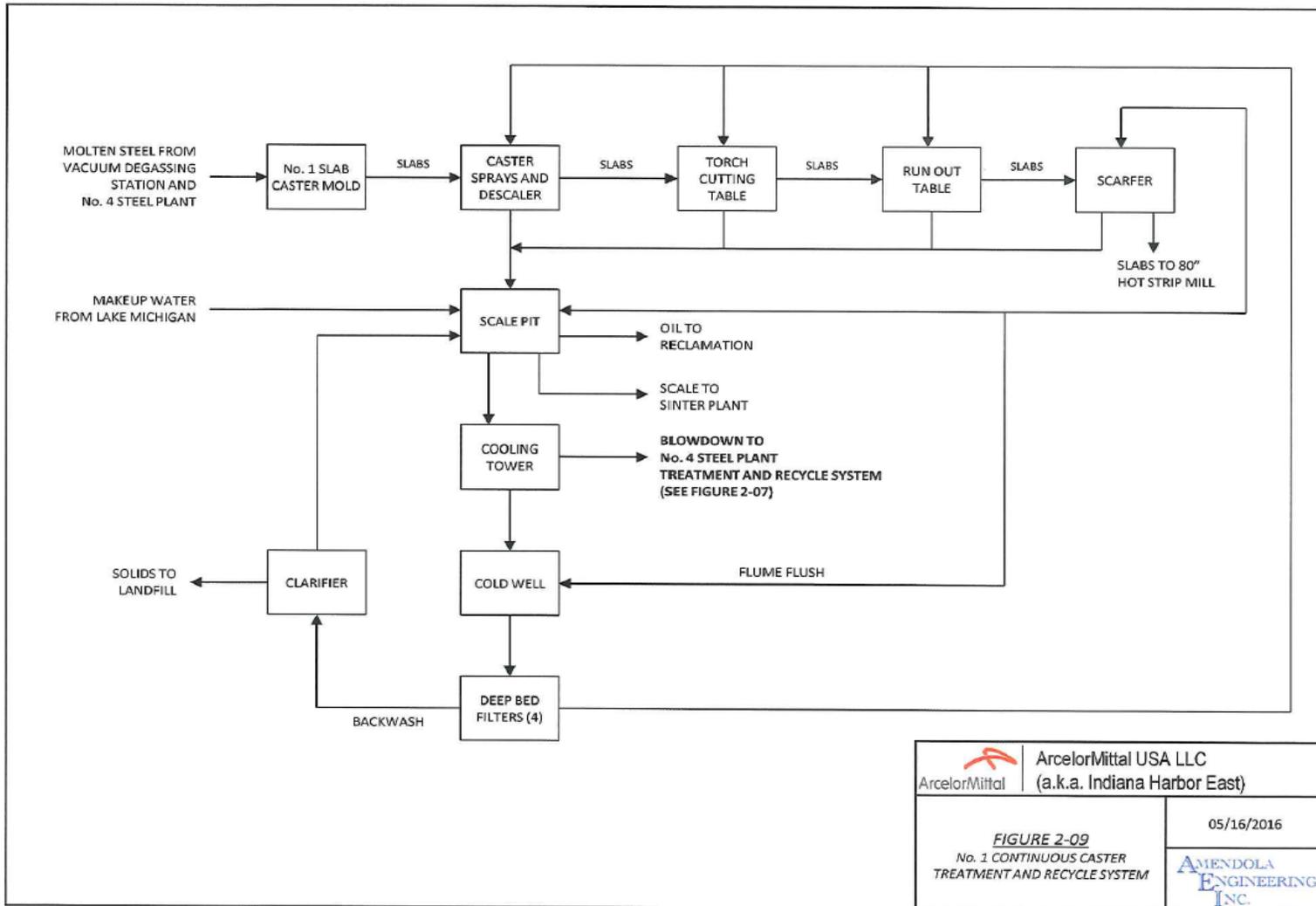


Figure 2-10

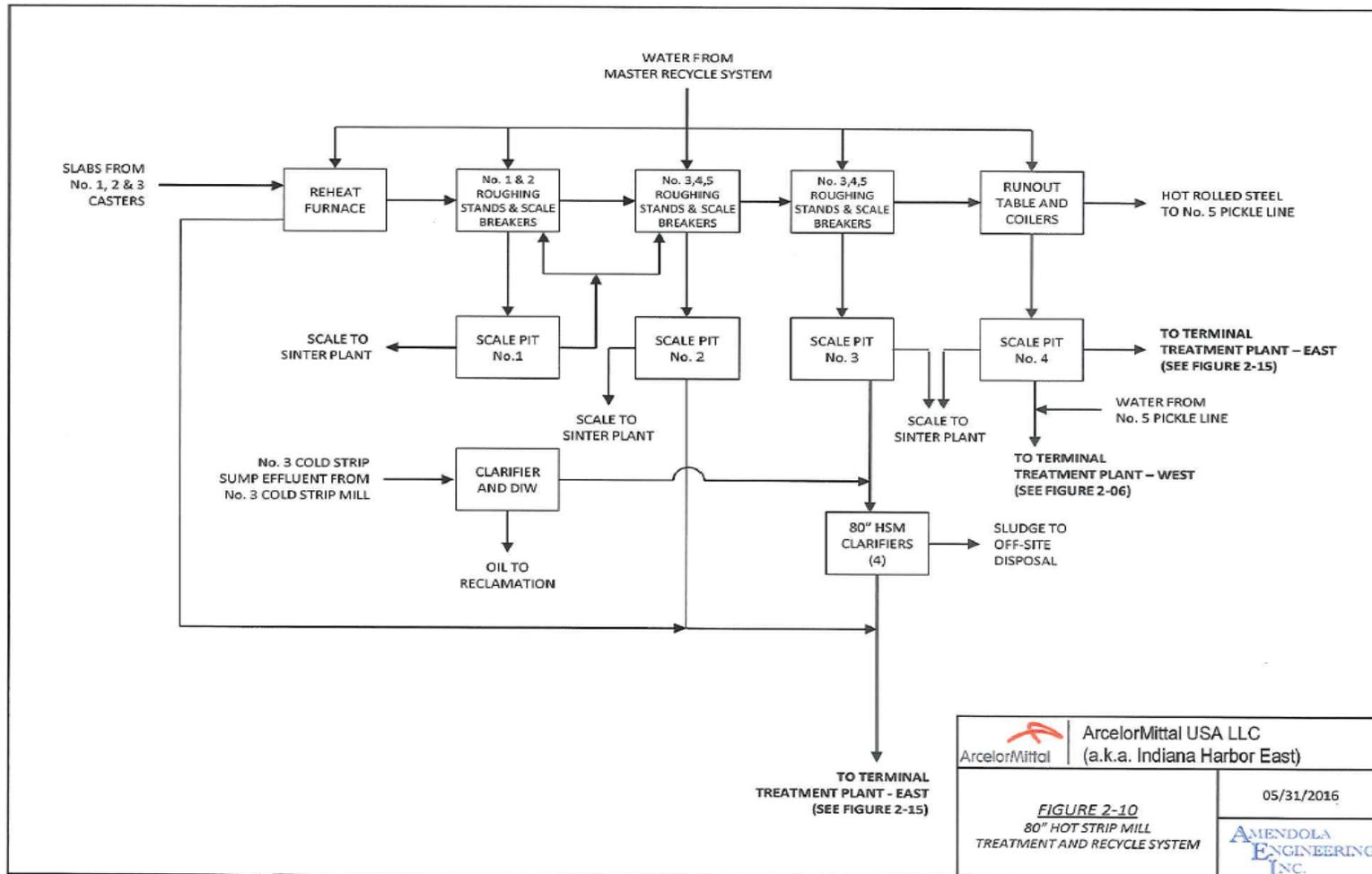


Figure 2-11

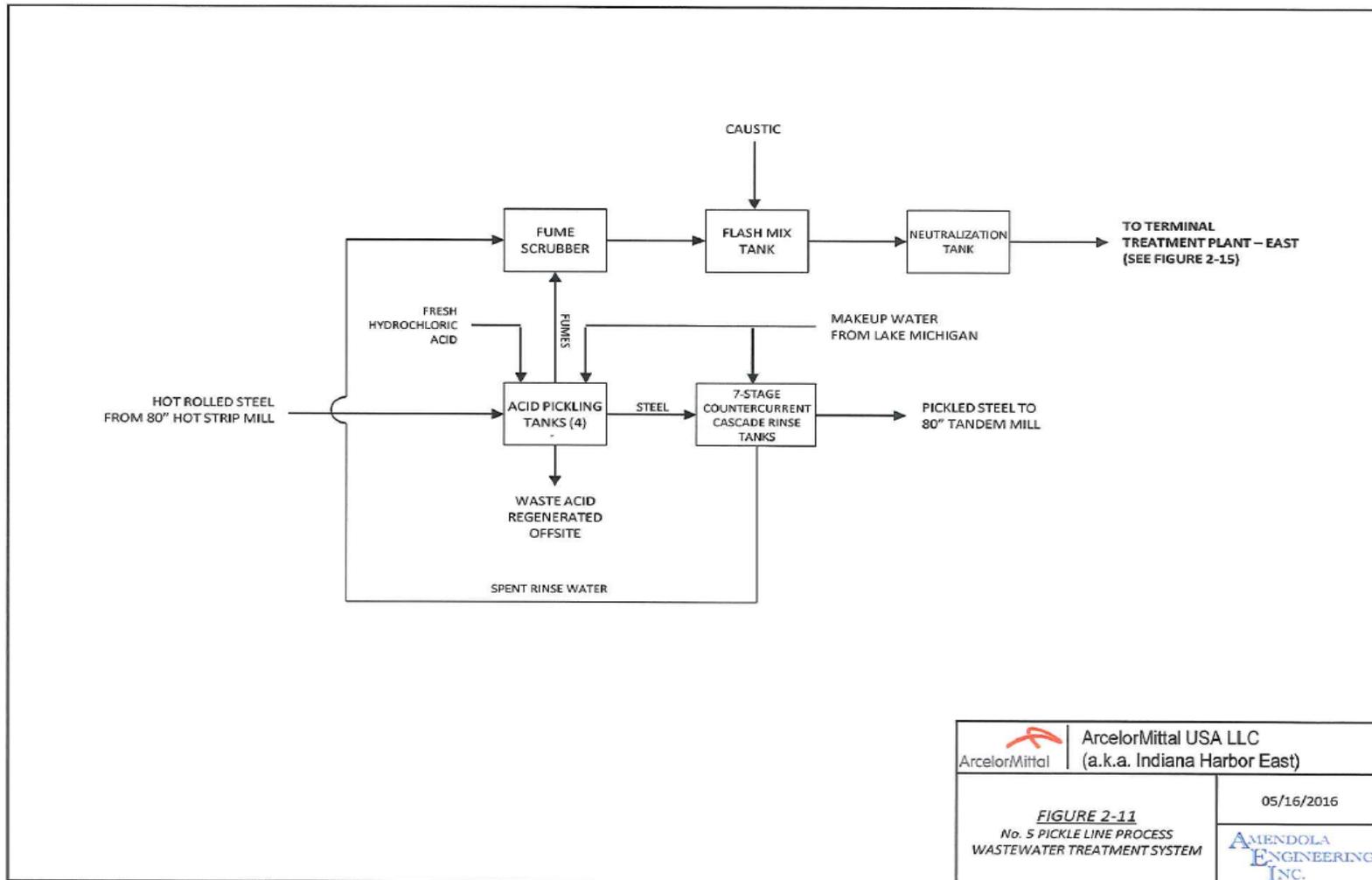


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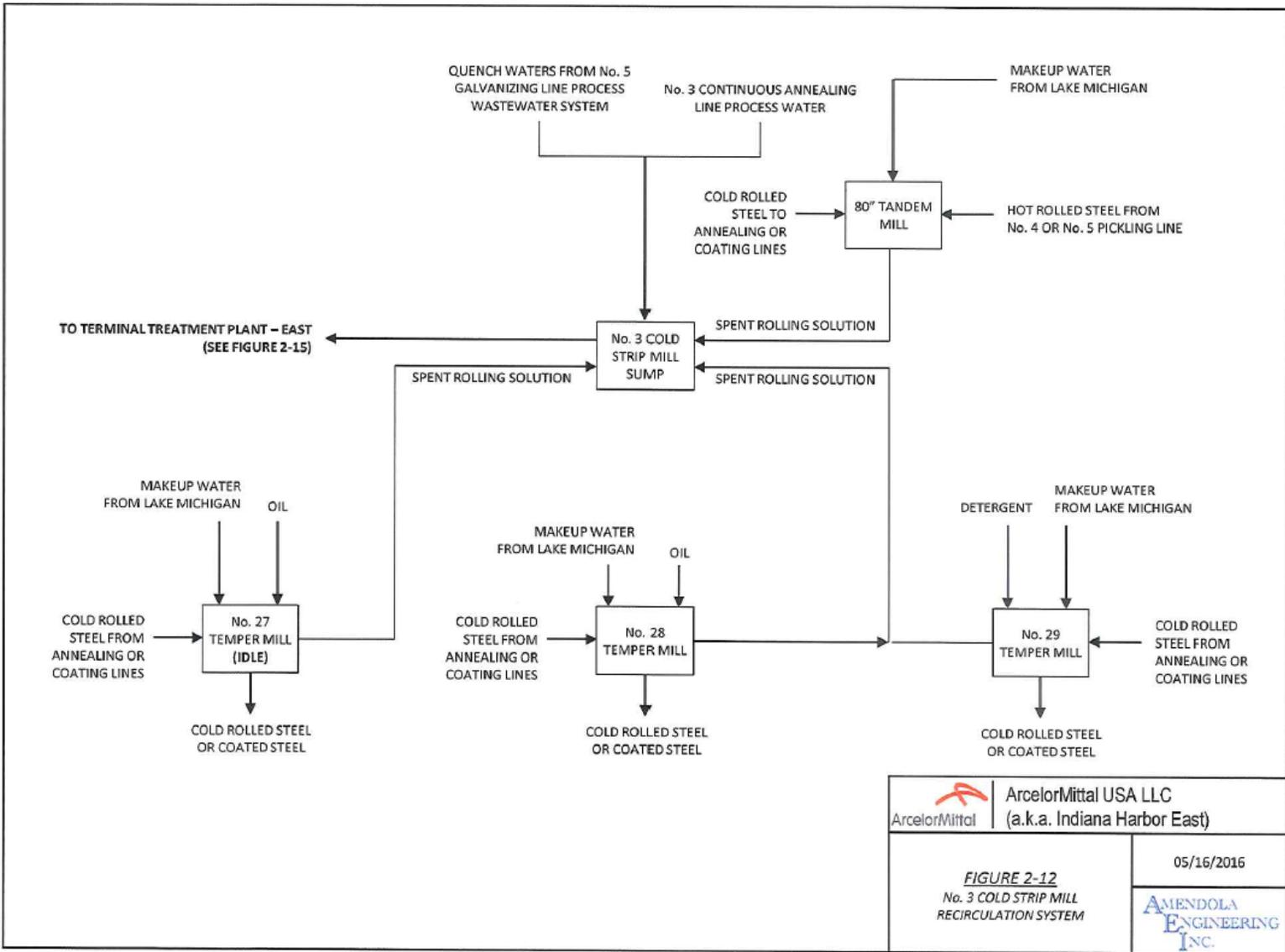


