



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
Commissioner

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

January 22, 2010

VIA CERTIFIED MAIL

7002 0510 0002 7964 7080

Mr. Robert Lange, Manager
Environmental Control
United States Steel Corporation, Gary Works
One North Broadway
Gary, Indiana 46402

Dear Mr. Lange:

Re: NPDES Permit No. IN0000281
United States Steel – Gary Works Facility
Gary, Indiana, Lake County

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. These forms are available on the internet at the following web site:

<http://www.in.gov/idem/5104.htm>

Additionally, you will soon be receiving a supply of the computer generated preprinted federal NPDES DMR forms. Both the state and federal forms need to be completed and submitted on a routine basis. If you do not receive the preprinted DMR forms in a timely manner, please call this office at 317-232-8670.

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 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 eighteen (18) days of the mailing of this letter by filing at the following address:

Office of Environmental Adjudication
Indiana Government Center North
100 North Senate Avenue, Room 501
Indianapolis, IN 46204

Please send a copy of any written appeal to me at the IDEM, Office of Water Quality - Mail Code 65-42, 100 North Senate Avenue, Indianapolis, Indiana 46204-2251.

If you have any questions concerning the permit, please contact Stan Rigney at 317/232-8709. Questions concerning appeal procedures should be directed to the Office of Environmental Adjudication, at 317/232-8591.

Sincerely,

A handwritten signature in black ink, appearing to read 'Bruno Pigott', with a long horizontal stroke extending to the right.

Bruno Pigott
Assistant Commissioner
Office of Water Quality

SRR

Enclosures

cc: U.S. EPA, Region V
Lake County Health Department

INDEX
for
United States Steel Gary Works NPDES Permit IN0000281

PART I.

A. Effluent Limitations and Monitoring Requirements.....	2
GRAND CALUMET RIVER DISCHARGERS	
Outfall 005.....	2-5
Outfall 005 (with 010).....	6-8
Outfall 501 (005).....	9
Outfall 010	10-12
Outfall 015	13-14
Outfall 607	15
Outfall 018	16-17
Outfall 019	18-19
Outfall 020.....	20-21
Outfall 021	22-23
Outfall 023	24
Outfall 026	25
Outfall 028/030 (Outfall 600).....	26-27
Outfall 603 (via 028/030).....	28
Outfall 032	29-30
Outfall 033.....	31-32
Outfall 034	33-35
Outfall 604 (via 034)	36-37
Outfall 605 (via 034)	38
Outfall 606 (via 034)	39
LAKE MICHIGAN DISCHARGERS	
Outfall 035	40-41
Outfall 037	42-43
Outfall 039	44-45
Outfall 041 & 041B	46-47
Intake Screen Backwash (BW-1, BW-2, BW-3, BW-4, BW-5)	47
B. Narrative Water Quality Standards.....	48
C. Monitoring and Reporting.....	48
1. Representative Sampling.....	48
2. Discharge Monitoring Reports.....	48-49
3. Definitions.....	49-52
4. Test Procedures.....	52-54
5. Recording of Results.....	54
6. Additional Monitoring by Permittee	55
7. Records Retention	55
D. Schedule of Compliance – Outfall 005 Benzo (a) pyrene and Whole Effluent Toxicity (WET)	55-57
E. Schedule of Compliance – Mercury	57-61

F. Schedule of Compliance – Outfall 010 Benzo (a) pyrene	61-62
G. Pollutions Minimization Program	62-64
H. Reopening Clause	64-65
I. Sanitary Lift Station Emergency Overflows.....	65-66
J. Storm Water Monitoring and Non-Numeric Conditions	66-77
K. Storm Water Pollution Prevention Plan	78-85
L. Whole Effluent Toxicity Limitation	85-91
M. Reporting Requirements For Solvents, Degreasing Agents, Rolling Oils, Water Treatment Chemicals and Biocides.....	91
N. Toxicity Organic Pollutant Management Plan	92
O. Visible Oil Corrective Action Monitoring Program	92
P. Zebra and Quagga Mussel Control and Chlorination	92-93
Q. Cyanide Requirements.....	93
R. Mercury Monitoring Requirements.....	94

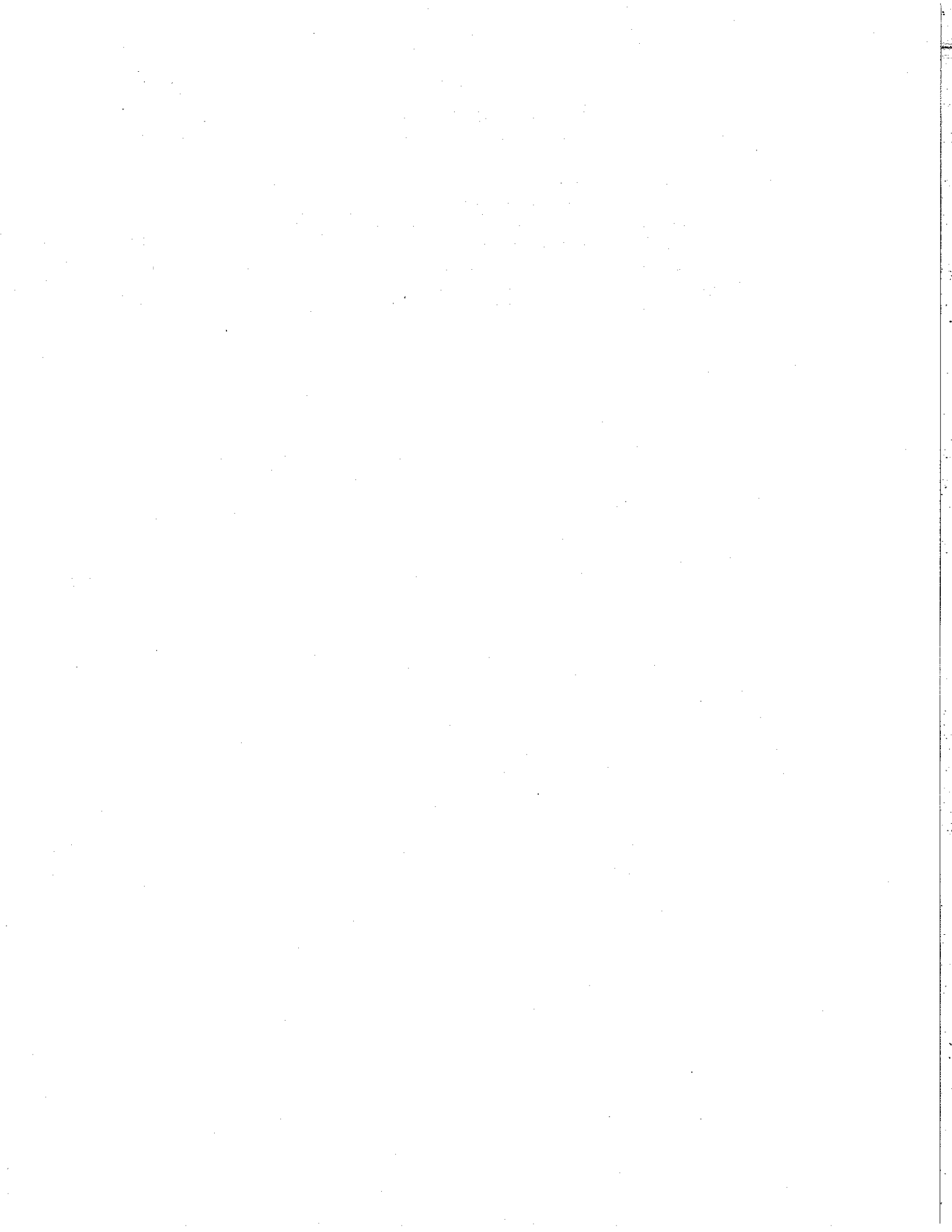
PART II STANDARD CONDITIONS FOR NPDES PERMITS

A. General Conditions	
1. Duty to Comply.....	94
2. Duty to Mitigate	94
3. Duty to Reapply	95
4. Permit Transfers.....	95-96
5. Permit Actions	96-97
6. Property Rights	97
7. Severability	97
8. Oil and Hazardous Substance Liability.....	97
9. State Laws.....	97
10. Penalties for Violation of Permit Conditions.....	97-98
11. Penalties for Tampering or Falsification.....	98
12. Toxic Pollutants.....	98
13. Wastewater treatment plant and certified operators.....	98-99
14. Construction Permits.....	99
15. Inspection and Entry	99-100
16. New or Increased Discharge of Pollutants.....	100
B. Management Requirements	
1. Proper Operation and Maintenance.....	100-101
2. Bypass of Treatment Facilities.....	101-102
3. Upset Conditions.....	102-103
4. Removed Substances	103
C. Reporting Requirements	
1. Planned Changes in Facility or Discharge.....	103-104
2. Monitoring Reports.....	104
3. Twenty-Four Hour Reporting Requirements.....	104-105
4. Other Noncompliance.....	105
5. Other Information.....	105
6. Signatory Requirements.....	105-106
7. Availability of Reports.....	107

8. Penalties for Falsifications of Reports.....107
9. Changes in Discharges of Toxic Substances.....107-108

PART III OTHER REQUIREMENTS

A. Temperature Requirements.....108-115
B. Biocides115
C. Cooling Water Intake Structures.....115- 119
D. Intake Screen Wash119
E. Special Reporting Requirements.....119-125
F. Polychlorinated Biphenyl (PCBs).....125



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 IC13-15,

U.S. STEEL – GARY WORKS
UNITED STATES STEEL CORPORATION

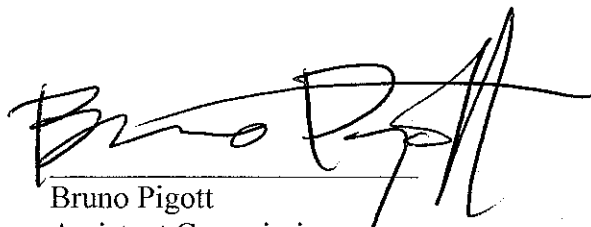
is authorized to discharge only via outfall locations designated in this permit, from an Integrated Steel Mill facility which manufactures iron and steel products, and coke and coke making byproducts that is located at One North Broadway, Gary, Indiana 46402, to receiving waters named the Grand Calumet River and Lake Michigan in accordance with effluent limitations, monitoring requirements, and other conditions set forth in Parts I, II, and III hereof. This permit may be revoked for the nonpayment of applicable fees in accordance with IC 13-18-20.

Effective Date: March 1, 2010

Expiration Date: February 28, 2015

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.

Signed on January 22, 2010 for the Indiana Department of Environmental Management.



Bruno Pigott
Assistant Commissioner
Office of Water Quality

TREATMENT FACILITY CLASSIFICATION

The discharger has seven industrial wastewater treatment plants rated as Class D, classified in accordance with 327 IAC 5-22, Classification of Wastewater Treatment Plants.

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

- During the period beginning on the effective date of this permit and lasting until the permittee redirects the flow from Outfall 010 to Outfall 005, the permittee is authorized to discharge from Outfall 005. The discharge is limited to non-contact cooling water used in the coal preparation, coke and coke byproducts manufacturing processes, non-contact cooling water used in the coke oven gas desulfurization facility, non-contact cooling water used in the coke plant boiler houses, treated process wastewater from the coke and coke byproducts manufacturing processes (internal Outfall 501), steam condensate, and storm water runoff. 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 Grand Calumet River. Such discharge shall be limited and monitored by the permittee as specified below:

DISCHARGE LIMITATIONS [6][11][14]
Outfall 005

Parameter	Quantity or Loading			Table 1 Quality or Concentration			Monitoring Measurement Frequency	Requirements Sample Type
	Monthly Average	Daily Maximum	Units	Monthly Average	Daily Maximum	Units		
Flow	Report	Report	MGD	-	-	-	Daily	Continuous
Oil & Grease [1]	-----	-----	-----	Report	Report	mg/l	2 X Weekly	3 Grabs/24 Hrs
Selenium [5]	2.1	4.1	lbs/day	4.1	8.2	ug/l	1 X Weekly	24-Hr. Comp.
Benzene	Report	Report	lbs/day	Report	Report	ug/l	3 X Monthly	3 Grabs/24-Hr.
Benzo-a-pyrene								
Interim	Report	Report	lbs/day	Report	1.0	ug/l	2 X Weekly	24-Hr. Comp.
Final [13]	0.047	0.12	lbs/day	0.093	0.23	ug/l	2 X Weekly	24-Hr. Comp.
Ammonia (as N)	Report	Report	lbs/day	Report	Report	ug/l	2 X Weekly	24-Hr. Comp.
Free Cyanide [2][17]								
Season 1 [16]	3.447	8.08	lbs/day	6.9	16.1	ug/l	2 X Weekly	See Part I.Q.
Season 2 [16]	3.0	6.6	lbs/day	6.0	13	ug/l	2 X Weekly	See Part I.Q.
Mercury [5][7]								
Interim	Report	Report	lbs/day	Report	Report	ng/l	Bi-Monthly [15]	Grab
Final [12]	0.00066	0.0016	lbs/day	1.3	3.2	ng/l	Bi-Monthly [15]	Grab
Total Residual Chlorine [8][3]	4.0	9.1 [10]	lbs/day	8	18	ug/l	Daily [9]	Grab
Fluoride	Report	Report	lbs/day	Report	Report	ug/l	2 X Monthly	24-Hr. Comp.
Chloride	Report	Report	lbs/day	Report	Report	mg/l	2 X Monthly	24-Hr. Comp.
Sulfate	Report	Report	lbs/day	Report	Report	mg/l	2 X Monthly	24-Hr. Comp.

Discharge Limitations [6][11][14]
 Outfall 005 (Table 1 Continued)

<u>Parameter</u>	<u>Quantity or Loading</u>		<u>Units</u>	<u>Quality or Concentration</u>		<u>Units</u>	<u>Monitoring Measurement Frequency</u>	<u>Requirements Sample Type</u>
	<u>Monthly Average</u>	<u>Daily Maximum</u>		<u>Monthly Average</u>	<u>Daily Maximum</u>			
Whole Effluent Toxicity[13][18]								
Interim				Report		TU _c	Quarterly [19]	24-Hr. Comp.
Final	-----	-----	-----	1.0	-----	TU _c	Quarterly [19]	24-Hr. Comp.
Temperature [4]	-----	-----	-----		Report	°F	2 X Weekly	6 Grabs/24-Hrs.