Figure 2-13

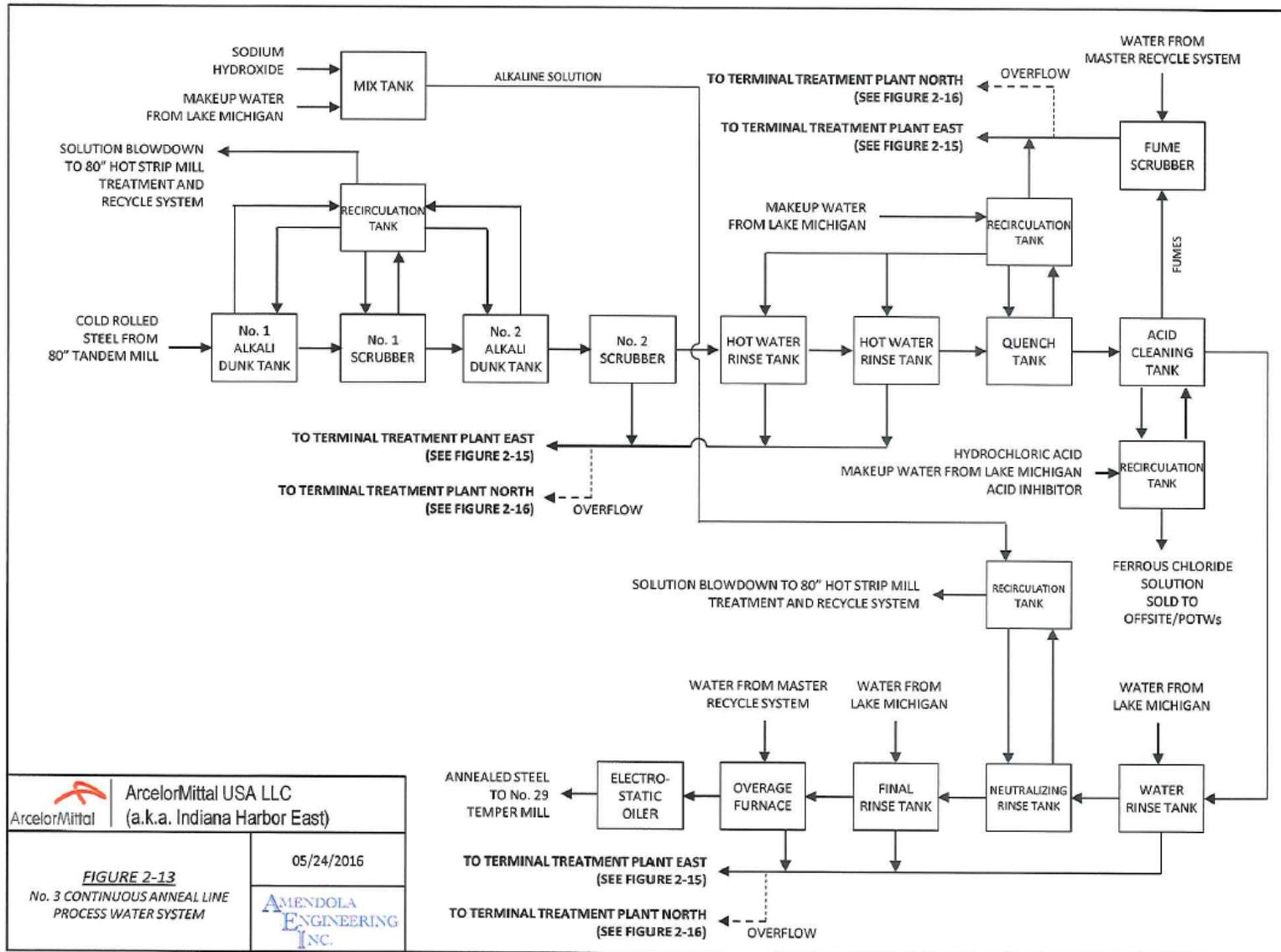


Figure 2-14

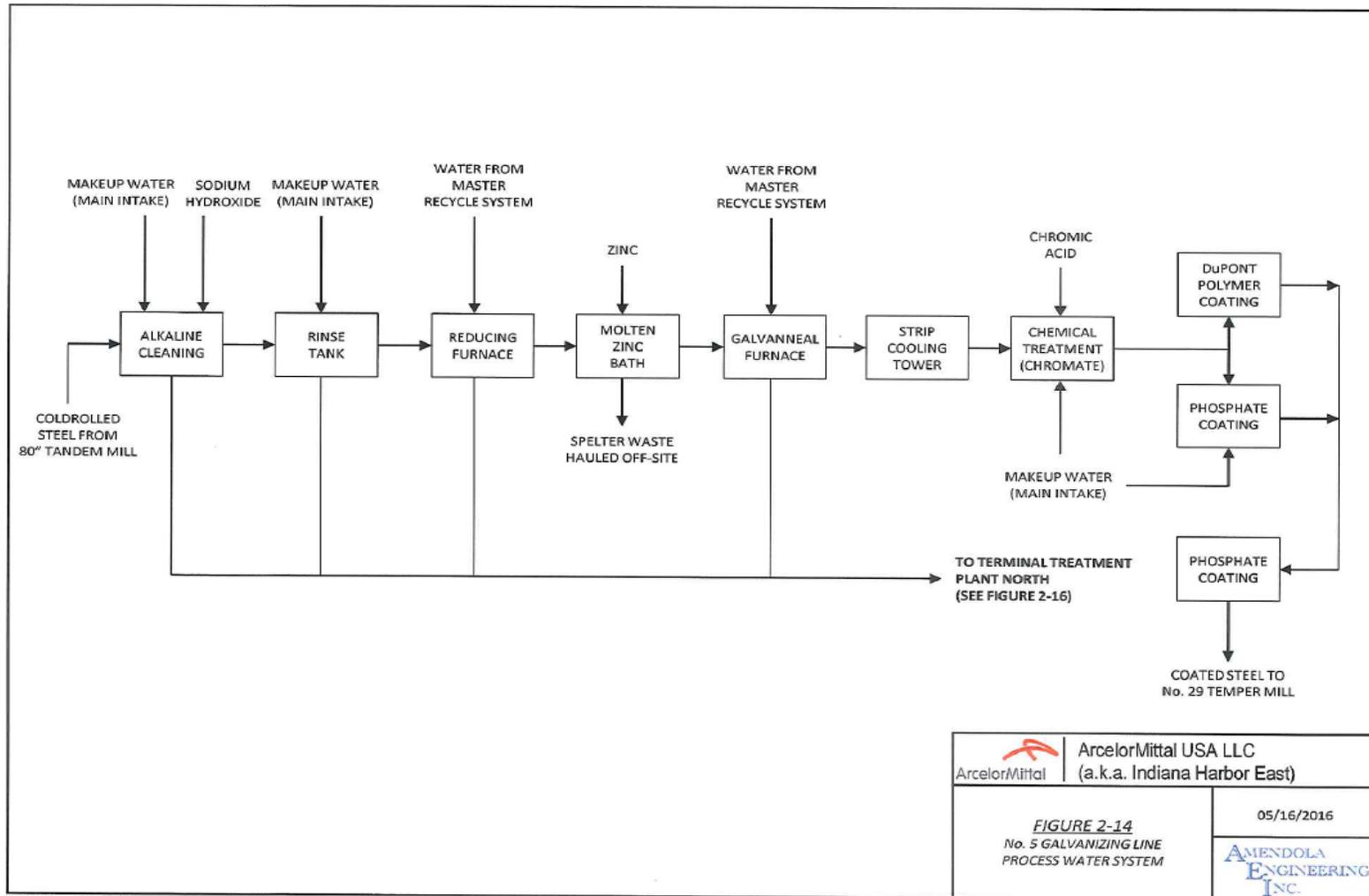


Figure 2-15

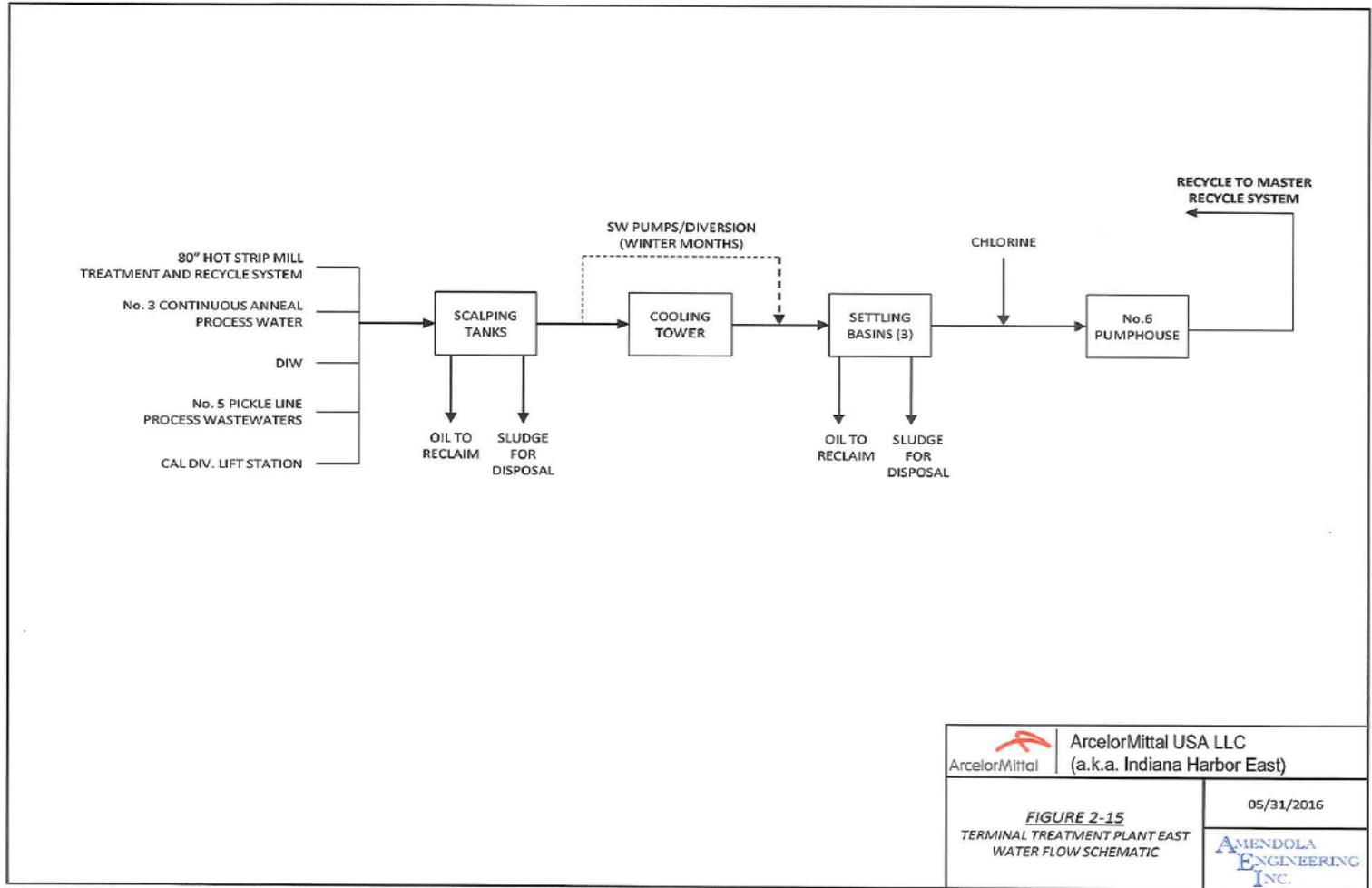
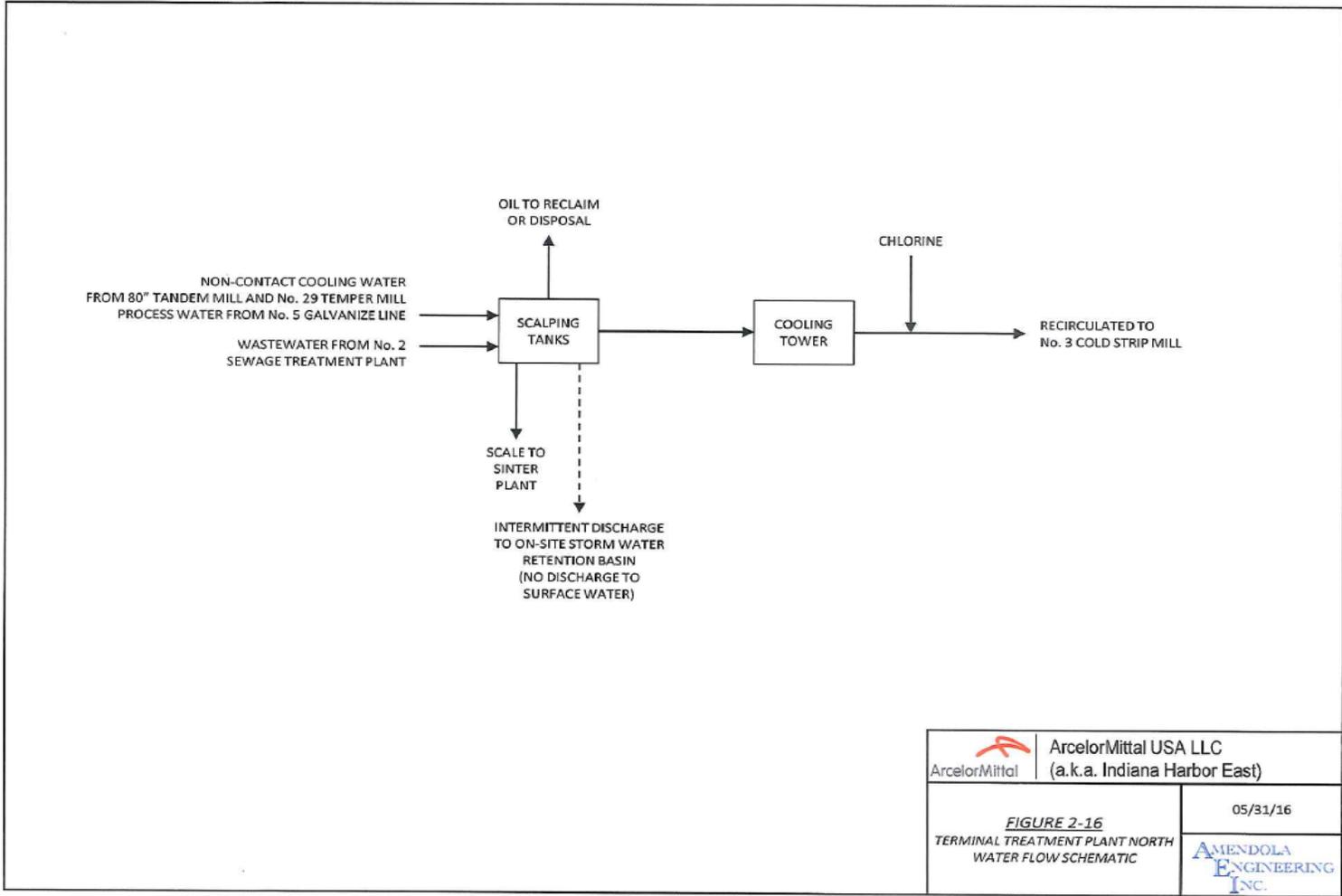


Figure 2-16



## Appendix II Water Quality Assessment

### Use Classifications

The Indiana Harbor Canal and Indiana Harbor are designated for full-body contact recreation and shall be capable of supporting a well-balanced, warm water aquatic community. The Indiana Harbor is designated as an industrial water supply. The Indiana portion of the open waters of Lake Michigan is designated for full-body contact recreation; shall be capable of supporting a well-balanced, warm water aquatic community; is designated as salmonid waters and shall be capable of supporting a salmonid fishery; is designated as a public water supply; is designated as an industrial water supply; and, is classified as an outstanding state resource water. These waterbodies are identified as waters of the state within the Great Lakes system. As such, they are subject to the water quality standards and associated implementation procedures specific to Great Lakes system dischargers as found in 327 IAC 2-1.5, 327 IAC 5-1.5, and 327 IAC 5-2.

Section 303(d) of the Clean Water Act requires states to identify waters, through their Section 305(b) water quality assessments, that do not or are not expected to meet applicable water quality standards with federal technology based standards alone. States are also required to develop a priority ranking for these waters taking into account the severity of the pollution and the designated uses of the waters. Once this listing and ranking of impaired waters is completed, the states are required to develop [Total Maximum Daily Loads \(TMDLs\)](#) for these waters in order to achieve compliance with the water quality standards. Indiana's 2014 303(d) List of Impaired Waters was developed in accordance with Indiana's Water Quality Assessment and 303(d) Listing Methodology for Waterbody Impairments and Total Maximum Daily Load Development for the 2014 Cycle. As of the 2014 303(d) List of Impaired Waters, the following impairments were listed for waters to which the permittee discharges:

**Table 1**

| <b>Assessment Unit</b> | <b>Waterbody</b>     | <b>Impairments</b>  | <b>ArcelorMittal East Outfalls</b> |
|------------------------|----------------------|---|------------------------------------|
| INC0163_T1001          | Indiana Harbor Canal | Impaired Biotic Communities, Oil and Grease, <i>E. coli</i> and PCBs in Fish Tissue | None                               |
| INC0163G_G1078         | Indiana Harbor       | Free Cyanide, Mercury in Fish Tissue and PCBs in Fish Tissue                        | 011, 014 and 018                   |
| INM00G1000_00          | Lake Michigan        | Mercury in Fish Tissue and PCBs in Fish Tissue                                      | None                               |

### Water Quality-based Effluent Limitations

The water quality-based effluent limitations included in the 2011 permit and documented in the Fact Sheet were developed as part of a wasteload allocation analysis for the Indiana Harbor Canal

presented in the report “Supplemental Information for the Wasteload Allocation Analysis for the ArcelorMittal Indiana Harbor 2011 Draft Permits” dated August 19, 2011. The wasteload allocation included a multi-discharger model that was limited to the Indiana Harbor Canal/Lake George Canal/Indiana Harbor subwatershed. Pollutants selected for the multi-discharger model were based on water quality concerns and the application of technology-based effluent limitations at multiple outfalls. Water quality-based effluent limitations (WQBELs) for ammonia-N, lead, zinc and total residual chlorine were calculated for ArcelorMittal Outfalls 014 and 018 as part of the multi-discharger model. The 2011 wasteload allocation (WLA) also included WQBELs for specific pollutants calculated on an individual outfall basis.

The 2011 WLA was developed using Indiana water quality regulations for discharges to waters within the Great Lakes system that include water quality criteria and methodologies for developing water quality criteria (327 IAC 2-1.5), procedures for calculating WLAs (327 IAC 5-2-11.4), making reasonable potential to exceed determinations (5-2-11.5) and developing WQBELs (5-2-11.6). These regulations are applicable to individual pollutants and to whole effluent toxicity (WET). These regulations are still applicable and were used in the current WLA analysis for the Indiana Harbor Canal presented in the report “Supplemental Information for the Wasteload Allocation Analysis for the ArcelorMittal Indiana Harbor 2017 Permits” dated June 23, 2017. The application of WET requirements to ArcelorMittal is included in a later section.

The current subwatershed model for the Indiana Harbor Canal/Lake George Canal/Indiana Harbor included the ArcelorMittal East facility which has three active outfalls to the Indiana Harbor. The other major dischargers included in the subwatershed model are as follows in relation to the ArcelorMittal East facility: ArcelorMittal Indiana Harbor – Central Wastewater Treatment Plant (IN0063711) has one active outfall upstream to the Indiana Harbor Canal, and ArcelorMittal Indiana Harbor – Indiana Harbor West (IN0000205) has three active outfalls upstream to the Indiana Harbor Canal, one active outfall downstream to the Indiana Harbor, and one water intake in the Indiana Harbor near the mouth of the Indiana Harbor Canal. The discharges from these two facilities were taken into consideration in determining the need for and establishing WQBELs for the discharges from the ArcelorMittal East outfalls.

A review of the 2014 303(d) list shows that there is only one pollutant on the list that has the potential to impact wasteload allocation analyses conducted for the renewal of NPDES permits for dischargers in the Indiana Harbor Canal/Lake George Canal/Indiana Harbor subwatershed. The Indiana Harbor was first listed for free cyanide on the 2010 303(d) list. The listing was based on free cyanide data collected during the years 2000 and 2001 at IDEM fixed station IHC-0 in the Indiana Harbor. This station is located just upstream of ArcelorMittal West Outfall 011 and, due to the potential for reverse flows in the Indiana Harbor, could be impacted by the outfall. It is also located downstream of ArcelorMittal East Outfalls 011, 014 and 018. The aquatic life criteria for cyanide were changed from total cyanide to free cyanide in the 1997 Great Lakes rulemaking. It is IDEM current practice to monitor for total cyanide at fixed stations and analyze samples for free cyanide only when total cyanide data show a reportable concentration ( $\geq 5$  ug/l). After 2001, data collected at fixed station IHC-0 no longer showed any reportable values for total cyanide so free cyanide data have not been collected. ArcelorMittal West has also installed additional treatment and redirected cyanide containing process wastewater away from Outfall 011.

The Indiana Harbor Canal has not been included on the 303(d) list for free cyanide due to the two IDEM fixed stations in the Indiana Harbor Canal (located upstream of fixed station IHC-0 at

Columbus Avenue (IHC-3S) and Dickey Road (IHC-2)) not showing impairment for free cyanide. There has not been a value for total cyanide above 5 ug/l reported at IHC-3S since February 2007 and at IHC-2 since January 2005. Prior to the 2011 permit renewal, total cyanide had been reported at many of the ArcelorMittal outfalls due to technology-based limits for this parameter, but little data for free cyanide was available. Therefore, in the 2011 permit renewal, monitoring was required for free cyanide at ArcelorMittal outfalls that have process wastewater for use in an assessment of reasonable potential.

A TMDL is not currently planned for the subwatershed, and, based on current IDEM monitoring data, may not be required. Therefore, as was done in the 2011 WLA, the procedures for calculating WLAs under 5-2-11.4 were used to develop preliminary WLAs and WLAs in the absence of a TMDL. Wasteload allocations in the absence of TMDLs are developed to establish water quality-based effluent limitations under 5-2-11.6 and preliminary wasteload allocations are developed to make reasonable potential determinations under 5-2-11.5. The reasonable potential procedures under 5-2-11.5 include provisions for making reasonable potential determinations using best professional judgment (5-2-11.5(a)) and using a statistical procedure (5-2-11.5(b)). The statistical procedure is a screening process in which a projected effluent quality (PEQ) based on effluent data is calculated and compared to a preliminary effluent limitation (PEL) based on the preliminary wasteload allocation. Both the best professional judgment and statistical procedures were used to establish the need for WQBELs to protect the designated uses of the Indiana Harbor Canal, Indiana Harbor, and Lake Michigan.

To develop WLAs and conduct reasonable potential to exceed analyses, IDEM utilized the following effluent data collected and submitted by ArcelorMittal for the East facility: data collected during the period December 2011 through June 2016 in accordance with the current permit and reported on monthly monitoring reports (MMRs); data for fluoride and cyanide collected from November 2014 through October 2015 as part of a special reporting requirement included in the 2011 permit renewal; and, additional data collected for the 2016 permit renewal application. To develop WLAs, IDEM utilized the following sources of water quality data for the Indiana Harbor Canal and Indiana Harbor: IDEM fixed water quality monitoring station IHC-3S at Columbus Drive (Indiana Harbor Canal upstream of Lake George Canal and all ArcelorMittal outfalls); IDEM fixed station IHC-2 at Dickey Road (Indiana Harbor Canal); and, IDEM fixed station IHC-0 at the mouth of the Indiana Harbor. To develop WLAs, IDEM utilized the following sources of data for Lake Michigan: IDEM fixed station LM-H at the public water supply intake for the City of Hammond and IDEM fixed station LM-DSP at Dunes State Park. After a review of effluent and in-stream data, it was decided to conduct a multi-discharger WLA for ammonia-N, free cyanide, fluoride, lead, zinc and total residual chlorine. Other pollutants of concern, including mercury, were considered on an outfall by outfall basis.

In the 2011 multi-discharger model, the Indiana Harbor Canal was divided into sixteen complete mix segments and the Indiana Harbor into five complete mix segments. The Lake George Canal was incorporated as an input to the Indiana Harbor Canal. The intrusion of lake water was accounted for in the model by adding a portion of the total lake intrusion flow to the surface layer of each of nine affected segments in the Indiana Harbor and Indiana Harbor Canal. A total lake intrusion flow of 138 cfs was used based on a measurement made by the USGS in October 2002 during a normal lake level condition. The procedures in 5-2-11.4 require the more stringent of the FAV or the acute WLA calculated using up to a one-to-one dilution to be applied to individual outfalls. They also limit the dilution available for each outfall (the mixing zone) to twenty-five

percent (25%) of the stream design flow. Because of the potential for overlapping mixing zones within a segment, the combined discharges in a segment were also limited collectively to twenty-five percent (25%) of the stream design flow. This was done in accordance with 5-2-11.4(b)(3)(D) which requires the combined effect of overlapping mixing zones to be evaluated to ensure that applicable criteria and values are met in the area where the mixing zones overlap.

Based on the reasonable potential statistical procedure at 5-2-11.5(b)(1)(iii) and (iv), the procedures under 5-2-11.4(c) are used as the basis for determining preliminary WLAs and the preliminary WLAs are then used to develop monthly and daily PELs in accordance with the procedure for converting WLAs into WQBELs under 5-2-11.6. Three critical inputs to the procedure under 5-2-11.4(c) include the background concentration, the effluent flow and the stream flow. The background concentration is determined under 5-2-11.4(a)(8). Under this rule, background concentrations can be determined using actual in-stream data or in-stream concentrations estimated using actual or projected pollutant loading data. In the multi-discharger WLA, in-stream data were used to establish the background concentration for the first segment of the model and then either actual or projected pollutant loading data were used. For pollutants not included in the multi-discharger WLA, in-stream data were used.

In the 2011 multi-discharger model, the flow assigned to each outfall was the long-term average flow using data from January 2006 through December 2007. This period was considered by ArcelorMittal to be the most representative of full operating conditions. Based on a review of flow data for the period January 2013 thru December 2015, it was determined that the flows used in the 2011 permit renewal are not representative of conditions expected during the term of the renewal permit. The termination of production at ArcelorMittal USA – Indiana Harbor Long Carbon (IN0063355) has resulted in the elimination of one significant discharge to the Indiana Harbor Canal. There has also been a significant reduction in the discharge flows from ArcelorMittal West Outfall 009 and ArcelorMittal East Outfall 011. The flow assigned to the ArcelorMittal Central WWTP outfall and to ArcelorMittal West Outfalls 002 and 011 was the long-term average flow calculated using data from the period January 2013 through December 2014. This period represents production prior to the idling in 2015 of operations contributing flow to ArcelorMittal Central WWTP and ArcelorMittal West. Based on improved flow monitoring, the period September 2016 through May 2017 was used for ArcelorMittal West Outfalls 009 and 010. The flow assigned to each outfall for ArcelorMittal East was the long-term average flow calculated using data from the period January 2014 through December 2015. This period represents production after the permanent shutdown of the Nos. 5 and 6 blast furnaces in June 2013.

The stream design flow used to develop wasteload allocations is determined under 5-2-11.4(b)(3). For the pollutants considered in this analysis, the aquatic life criteria are limiting and the stream design flow for chronic aquatic life criteria is the Q7,10. As was done in the 2011 WLA, since the Q7,10 is the appropriate flow for the water quality criteria being considered, the Q7,10 was used as the upstream flow for the Indiana Harbor Canal/Lake George Canal/Indiana Harbor WLA. Therefore, the stream design flow was set equal to the Q7,10 flow in the first segment of the multi-discharger model and then the long-term average flow of each discharger was added to become the stream design flow for downstream dischargers. The lake intrusion flow was added to the stream design flow at the end of each applicable segment. The Q7,10 was calculated using data from USGS gauging station 04092750 which is located in the Indiana Harbor Canal at Canal Street. The data used in the calculation consisted of continuous daily mean flow data approved by the USGS

for the period 10-1-1994 through 3-31-2012. The Q7,10 based on the climatic year (April 1 through March 31) is 358 cfs.

At each applicable outfall, PELs were calculated for each pollutant of concern using an outfall specific spreadsheet that calculates PELs using the procedures under 5-2-11.4(c) to calculate WLAs and the procedures under 5-2-11.6 to convert WLAs into PELs. The spreadsheet considers all water quality criteria (acute and chronic aquatic life, human health and wildlife) and associated stream design flows and mixing zones. The stream design flow for each water quality criterion was set equal to the same value in the outfall specific spreadsheet. This value was the Q7,10 flow plus the accumulation of long-term average effluent flow and any lake intrusion flow, minus any intake flow. For Mercury, which is a bioaccumulative chemical of concern (BCC), a mixing zone was not allowed in the development of PELs for any outfall in accordance with 5-2-11.4(b)(1). For those pollutants included in a multi-discharger WLA, the multi-discharger model was used to ensure that the most stringent water quality criterion is met at the edge of the mixing zone for each segment. This was the 4-day average chronic criterion. The multi-discharger model was also used to ensure that Lake Michigan criteria are met at the end of the last segment in the Indiana Harbor. The preliminary WLA was included as an input in the multi-discharger model and PELs were calculated from the preliminary WLA.

In the multi-discharger model, preliminary WLAs for each outfall were established, if possible, so that the monthly and daily PEQs did not exceed the PELs calculated from the preliminary WLAs. If TBELs were included for the parameter at a final outfall or an internal outfall, then the preliminary WLA was increased to the extent possible to allow the mass-based PELs to exceed the TBELs. The preliminary WLAs were adjusted as necessary so that the calculated PELs did not exceed the PELs calculated using the outfall specific spreadsheets and so that the water quality criterion was not exceeded at the edge of the mixing zone for each segment as determined using the multi-discharger model. For some outfalls, the discharge of one or more pollutants for which a multi-discharger WLA was conducted was not considered significant, so a preliminary WLA was established based on the reported effluent concentration, or if sufficient data were available, reported effluent loading data, but PELs were not calculated as allowed under 5-2-11.5(b)(1).

After assigning a preliminary WLA to each outfall in a segment and entering the WLA into the multi-discharger model, the model calculates the PELs for each outfall, the concentration at the edge of the mixing zone for the segment and the concentration at the end of each segment after complete mixing. The concentration after complete mixing then becomes the background concentration for the next segment. To calculate PELs using the outfall specific spreadsheets, the background concentration for each outfall was calculated assuming complete mixing between outfalls. This was done by entering the WLAs for each outfall into a separate spreadsheet that calculated the background concentration upstream of each outfall. By conducting a multi-discharger WLA in this manner, the background concentration for each outfall was based on the accumulated WLAs for the prior outfalls. Since the WLAs were based in some cases on projected effluent quality, the background concentrations were based on projected loading data. This provided a conservative means of determining the cumulative impact of the outfalls. For those pollutants not included in a multi-discharger WLA, the background concentration for each outfall was based on in-stream data.

The results of the reasonable potential statistical procedure are included in Tables 2-3. The results show that the discharge from ArcelorMittal Indiana Harbor East Outfall 018 has a reasonable potential to exceed a water quality criterion for lead.

In addition to establishing WQBELs based on the reasonable potential statistical procedure, IDEM is also required to establish WQBELs under 5-2-11.5(a) "If the commissioner determines that a pollutant or pollutant parameter (either conventional, nonconventional, a toxic substance, or whole effluent toxicity (WET)) is or may be discharged into the Great Lakes system at a level that will cause, have the reasonable potential to cause, or contribute to an excursion above any applicable narrative criterion or numeric water quality criterion or value under 327 IAC 2-1.5". Chlorine is added to the intake water for zebra and quagga mussel control at concentrations exceeding water quality criteria. Therefore, chlorine may be discharged from Outfalls 011, 014, and 018 at a level that will cause an excursion above the numeric water quality criterion for total residual chlorine under 2-1.5 and WQBELs for total residual chlorine are required at Outfalls 011, 014, and 018.

For each pollutant receiving TBELs at an internal outfall, and for which water quality criteria or values exist or can be developed, concentration and corresponding mass-based WQBELs were calculated at the final outfall. The WQBELs were set equal to the applicable PELs from the multi-discharger model or the outfall specific spreadsheet. This was done for ArcelorMittal East Outfall 014 (lead, zinc, naphthalene and tetrachloroethylene at the final outfall), and Outfall 018 (lead and zinc at internal Outfalls 518 and 618 and ammonia-N at internal Outfall 518). The mass-based WQBELs at the final outfall were compared to the mass-based TBELs. Since the facility is authorized to discharge up to the mass-based TBELs, if the mass-based TBELs exceed the mass-based WQBELs at the final outfall, the pollutant may be discharged at a level that will cause an excursion above a numeric water quality criterion or value under 2-1.5 and WQBELs are required for the pollutant at the final outfall. This was the case for lead and zinc at Outfall 014 and lead at Outfall 018. Therefore, WQBELs are required for these pollutants regardless of the results of the reasonable potential statistical procedure. However, the results of the reasonable potential statistical procedure were used to help establish the monitoring frequency.

Once a determination is made using the reasonable potential provisions under 5-2-11.5 that WQBELs must be included in the permit, the WQBELs are calculated in accordance with 5-2-11.5(d). Under this provision, in the absence of an EPA-approved TMDL, WLAs are calculated for the protection of acute and chronic aquatic life, wildlife, and human health in accordance with the WLA provisions under 5-2-11.4. The WLAs are then converted into WQBELs in accordance with the WQBEL provisions under 5-2-11.6. The WQBELs are included in Table 5 and were set equal to the PELs calculated for each pollutant.

### **Whole Effluent Toxicity Testing Requirements**

The 1997 Indiana Great Lakes regulations included narrative criteria with numeric interpretations for acute (2-1.5-8(b)(1)(E)(ii)) and chronic (2-1.5-8(b)(2)(A)(iv)) whole effluent toxicity (WET) and a procedure for conducting reasonable potential for WET (5-2-11.5(c)(1)). U.S. EPA did not approve the reasonable potential procedure for WET so Indiana is now required by 40 CFR Part 132.6(c) to use the reasonable potential procedure in Paragraphs C.1 and D of Procedure 6 in Appendix F of 40 CFR Part 132. IDEM used this procedure in conducting the reasonable potential

analysis for WET except that the equation was rearranged so that it is similar to the equation that IDEM uses for other pollutants and pollutant parameters.

The 2011 permit required ArcelorMittal to conduct monthly chronic toxicity testing for three months at Outfalls 014 and 018 for *Ceriodaphnia dubia* and Fathead Minnow. Thereafter, testing was required quarterly for the most sensitive species. The permit modification issued June 19, 2014 reduced the testing frequency to once per year and only required testing for *Ceriodaphnia dubia*. The representative dataset for the reasonable potential analysis was considered to begin with the first test under the 2011 permit conducted in January 2012. The results of the reasonable potential analysis are shown in Table 4. The results show that the discharges from Outfalls 014 and 018 do not have a reasonable potential to exceed the numeric interpretation of the narrative criterion for acute or chronic WET.

The permittee will be required to conduct whole effluent toxicity testing of its effluent discharge from Outfalls 014 and 018 using *Ceriodaphnia dubia*. The terms and conditions of the WET testing are contained in Part I.D. of the NPDES permit. Part I.D.1.c.(2) of the permit states that chemical analysis must accompany each effluent sample taken for bioassay test. The analysis detailed under Part I.A. should be conducted for each effluent sample. The effluent should be sampled using the sample type requirements specified in Part I.A. Questions regarding the WET testing procedures should be addressed to the Office of Water Quality, NPDES Permits Branch.

Acute toxicity is to be derived from chronic toxicity tests and toxicity is to be reported in terms of acute and chronic toxic units and compared to calculated toxicity reduction evaluation (TRE) triggers. The TRE triggers are set equal to the acute and chronic WLAs for WET in accordance with 327 IAC 5-2-11.6(d). If either an acute or chronic TRE trigger is exceeded, another chronic WET test must be conducted within two weeks. If the results of any two consecutive tests exceed the applicable TRE trigger, ArcelorMittal must conduct a TRE. The TRE triggers are shown in Table 5.

## **Thermal Requirements**

The Indiana Harbor Canal and Indiana Harbor shall be capable of supporting a well-balanced, warm water aquatic community. The water quality criteria for temperature applicable to these waterbodies are included in 327 IAC 2-1.5-8(c). Indiana regulations state that the temperature criteria apply outside a mixing zone, but the allowable mixing zone is not established in the rules. IDEM current practice is to allow fifty percent (50%) of the stream flow for mixing to meet temperature criteria. The implementation procedures under 327 IAC 5-2-11.4 for developing wasteload allocations for point source discharges address temperature under 5-2-11.4(d)(3). This provision states that temperature shall be addressed using a model, approved by the commissioner, that ensures compliance with the water quality criteria for temperature.