Table 2

<u>Parameter</u>	<u>Quality or Concentration</u>		<u>Units</u>	<u>Monitoring Measurement Frequency</u>	<u>Requirements Sample Type</u>
	<u>Daily Minimum</u>	<u>Daily Maximum</u>			
pH	6.0	9.0	s.u.	3 X Weekly	Grab

- [1] Additional monitoring and reporting requirements are contained in Part I.O., Visible Oil Corrective Action Monitoring Program.
- [2] Cyanide shall be measured and reported as Available (Free) Cyanide. See Part I.Q. for additional requirements.
- [3] See Part I.G. of the permit for Pollutant Minimization Requirements.
- [4] See Part III.A., for additional Temperature Requirements.
- [5] The permittee shall monitor and report the identified metals as total recoverable metals.
- [6] See Part I.B. of the permit for the Narrative Water Quality Standards.
- [7] See Part I.R. for Mercury Monitoring Requirements
- [8] See Part I.P. for Zebra and Quagga Mussel Control and Chlorination for additional requirements.
- [9] Monitoring for TRC shall be 1 X Daily during Zebra or Quagga mussel intake chlorination, and continue for three additional days after Zebra or Quagga mussel treatment has been completed.
- [10] Compliance with the daily maximum mass value will be demonstrated if the calculated mass value is less than 30.2 lbs/day for Outfall 005.
- [11] See the Fact Sheet for the water treatment additives in use at Outfall 005 that have been reviewed and are approved for use at this facility by the Commissioner. In the event that changes are to be made in the use of water treatment additives including dosage rates contributing to Outfall 005, 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 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] The permittee has up to a sixty (60) month schedule of compliance as outlined in Part I.E. of the permit in which to meet the final effluent limitations for Mercury. Interim limitations shall apply until the final limits take effect.
- [13] The permittee has up to a thirty-four (34) month schedule of compliance from the effective date of the permit as outlined in Part I.D. of the permit in which to meet the final effluent limitations for Benzo(a)pyrene and the limits for Whole Effluent Toxicity (WET). Interim limitations shall apply until the final limits take effect.
- [14] To ensure that process waters from current coke plant operations are not discharged, US Steel shall certify to that effect with each monthly discharge monitoring report as follows:
- "I certify that, to the best of my knowledge and belief, and having consulted with the manager of coke plant operations and coke plant personnel responsible for managing and disposing of cokemaking and by-product recovery wastewater, that process wastewaters generated from cokemaking and by-product recovery operations have not been discharged to the Grand Calumet River or to Lake Michigan through any outfall or conveyance since the last discharge monitoring report, except for the treated coke plant by-product recovery wastewater in Internal Outfall 501."
- [15] Bi-Monthly monitoring shall be conducted in the months of February, April, June, August, October, and December of each year.
- [16] Season 1 ("salmonids absent") limitations apply April 1 – September 30 of each year. Season 2 ("salmonids present") limitations apply October 1 – March 31 of each year. These seasons are based on times when salmonids occur at the site.
- [17] US Steel may develop the appropriate studies to determine an alternate season.
- [18] See Part I.L. of the permit for Biomonitoring Requirements.
- [19] 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.

2. During the period beginning when the flow from Outfall 010 has been redirected to Outfall 005, the permittee is authorized to discharge the combined flow through Outfall 005. The discharge is limited to non-contact cooling water used in the coal preparation, coke and coke byproducts manufacturing processes, non-contact cooling water used in the coke oven gas desulfurization facility, non-contact cooling water used in the coke plant boiler houses, treated process wastewater from the coke and coke byproducts manufacturing processes (internal Outfall 501), steam condensate, and storm water runoff. 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 Grand Calumet River. Such discharge shall be limited and monitored by the permittee as specified below:

DISCHARGE LIMITATIONS [6][11][14][20]
Outfall 005

Table 1

Parameter	Quantity or Loading		Quality or Concentration				Monitoring Measurement Frequency	Requirements Sample Type
	Monthly Average Report	Daily Maximum Report	Units	Monthly Average	Daily Maximum	Units		
Flow	Report	Report	MGD	-	-	-	Daily	Continuous
Oil & Grease [1]	-----	-----	-----	Report	Report	mg/l	2 X Weekly	3 Grabs/24 Hrs
Selenium [5]	2.1	4.2	lbs/day	4.1	8.2	ug/l	1 X Weekly	24-Hr. Comp.
Benzene	Report	Report	lbs/day	Report	Report	ug/l	3 X Monthly	3 Grabs/24-Hr
Benzo-a-pyrene	Report	Report	lbs/day	Report	1.0	ug/l	2 X Weekly	24-Hr. Comp.
Interim	0.047	0.12	lbs/day	0.093	0.23	ug/l	2 X Weekly	24-Hr. Comp.
Final [13]	Report	Report	lbs/day	Report	Report	ug/l	2 X Weekly	24-Hr. Comp.
Ammonia (as N)	Report	Report	lbs/day	Report	Report	ug/l	2 X Weekly	24-Hr. Comp.
Free Cyanide [2][17]	Report	Report	lbs/day	Report	Report	ug/l	2 X Weekly	24-Hr. Comp.
Season 1 [16]	3.5	8.2	lbs/day	6.9	16.1	ug/l	2 X Weekly	See Part I.Q.
Season 2 [16]	3.1	6.6	lbs/day	6.0	13	ug/l	2 X Weekly	See Part I.Q.
Mercury [5][7]	Report	Report	lbs/day	Report	Report	ng/l	Bi-Monthly [15]	Grab
Interim	0.00066	0.0016	lbs/day	1.3	3.2	ng/l	Bi-Monthly [15]	Grab
Final [12]	4.1	9.2 [10]	lbs/day	8	18	ug/l	Daily [9]	Grab
Total Residual Chlorine [8][3]	Report	Report	lbs/day	Report	Report	ug/l	2 X Monthly	24-Hr. Comp.
Fluoride	Report	Report	lbs/day	Report	Report	mg/l	2 X Monthly	24-Hr. Comp.
Chloride	Report	Report	lbs/day	Report	Report	mg/l	2 X Monthly	24-Hr. Comp.
Sulfate	Report	Report	lbs/day	Report	Report	mg/l	2 X Monthly	24-Hr. Comp.
Whole Effluent Toxicity [18]	Report	Report	Report	Report	Report	TU _c	Quarterly [19]	24-Hr. Comp.
Interim	-----	-----	-----	1.0	-----	TU _c	Quarterly [19]	24-Hr. Comp.
Final	-----	-----	-----	-----	Report	°F	2 X Weekly	6 Grabs/24-Hrs.
Temperature [4]	-----	-----	-----	-----	-----	-----	-----	-----

Table 2

Parameter	Quality or Concentration		Units	Monitoring Measurement Frequency	Requirements Sample Type
	Daily Minimum	Daily Maximum			
pH	6.0	9.0	s.u.	3 X Weekly	Grab

[1] Additional monitoring and reporting requirements are contained in Part I.O., Visible Oil Corrective Action Monitoring Program.

- [2] Cyanide shall be measured and reported as Available (Free) Cyanide. See Part I.Q. for additional requirements.
- [3] See Part I.G. of the permit for Pollutant Minimization Requirements.
- [4] See Part III.A., for additional Temperature Requirements.
- [5] The permittee shall monitor and report the identified metals as total recoverable metals.
- [6] See Part I.B. of the permit for the Narrative Water Quality Standards.
- [7] See Part I.R. for Mercury Monitoring Requirements
- [8] See Part I.P. for Zebra and Quagga Mussel Control and Chlorination for additional requirements.
- [9] Monitoring for TRC shall be 1 X Daily during Zebra or Quagga mussel intake chlorination, and continue for three additional days after zebra or quagga mussel treatment has been completed.
- [10] Compliance with the daily maximum mass value will be demonstrated if the calculated mass value is less than 30.7 lbs/day for Outfall 005.
- [11] See the Fact Sheet for the water treatment additives in use at Outfall 005 that have been reviewed and are approved for use at this facility by the Commissioner. In the event that changes are to be made in the use of water treatment additives including dosage rates contributing to Outfall 005, 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 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] The permittee has up to a sixty (60) month schedule of compliance as outlined in Part I.E. of the permit in which to meet the final effluent limitations for Mercury. Interim limitations shall apply until the final limits take effect.
- [13] The permittee has up to a thirty-four (34) month schedule of compliance from the effective date of the permit as outlined in Part I.D. of the permit in which to meet the final effluent limitations for Benzo(a)pyrene and the limits for Whole Effluent Toxicity (WET). Interim limitations shall apply until the final limits take effect.