There is also no specific procedure in the rules for determining whether a discharger is required to have water quality-based effluent limits (WQBELs) for temperature. Therefore, the general provision for making reasonable potential determinations in 5-2-11.5(a) is applicable. This provision establishes that if the commissioner determines that a pollutant or pollutant parameter is or may be discharged into the Great Lakes system at a level that will cause, have the reasonable potential to cause, or contribute to an excursion above any applicable narrative or numeric water

quality criterion under 2-1.5, the commissioner shall incorporate WQBELs in an NPDES permit that will ensure compliance with the criterion. In making this determination, the commissioner shall exercise best professional judgment, taking into account the source and nature of the discharge, existing controls on point and nonpoint sources of pollution, the variability of the pollutant or pollutant parameter in the effluent, and, where appropriate, the dilution of the effluent in the receiving water. The commissioner shall use any valid, relevant, representative information pertaining to the discharge of the pollutant.

The multi-discharger model for the Indiana Harbor Canal/Lake George Canal/Indiana Harbor subwatershed discussed above included four active outfalls discharging to the Indiana Harbor Canal and four active outfalls discharging to the Indiana Harbor that contain a thermal component such as noncontact cooling water or boiler blowdown as a source of wastewater. ArcelorMittal East Outfall 011 has a flow of 30.3 mgd consisting mostly of noncontact cooling water; Outfall 014 has a flow of 7.7 mgd consisting of blowdown from the Main Plant Recycle System which includes process and cooling water; and, Outfall 018 has a flow of 16.4 mgd with Internal Outfall 518 having a flow of 0.089 mgd and Internal Outfall 618 having a flow of 0.58 mgd with the remaining discharge including various thermal discharges such as noncontact cooling water and cooling tower blowdown. The ArcelorMittal East 2011 permit includes temperature monitoring for Outfalls 011, 014 and 018 on the intake and outfall. The source of cooling water for Outfalls 011 and 014 is the Main Intake on Lake Michigan and the source of cooling water for Outfall 018 is the No. 7 Pump House on Lake Michigan. Effluent temperature data reported for the period January 1998 through December 2015 were reviewed. The data for Outfall 011 follow a seasonal pattern with a maximum recorded temperature of 89.2 °F in September 1998. However, the data show a significant reduction in temperature after this time with the reduction of thermal sources. Therefore, only data collected since January 2012 were used in the analysis. The maximum recorded temperature during this period was 79.5 °F in July 2012. The data for Outfall 014 follow a seasonal pattern, but with relatively higher temperatures than the other ArcelorMittal East outfalls, with a maximum recorded temperature of 90.6 °F in July 2006. The data for Outfall 018 follow a seasonal pattern with a maximum recorded temperature, after the shutdown of the No. 4 AC power station around May 1999, of 86.5 °F in July 2012.

The multi-discharger model accounted for the intrusion of lake water into the Indiana Harbor and Indiana Harbor Canal. The intrusion of lake water produces thermal stratification that ends at the railroad bridge about 0.7 miles upstream of the mouth of the Indiana Harbor Canal. The outfalls that discharge upstream of the railroad bridge are ArcelorMittal Central WWTP Outfall 001 and ArcelorMittal West Outfall 002 on the west side of the canal. ArcelorMittal West Outfalls 009 and 010, which are two large sources of non-contact cooling water, are the first two discharges downstream of the railroad bridge. A review of historical instream temperature data at IDEM fixed stations on the Indiana Harbor Canal and Indiana Harbor from January 1990 through December 2015 and IDEM fixed station LM-DSP on Lake Michigan at Dunes State Park from January 1997 through December 2015 shows that the maximum temperature values were recorded in July 1999 and July 2012. The average stream flow during the July 1999 and July 2012 temperature monitoring as recorded at USGS gaging station 04092750 in the Indiana Harbor Canal at Canal Street was 485 cfs in July 1999 and 521 cfs in July 2012 which are greater than the Q7,10 of 358 cfs, but less than the harmonic mean flow of 548 cfs.

In addition to the instream sampling, a multi-discharger model was used to assist in the reasonable potential analysis. The multi-discharger model for toxics discussed above was modified to account

for temperature. The mixing zone was set at fifty percent (50%) of the stream flow to be consistent with current IDEM practice for mixing zones for temperature. The model does not account for heat dissipation so it represents a conservative, dilution only analysis. A Q7,10 flow of 358 cfs, long-term average effluent flows and background temperatures from fixed station IHC-3S were used in the multi-discharger thermal model as were used in the multi-discharger toxics model. The effluent temperature input to the model was set equal to the maximum temperature reported for the month during the period of representative data collection. For the ArcelorMittal Central WWTP outfall and ArcelorMittal West outfalls, this period was January 2012 through December 2015 since temperature monitoring was reinstated in their 2011 permits. For ArcelorMittal East Outfall 011, the representative period was also January 2012 through December 2015. For ArcelorMittal East Outfall 014, the period was January 1998 through December 2015 and for ArcelorMittal East Outfall 018 the period was June 1999 through December 2015 if it was considered representative data. The maximum temperature for May for ArcelorMittal East Outfall 018 was reported in 2010, but it was not considered representative due to low discharge flows at the plant. The maximum temperature for November for Outfall 018 was reported in 2009, but it was not considered representative due to low discharge flows at the plant. In addition, the January and February data for both 2009 and 2010 were not considered representative due to low discharge flows. The critical peak temperature months of June through September were included as one period since the same maximum criterion of 90°F applies each month.

The results of the conservative, dilution only modeling show that the discharges from ArcelorMittal East Outfalls 011, 014 and 018 do not have a reasonable potential to cause or contribute to an excursion of the water quality criterion for temperature in the Indiana Harbor from January through December. Based on the results of the instream sampling and multi-discharger thermal model, the discharges from ArcelorMittal East Outfalls 011, 014 and 018 do not have a reasonable potential to exceed a water quality criterion for temperature. Under 5-2-11.5(e), the commissioner may require monitoring for a pollutant of concern even if it is determined that a WQBEL is not required based on a reasonable potential determination. Monitoring for temperature was continued in the renewal permit.

**TABLE 2 REASONABLE POTENTIAL TO EXCEED ARCELORMITTAL USA - INDIANA HARBOR EAST OUTFALL 014 (7.7 mgd)**

| PARAMETER                    | MONTHLY AVERAGE        |       |      |      |       | DAILY MAXIMUM          |       |      |      |       | PEL              |               | PEQ > PEL       |               |
|------------------------------|------------------------|-------|------|------|-------|------------------------|-------|------|------|-------|------------------|---------------|-----------------|---------------|
|                              | Maximum Effluent Value | Count | C.V. | M.F. | PEQ   | Maximum Effluent Value | Count | C.V. | M.F. | PEQ   | Monthly Average@ | Daily Maximum | Monthly Average | Daily Maximum |
| Free Cyanide (ug/l) *        | 12                     | 44    | 0.3  | 1.0  | 12    | 12                     | 468   | 0.3  | 0.9  | 11    | 12               | 25            | No              | No            |
| Hexavalent Chromium (mg/l) * | 0.0070                 | 15    | 0.8  | 1.7  | 0.012 | 0.0095                 | 48    | 0.9  | 1.1  | 0.010 | 0.016            | 0.032         | No              | No            |
| Fluoride (mg/l) **           | 2.2                    | 12    | 0.3  | 1.3  | 2.9   | 2.5                    | 24    | 0.3  | 1.1  | 2.8   | 3.3              | 6.6           | No              | No            |
| Lead (ug/l) *                | 3.3                    | 55    | 0.5  | 1.0  | 3.3   | 30                     | 755   | 1.3  | 0.8  | 24    | 47               | 95            | No              | No            |
| Zinc (ug/l) *                | 129                    | 55    | 0.6  | 1.0  | 130   | 280                    | 750   | 0.9  | 0.8  | 220   | 170              | 330           | No              | No            |
| Ammonia-N (mg/l) *           | 0.57                   | 33    | 0.5  | 1.1  | 0.63  | 1.1                    | 449   | 0.8  | 0.8  | 0.88  | 1.1              | 2.1           | No              | No            |

\* Effluent data were obtained from MMRs for the period December 2011 through June 2016. The free cyanide sample collected 1-14-2013 was removed from the dataset as an outlier. The factors considered in making this determination were the following: the source of the discharge is a recycle system, Internal Outfall 613 was not discharging at the time, samples collected the week prior and the following two days showed levels below detection, and the large number of sampling events for this outfall. The zinc samples collected 2-29, 3-1 and 3-2-2016 were also removed from the data set as outliers. The factor considered in making this determination was the following: the source of the high values was wastewater associated with the basic oxygen furnace which has been permanently shut down.

\*\* Effluent data were obtained from a 12-month sampling effort required under the 2011 permit and conducted from November 2014 thru October 2015.

@ Monthly average PELs were calculated based on the applicable sampling frequency in a month.

6/23/2017

**TABLE 3 REASONABLE POTENTIAL TO EXCEED ARCELORMITTAL USA - INDIANA HARBOR EAST OUTFALL 018 (16.4 mgd)**

| PARAMETER             | MONTHLY AVERAGE        |       |      |      |        | DAILY MAXIMUM          |       |      |      |        | PEL              |               | PEQ > PEL       |               |
|-----------------------|------------------------|-------|------|------|--------|------------------------|-------|------|------|--------|------------------|---------------|-----------------|---------------|
|                       | Maximum Effluent Value | Count | C.V. | M.F. | PEQ    | Maximum Effluent Value | Count | C.V. | M.F. | PEQ    | Monthly Average@ | Daily Maximum | Monthly Average | Daily Maximum |
| Free Cyanide (ug/l) * | 21                     | 55    | 0.6  | 1.0  | 21     | 41                     | 372   | 0.9  | 0.8  | 33     | 21               | 43            | No              | No            |
| Fluoride (mg/l) **    | 0.84                   | 12    | 0.3  | 1.3  | 1.1    | 0.98                   | 25    | 0.4  | 1.2  | 1.2    | 1.6              | 3.3           | No              | No            |
| Lead (ug/l) *         | 6.4                    | 55    | 0.8  | 1.0  | 6.4    | 67                     | 563   | 2.7  | 0.7  | 47     | 23               | 46            | No              | Yes           |
| Selenium (mg/l) *     | 0.0048                 | 55    | 0.6  | 1.0  | 0.0048 | 0.0055                 | 140   | 0.7  | 0.9  | 0.0050 | 0.025            | 0.050         | No              | No            |
| Zinc (ug/l) *         | 33                     | 55    | 0.4  | 1.0  | 33     | 170                    | 565   | 0.8  | 0.8  | 140    | 160              | 330           | No              | No            |
| Ammonia-N (mg/l) *    | 0.63                   | 55    | 0.5  | 1.0  | 0.63   | 0.94                   | 562   | 0.7  | 0.9  | 0.85   | 1.1              | 2.1           | No              | No            |

\* Effluent data were obtained from MMRs for the period December 2011 through June 2016.

\*\* Effluent data were obtained from a 12-month sampling effort required under the 2011 permit and conducted from November 2014 thru October 2015.

@ Monthly average PELs were calculated based on the applicable sampling frequency in a month.

6/23/2017

**TABLE 4 REASONABLE POTENTIAL TO EXCEED FOR WHOLE EFFLUENT TOXICITY  
ARCELORMITTAL USA - INDIANA HARBOR EAST**

**Outfall 014\***

| Parameter         | Maximum Effluent Value | Count | C.V. | M.F. | PEQ  | WLA | PEQ>WLA | WQBEL           |               |
|-------------------|------------------------|-------|------|------|------|-----|---------|-----------------|---------------|
|                   |                        |       |      |      |      |     |         | Monthly Average | Daily Maximum |
| Acute WET (TUa)   | <1.0                   | 13    | 0.0  | 1.0  | <1.0 | 1.0 | NO      | --              | Not Required  |
| Chronic WET (TUc) | 2.0                    | 13    | 0.3  | 1.3  | 2.6  | 13  | NO      | Not Required    | --            |

**Outfall 018\***

| Parameter         | Maximum Effluent Value | Count | C.V. | M.F. | PEQ  | WLA | PEQ>WLA | WQBEL           |               |
|-------------------|------------------------|-------|------|------|------|-----|---------|-----------------|---------------|
|                   |                        |       |      |      |      |     |         | Monthly Average | Daily Maximum |
| Acute WET (TUa)   | <1.0                   | 13    | 0.0  | 1.0  | <1.0 | 1.0 | NO      | --              | Not Required  |
| Chronic WET (TUc) | 1.1                    | 13    | 0.0  | 1.0  | 1.1  | 6.8 | NO      | Not Required    | --            |

\* The data used in the analysis were those collected from January 2012 to August 2016 for *Ceriodaphnia dubia* in accordance with the October 2011 permit renewal and June 2014 permit modification.

**TABLE 5**  
**WATER QUALITY-BASED EFFLUENT LIMITATIONS**  
**FOR ARCELORMITTAL USA - INDIANA HARBOR EAST**

| Parameter                     | Quantity or Loading |               | Units   | Quality or Concentration |               | Units |
|-------------------------------|---------------------|---------------|---------|--------------------------|---------------|-------|
|                               | Monthly Average     | Daily Maximum |         | Monthly Average @        | Daily Maximum |       |
| <b>Outfall 011 (30.3 mgd)</b> |                     |               |         |                          |               |       |
| Mercury                       | 0.00033             | 0.00081       | lbs/day | 1.3                      | 3.2           | ng/l  |
| Total Residual Chlorine       | 3.5                 | 8.1           | lbs/day | 14                       | 32            | ug/l  |
| <b>Outfall 014 (7.7 mgd)</b>  |                     |               |         |                          |               |       |
| Lead                          | 3.0                 | 6.1           | lbs/day | 47                       | 95            | ug/l  |
| Mercury                       | 0.000084            | 0.00021       | lbs/day | 1.3                      | 3.2           | ng/l  |
| Zinc                          | 11                  | 21            | lbs/day | 170                      | 330           | ug/l  |
| Naphthalene                   | 13                  | 26            | lbs/day | 200                      | 400           | ug/l  |
| Tetrachloroethylene           | 31                  | 62            | lbs/day | 480                      | 960           | ug/l  |
| Total Residual Chlorine       | 0.84                | 2.0           | lbs/day | 13                       | 31            | ug/l  |
| Whole Effluent Toxicity (WET) |                     |               |         |                          |               |       |
| Acute #                       |                     |               |         |                          | 1.0           | TUa   |
| Chronic &                     |                     |               |         | 13                       |               | TUc   |
| <b>Outfall 018 (16.4 mgd)</b> |                     |               |         |                          |               |       |
| Lead                          | 3.1                 | 6.3           | lbs/day | 23                       | 46            | ug/l  |
| Mercury                       | 0.00018             | 0.00044       | lbs/day | 1.3                      | 3.2           | ng/l  |
| Zinc                          | 22                  | 45            | lbs/day | 160                      | 330           | ug/l  |
| Ammonia (as N)                |                     |               |         |                          |               |       |
| Summer +                      | 150                 | 290           | lbs/day | 1,100                    | 2,100         | ug/l  |
| Winter +                      | 150                 | 290           | lbs/day | 1,100                    | 2,100         | ug/l  |
| Total Residual Chlorine       | 1.8                 | 4.2           | lbs/day | 13                       | 31            | ug/l  |
| Whole Effluent Toxicity (WET) |                     |               |         |                          |               |       |
| Acute #                       |                     |               |         |                          | 1.0           | TUa   |
| Chronic &                     |                     |               |         | 6.8                      |               | TUc   |

@ Monthly average WQBELs were calculated based on the applicable sampling frequency in a month.

+ Summer months are July through September, and Winter months are October through June.

# This value is the Toxicity Reduction Evaluation (TRE) trigger for acute WET testing.

& This value is the Toxicity Reduction Evaluation (TRE) trigger for chronic WET testing.

### Appendix III Technology Based Effluent Limits

| US Steel Midwest   | IN000094 | 2016  | Outfall 518   |                    |   |                    |                               |                    |
|--|----------|---|---|--------------------|---|--------------------|-------------------------------|--------------------|
| ** Facility provided production in tons; converted to lbs by *2          |          |   |   |                    |   |                    |                               |                    |
| Technology-based Effluent Limitations - TSS                              |          |   |   |                    |   |                    |                               |                    |
| Parameter  | 40 CFR   | Production in<br>1,000 lbs/day<br>**flow(MGD) | Multiplication factor:(40<br>CFR 420 = lbs/1,000 lbs<br>of product)(40 CFR 433 =<br>mg/l) |                    | Effluent Limitations<br>(lbs/day)<br>production * EGL =<br>limit(lbs/day) |                    | Previous Production<br>Limits |                    |
|  |          |   | Daily<br>Maximum  | Monthly<br>Average | Daily<br>Maximum  | Monthly<br>Average | Daily<br>Maximum              | Monthly<br>Average |
| TSS  | 420.34   | 24000   | 0.0117  | 0.00438            | 280.80  | 105.12             | 243.71                        | 91.24              |
| O & G  | 420.34   | 24000   | 0.00292   |                    | 70.08   |                    | 60.82                         |                    |
| Ammonia - N  | 420.34   | 24000   | 0.00876   | 0.00292            | 210.24  | 70.08              | 182.47                        | 60.82              |
| Cyanide  | 420.34   | 24000   | 0.000584  | 0.000292           | 14.02   | 7.01               | 12.16                         | 6.08               |
| Phenols  | 420.34   | 24000   | 0.0000584   | 0.0000292          | 1.40  | 0.70               | 1.22                          | 0.61               |
| TRC*   | 420.34   | 24000   | 0.000146  |                    | 3.50  |                    | 3.04                          |                    |
| Lead   | 420.34   | 24000   | 0.000263  | 0.0000876          | 6.31  | 2.10               | 2.28                          | 1.32               |
| Zinc   | 420.34   | 24000   | 0.000394  | 0.000131           | 9.46  | 3.14               | 8.21                          | 2.73               |
| *TRC shall apply when chlorination of ironmaking wastewater is practiced |          |   |   |                    |   |                    |                               |                    |
| **Internal outfall - WQBEL do not apply                                  |          |   |   |                    |   |                    |                               |                    |

| US Steel Midwest | IN000094   | 2016  | Outfall 618   |                    |   |                    |
|------------------|------------|---|---|--------------------|---|--------------------|
| Parameter        | 40 CFR     | Production in<br>1,000 lbs/day<br>**flow(MGD) | Multiplication factor:(40<br>CFR 420 = lbs/1,000 lbs<br>of product)(40 CFR 433 =<br>mg/l) |                    | Effluent Limitations<br>(lbs/day)<br>production * EGL =<br>limit(lbs/day) |                    |
|                  |            |   | Daily<br>Maximum  | Monthly<br>Average | Daily<br>Maximum  | Monthly<br>Average |
| TSS              | 420.42     | 17010   | 0.0687  | 0.0229             | 1168.59   | 389.53             |
| Lead             | 420.43 (c) | 17010   | 0.000413  | 0.000138           | 7.03  | 2.35               |
| Zinc             | 420.43 (c) | 17010   | 0.00062   | 0.000207           | 10.55   | 3.52               |
| TSS              | 420.62     | 16202   | 0.078   | 0.026              | 1263.76   | 421.25             |
| Oil and Grease   | 420.62     | 16202   | 0.0234  | 0.0078             | 379.13  | 126.38             |
| Lead             | 420.63     | 16202   | 0.0000939   | 0.0000313          | 1.52  | 0.51               |
| Zinc             | 420.63     | 16202   | 0.000141  | 0.0000469          | 2.28  | 0.76               |
| TSS              | 420.54     | 11934   | 0.0073  | 0.00261            | 87.12   | 31.15              |
| Lead             | 420.54     | 11934   | 0.0000939   | 0.0000313          | 1.12  | 0.37               |
| Zin              | 420.54     | 11934   | 0.000141  | 0.0000469          | 1.68  | 0.56               |

| Final Limits @ 618 | Total limits for each ELG |                 | Previous Production |                 |
|--------------------|---------------------------|-----------------|---------------------|-----------------|
|                    | Daily Maximum             | Monthly Average | Daily Maximum       | Monthly Average |
| TSS                | 2519.46                   | 841.93          | 720                 | 360             |
| Oil and Grease     | 379.13                    | 126.38          | 216                 | 102             |
| Lead               | 9.67                      | 3.23            | 6.48                | 2.16            |
| Zinc               | 14.51                     | 4.84            | 10.5                | 3.5             |

O18 - ELG's applied at internal outfall 518 and 618, limits at O18 are water quality

Compare TBEL mass to WQBEL mass to see if it triggers limit at final

| Final Limits @ 618 | Current Production |                 | Previous Prod Limits |                 | WATER QUALITY<br>Previous Permit |                 | Current Water Quality |                 |
|--------------------|--------------------|-----------------|----------------------|-----------------|----------------------------------|-----------------|-----------------------|-----------------|
|                    | Daily Maximum      | Monthly Average | Daily Maximum        | Monthly Average | Daily Maximum                    | Monthly Average | Daily Maximum         | Monthly Average |
| TSS                | 2763.17            | 31.15           | 720                  | 360             |                                  |                 |                       |                 |
| Oil and Grease     | 439.95             | 126.38          | 216                  | 102             |                                  |                 |                       |                 |
| Lead               | 11.95              | 0.37            | 6.48                 | 2.16            | 10                               | 5               | 6.3                   | 3.1             |
| Zinc               | 20.38              | 0.56            | 10.5                 | 3.5             | 48                               | 24              | 45                    | 23              |
| Ammonia            | 195.42             | 65.14           | 182.47               | 60.82           | Report                           | Report          | 290*                  | 150*            |
| Phenols            | 1.30               | 0.65            | 1.22                 | 0.61            | Report                           | Report          | no RPE                | no RPE          |
| Cyanide            | 13.03              | 6.51            | 12.16                | 6.08            | Report                           | Report          | no RPE                | no RPE          |
| TRC                | 3.26               |                 | 3.04                 |                 | 4                                | 1.7             | 4.2                   | 1.8             |
| Selenium           | No ELGs            |                 |                      |                 | Report                           | Report          | no RPE                | no RPE          |

\* No RPR

Outfall 014 - Calculation of Proposed Technology-Based Effluent Limits

| Production Unit                        | Production (tons/day) |                     | TSS                 |           | Oil and Grease |           | Total Lead  |           | Total Zinc  |           | Naph. <sup>3</sup> | TCE <sup>1</sup> |
|--|-----------------------|---------------------|---------------------|-----------|----------------|-----------|-------------|-----------|-------------|-----------|--------------------|------------------|
|  |                       |                     | Monthly Avg         | Daily max | Monthly Avg    | Daily max | Monthly Avg | Daily max | Monthly Avg | Daily max |                    |                  |
| 80" Hot Strip Mill <sup>2</sup>        | 16,871                | ELG (lbs/1000 lbs)  | 0.16                | 0.427     |                | 0.107     | 0.000108    | 0.000325  | 0.000163    | 0.000488  |                    |                  |
| Hot Forming Strip 420.72/77 (c)(1)     |                       | Mass Limit (pounds) | 5398.72             | 14407.83  | 1202.26        | 3610.39   | 3.64        | 10.97     | 5.50        | 16.47     |                    |                  |
| No. 5 Pickle Line                      | 7,853                 | ELG (lbs/1000 lbs)  | 0.035               | 0.0818    | 0.0117         | 0.035     | 0.000175    | 0.000526  | 0.000234    | 0.000701  |                    |                  |
| HCl Pickling SSP w/ls 420.92/93 (b)(2) |                       | Mass Limit (pounds) | 549.71              | 1284.75   | 183.76         | 549.71    | 2.75        | 8.26      | 3.68        | 11.01     |                    |                  |
| Pickling Line Fume Scrubbers           | # Scrubbers           | ELG (kg/day)        | 2.45                | 5.72      | 0.819          | 2.45      | 0.0123      | 0.0368    | 0.0164      | 0.0491    |                    |                  |
| Fume Scrubbers 420.92/93 (b)(4)        |                       | 1                   | Mass Limit (pounds) | 5.40      | 12.61          | 1.81      | 5.40        | 0.03      | 0.08        | 0.04      | 0.11               |                  |
| 80" Tandem Mill                        | 9,955                 | ELG (lbs/1000 lbs)  | 0.00313             | 0.00626   | 0.00104        | 0.00261   | 0.0000156   | 0.0000469 | 0.0000104   | 0.0000313 | 0.0000104          | 0.0000156        |
| Cold Rolling MS/REC 420.102/103 (a)(2) |                       | Mass Limit (pounds) | 62.32               | 124.64    | 20.71          | 51.97     | 0.31        | 0.93      | 0.21        | 0.62      | 0.21               | 0.31             |
| 56" Tandem Mill                        | 0                     | ELG (lbs/1000 lbs)  |                     |           |                |           |             |           |             |           |                    |                  |
| Cold Rolling MS/Rec 420.102/103 (a)(2) |                       | Mass Limit (pounds) |                     |           |                |           |             |           |             |           |                    |                  |
| #29 Temper Mill                        | 5,421                 | ELG (lbs/1000 lbs)  | 0.0113              | 0.0225    | 0.00376        | 0.00939   | 0.0000563   | 0.000169  | 0.0000376   | 0.000113  | 0.0000376          | 0.0000563        |
| Cold Rolling SS/DA 420.102/103 (a)(4)  |                       | Mass Limit (pounds) | 122.51              | 243.95    | 40.77          | 101.81    | 0.61        | 1.83      | 0.41        | 1.23      | 0.41               | 0.61             |
| #28 Temper Mill                        | 4,752                 | ELG (lbs/1000 lbs)  | 0.0501              | 0.1       | 0.0167         | 0.0417    | 0.000025    | 0.000751  | 0.000167    | 0.000501  | 0.000167           | 0.000025         |
| Cold Rolling MS/DA 420.102/103 (a)(5)  |                       | Mass Limit (pounds) | 476.15              | 950.40    | 158.72         | 396.32    | 2.38        | 7.14      | 1.59        | 4.76      | 1.59               | 2.38             |
| #27 Temper Mill                        | 0                     | ELG (lbs/1000 lbs)  |                     |           |                |           |             |           |             |           |                    |                  |
| Cold Rolling MS/DA 420.102/103 (a)(5)  |                       | Mass Limit (pounds) |                     |           |                |           |             |           |             |           |                    |                  |
| No. 5 Galvanize                        | 1,173                 | ELG (lbs/1000 lbs)  | 0.0751              | 0.175     | 0.025          | 0.0751    | 0.000376    | 0.00113   | 0.0005      | 0.0015    |                    |                  |
| Hot Coating SS 402.122/123 (a)(1)      |                       | Mass Limit (pounds) | 176.18              | 410.55    | 58.65          | 176.18    | 0.88        | 2.65      | 1.17        | 3.52      |                    |                  |
| Alkaline Cleaning                      | 1,117                 | ELG (lbs/1000 lbs)  | 0.0438              | 0.102     | 0.0146         | 0.0438    |             |           |             |           |                    |                  |
| Continuous 420.112 (b)                 |                       | Mass Limit (pounds) | 97.85               | 227.87    | 32.62          | 97.85     |             |           |             |           |                    |                  |
| No. 2 BOF                              | 5,342                 | ELG (lbs/1000 lbs)  | 0.0104              | 0.0312    |                |           | 0.0000626   | 0.000188  | 0.0000939   | 0.000282  |                    |                  |
| BOF Steelmaking W-SC 420.42/43 (b)     |                       | Mass Limit (pounds) | 111.11              | 333.34    |                |           | 0.67        | 2.01      | 1.00        | 3.01      |                    |                  |
| No. 2 BOF Casters                      | 5,278                 | ELG (lbs/1000 lbs)  | 0.00261             | 0.0073    | 0.00104        | 0.00313   | 0.0000313   | 0.0000939 | 0.0000469   | 0.000141  |                    |                  |
| Continuous Casting 420.64              |                       | Mass Limit (pounds) | 27.55               | 77.06     | 10.98          | 33.04     | 0.33        | 0.99      | 0.50        | 1.49      |                    |                  |
| Outfall 014 Total                      |                       | Mass Limit (pounds) | 7,028               | 18,073    | 1,710          | 5,023     | 11.6        | 34.9      | 14.1        | 42.2      | 2.2                | 3.3              |

Notes

<sup>1</sup>Lead and zinc allowances for Hot Strip Mill wastewaters co-treated with cold rolling wastewaters (Source: Development Document for Effluent Limitations Guidelines and Standards for the Iron and Steel Point Source Category, Volume I, Table I-2 (EPA 440/1-82/024))

<sup>2</sup>BPI for monthly average oil and grease for the 80" HSM taken as 1/3 daily maximum allowance

<sup>3</sup>Monitoring waiver requested to be continued for naphthalene and tetrachloroethylene

## Appendix IV

### ArcelorMittal Comment Letter and Appendicies

ArcelorMittal Comments on Draft Fact Sheet and NPDES Permit ArcelorMittal  
USA LLC  
Indiana Harbor East  
NPDES Permit Number IN0000094  
Public Notice No. 2017-4C-RD, April 12, 2017

1. Outfall 014 – TBELs & WQBELs for Lead, Zinc and Hexavalent chromium  
NPDES Permit (page 7), Fact Sheet (pages 21 to 22), WLA Report (Attachment 21-1)<sup>1</sup>

Reference is made to our comments on IDEM’s November 2016 wasteload allocation report for the ArcelorMittal Indiana Harbor facilities. Those comments were provided under separate cover.

#### Lead and Zinc

The proposed WQBELs for lead and zinc at Outfall 014 are not warranted. The draft Fact Sheet states that the discharge from Outfall 014 exhibits *reasonable potential to exceed (RP)* for both lead and zinc. However, ArcelorMittal’s *RP* assessments do not indicate *RP* for either lead or zinc. Because the technology based effluent limits for lead and zinc are more stringent than the preliminary water quality based limits, and *RP* is not demonstrated for either metal, the respective technology based effluent limits for lead and zinc should apply at Outfall 014. Please apply only the technology based effluent limits at Outfall 014 for lead and zinc.

#### Hexavalent Chromium

Monitoring requirements set out in the proposed NPDES permit for hexavalent chromium at Outfall 014 are not warranted. Both IDEM’s WLA Report and ArcelorMittal’s assessment do not indicate *RP* for hexavalent chromium. Process operations discharging to Outfall 014 that are subject to effluent limitations guidelines (ELGs) are not regulated for hexavalent chromium. Consequently, monitoring requirements are not warranted. Please remove the monitoring requirements for hexavalent chromium at Outfall 014.

#### Mass-Equivalent WQBELs

An important issue for Outfall 014 is that the discharge flow from the Master Recycle System is susceptible to short term high variability (i.e., substantially increased discharge flow) as a result of significant precipitation events. The Master Recycle System collects storm water from substantial areas of IH East, including many acres under roof and from acres of impervious surfaces. Because the discharge from the Master Recycle System is based on level control, under these circumstances the excess water introduced into the Master Recycle System from storm events is discharged from Outfall 014 over relatively short periods of time. For example, while the long-term average flow used by IDEM to calculate mass WQBELs for Outfalls 014 is approximately 7.7 mgd, the following daily flows have been recorded:

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<sup>1</sup> Supplemental Information for the Wasteload Allocation Analysis for the ArcelorMittal Indiana Harbor 2016 Draft Permits (November 16, 2016).

| Date     | Flow (mgd) |
|----------|------------|
| 07/29/15 | 22.37      |
| 08/30/16 | 26.33      |
| 03/01/17 | 21.26      |

This presents obvious problems with the mass WQBELs that were derived from the long-term average flow and the WQBEL concentration values derived from IDEM's water quality assessment. To remedy this situation, please apply any water quality based effluent limits for Outfall 014 in terms of concentration only, with no corresponding mass effluent limits. We believe this approach is protective of water quality because such high-volume Outfall 014 discharges as noted above would only occur during periods of heavy rain when the upstream flow would be much greater than the 7Q10 flow.

2. Outfall 018 – TBELs and WQBELs for Lead and Zinc  
NPDES Permit (page 11), Fact Sheet (pages 21 to 22), WLA Report (Attachment 21-2)

As with Outfall 014, the proposed water quality based effluent limits for lead and zinc at Outfall 018 are not warranted. The draft Fact Sheet states that the discharge from Outfall 018 exhibits *RP* for both lead and zinc. However, the November 2016 wasteload allocation report indicates *RP* for only lead (daily maximum), but does not indicate *RP* for lead (monthly average) or zinc (monthly average and daily maximum). ArcelorMittal's *RP* assessments do not indicate *RP* for either lead or zinc. Because the technology based effluent limits for lead and zinc are more stringent than the preliminary water quality based limits, and *RP* is not demonstrated for either metal, the respective technology based effluent limits for lead and zinc should apply at internal Outfalls 518 and 618, which discharge to Outfall 018. Monitor-only requirements for lead and zinc should apply at Outfall 018. Please remove the water quality based effluent limits for lead and zinc at Outfall 018.

3. Ammonia-N Effluent Limits at Outfall 518  
NPDES Permit (pages 15 to 16), Fact Sheet (pages 22 to 24)

In the January 2017 amendment to the Indiana Harbor East NPDES permit application, ArcelorMittal requested to transfer the Section 301(g) variance effluent limits for ammonia-N from Outfall 613 (Nos. 5 & 6 Blast Furnaces) to Outfall 518 (No. 7 Blast Furnace).

ArcelorMittal understands IDEM's determination regarding the transfer of ammonia-N effluent limits from Outfall 613 to Outfall 518. ArcelorMittal would like to explore other approaches to obtaining increased ammonia-N effluent limits at Outfall 518. These may include a Section 301(g) variance and possible water trading with Indiana Harbor West under U.S. EPA's water trading policy. We would like the opportunity to discuss these approaches with the Department. Any possible approach could be implemented as a modification of the renewal NPDES permit.

4. pH Effluent Limits at Outfalls 518 and 618  
NPDES Permit (pages 15 to 16), Fact Sheet (page 20)

The draft Fact Sheet indicates that pH limits at internal outfalls are required by applicable effluent limitations guidelines. Outfall 518 (No. 7 Blast Furnace) and Outfall 618 (No. 4 BOF, No. 1 Continuous Caster, RHOB Vacuum Degasser) are internal outfalls where 40 CFR Part 420 applies. The draft NPDES permit does not contain proposed pH limits at these internal outfalls. This is in accordance with 40 CFR §420.07, which provides that pH limits from 40 CFR Part 420 may be applied at external outfalls in lieu of internal outfalls. Please amend the draft Fact Sheet to indicate that pH effluent limits at internal Outfalls 518 and 618 are not proposed because ArcelorMittal requested that those pH limits be applied at Outfall 018 following the provisions of 40 CFR §420.07.