- [14] To ensure that process waters from current coke plant operations are not discharged, US Steel shall certify to that effect with each monthly discharge monitoring report as follows:
- "I certify that, to the best of my knowledge and belief, and having consulted with the manager of coke plant operations and coke plant personnel responsible for managing and disposing of cokemaking and by-product recovery wastewater, that process wastewaters generated from cokemaking and by-product recovery operations have not been discharged to the Grand Calumet River or to Lake Michigan through any outfall or conveyance since the last discharge monitoring report, except for the treated coke plant by-product recovery wastewater in Internal Outfall 501."
- [15] Bi-Monthly monitoring shall be conducted in the months of February, April, June, August, October, and December of each year.
- [16] Season 1 ("salmonids absent") limitations apply April 1 – September 30 of each year. Season 2 ("salmonids present") limitations apply October 1 – March 31 of each year. These seasons are based on times when salmonids occur at the site.
- [17] US Steel may develop the appropriate studies to determine an alternate season.
- [18] See Part I.L. of the permit for Biomonitoring Requirements.
- [19] 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.
- [20] USS shall notify the Compliance Evaluation Section of the Office of Water Quality in writing at least thirty (30) days prior to the completion of combining Outfalls 005 and 010 discharges.

3. During the period beginning on the effective date of this permit and lasting until the expiration date, the permittee is authorized to discharge cokemaking and by-product recovery area treatment system water including groundwater from the East Side Solid Waste Management Area (SWMA), from Internal Outfall 501 through Outfall 005, to the Grand Calumet River. Samples taken in compliance with the monitoring requirements below shall be taken at a point representative of the discharge but prior to commingling with any other process or non-process waters. Such discharge shall be limited and monitored by the permittee as specified below:

DISCHARGE LIMITATIONS
 Internal Outfall 501

Parameter	Quantity or Loading		Units	Quality or Concentration		Units	Monitoring Measurement Frequency	Requirements Sample Type
	Monthly Average	Daily Maximum		Monthly Average	Daily Maximum			
Flow	Report	Report	MGD	-	-	-	Daily	Continuous
TSS	706	1,359	lbs/day	Report	Report	mg/l	2 X Weekly	24-Hr. Comp.
Oil & Grease	Report	50.4	lbs/day	Report	Report	mg/l	2 X Weekly	3 Grabs/24 Hrs
Selenium [1]	Report	Report	lbs/day	Report	Report	ug/l	2 X Weekly	24-Hr. Comp.
Benzene	Report	0.25	lbs/day	Report	Report	ug/l	3 X Monthly	3 Grabs/24-Hr.
Benzo-a-pyrene	0.08	0.15	lbs/day	Report	Report	ug/l	2 X Weekly	24-Hr. Comp.
Naphthalene	0.09	0.15	lbs/day	Report	Report	ug/l	2 X Weekly	24-Hr. Comp.
Phenols (4AAP)	0.25	0.50	lbs/day	Report	Report	ug/l	2 X Weekly	24-Hr. Comp.
Ammonia (as N)	27.9	40.4	lbs/day	Report	Report	ug/l	2 X Weekly	24-Hr. Comp.
Cyanide [2]								
Total	27.7	41.0	lbs/day	Report	Report	ug/l	2 X Weekly	See Part I.Q.
Free	Report	Report	lbs/day	Report	Report	ug/l	2 X Weekly	See Part I.Q.
pH				Minimum Daily Report	Maximum Daily Report	s.u.	1 X Weekly	Grab

[1] The permittee shall monitor and report the identified metals as total recoverable metals.

[2] Cyanide shall be measured and reported as Total and Available (Free) Cyanide. See Part I.Q. for additional requirements.

4. During the period beginning on the effective date of this permit and lasting until the flow currently discharging from Outfall 010 has been re-directed through Outfall 005, the permittee is authorized to discharge non-contact cooling water used in coal preparation, coke and coke byproducts manufacturing processes, and storm water runoff via Outfall 010 to the Grand Calumet River. 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 Grand Calumet River. Such discharge shall be limited and monitored by the permittee as specified below:

DISCHARGE LIMITATIONS [1][15][6][17]
Outfall 010

Parameter	Quantity or Loading			Quality or Concentration			Monitoring Measurement Frequency	Requirements Sample Type
	Monthly Average	Daily Maximum	Units	Monthly Average	Daily Maximum	Units		
	Table 1							
Flow	Report	Report	MGD	-	-	-	Daily	Continuous
Oil & Grease [2]	-----	-----	-----	Report	Report	mg/l	2 X Weekly	3 Grabs/24 Hrs
Total Residual Chlorine [8][10]	0.055	0.12 [11]	lbs/day	8	18	ug/l	Daily [9]	Grab
Benzo-a-pyrene								
Interim	Report	Report	lbs/day	Report	1.0	ug/l	2 X Weekly	24-Hr. Comp.
Final [14]	0.00064	0.0016	lbs/day	0.093	0.23	ug/l	2 X Weekly	24-Hr. Comp.
Ammonia (as N)	Report	Report	lbs/day	Report	Report	ug/l	2 X Monthly	24-Hr. Comp.
Benzene	Report	Report	lbs/day	Report	Report	ug/l	3 X Monthly	3 Grabs/24-Hr.
Mercury [5][7]								
Interim	Report	Report	lbs/day	Report	Report	ng/l	Bi-Monthly [12]	Grab
Final [13]	0.0000090	0.000022	lbs/day	1.3	3.2	ng/l	Bi-Monthly [12]	Grab
Free Cyanide [3]								
Season 1 [16]	0.053	0.12	lbs/day	7.6	18	ug/l	1 X Weekly	See Part I.Q.
Season 2 [16]	0.046	0.090	lbs/day	6.7	13	ug/l	1 X Weekly	See Part I.Q.
Chloride	Report	Report	lbs/day	Report	Report	mg/l	2 X Monthly	24-Hr. Comp.
Sulfate	Report	Report	lbs/day	Report	Report	mg/l	2 X Monthly	24-Hr. Comp.
Temperature [4]	-----	-----	-----	-----	-----	°F	1 X Weekly	6 Grabs/24-Hrs.
Whole Effluent Toxicity (WET)				See Part I.L. of the permit for Biomonitoring Requirements			Quarterly	24 Hr. Comp.

Parameter	Quality or Concentration			Monitoring Measurement Frequency	Requirements Sample Type
	Daily Minimum	Daily Maximum	Units		
	Table 2				
pH	6.0	9.0	s.u.	3 X Weekly	Grab

- [1] There shall be no discharge of coke and coke byproducts manufacturing process wastewater, other than non-contact cooling water through Outfall 010.
- [2] Additional monitoring and reporting requirements are contained in Part I.O., Visible Oil Corrective Action Monitoring Program.
- [3] Cyanide shall be measured and reported as Available (Free) Cyanide. See Part I.Q. for additional requirements.