5. Outfall 518 Compliance Sampling Location  
NPDES Permit (page 15)

Please amend the second to last sentence in the discharge authorization statement as follows:

*“Samples taken in compliance with the monitoring requirements below shall be taken at a point representative of the discharge but prior to comingling with any other wastewater streams.”*

6. Storm Water  
NPDES Permit (pages 30 to 48), Fact Sheet (pages 29 to 31)

The sections of the draft NPDES permit regarding storm water (Part I.D Storm Water Monitoring and Non-Numeric Effluent Limits, Part I.E. Storm Water Pollution Prevention Plan) are not reasonable for large industrial facilities such as the ArcelorMittal Indiana Harbor steel mills where there are no outfalls that discharge only storm water. These sections need to be reworked to make the storm water provisions reasonable and practical for a large steel mill site such as the Indiana Harbor Central Wastewater Treatment Plant facility. In many instances, ArcelorMittal believes the highly prescriptive requirements can be replaced with references to other permits (e.g., Title V) and contingency plans already in effect (e.g., SPCC, RCRA). [Appendix A-1](#) presents our proposed mark-up of these sections. We would like the opportunity to discuss the storm water requirements in a meeting with IDEM.

7. Thermal Effluent Requirements  
NPDES Permit (page 70), Fact Sheet (pages 25 to 27)

IDEM has determined that thermal discharges from the Indiana Harbor East facility do not pose a *reasonable potential to exceed* Indiana water quality standards for temperature. Accordingly, we request that Paragraph A on page 70 of the NPDES permit be replaced with a simple requirement that intake and outfall measurements for temperature be conducted on the same day by grab sample, with no restriction on the time when temperature measurements can be made. This would minimize operating labor requirements.

The Fact Sheet at p. 25 states that effluent limits for temperature shall be monitored at Outfalls 008, 011, 014 and 018. The draft NPDES permit contains monitor-only requirements for temperature at

Outfalls 011, 014 and 018, which is consistent with IDEM's determination that the discharges do not pose a *reasonable potential to exceed* water quality standards. Please amend the Fact Sheet at page 25 to state that monitor-only requirements for temperature at Outfalls 011, 014 and 018 will be proposed in the renewal NPDES permit, and please remove Outfall 008 from this statement.

8. Outfall 011 Monitoring Requirements  
NPDES Permit (page 4), Fact Sheet (pages 26 to 28)

Outfall 011 is designed such that water from the Master Recycle System that is discharged through Outfall 014 cannot mix with or reach Outfall 011. Outfall 011 discharges only non-contact cooling water from the No. 2 AC station, storm water, groundwater and miscellaneous non-process wastewaters (e.g., steam condensate). There are no process sources of ammonia-N, phenols (4AAP), lead or zinc to Outfall 011. Accordingly, please remove the monitoring requirements for ammonia-N, phenols (4AAP), lead and zinc from the draft NPDES permit.

If monitoring requirements for phenols (4AAP), lead and zinc remain in the final renewal permit, we request the sample type for these pollutants be modified from "24-Hr Comp" to "Grab".

9. Pollutant Minimization Program (PMP) for Total Residual Chlorine  
NPDES Permit (pages 49 to 50)

Sodium hypochlorite is used in water and wastewater treatment at Indiana Harbor East in two applications:

- (1) In the Outfall 518 process wastewater treatment system (No. 7 blast furnace) for treatment of ammonia-N, cyanide and phenols (4AAP); and,
- (2) For control of zebra mussels and quagga mussels in cooling water applications.

Because these applications require dosages of sodium hypochlorite that must be effective for the intended purposes, and there are effluent limits for total residual chlorine (TRC) at Outfall 518 (technology based effluent limit) and at Outfalls 011, 014 and 018 (water quality based effluent limits), there are essentially no opportunities to develop and apply Pollutant Minimization Programs for TRC at Indiana Harbor East that would have any utility. Accordingly, we request the Pollutant Minimization Program requirements for total residual chlorine listed at Part I.J of the NPDES Permit be removed from the draft permit.

10. Definition of 24-Hour Composite Sample  
NPDES Permit (page 21)

Part I.C.3.d of the NPDES permit provides the following definition for a 24-hour composite sample:

*"A 24-hour composite sample consists of at least 3 individual flow-proportioned samples of wastewater, taken by the grab sample method or by an automatic sampler, which are taken at approximately equally spaced time intervals for the duration of the discharge within a 24-hour period and which are combined prior to analysis."*

Please replace this definition with the following:

*“A 24-hour composite sample consists of at least 3 individual flow-proportioned samples of wastewater, taken by the grab sample method or by an automatic sampler, which are taken at approximately either equally spaced time intervals or time intervals between samples proportional to stream flow for the duration of the discharge within a 24-hour period and which are combined prior to analysis.”*

11. Water Treatment Additives
  - Outfall 011 – Footnote [7]: NPDES Permit (pages 4, 5), Fact Sheet (page 31)
  - Outfall 014 – Footnote [7]: NPDES Permit (pages 7, 8), Fact Sheet (page 31)
  - Outfall 018 – Footnote [6]: NPDES Permit (pages 11, 12), Fact Sheet (page 31)

Please delete the phrase “or increase the discharge concentration of the additive contributing to this Outfall”. This is already accounted for in the phrase “including dosage rates beyond the previously approved max dosage rates”

We will advise IDEM of any planned changes in the use of water treatment additives as they may occur on an as-needed basis.

12. Oil & Grease Reporting
  - Outfall 014 – Footnote [2]: NPDES Permit (page 7)
  - Outfall 618 – Footnote [2]: NPDES Permit (page 16)

We request the following modification to the text following the second sentence of each respective footnote [2] listed above to clarify the manner in which oil & grease data are handled for compliance determinations:

*... Each sample shall be analyzed individually, and the arithmetic mean of the concentrations shall be reported as the value for the twenty-four (24) hour period. That value shall be used to assess compliance with the daily maximum effluent limitation, and the arithmetic average of all daily values determined each month shall be used to assess compliance with the monthly average effluent limit.*

13. LOD/LOQ Reporting
  - Outfall 011 – Footnote [2], [9]: NPDES Permit (pages 4 to 6)
  - Outfall 014 – Footnote [10], [13], [14]: NPDES Permit (pages 7 to 10)
  - Outfall 018 – Footnote [8], [11]: NPDES Permit (pages 11 to 14)

These footnotes provide that daily maximum mass loads for purposes of determining compliance are calculated based on the LOQ of total residual chlorine. This is because the associated WQBELs are below the level of quantitation. ArcelorMittal requests that these footnotes be revised to include:

- a) Allow averaging of separate grab sample results collected during one day when calculating mass loadings and using values of “0” for the purpose of determining compliance when less than LOQ values are reported. For example: one grab

sample at 10:00 results in < 0.06 mg/l of TRC, second grab sample at 17:00 results in < 0.06 mg/l of TRC, because the level of chlorine was consistently below the level of quantitation a mass value of "0" may be assigned, or;

- b) If one sample results in a TRC < LOD, then a value of 0 may be used for the purposes of determining compliance.

These alternative methods of calculating mass loadings may also serve to minimize possible confusion when reporting electronically via IDEM's netDMR system.

- For Outfall 011 Footnote [2], please insert a reference to Footnote [9], which sets out the LOD and LOQ for total residual chlorine at 0.02 mg/L and 0.06 mg/L, respectively.
- For Outfall 014 Footnotes [13] and [14], please insert a reference to Footnote [10], which sets out the LOD and LOQ for total residual chlorine at 0.02 mg/L and 0.06 mg/L, respectively.
- For Outfall 018 Footnote [11], please insert a reference to Footnote [8], which sets out the LOD and LOQ for total residual chlorine at 0.02 mg/L and 0.06 mg/L, respectively.

14. Total and Free Cyanide Analytical Methods  
 Outfall 011 - Footnote [10]: NPDES Permit (pages 7 to 9)  
 Outfall 018 - Footnote [8]: NPDES Permit (pages 11 to 14)

Please include the following approved analytical methods listed at 40 CFR Part 136: Total

Cyanide: ASTM D2036-09(A)

Free Cyanide: ASTM D2036-09(B)

15. Sources Contributing Flow to Outfall 011  
 NPDES Permit (page 4)
- For Outfall 011, please add "sinter plant non-contact cooling water" to the list of authorized discharges for Outfall 011
  - For Outfall 011, please remove "boiler blowdown from the No. 2 AC power station" from the discharge authorization paragraph and from Footnote [1]

16. Reporting Requirements  
 NPDES Permit (pages 19 to 24, 69)

DMR Due Date (Part I.C.2)

The last paragraph in this part states:

*"The permittee shall submit federal and state discharge monitoring reports to the Indiana Department of Environmental Management containing results obtained during the previous*

*month which shall be submitted no later than the 28th day of the month following each completed monitoring period.”*

The following change is recommended to address reporting of results where the monitoring frequency is different than monthly (e.g., quarterly):

*“The permittee shall submit federal and state discharge monitoring reports to the Indiana Department of Environmental Management containing results obtained during the previous monitoring period which shall be submitted no later than the 28<sup>th</sup> day of the month following each completed monitoring period.”* [emphasis added].

#### Reporting Times of Analyses (Part I.C.5.c)

We request that the requirement to report times of analyses be removed from the NPDES permit. We believe reporting the dates of analyses are sufficient to document whether sample holding times were met.

#### Reporting Additional Data (Part I.C.6)

This section of the permit boilerplate language should be updated to address reporting of additional data under IDEM’s netDMR system. Additional data can be reported and indicated in the MMR, but there may be issues with the DMR because required monitoring frequency codes may not agree. Therefore, we request that the sentence “Such increased frequency shall also be indicated”. The additional data will be used in the calculations and will also be shown in the MMR.

17. Outfalls Removed from the NPDES Permit  
Fact Sheet (pages 13 to 14)

Under Section 4.1. Existing Permit Limits, Tables 4.1 and 4.2 are for Outfalls 003, 008 and 013 which have been removed from the NPDES permit. Please remove the tables from the Fact Sheet.

18. Receiving Waters  
NPDES Permit (page 1)

The draft permit includes an unnamed tributary to the Grand Calumet River as a receiving water. Please remove this statement, as no Outfalls discharge to this stream.

19. Facility Contact

Please ensure Tom Barnett is listed as the designated facility contact.

Thomas Barnett  
Manager, Environmental Technology ArcelorMittal  
Indiana Harbor LLC ArcelorMittal USA LLC  
3001 Dickey Road, Sta. 001 East  
Chicago, IN 46312 (219) 399-2380

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## Appendix A-1

### ArcelorMittal Comments on Draft NPDES Permit Conditions for Storm Water

#### D. STORM WATER MONITORING AND NON-NUMERIC EFFLUENT LIMITS

Within twelve (12) months of the effective date of this permit, the permittee shall implement the non-numeric permit conditions in this Section of the permit for the entire site as it relates to storm water associated with industrial activity regardless which outfall the storm water is discharged from.

To the extent other facility contingency plans prepared outside the scope of the NPDES permit (e.g., SPCC, RCRA) address either directly or indirectly storm water pollution prevention measures, those plans are incorporated by reference and may be cited by the permittee as means to comply with the provisions of this section.

##### 1. Control Measures and Effluent Limits

In the technology-based limits included in Part D.2-4., the term “minimize” means reduce and/or eliminate to the extent achievable using control measures (including best management practices) that are technologically available and economically practicable and achievable in light of best industry practice.

##### 2. Control Measures

Select, design, install, and implement control measures (including best management practices) to minimize pollutant discharges that address the selection and design considerations in Part D.3 to meet the non-numeric effluent limits in Part D.4. The selection, design, installation, and implementation of these control measures must be in accordance with good engineering practices and manufacturer’s specifications. Any deviation from the manufacturer’s specifications shall be documented. If the control measures are not achieving their intended effect in minimizing pollutant discharges, the control measures must be modified as in accordance with the corrective action requirements in Part I.D.6.

Regulated storm water discharges from the facility include storm water run-on that commingles with storm water discharges associated with industrial activity at the facility.

##### 3. Control Measure Selection and Design Considerations

When selecting and designing control measures consider the following:

- a. preventing storm water from coming into contact with polluting materials is generally more effective, and cost-effective, than trying to remove pollutants from storm water;
- b. use of control measures in combination may be more effective than use of control measures in isolation for minimizing pollutants in storm water discharge;
- c. assessing the type and quantity of pollutants, including their potential to impact receiving water quality, is critical to designing effective control measures that will achieve the limits in this permit;
- d. minimizing impervious areas at the facility and infiltrating runoff onsite (including bioretention cells, green roofs, and pervious pavement, among other approaches), can reduce runoff and improve groundwater recharge and stream base flows in local streams, although care must be taken to avoid ground water contamination;
- e. flow can be attenuated by use of open vegetated swales and natural depressions to reduce in-stream impacts of erosive flow;
- f. conservation and/or restoration of riparian buffers will help protect streams from storm water runoff and improve water quality; and
- g. use of treatment interceptors (e.g. swirl separators and sand filters) may be appropriate in some instances to minimize the discharge of pollutants.

4. Technology-Based Effluent Limits (BPT/BAT/BCT): Non-Numeric Effluent Limits

a. Minimize Exposure

Minimize the exposure of manufacturing, processing, and material storage areas (including loading and unloading, storage, disposal, cleaning, maintenance, and fueling operations) to rain, snow, snowmelt, and runoff. To the extent technologically available and economically practicable and achievable, either locate industrial materials and activities inside or protect them with storm resistant coverings in order to minimize exposure to rain, snow, snowmelt, and runoff (although significant enlargement of impervious surface area is not recommended). In minimizing exposure, pay particular attention to the following areas:

Loading and unloading areas: locate in roofed or covered areas where feasible; use grading, berming, or curbing around the loading area to divert run-on; locate the loading and unloading equipment and vehicles so that leaks are contained in existing containment and flow diversion systems.

Material storage areas: locate indoors, or in roofed or covered areas where feasible; install berms/dikes around these areas; use dry cleanup methods.

Note: Industrial materials do not need to be enclosed or covered if storm water runoff from affected areas will not be discharged to receiving waters.

b. Good Housekeeping

Keep clean all exposed areas that are potential sources of pollutants, using such measures as sweeping at regular intervals, store materials in appropriate containers, identify and control all on-site sources of dust to minimize storm water contamination from the deposition of dust on areas exposed to precipitation, ~~keep all dumpsters under cover or fit with a lid that must remain closed when not in use,~~ and ensure that waste, garbage, and floatable debris are not discharged to receiving waters by keeping exposed areas free of such materials or by intercepting them before they are discharged.

c. Maintenance

Maintain all control measures which are used to achieve the effluent limits required by this permit in effective operating condition. Nonstructural control measures must also be diligently maintained (e.g., spill response supplies available, personnel appropriately trained). If control measures need to be replaced or repaired, make the necessary repairs or modifications as expeditiously as practicable.

d. Spill Prevention and Response Procedures

Minimize the potential for leaks, spills and other releases that may be exposed to storm water and develop plans for effective response to such spills if or when they occur. At a minimum, implement:

- i. Procedures for plainly labeling containers (e.g., "Used Oil", "Spent Solvents", "Fertilizers and Pesticides", etc.) that could

- be susceptible to spillage or leakage to encourage proper handling and facilitate rapid response if spills or leaks occur;
- ii. Preventive measures such as barriers between material storage and traffic areas, secondary containment provisions, and procedures for material storage and handling;
  - iii. Procedures for expeditiously stopping, containing, and cleaning up leaks, spills, and other releases. Employees who may cause, detect or respond to a spill or leak must be trained in these procedures and have necessary spill response equipment available. If possible, one of these individuals should be a member of the storm water pollution prevention team;
  - iv. Procedures for notification of appropriate facility personnel, emergency response agencies, and regulatory agencies. State or local requirements may necessitate reporting spills or discharges to local emergency response, public health, or drinking water supply agencies. Contact information must be in locations that are readily accessible and available; and
  - v. A procedure for documenting all significant spills and leaks of oil or toxic or hazardous pollutants that actually occurred at exposed areas, or that drained to a storm water conveyance.

e. Erosion and Sediment Controls

Through the use of structural and/or non-structural control measures stabilize, and contain runoff from, exposed areas to minimize onsite erosion and sedimentation, and the resulting discharge of pollutants. ~~Among other actions to meet this limit, place flow velocity dissipation devices at discharge locations and within outfall channels where necessary to reduce erosion and/or settle out pollutants.~~ In selecting, designing, installing, and implementing appropriate control measures for erosion and sediment control, check out information from both the State and EPA websites. The following two websites are given as information sources:

[http://www.in.gov/idem/storm\\_water/2363.htm](http://www.in.gov/idem/storm_water/2363.htm) and  
[http://water.epa.gov/polwaste/npdes/storm\\_water/Storm\\_water-Pollution-Prevention-Plans-for-Construction-Activities.cfm](http://water.epa.gov/polwaste/npdes/storm_water/Storm_water-Pollution-Prevention-Plans-for-Construction-Activities.cfm)

f. Management of Runoff

Divert, infiltrate, reuse, contain or otherwise reduce storm water runoff, to minimize pollutants in the discharge.

g. Salt Storage Piles or Piles Containing Salt

Enclose or cover storage piles of salt, or piles containing salt, used for deicing or other commercial or industrial purposes, including maintenance of paved surfaces. Implement appropriate measures (e.g., good housekeeping, diversions, containment) to minimize exposure resulting from adding to or removing materials from the pile. Piles do not need to be enclosed or covered if storm water runoff from the piles is not discharged.

h. Employee Training

Train ~~all~~ employees with responsibility for environmental management within each department who work in areas where industrial material or activities are exposed to storm water, or who are responsible for implementing activities necessary to meet the conditions of this permit (e.g., inspectors, maintenance personnel), including all members of the Pollution Prevention Team.