- [4] See Part III.A. for additional Temperature Requirements.
- [5] The permittee shall monitor and report the identified metals as total recoverable metals.
- [6] See Part I.B. of the permit for the Narrative Water Quality Standards.
- [7] See Part I.R. for Mercury Monitoring Requirements.
- [8] See Part I.P. for Zebra and Quagga Mussel Control and Chlorination for additional requirements.
- [9] Monitoring for TRC shall be 1 X Daily during zebra or quagga mussel intake chlorination, and continue for three additional days after zebra or quagga mussel treatment has been completed.
- [10] See Part I.G. of the permit for Pollutant Minimization Requirements.
- [11] Compliance with the daily maximum mass value will be demonstrated if the calculated mass value is less than 0.42 lbs/day for Outfall 010.
- [12] Bi-monthly monitoring shall be conducted in the months of February, April, June, August, October, and December of each year.
- [13] The permittee has up to a sixty (60) month schedule of compliance as outlined in Part I.E. of the permit in which to meet the final effluent limitations for Mercury. Interim limitations shall apply until the final limits take effect.
- [14] The permittee has up to a twenty-four (24) month schedule of compliance as outlined in Part I.F. of the permit in which to meet the final effluent limitations for Benzo(a)pyrene. Interim limitations shall apply until the final limits take effect.
- [15] See the Fact Sheet for the water treatment additives in use at Outfall 010 that have been reviewed and are approved for use at this facility by the Commissioner. In the event that changes are to be made in the use of water treatment additives including dosage rates contributing to Outfall 010, 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 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.

- [16] Season 1 ("salmonids absent") limitations apply April 1 – September 30 of each year. Season 2 ("salmonids present") limitations apply October 1 – March 31 of each year. These seasons are based on times when salmonids occur at the site.

- [17] USS shall notify the Compliance Evaluation Section of the Office of Water Quality in writing at least thirty (30) days prior to the completion of combining Outfalls 005 and 010 discharges.

5. During the period beginning on the effective date of this permit, the permittee is authorized to discharge non-contact cooling water from blast furnace and sinter plant, steam condensate, treated SWD-1 Landfill wastewater, North Tennessee Street Drainage Sump effluent, and storm water runoff through Outfall 015 to the Grand Calumet River. 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 Grand Calumet River. Such discharge shall be limited and monitored by the permittee as specified below:

DISCHARGE LIMITATIONS [1][11][13]
Outfall 015

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	-	-		
Total Suspended Solids	Report	Report	lbs/day	Report	Report	mg/l	1 X Weekly	24-Hr. Comp.
Oil & Grease [2]	-----	-----	-----	Report	Report	mg/l	1 X Weekly	Grab
Ammonia (as N)	Report	Report	lbs/day	Report	Report	mg/l	1 X Weekly	24-Hr. Comp.
CBOD ₅	Report	Report	lbs/day	Report	Report	mg/l	1 X Weekly	24-Hr. Comp.
Free Cyanide [3]	Report	Report	lbs/day	Report	Report	ug/l	1 X Weekly	See Part I.Q.
Phenols (4AAP)	Report	Report	lbs/day	Report	Report	ug/l	1 X Weekly	24-Hr. Comp.
Lead [4]	Report	Report	lbs/day	Report	Report	ug/l	1 X Weekly	24-Hr. Comp.
Zinc [4]	Report	Report	lbs/day	Report	Report	ug/l	1 X Weekly	24-Hr. Comp.
Temperature [5]	-----	-----	-----	-----	Report	°F	1 X Weekly	6 Grabs/24-Hrs.
Total Residual Chlorine [12]	0.11	0.26 [6]	lbs/day	8	18	ug/l	Daily [7]	Grab
Mercury [4][8][9]								
Interim	Report	Report	lbs/day	Report	Report	ng/l	Bi-Monthly [10]	Grab
Final	0.000018	0.000045	lbs/day	1.3	3.2	ng/l	Bi-Monthly [10]	Grab

Parameter	Quality or Concentration			Monitoring Measurement Frequency	Requirements Sample Type
	Daily Minimum	Daily Maximum	Units		
	pH	6.0	9.0		

- [1] The discharge of non-contact cooling waters from blast furnace and sintering operations is permitted only through Outfalls 015, 018, 019, and 035.
- [2] Additional monitoring and reporting requirements are contained in Part I.O., Visible Oil Corrective Action Monitoring Program.
- [3] Cyanide shall be measured and reported as Available (Free) Cyanide. See Part I.Q. for additional requirements.
- [4] The permittee shall measure and report identified metals as total recoverable metals.

- [5] See Part III.A., for additional Temperature Requirements.
- [6] Compliance with the daily maximum mass value will be demonstrated if the calculated value is less than 0.85 lbs/day.
- [7] Monitoring for TRC shall be 1 X Daily during zebra or quagga mussel intake chlorination, and continue for three additional days after zebra or quagga mussel treatment has been completed. See Part I.P. for Zebra and Quagga Mussel Control and Chlorination for additional requirements.
- [8] See Part I.R. for Mercury Monitoring Requirements.
- [9] The permittee has up to a sixty (60) month schedule of compliance as outlined in Part I.E. of the permit in which to meet the final effluent limitations for Mercury. Interim limitations shall apply until the final limits take effect.
- [10] Bi-monthly monitoring shall be conducted in the months of February, April, June, August, October, and December of each year.
- [11] See the Fact Sheet for the water treatment additives in use at Outfall 015 that have been reviewed and are approved for use at this facility by the Commissioner. In the event that changes are to be made in the use of water treatment additives including dosage rates contributing to Outfall 015, 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 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] See Part I.G. of the permit for Pollutant Minimization Requirements.
- [13] See Part I.B. of the permit for the Narrative Water Quality Standards.

6. During the period beginning on the effective date of this permit, the permittee is authorized to discharge treated SWD-1 Landfill wastewaters through Outfall 607 to the Grand Calumet River via Outfall 015. Samples taken in compliance with the monitoring requirements below shall be taken at a point representative of the discharge but prior to commingling with any other process or non-process waters. Such discharge shall be limited and monitored by the permittee as specified below:

DISCHARGE LIMITATIONS [4]
 Outfall 607

Parameter	Quantity or Loading		Units	Quality or Concentration		Units	Monitoring Measurement Frequency	Requirements Sample Type
	Monthly Average	Daily Maximum		Monthly Average	Daily Maximum			
Flow	Report	Report	MGD	-	-	-	Daily	Continuous
Total Suspended Solids	Report	Report	lbs/day	30.0	60.0	mg/l	1 X Weekly	24-Hr. Comp.
Oil & Grease	-----	-----	-----	10.0	15.0	mg/l	1 X Weekly	Grab
Ammonia (as N)	Report	Report	lbs/day	Report	Report	mg/l	1 X Weekly	24-Hr. Comp.
CBO ₅	Report	Report	lbs/day	Report	Report	mg/l	1 X Weekly	24-Hr. Comp.
Free Cyanide [1]	Report	Report	lbs/day	Report	Report	mg/l	1 X Monthly	See Part I.Q.
Phenols (4AAP)	Report	Report	lbs/day	Report	Report	mg/l	1 X Monthly	24-Hr. Comp.
Lead [2]	Report	Report	lbs/day	Report	Report	mg/l	1 X Monthly	24-Hr. Comp.
Zinc [2]	Report	Report	lbs/day	Report	Report	mg/l	1 X Monthly	24-Hr. Comp.
Benzo(a)pyrene	Report	Report	lbs/day	Report	Report	mg/l	1 X Quarter[3]	24-Hr. Comp.
pH	-----	-----	-----	-----	Report	s.u.	1 X Weekly	Grab

[1] Cyanide shall be measured and reported as Available (Free) Cyanide. See Part I.Q. for additional requirements.