The following personnel must understand the requirements of Part I.D. and Part I.E. of this permit and their specific responsibilities with respect to those requirements: Personnel who are responsible for the design, installation, maintenance, and/or repair of controls (including pollution prevention measures); personnel responsible for the storage and handling of chemicals and materials that could become contaminants in storm water discharges; personnel who are responsible for conducting and documenting monitoring and inspections related to storm water; and personnel who are responsible for taking and documenting corrective actions as required in Part I.D.6.

Personnel must be trained in at least the following if related to the scope of their job duties (e.g., only personnel responsible for conducting inspections need to understand how to conduct inspections): an overview of what is in the SWPPP; spill response procedures, good housekeeping, maintenance requirements, and material management practices; the location of all controls on the site required by this permit, and how they are to be maintained; the proper procedures to follow with respect to the permit's pollution prevention requirements; and when and how to conduct inspections, record applicable findings, and take corrective actions.

i. Non-Storm water Discharges

Determine if any non-storm water discharges not authorized by an NPDES permit exist. Any non-storm water discharges discovered must either be eliminated or modified into this permit.

The following non-storm water discharges are authorized: ~~and should be documented when they occur in accordance with Part 1.E.2.c. of the permit:~~

Discharges from fire-fighting activities; Fire Hydrant flushings; Potable water, including water line flushings; ~~Uncontaminated c~~Condensate from air conditioners, coolers, and other compressors and from the outside storage of refrigerated gases or liquids; Irrigation drainage; Landscape watering provided all pesticides, herbicides, and fertilizer have been applied in accordance with the approved labeling; Pavement wash water where no detergents are used and no spills or leaks of toxic or hazardous material have occurred (unless all spilled material has been removed); Routine external building washdown that does not use detergents; ~~Uncontaminated g~~Ground water or spring water; Foundation or footing drains where flows are not contaminated with process materials; Incidental windblown mist from cooling towers that collects on rooftops or adjacent portions of the facility, but not intentional discharges from cooling towers (e.g., "piped cooling tower blowdown or drains); and Vehicle wash-waters where ~~uncontaminated water without~~ detergents or solvents ~~are not~~ utilized.

j. Dust Generation and Vehicle Tracking of Industrial Materials

Minimize generation of dust and off-site tracking of raw, final, or waste materials.

5. Annual Review

At least once every 12 months, ~~submit~~ prepare an Annual Report to ~~the Industrial NPDES Permit Section~~ which includes the following: the results or a summary of the past year's routine facility inspection documentation

and quarterly visual assessment documentation; information copied or summarized from the corrective action documentation required (if applicable). If corrective action is not yet completed at the time of ~~preparation~~ submission of this Annual Report, describe the status of any outstanding corrective action(s); and any incidents of noncompliance observed or, if there is no noncompliance, a certification signed by a responsible corporate officer, general partner or the proprietor, executive officer or ranking elected official, stating the facility is in compliance with this permit.

#### 6. Corrective Actions – Conditions Requiring Review

- a. If any of the following conditions occur, review the SWPPP to determine if and where revisions may need to be made to eliminate the condition and prevent its recurrence:
  - i. An unauthorized release or discharge (e.g., spill, leak, or discharge of non-storm water not authorized by this NPDES permit) occurs at the facility;
  - ii. Control measures are not stringent enough for the discharge to meet applicable water quality standards;
  - iii. A required control measure was never installed, was installed incorrectly, or is not being properly operated or maintained;
  - iv. Visual assessments indicate obvious signs of storm water pollution (e.g., color, odor, floating solids, settled solids, suspended solids, foam); or
- b. If construction or a change in design, operation, or maintenance at the facility significantly changes the nature of pollutants discharged in storm water from the facility, or significantly increases the quantity of pollutants discharge the permittee must review and revise the selection, design, installation, and implementation of the control measures to determine if modifications are necessary to meet the effluent limits in this permit.

#### 7. Corrective Action Deadlines

If additional changes are necessary, a new or modified control must be installed and made operational, or a repair completed, before the next storm event if possible, ~~otherwise as soon as is reasonably practicable given the scope of the correction action. The reasons for any schedule for a corrective action requiring more than 90 days to complete shall be documented and within 14 calendar days from the time of discovery. If it is infeasible to complete the installation or repair within 14 calendar days,~~

~~the reason(s) must be documented. A schedule for completing the work must also be identified, which must be done as soon as practicable after the 14-day timeframe but no longer than 45 days after discovery.~~

Where corrective actions result in changes to any of the controls or procedures documented in the SWPPP, the SWPPP must be modified accordingly within ~~3014~~ calendar days of completing corrective action work.

These time intervals are not grace periods, but are schedules considered reasonable for documenting the findings and for making repairs and improvements. They are included in this permit to ensure that the conditions prompting the need for these repairs and improvements are not allowed to persist indefinitely.

#### 8. Corrective Action Report

The existence of any of the conditions listed in Part I.D.6 must be documented within 24 hours of becoming aware of such condition. The following information must be included in the documentation:

- a. Identification and description of the condition triggering the need for corrective action review. For any spills or leaks, include the following information: a description of the incident including material, date/time, amount, location, and reason for spill, and any leaks, spills or other releases that resulted in discharges of pollutants to waters of U.S., through storm water or otherwise;
- b. Date the condition was identified; and
- c. A discussion of whether the triggering condition requires corrective action. For any spills or leaks, include response actions, the date/time clean-up completed, notifications made, and staff involved. Also include any measures taken to prevent the reoccurrence of such releases.

Document the corrective actions taken that occurred as a result of the conditions listed in Part I.D.6. within ~~3014~~ days from the time of discovery of any of those conditions. Provide the dates when each corrective action was initiated and completed (or is expected to be completed). If applicable, document why it is infeasible to complete necessary installations or repairs within the ~~3014~~-day timeframe and document the schedule for installing the controls and making them operational as soon as practicable after the ~~3014~~-day timeframe.

## 9. Inspections

### a. Routine Facility Inspections

During normal facility operating hours conduct inspections of areas of the facility covered by the requirements in this permit, including the following:

- i. Areas where industrial materials or activities are exposed to storm water;
- ii. Areas identified in the SWPPP and those that are potential pollutant sources;
- iii. Areas where spills and leaks have occurred in the past 3 years.
- iv. Discharge points; and
- v. Control measures used to comply with the effluent limits contained in this permit.

Inspections must be conducted at least quarterly (i.e., once each calendar quarter), or in some instances more frequently (e.g., monthly), as appropriate. Increased frequency may be appropriate for some types of equipment, processes and storm water control measures, or areas of the facility with significant activities and materials exposed to storm water. At least one of the routine inspections must be conducted during a period when a storm water discharge is occurring.

Inspections must be performed by qualified personnel with at least one member of the storm water pollution prevention team participating. Inspectors must consider the results of visual and analytical monitoring (if any) for the past year when planning and conducting inspections.

During the inspection examine or look out for the following:

- vi. Industrial materials, residue or trash that may have or could come into contact with storm water;
- vii. Leaks or spills from industrial equipment, drums, tanks and other containers;
- viii. Offsite tracking of industrial or waste materials, or sediment where vehicles enter or exit the site;
- ix. Tracking or blowing of raw, final or waste materials from areas of no exposure to exposed areas; and
- x. Control measures needing replacement, maintenance or repair.

During an inspection occurring during a storm water discharge, control measures implemented to comply with effluent limits must be observed to ensure they are functioning correctly. Discharge outfalls must also be observed during this inspection. If such discharge locations are inaccessible, nearby downstream locations must be inspected.

~~As part of conducting the routine facility inspections at least quarterly, address all potential sources of pollutants, including (if applicable) air pollution control equipment (e.g., baghouses, electrostatic precipitators, scrubbers, and cyclones), for any signs of degradation (e.g., leaks, corrosion, or improper operation) that could limit their efficiency and lead to excessive emissions. Consider monitoring air flow at inlets and outlets (or use equivalent measures) to check for leaks (e.g., particulate deposition) or blockage in ducts.~~

~~Also inspect all process and material handling equipment (e.g., conveyors, cranes, and vehicles) for leaks, drips, or the potential loss of material; and material storage areas (e.g., piles, bins, or hoppers for storing coke, coal, scrap, or slag, as well as chemicals stored in tanks and drums) for signs of material losses due to wind or storm water runoff.~~

#### b. Routine Facility Inspection Documentation

The findings of facility inspections must be documented and the report maintained with the SWPPP. Findings must be summarized in the annual report. Document all findings, including but not limited to, the following information:

- i. The inspection date and time;
- ii. The name(s) and signature(s) of the inspector(s);
- iii. Weather information;
- iv. All observations relating to the implementation of control measures at the facility, including:
  - (1) A description of any discharges occurring at the time of the inspection;
  - (2) Any previously unidentified discharges and/or pollutants from the site;
  - (3) Any evidence of, or the potential for, pollutants entering the drainage system;
  - (4) Observations regarding the physical condition of and around all outfalls including any flow dissipation

- devices, and evidence of pollutants in discharges and/or the receiving water;
- (5) Any control measures needing maintenance, repairs, or replacement;
- v. Any additional control measures needed to comply with the permit requirements; and
- vi. Any incidents of noncompliance observed.

Any corrective action required as a result of a routine facility inspection must be performed consistent with Part I.D.6. of this permit.

If the discharge was visual assessed, as required in Part I.D.9.c., during the facility inspection, include the results of the assessment with the report required in Part I.D.9.a., as long as all components of both types of inspections are included in the report.

c. Quarterly Visual Assessment Procedures

Once each quarter for the entire permit term, collect a storm water sample from each outfall and conduct a visual assessment of each of these samples. These samples are not required to be collected consistent with 40 CFR Part 136 procedures but should be collected in such a manner that the samples are representative of the storm water discharge. Guidance on monitoring is available at:

[http://water.epa.gov/polwaste/npdes/storm\\_water/EPA-Multi-Sector-General-Permit-MSGP.cfm](http://water.epa.gov/polwaste/npdes/storm_water/EPA-Multi-Sector-General-Permit-MSGP.cfm)

The visual assessment must be made:

- i. Of a sample in a clean, clear glass, or plastic container, and examined in a well-lit area;
- ii. On samples collected within the first 30 minutes of an actual discharge from a storm event. If it is not possible to collect the sample within the first 30 minutes of discharge, the sample must be collected as soon as practicable after the first 30 minutes and document why it was not possible to take samples within the first 30 minutes. In the case of snowmelt, samples must be taken during a period with a measurable discharge from the site; and
- iii. For storm events, on discharges that occur at least 72 hours (3 days) from the previous discharge. The 72-hour (3-day) storm interval does not apply if you document that less than

a 72-hour (3-day) interval is representative for local storm events during the sampling period.

Visually inspect or observe the sample for the following water quality characteristics:

- iv. Color;
- v. Odor;
- vi. Clarity (diminished);
- vii. Floating solids;
- viii. Settled solids;
- ix. Suspended solids;
- x. Foam;
- xi. Oil sheen; and
- xii. Other obvious indicators of storm water pollution.

Whenever the visual assessment shows obvious signs of storm water pollution, initiate the corrective action procedures in Part I.D.6.

d. Quarterly Visual Assessment Documentation

Results of visual assessments must be documented and the documentation maintained onsite with the SWPPP. Documentation of the visual assessment must include, but is not be limited to:

- i. Sample location(s);
- ii. Sample collection date and time, and visual assessment date and time for each sample;
- iii. Personnel collecting the sample and performing visual assessment, and their signatures;
- iv. Nature of the discharge (i.e., runoff or snowmelt);
- v. Results of observations of the storm water discharge;
- vi. Probable sources of any observed storm water contamination; and
- vii. If applicable, why it was not possible to take samples within the first 30 minutes.

Any corrective action required as a result of a quarterly visual assessment must be performed consistent with Part I.D.6. of this permit.

e. Exceptions to Quarterly Visual Assessments

- i. Adverse Weather Conditions: When adverse weather conditions prevent the collection of samples during the quarter, take a substitute sample during the next qualifying

storm event. Documentation of the rationale for no visual assessment for the quarter must be included with the SWPPP records. Adverse conditions are those that are dangerous or create inaccessibility for personnel, such as local flooding, high winds, or electrical storms, or situations that otherwise make sampling impractical, such as extended frozen conditions.

- ii. Snow: In areas subject to snow, at least one quarterly visual assessment must capture snowmelt discharge, taking into account the exception described above for climates with irregular storm water runoff.
- iii. For outfalls that discharge non-contact cooling water and/or process water where the dry weather discharge flow is substantially greater than typical storm water contributions to the overall discharge flow, quarterly visual assessments are not required.

#### E. STORM WATER POLLUTION PREVENTION PLAN

To the extent other facility contingency plans prepared outside the scope of the NPDES permit (e.g., SPCC, RCRA) address either directly or indirectly storm water pollution prevention measures, those plans are incorporated by reference and may be cited by the permittee as means to comply with the provisions of this section.

##### 1. Development of Plan

Within ~~18~~12-months from the effective date of this permit, the permittee is required to revise and update the current Storm Water Pollution Prevention Plan (SWPPP) to ensure the SWPPP is appropriate for the permitted facility. The SWPPP does not contain effluent limitations. The SWPPP is intended to document the selection, design, and installation of control measures. As distinct from the SWPPP, the additional documentation requirements are intended to document the implementation (including inspection, maintenance, monitoring, and corrective action) of the permit requirements.

##### i. Contents

The plan shall include, at a minimum, the following items:

- a. Pollution Prevention Team – The SWPPP must identify the staff members (by name or title) that comprise the facility's storm water pollution prevention team as well as their individual responsibilities.

The storm water pollution prevention team is responsible for overseeing development of the SWPPP, any later modifications to it, and for compliance with permit Parts I.D. and I.E. of this permit. Each member of the storm water pollution prevention team must have ready access to either an electronic or paper copy of applicable portions of this permit, the most updated copy of the SWPPP, other relevant documents or information that must be kept with the SWPPP.

- b. Site Description – As a minimum, the plan shall contain the following:
- i. *Activities at the Facility*. Provide a description of the nature of the industrial activities at the facility.
  - ii. *General location map*. Provide a general location map (e.g., U.S. Geological Survey (USGS) quadrangle map) with enough detail to identify the location of the facility and all receiving waters for the storm water discharges.
  - iii. *Site map*. Provide a map showing:
    - (A) Boundaries of the property and the size of the property in acres;
    - (B) Location and extent of significant structures and impervious surfaces;
    - (C) Directions of storm water flow (use arrows);
    - (D) Locations of all storm water control measures;
    - (E) Locations of all receiving waters, including wetlands, in the immediate vicinity of the facility. Indicate which waterbodies are listed as impaired and which are identified by the State of Indiana or EPA as Tier 2 or Tier 2.5 waters;
    - (F) Locations of all storm water conveyances including ditches, pipes, and swales;
    - (G) Locations of potential pollutant sources identified;
    - (H) Locations where significant spills or leaks identified have occurred;
    - (I) Locations of all storm water monitoring points;
    - (J) Locations of storm water inlets and outfalls, with a unique identification code for each outfall (e.g., Outfall No. 1, No. 2), indicating if you are treating one or more outfalls as “substantially identical”, and an approximate outline of the areas draining to each outfall;
    - (K) If applicable, municipal separate storm sewer systems and where the storm water discharges to them;

- (L) Areas of federally-listed critical habitat for endangered or threatened species, if applicable.
- (M) Locations of the following activities where such activities are exposed to precipitation:
  - (a) fueling stations;
  - (b) vehicle and equipment maintenance and/or cleaning areas;
  - (c) loading/unloading areas;
  - (d) locations used for the treatment, storage, or disposal of wastes;
  - (e) liquid storage tanks;
  - (f) processing and storage areas;
  - (g) immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or by-products used or created by the facility;
  - (h) transfer areas for substances in bulk;  
and **machinery**
  - (i) locations and sources of run-on to the site from adjacent property that contains significant quantities of pollutants.
- (N) Identify in the SWPPP where any of the following activities are exposed to precipitation or surface runoff: storage or disposal of wastes such as spent solvents and baths, sand, slag and dross; liquid storage tanks and drums; processing areas including pollution control equipment (e.g., baghouses); and storage areas of raw material such as coal, coke, scrap, sand, fluxes, refractories or metal in any form. In addition, indicate where an accumulation of significant amounts of particulate matter could occur from such sources as furnace or oven emissions, losses from coal and coke handling operations, etc., and could result in a discharge of pollutants in storm water.

c. Potential Pollutant Sources:

The SWPPP must document areas at the facility where industrial materials or activities are exposed to storm water or from which allowable non-storm water discharges may be released. Industrial materials or activities include, but are not limited to: material handling equipment or activities; industrial machinery; raw materials; industrial production and processes; and intermediate products, by-products, final products, and waste products. *Material handling activities* include, but are not limited to: the storage,

loading and unloading, transportation, disposal, or conveyance of any raw material, intermediate product, final product or waste product. For structures located in areas of industrial activity, be aware that the structures themselves are potential sources of pollutants. This could occur, for example, when metals such as aluminum or copper are leached from the structures as a result of acid rain.

For each area identified, the description must include:

- i. *Activities in the Area.* A list of the industrial activities exposed to storm water (e.g., material storage; equipment fueling, maintenance, and cleaning; cutting steel beams).
- ii. *Pollutants.* A list of the pollutant(s) or pollutant constituents (e.g., crankcase oil, zinc, sulfuric acid, and cleaning solvents) associated with each identified activity, which could be exposed to rainfall or snowmelt and could be discharged from the facility. The pollutant list must include all significant materials that have been handled, treated, stored, or disposed, and that have been exposed to storm water in the three years prior to the date the SWPPP is prepared or amended.
- iii. *Spills and Leaks.* The SWPPP must document where potential spills and leaks could occur that could contribute pollutants to storm water discharges, and the corresponding outfall(s) that would be affected by such spills and leaks. The SWPPP must document all significant spills and leaks of oil or toxic or hazardous pollutants that actually occurred at exposed areas, or that drained to a storm water conveyance, in the three years prior to the date the SWPPP is prepared or amended.
- iv. *Non-Storm water Discharges* – The SWPPP must document that you have evaluated for the presence of non-storm water discharges not authorized by an NPDES permit. Any non-storm water discharges have either been eliminated or incorporated into this permit. Documentation of non-storm water discharges shall include:

A written non-storm water assessment, including the following:

- (1) The date of the evaluation;
- (2) A description of the evaluation criteria used;
- (3) A list of the outfalls or onsite drainage points that were directly observed during the evaluation; and
- (4) The action(s) taken, such as a list of control measures used to eliminate unauthorized discharge(s), or

documentation that a separate NPDES permit was obtained. For example, a floor drain was sealed, a sink drain was re-routed to sanitary, or an NPDES permit application was submitted for an unauthorized cooling water discharge.

- v. Salt Storage - The location of any storage piles containing salt used for deicing or other commercial or industrial purposes must be documented in the SWPPP.
- vi. Sampling Data - All storm water discharge sampling data collected at the facility during the previous permit term must be summarized in the SWPPP.
- vii. Description of Control Measures to Meet Technology-Based Effluent Limits - The location and type of control measures you have specifically chosen and/or designed to comply with Permit Part I.D. must be documented in the SWPPP. Regarding the control measures, the following must be documented as appropriate:
  - (a) How the selection and design considerations of control measures were addressed.
  - (b) How the control measures address the pollutant sources identified.

d. Schedules and Procedures

The following must be documented in the SWPPP:

- i. Good Housekeeping – Any schedule for regular pickup and disposal of waste materials, along with routine inspections for leaks and conditions of drums, tanks and containers;
- ii. Maintenance – Preventative maintenance procedures, including regular inspections, testing, maintenance and repair of all control measures to avoid situations that may result in leaks, spills, and other releases, and any back-up practices in place should a runoff event occur while a control measure is off-line. The SWPPP shall include the schedule or frequency for maintaining all control measures used to comply with the storm water requirements.
- iii. Spill Prevention and Response Procedures – Procedures for preventing and responding to spills and leaks, including notification procedures. For preventing spills, include in the SWPPP the control measures for material handling and storage, and the procedures for preventing spills that can contaminate storm water. Also specify cleanup equipment, procedures and spill logs, as appropriate, in the event of

spills. You may reference the existence of other plans for Spill Prevention Control and Countermeasure (SPCC) developed for the facility under Section 311 of the CWA or BMP programs otherwise required by an NPDES permit for the facility, provided that you keep a copy of that other plan onsite and make it available for review;

- iv. Erosion and Sediment Control – If you use polymers and/or other chemical treatments as part of the controls, identify the polymers and/or chemicals used and the purpose; and
- v. Employee Training – The elements of the employee training plan shall include all, but not be limited to, the requirements set forth in Permit Part.I.D., and also the following:
  - (1) The content of the training;
  - (2) The frequency/schedule of training for employees within each department with responsibility for environmental management who have duties in areas of industrial activities subject to this permit;
  - (3) A log of the dates on which designated specific employees received training.

e. Pertaining to Inspections

Document in the SWPPP the procedures for performing, as appropriate, the types of inspections specified by this permit, including:

- i. Routine facility inspections and;
- ii. Quarterly visual assessment of storm water discharges.

For each type of inspection performed, the SWPPP must identify:

- iii. Person(s) or positions of person(s) responsible for inspection;
- iv. Schedules for conducting inspections, including tentative schedule for irregular storm water runoff discharges; and
- v. Specific items to be covered by the inspection, including schedules for specific outfalls.

f. Pertaining to Monitoring

~~Document in the SWPPP the procedures for conducting the five types of analytical monitoring specified by this permit, where applicable to the facility, including Benchmark monitoring;~~

For each type of monitoring, the SWPPP must document:

- i. Locations where samples are collected, including any determination that two or more outfalls are substantially identical;
  - ii. Parameters for sampling and the frequency of sampling for each parameter;
  - iii. Schedules for monitoring at the facility, including schedule for alternate monitoring periods for climates with irregular storm water runoff;
  - iv. Any numeric control values (effluent limitations guidelines, TMDL-related requirements, or other requirements) applicable to discharges from each outfall; and
  - v. Procedures (e.g., responsible staff, logistics, laboratory to be used) for gathering storm event data.
- g. General Requirements – The SWPPP must meet the following general requirements:
- i. The SWPPP shall be prepared in accordance with good engineering practices and to industry standards. The SWPPP may be developed by either a person on the staff or a third party, and it shall be certified in accordance with the signature requirements, under Part II.C.6.
  - ii. Retain a complete copy of the current SWPPP required by this permit at the facility in any accessible format. A complete SWPPP includes any documents incorporated by reference and all documentation supporting parts I.D. and I.E. of this permit, as well as the signed and dated certification page. Regardless of the format, the SWPPP must be immediately available to facility employees, EPA, a state or tribe, the operator of an MS4 receiving discharges from the site; and representatives of the U.S. Fish and Wildlife Service (USFWS) or the National Marine Fisheries Service (NMFS) at the time of an onsite inspection. The current SWPPP or certain information from the current SWPPP must also be made available to the public (except any confidential business information (CBI) or restricted information, but clearly identify those portions of the SWPPP that are being withheld from public access.
  - iii. Where the SWPPP refers to procedures in other facility documents, such as a Spill Prevention, Control and Countermeasure (SPCC) Plan or an Environmental Management System (EMS), copies of the relevant portions of those documents must be kept with the SWPPP.

## Appendix V

### IDEM Response to Comments

1. **Outfall 014 – TBELs & WQBELs for Lead, Zinc and Hexavalent chromium NPDES Permit (page 7), Fact Sheet (pages 21 to 22), WLA Report (Attachment 21-1)**

#### Lead and Zinc

The calculated TBELs for Outfall 014 were inadvertently omitted from the draft permit documents. A table showing the calculated TBELs for 014 is now included as part of Attachment III of this Fact Sheet. However, the WQBELs for lead and zinc are more stringent than the calculated TBELs. Including the mass-based TBELs at the final outfall would allow the permittee to discharge up to that allowance. Since the mass-based TBELs exceed the mass-based WQBELs, the pollutant could potentially be discharged at a level that will cause a violation the WQBELs. Therefore, the WQBELs for lead and zinc are included at Outfall 014.

#### Hexavalent Chromium

Reporting requirements for Hexavalent Chromium will remain in the permit at a frequency of twice yearly.

#### Mass-Equivalent WQBELs

Mass limits are included per 327 IAC 5-2-11.6(g). Pursuant 327 IAC 5-2-11.6(g)(4), the permittee may request tiered mass limits based on variable flows. This permit may be modified in the future to account for variable wet weather flows at the request of the permittee once sufficient flow data is gathered.

2. **Outfall 018 – TBELs and WQBELs for Lead and Zinc NPDES Permit (page 11), Fact Sheet (pages 21 to 22), WLA Report (Attachment 21-2)**

The TBELs for lead and zinc are included at Internal Outfalls 518 and 618. However, as noted in the response above, WQBELs are included at the final outfall (018) because the allowable discharge levels for the TBELs could cause an excursion above Indiana Water Quality Standards. Therefore, WQBELs are included at Outfall 018.

3. **Ammonia-N Effluent Limits at Outfall 518 NPDES Permit (pages 15 to 16), Fact Sheet (pages 22 to 24)**

As indicated in the comment, the scope of this request would be more adequately handled in a separate permit modification. At such a time, the permittee will need to submit a complete NPDES application package and submit all the relevant documentation. This action, it should be noted, may include U.S. EPA input.

4. **pH Effluent Limits at Outfalls 518 and 618  
NPDES Permit (pages 15 to 16), Fact Sheet (page 20)**

The above requested change has been made by adding wording to Section 4.4 of this Fact Sheet.

5. **Outfall 518 Compliance Sampling  
Location NPDES Permit (page 15)**

The above requested change has been made.

6. **Storm Water  
NPDES Permit (pages 30 to 48), Fact Sheet (pages 29 to 31)**

In response to the above comment, most of the suggested changes have been made. The first additional paragraph in Part I.E was not added, but was included as suggested in Part I.F. Also, the second paragraph in Part I.E.4.i. was not added. The permittee is required to document when the listed allowable non-storm water discharges occur.

7. **Thermal Effluent Requirements  
NPDES Permit (page 70), Fact Sheet (pages 25 to 27)**

The above requested change has been made. Footnotes [1] and [2] in Part III.A have been combined and adjusted to read:

- [1] Temperature at Outfalls 011, 014, and 018 shall be sampled. On days when temperature is sampled at the outfall, temperature shall also be sampled at the intake supplying the most significant source of water to the outfall. As an alternative to direct grab measurements during this time period the facility may install a more permanent temperature measuring device that will retain the highest temperature value during any given 24 hour period.

8. **Outfall 011 Monitoring Requirements  
NPDES Permit (page 4), Fact Sheet (pages 26 to 28)**

In response to the above comment, lead, zinc, and phenols have been removed from Outfall 011.

9. **Pollutant Minimization Program (PMP) for Total Residual  
Chlorine NPDES Permit (pages 49 to 50)**

The draft language of Part I.J of the Permit has been removed and replaced with:

This permit contains water quality-based effluent limits for TRC which are less than the LOQ. Therefore, the permittee is required to continue a pollutant minimization program (PMP) for TRC. A PMP has already been conducted for

TRC at all Outfalls regulated by this permit, therefore, a new PMP will not be required for TRC.

10. **Definition of 24-Hour Composite  
Sample NPDES Permit (page 21)**

The above requested change has been made.

11. **Water Treatment Additives**

The above referenced footnotes have been changed to read:

In the event that changes are to be made in the use of water treatment additives ~~including dosage rates beyond the previously approved estimated maximum dosage rates, or changes~~ that could significantly change the nature of, or increase the discharge concentration of the additive to Outfall 002, the permittee shall notify the Indiana Department of Environmental Management as required in Part II.C.1 of this permit. The use of any new or changed water treatment additives, or *increased* dosage rates shall not cause the discharge from any permitted outfall to exhibit chronic or acute toxicity. Acute and chronic aquatic toxicity information must be provided with any notification regarding any new or changed water treatment additives or dosage rates.

12. **Oil & Grease Reporting  
Outfall 014 – Footnote [2]: NPDES Permit (page 7)  
Outfall 618 – Footnote [2]: NPDES Permit (page 16)**

The above requested change has been made.

13. **LOD/LOQ Reporting  
Outfall 011 – Footnote [2], [9]: NPDES Permit (pages 4 to 6)  
Outfall 014 – Footnote [10], [13], [14]: NPDES Permit (pages 7 to 10)  
Outfall 018 – Footnote [8], [11]: NPDES Permit (pages 11 to 14)**

The above requested change is not incorporated into the final permit. In accordance with 327 IAC 5-2-11.6(h)(3)(C), a value of zero is not appropriate to assign daily values when calculating compliance with the daily maximum mass limitation.

14. **Total and Free Cyanide Analytical Methods  
Outfall 014 - Footnote [10]: NPDES Permit (pages 7 to 9)  
Outfall 018 - Footnote [8]: NPDES Permit (pages 11 to 14)**

The requested method has been added to the footnotes referenced above.

15. **Sources Contributing Flow to Outfall  
011 NPDES Permit (page 4)**

The above requested change has been made to Part I.A.1 and footnote [1] of that section.

16. **Reporting Requirements  
NPDES Permit (pages 19 to 24, 69)**

DMR Due Date (Part I.C.2)

The above requested change has been made.

Reporting Times of Analyses (Part I.C.5.c)

This is a condition of all similarly issued NPDES permits. No changes are made in response to this comment.

Reporting Additional Data (Part I.C.6)

This is a condition of all similarly issued NPDES permits. No changes are made in response to this comment. If the permittee has NetDMR or MMR questions, please contact IDEM's Office of Water Quality Compliance and Data Section.

17. **Outfalls Removed from the NPDES  
Permit Fact Sheet (pages 13 to 14)**

This section of the Fact Sheet identifies the outfalls, limitations, and monitoring requirements under the existing NPDES permit. The identified outfalls are not included as monitoring locations in this renewal. However, they were a part of the previous permit renewal and are identified as such in this part of the Fact Sheet. No changes have been made in response to this comment.

18. **Receiving Waters  
NPDES Permit (page 1)**

The above requested change has been made.

19. **Facility Contact**

No changes have been made to this permit in response to this comment. Thomas Barnett was listed in the draft permit as the facility contact with the phone number and email address provided in the comment. Thomas Barnett was added as the facility contact to the other permits.

STATE OF INDIANA  
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
PUBLIC NOTICE NO: 2017 – 7B – F  
DATE OF NOTICE: JULY 21, 2017

The Office of Water Quality issues the following NPDES FINAL PERMIT.

**MAJOR – RENEWAL**

**ARCELORMITTAL USA LLC - IN HARBOR EAST**, Permit No. IN0000094, LAKE COUNTY, 3001 Dickey Rd, East Chicago, IN. This major industrial facility discharges 50 million gallons daily of storm water, process & non-process wastewater into IN Harbor Ship Canal & Harbor. The Streamlined Mercury Variance application (public noticed 6/16/16) was submitted & incorporated into this permit. Permit Manager: Richard Hamblin, 317/232-8696, [Rhamblin@idem.in.gov](mailto:Rhamblin@idem.in.gov).

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**Notice of Right to Administrative Review [Permits]**

If you wish to challenge this Permit, you must file a Petition for Administrative Review with the Office of Environmental Adjudication (OEA), and serve a copy of the Petition upon IDEM. The requirements for filing a Petition for Administrative Review are found in IC 4-21.5-3-7, IC 13-15-6-1 and 315 IAC 1-3-2. A summary of the requirements of these laws is provided below.

A Petition for Administrative Review must be filed with the Office of Environmental Adjudication (OEA) within fifteen (15) days of the issuance of this notice (eighteen (18) days if you received this notice by U.S. Mail), and a copy must be served upon IDEM.

Addresses are:

Director  
Office of Environmental Adjudication  
Indiana Government Center North  
100 North Senate Avenue - Room N103  
Indianapolis, Indiana 46204

Commissioner  
Indiana Department of Environmental Management  
Indiana Government Center North  
100 North Senate Avenue - Room 1301  
Indianapolis, Indiana 46204

The Petition must contain the following information:

1. The name, address and telephone number of each petitioner.
2. A description of each petitioner's interest in the Permit.
3. A statement of facts demonstrating that each petitioner is:
  - a. a person to whom the order is directed;
  - b. aggrieved or adversely affected by the Permit; or
  - c. entitled to administrative review under any law.
4. The reasons for the request for administrative review.
5. The particular legal issues proposed for review.
6. The alleged environmental concerns or technical deficiencies of the Permit.
7. The Permit terms and conditions that the petitioner believes would be appropriate and would comply with the law.
8. The identity of any persons represented by the petitioner.
9. The identity of the person against whom administrative review is sought.
10. A copy of the Permit that is the basis of the petition.
11. A statement identifying petitioner's attorney or other representative, if any.

Failure to meet the requirements of the law with respect to a Petition for Administrative Review may result in a waiver of your right to seek administrative review of the Permit. Examples are:

1. Failure to file a Petition by the applicable deadline;
2. Failure to serve a copy of the Petition upon IDEM when it is filed; or
3. Failure to include the information required by law.

If you seek to have a Permit stayed during the Administrative Review, you may need to file a Petition for a Stay of Effectiveness. The specific requirements for such a Petition can be found in 315 IAC 1-3-2 and 315 IAC 1-3-2.1.

Pursuant to IC 4-21.5-3-17, OEA will provide all parties with Notice of any pre-hearing conferences, preliminary hearings, hearings, stays, or orders disposing of the review of this action. If you are entitled to Notice under IC 4-21.5-3-5(b) and would like to obtain notices of any pre-hearing conferences, preliminary hearings, hearings, stays, or orders disposing of the review of this action without intervening in the proceeding you must submit a written request to OEA at the address above.

If you have procedural or scheduling questions regarding your Petition for Administrative Review you may contact the Office of Environmental Adjudication at (317) 233-0850 or see OEA's website at <http://www.in.gov/oea>.