[2] The permittee shall measure and report identified metals as total recoverable metals.

[3] Samples shall be taken once 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.

[4] By January 31st of each year, US Steel will provide all Mercury data collected for this outfall for the previous year.

7. During the period beginning on the effective date of this permit, the permittee is authorized to discharge blast furnace and sinter plant non-contact cooling water, storm water runoff and turboboiler blowdown, stock house misc. steam condensate & air conditioner non-contact water through Outfall 018 to the Grand Calumet River. 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 Grand Calumet River. Such discharge shall be limited and monitored by the permittee as specified below:

DISCHARGE LIMITATIONS [1][10][13]
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	Report	Report	MGD	-	-	-	Daily	Continuous
Oil & Grease [2][14]	-----	-----	-----	Report	Report	mg/l	1 X Weekly	Grab
Ammonia (as N)	Report	Report	lbs/day	Report	Report	mg/l	2 X Monthly	24-Hr. Comp.
Free Cyanide [4]	-----	Report	lbs/day	-----	Report	mg/l	1 X Monthly	See Part I.Q.
Phenols (4AAP)	Report	Report	lbs/day	Report	Report	mg/l	1 X Monthly	24-Hr. Comp.
Copper [5]	Report	Report	lbs/day	Report	Report	mg/l	1 X Weekly	24-Hr. Comp.
Mercury [5][6][7]								
Interim	Report	Report	lbs/day	Report	Report	ng/l	Bi-Monthly [12]	Grab
Final	0.00063	0.0016	lbs/day	1.3	3.2	ng/l	Bi-Monthly [12]	Grab
Temperature [3]	-----	-----	-----	-----	Report	°F	2 X Weekly	6 Grabs/24-Hrs.
Total Residual Chlorine [11]	3.9	8.7 [8]	lbs/day	8	18	ug/l	Daily [9]	Grab

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

- [1] The permittee may discharge noncontact cooling water from blast furnace and sintering operations only through Outfalls 015, 018, 019, and 035.
- [2] Additional monitoring and reporting requirements are contained in Part I.O., Visible Oil Corrective Action Monitoring Program.
- [3] See Part III.A. of the permit for the Temperature Requirements.
- [4] Cyanide shall be measured and reported as Available (Free) Cyanide. See Part I.Q. for additional requirements.
- [5] The permittee shall measure and report identified metals as total recoverable metals.

- [6] See Part I.R. for Mercury Monitoring Requirements.
- [7] The permittee has up to a sixty (60) month schedule of compliance as outlined in Part I.E. of the permit in which to meet the final effluent limitations for Mercury. Interim limitations shall apply until the final limits take effect.
- [8] Compliance with the daily maximum mass value will be demonstrated if the calculated mass value is less than 29.1 lbs/day.
- [9] Monitoring for TRC shall be 1 X Daily during zebra or quagga mussel intake chlorination, and continue for three additional days after zebra or quagga mussel treatment has been completed. See Part I.P. for Zebra and Quagga Mussel Control and Chlorination for additional requirements.
- [10] See the Fact Sheet for the water treatment additives in use at Outfall 018 that have been reviewed and are approved for use at this facility by the Commissioner. In the event that changes are to be made in the use of water treatment additives including dosage rates contributing to Outfall 018, 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 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.
- [11] See Part I.G. of the permit for Pollutant Minimization Requirements.
- [12] Bi-monthly monitoring shall be conducted in the months of February, April, June, August, October, and December of each year.
- [13] See Part I.B. of the permit for the Narrative Water Quality Standards.
- [14] If oil and grease is measured in the effluent in significant quantities, the source of such discharge is to be investigated and eliminated. The facility is required to investigate and eliminate any significant or measured concentration of oil and grease (quantities in excess of 5 mg/l). The intent of this requirement is to assure that oil and grease is not added to once-through cooling water in measurable quantities (5 mg/l).

8. During the period beginning on the effective date of this permit, the permittee is authorized to discharge blast furnace and sinter plant non-contact cooling water, storm water runoff, power station and No. 2 Q-BOP non-contact cooling water, CWT plant brine regenerant, turboboiler blowdown and steam condensate through Outfall 019 to the Grand Calumet River. 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 Grand Calumet River. Such discharge shall be limited and monitored by the permittee as specified below:

DISCHARGE LIMITATIONS [1][9][11]
Outfall 019

Parameter	Quantity or Loading		Units	Quality or Concentration		Units	Monitoring Measurement Frequency	Requirements Sample Type
	Monthly Average	Daily Maximum		Monthly Average	Daily Maximum			
Flow	Report	Report	MGD	-	-	-	Daily	Continuous
Oil & Grease [12][14]	-----	-----	-----	Report	Report	mg/l	1 X Weekly	Grab
Temperature [2]	-----	-----	-----	-----	Report	°F	2 X Weekly	6 Grabs/24-Hrs.
Free Cyanide [3]	-----	Report	lbs/day	-----	Report	mg/l	1 X Monthly	See Part I.Q.
Mercury [4][5][6]								
Interim	Report	Report	lbs/day	Report	Report	ng/l	Bi-Monthly [10]	Grab
Final	0.00053	0.0013	lbs/day	1.3	3.2	ng/l	Bi-Monthly [10]	Grab
Ammonia (as N)	Report	Report	lbs/day	Report	Report	mg/l	2 X Monthly	24-Hr. Comp.
Phenols (4AAP)	Report	Report	lbs/day	Report	Report	mg/l	1 X Monthly	24-Hr. Comp.
Total Residual Chlorine [13]	3.3	7.4 [7]	lbs/day	8	18	ug/l	Daily [8]	Grab

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

- [1] The permittee may discharge non-contact cooling waters from blast furnace and sintering operations only through Outfalls 015, 018, 019, and 035.
- [2] See Part III.A. of the permit for the Temperature Requirements.
- [3] Cyanide shall be measured and reported as Available (Free) Cyanide. See Part I.Q. for additional requirements.
- [4] The permittee shall measure and report identified metals as total recoverable metals.
- [5] See Part I.R. for Mercury Monitoring Requirements.

- [6] The permittee has up to a sixty (60) month schedule of compliance as outlined in Part I.E. of the permit in which to meet the final effluent limitations for Mercury. Interim limitations shall apply until the final limits take effect.
- [7] Compliance with the daily maximum mass value will be demonstrated if the calculated mass value is less than 24.7 lbs/day.
- [8] Monitoring for TRC shall be 1 X Daily during zebra or quagga mussel intake chlorination, and continue for three additional days after zebra or quagga mussel treatment has been completed. See Part I.P. for Zebra and Quagga Mussel Control and Chlorination for additional requirements.
- [9] See the Fact Sheet for the water treatment additives in use at Outfall 019 that have been reviewed and are approved for use at this facility by the Commissioner. In the event that changes are to be made in the use of water treatment additives including dosage rates contributing to Outfall 019, 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 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.
- [10] Bi-monthly monitoring shall be conducted in the months of February, April, June, August, October, and December of each year.
- [11] See Part I.B. of the permit for the Narrative Water Quality Standards.
- [12] Additional monitoring and reporting requirements are contained in Part I.O., Visible Oil Corrective Action Monitoring Program.
- [13] See Part I.G. of the permit for Pollutant Minimization Requirements.
- [14] If oil and grease is measured in the effluent in significant quantities, the source of such discharge is to be investigated and eliminated. The facility is required to investigate and eliminate any significant or measured concentration of oil and grease (quantities in excess of 5 mg/l). The intent of this requirement is to assure that oil and grease is not added to once-through cooling water in measurable quantities (5 mg/l).

9. During the period beginning on the effective date of this permit, the permittee is authorized to discharge No. 1 BOP Shop non-contact cooling water, No.1 continuous caster non-contact cooling water, steam condensate, and storm water through Outfall 020 to the Grand Calumet River. 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 Grand Calumet River. Such discharge shall be limited and monitored by the permittee as specified below:

DISCHARGE LIMITATIONS [1][9][11]
Outfall 020

Parameter	Quantity or Loading		Table 1				Monitoring Measurement Frequency	Requirements Sample Type
	Monthly Average	Daily Maximum	Units	Quality or Concentration Monthly Average	Daily Maximum	Units		
Flow	Report	Report	MGD	-	-	-	Daily	Continuous
Oil & Grease [2][13]	-----	-----	-----	Report	Report	mg/l	1 X Weekly	Grab
Temperature [3]	-----	-----	-----	-----	Report	°F	2 X Weekly	6 Grabs/24-Hrs.
Lead [4]	Report	Report	lbs/day	Report	Report	mg/l	2 X Monthly	24-Hr. Comp.
Zinc [4]	Report	Report	lbs/day	Report	Report	mg/l	2 X Monthly	24-Hr. Comp.
Mercury [4][5][6]								
Interim	Report	Report	lbs/day	Report	Report	ng/l	Bi-Monthly [10]	Grab
Final	0.00087	0.0022	lbs/day	1.3	3.2	ng/l	Bi-Monthly [10]	Grab
Ammonia (as N)	Report	Report	lbs/day	Report	Report	mg/l	2 X Monthly	24-Hr. Comp.
Total Residual Chlorine [12]	5.4	12 [7]	lbs/day	8	18	ug/l	Daily [8]	Grab

Parameter	Table 2			Monitoring Measurement Frequency	Requirements Sample Type
	Quality or Concentration Daily Minimum	Daily Maximum	Units		
pH	6.0	9.0	s.u.	1 X Weekly	Grab

- [1] There shall be no discharge of any steelmaking area process wastewater (steelmaking, vacuum degassing and continuous casting) or other process wastewaters from Outfall 020.
- [2] Additional monitoring and reporting requirements are contained in Part I.O., Visible Oil Corrective Action Monitoring Program.
- [3] See Part III.A. of the permit for the Temperature Requirements.
- [4] The permittee shall measure and report identified metals as total recoverable metals.
- [5] See Part I.R. for Mercury Monitoring Requirements.
- [6] The permittee has up to a sixty (60) month schedule of compliance as outlined in Part I.E. of the permit in which to meet the final effluent limitations for Mercury. Interim limitations shall apply until the final limits take effect.

- [7] Compliance with the daily maximum mass value will be demonstrated if the calculated mass value is less than 40.3 lbs/day.
- [8] Monitoring for TRC shall be 1 X Daily during zebra or quagga mussel intake chlorination, and continue for three additional days after zebra or quagga mussel treatment has been completed. See Part I.P. for Zebra and Quagga Mussel Control and Chlorination for additional requirements.
- [9] See the Fact Sheet for the water treatment additives in use at Outfall 020 that have been reviewed and are approved for use at this facility by the Commissioner. In the event that changes are to be made in the use of water treatment additives including dosage rates contributing to Outfall 020, 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 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.
- [10] Bimonthly monitoring shall be conducted in the months of February, April, June, August, October, and December of each year.
- [11] See Part I.B. of the permit for the Narrative Water Quality Standards.
- [12] See Part I.G. of the permit for Pollutant Minimization Requirements.
- [13] If oil and grease is measured in the effluent in significant quantities, the source of such discharge is to be investigated and eliminated. The facility is required to investigate and eliminate any significant or measured concentration of oil and grease (quantities in excess of 5 mg/l). The intent of this requirement is to assure that oil and grease is not added to once-through cooling water in measurable quantities (5 mg/l).

10. During the period beginning on the effective date of this permit, the permittee is authorized to discharge air compressor cooling water, air conditioning condensates, steam condensate, and storm water runoff through Outfall 021 to the Grand Calumet River. 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 Grand Calumet River. Such discharge shall be limited and monitored by the permittee as specified below:

DISCHARGE LIMITATIONS [1][4][5]
 Outfall 021

Table 1

<u>Parameter</u>	<u>Quantity or Loading</u>		<u>Units</u>	<u>Quality or Concentration</u>		<u>Units</u>	<u>Monitoring Measurement Frequency</u>	<u>Requirements Sample Type</u>
	<u>Monthly Average</u>	<u>Daily Maximum</u>		<u>Monthly Average</u>	<u>Daily Maximum</u>			
Flow	Report	Report	MGD	-	-	-	1 X Monthly	Estimate
Oil & Grease	-----	-----	-----	-----	Report	mg/l	1 X Monthly	Grab
Total Residual Chlorine [6]	0.040	0.090 [2]	lbs/day	8	18	ug/l	Daily [3]	Grab
Ammonia (as N)	Report	Report	lba/day	Report	Report	ug/l	2 X Monthly	Grab

Table 2

<u>Parameter</u>	<u>Quality or Concentration</u>		<u>Units</u>	<u>Monitoring Measurement Frequency</u>	<u>Requirements Sample Type</u>
	<u>Daily Minimum</u>	<u>Daily Maximum</u>			
pH	6.0	9.0	s.u.	1 X Monthly	Grab

- [1] There shall be no discharge of process wastewaters through this outfall.
- [2] Compliance with the daily maximum mass value will be demonstrated if the calculated mass value is less than 0.3 lbs/day.
- [3] Monitoring for TRC shall be 1 X Daily during zebra or quagga mussel intake chlorination, and continue for three additional days after zebra or quagga mussel treatment has been completed. See Part I.P. for Zebra and Quagga Mussel Control and Chlorination for additional requirements.
- [4] See the Fact Sheet for the water treatment additives in use at Outfall 021 that have been reviewed and are approved for use at this facility by the Commissioner. In the event that changes are to be made in the use of water treatment additives including dosage rates contributing to Outfall 021, 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 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] See Part I.B. of the permit for the Narrative Water Quality Standards.
- [6] See Part I.G. of the permit for Pollutant Minimization Requirements.

11. During the period beginning on the effective date of this permit, the permittee is authorized to discharge air conditioning and steam condensates and storm water runoff through Outfall 023 to the Grand Calumet River. 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 Grand Calumet River. Such discharge shall be limited and monitored by the permittee as specified below:

DISCHARGE LIMITATIONS [1][2][3]
 Outfall 023

<u>Parameter</u>	<u>Quantity or Loading</u>		<u>Units</u>	<u>Table 1 Quality or Concentration</u>		<u>Units</u>	<u>Monitoring Measurement Frequency</u>	<u>Requirements Sample Type</u>
	<u>Monthly Average</u>	<u>Daily Maximum</u>		<u>Monthly Average</u>	<u>Daily Maximum</u>			
Flow	Report	Report	MGD	-	-	-	1 X Monthly	Estimate
Oil & Grease	-----	-----	-----	-----	Report	mg/l	1 X Monthly	Grab
Ammonia (as N)	Report	Report	lbs/day	Report	Report	ug/l	2 X Monthly	Grab

<u>Parameter</u>	<u>Table 2 Quality or Concentration</u>		<u>Units</u>	<u>Monitoring Measurement Frequency</u>	<u>Requirements Sample Type</u>
	<u>Daily Minimum</u>	<u>Daily Maximum</u>			
pH	6.0	9.0	s.u.	1 X Monthly	Grab

- [1] There shall be no discharge of process wastewaters through this outfall.
- [2] See the Fact Sheet for the water treatment additives in use at Outfall 023 that have been reviewed and are approved for use at this facility by the Commissioner. In the event that changes are to be made in the use of water treatment additives including dosage rates contributing to Outfall 023, 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 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.
- [3] See Part I.B. of the permit for the Narrative Water Quality Standards.

14. During the period beginning on the effective date of this permit, the permittee is authorized to discharge air conditioning and steam condensates, and storm water runoff through Outfall 026 to the Grand Calumet River. 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 Grand Calumet River. Such discharge shall be limited and monitored by the permittee as specified below:

DISCHARGE LIMITATIONS [1][2][3]
 Outfall 026 (Inactive)

<u>Parameter</u>	<u>Quantity or Loading</u>		<u>Units</u>	<u>Quality or Concentration</u>		<u>Units</u>	<u>Monitoring Measurement Frequency</u>	<u>Requirements Sample Type</u>
	<u>Monthly Average</u>	<u>Daily Maximum</u>		<u>Monthly Average</u>	<u>Daily Maximum</u>			
Flow	Report	Report	MGD	-	-	-	1 X Monthly	Estimate
Oil & Grease	-----	-----	-----	-----	Report	mg/l	1 X Monthly	Grab

<u>Parameter</u>	<u>Quality or Concentration</u>		<u>Units</u>	<u>Monitoring Measurement Frequency</u>	<u>Requirements Sample Type</u>
	<u>Daily Minimum</u>	<u>Daily Maximum</u>			
pH	6.0	9.0	s.u.	1 X Monthly	Grab

- [1] US Steel shall notify the Compliance Evaluation Section of the Office of Water Quality (OWQ) at least 30 days prior to re-activation of this outfall.
- [2] See Part I.B. of the permit for the Narrative Water Quality Standards.
- [3] There shall be no discharge of process wastewaters through this outfall.

15. During the period beginning on the effective date of this permit, the permittee is authorized to discharge treated wastewater from steelmaking, vacuum degassing, continuous casting and hot forming process wastewaters (Internal Outfall 603), storm water runoff, non-contact cooling water and direct contact slab cooling water through Outfalls 028 and 030 to the Grand Calumet River. The permittee is authorized to discharge from Outfalls 028 & 030 (combined total) and reported as Outfall 600 to the Grand Calumet River. 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 Grand Calumet River. Such discharge shall be limited and monitored by the permittee as specified below:

DISCHARGE LIMITATIONS [1][9][11]
028/030 (Outfall 600)

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	-	-	-	Daily	Continuous
Total Suspended Solids	2,038	5,933	lbs/day	Report	Report	mg/l	5 X Weekly	24-Hr. Comp.
Oil & Grease [4]	1,274	2,807	lbs/day	Report	Report	mg/l	5 X Weekly	3 Grabs/ 24 Hr.
Lead [3]	6.1	12	lbs/day	0.026	0.052	mg/l	2 X Weekly	24-Hr. Comp.
Zinc [3]	Report	Report	lbs/day	Report	Report	mg/l	1 X Weekly	24-Hr. Comp.
Mercury [3][5]								
Interim	Report	Report	lbs/day	Report	Report	ng/l	Bi-Monthly [8]	Grab
Final [10]	0.00031	0.00075	lbs/day	1.3	3.2	ng/l	Bi-Monthly [8]	Grab
Ammonia (as N)	Report	Report	lbs/day	Report	Report	mg/l	1 X Weekly	24-Hr. Comp.
Fluoride	Report	Report	lbs/day	Report	Report	mg/l	1 X Weekly	24-Hr. Comp.
Total Residual Chlorine [12]	1.9	4.2 [6]	lbs/day	8	18	ug/l	Daily [7]	Grab
Temperature [2]	-----	-----	-----	-----	Report	°F	2 X Weekly	6 Grabs/24-Hrs.
Whole Effluent Toxicity				See Part I.L., Biomonitoring Requirements			Quarterly	24-Hr. Comp.

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] The permittee shall measure on the same day and at the same time and report Outfalls 028 and 030 separately and also report as a combined total (Outfall 600).
- [2] See Part III.A. of the permit for the Temperature Requirements.
- [3] The permittee shall measure and report identified metals as total recoverable metals.
- [4] Additional monitoring and reporting requirements are contained in Part I.O., Visible Oil Corrective Action Monitoring Program.

- [5] See Part I.R. for Mercury Monitoring Requirements.
- [6] Compliance with the daily maximum mass value will be demonstrated if the calculated mass value is less than 14.1 lbs/day.
- [7] Monitoring for TRC shall be 1 X Daily during zebra or quagga mussel intake chlorination, and continue for three additional days after zebra or quagga mussel treatment has completed. See Part I.P. for Zebra and Quagga Mussel Control and Chlorination for additional requirements.
- [8] Bi-monthly monitoring shall be conducted in the months of February, April, June, August, October, and December of each year.
- [9] See the Fact Sheet for the water treatment additives in use at Outfall 028/030 that have been reviewed and are approved for use at this facility by the Commissioner. In the event that changes are to be made in the use of water treatment additives including dosage rates contributing to Outfall 028/030, 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 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.
- [10] The permittee has up to a sixty (60) month schedule of compliance as outlined in Part I.E. of the permit in which to meet the final effluent limitations for Mercury. Interim limitations shall apply until the final limits take effect.
- [11] See Part I.B. of the permit for the Narrative Water Quality Standards.
- [12] See Part I.G. of the permit for Pollutant Minimization Requirements.

16. During the period beginning on the effective date of this permit, the permittee is authorized to discharge BOP (1-BOP and Q-BOP) treatment, vacuum degasser and continuous casting (1-Caster, 2-Caster A/B line, and 2-Caster C Line) treatment wastewater through Outfall 603 to the Grand Calumet River via Outfall 028/030. Samples taken in compliance with the monitoring requirements below shall be taken at a point representative of the discharge but prior to commingling with any other process or non-process waters. Such discharge shall be limited and monitored by the permittee as specified below:

DISCHARGE LIMITATIONS [1]
 Internal Outfall 603

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	-	-	-	Daily	Continuous
Lead [2]	Report	Report	lbs/day	Report	Report	mg/l	2 X Weekly[3]	24-Hr. Comp.
Zinc [2]	11.88	36.38	lbs/day	Report	Report	mg/l	2 X Weekly[3]	24-Hr. Comp.

- [1] Samples taken in compliance with the monitoring requirements above shall be taken at a point representative of the discharge but prior to entry into Outfalls 028/030. Separate samples and flow measurements shall be taken at the discharge of the No.1 Continuous Caster Scale Pit, the filtered blowdown from the No. 2 Continuous Caster, and the discharge of the No.1 and No.1A BOP Thickeners. The mass loadings from each monitoring point shall be calculated and added together to determine the daily and monthly average mass discharges.
- [2] The permittee shall measure and report identified metals as total recoverable metals.
- [3] Sampling at 603 for lead and zinc shall occur on the same day and at approximately at the same time as the sample taken at Outfalls 028 and 030.

17. During the period beginning on the effective date of this permit, the permittee is authorized to discharge miscellaneous non-contact cooling water, steam condensate, freeze protection water, and storm water through Outfall 032 to the Grand Calumet River. 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 Grand Calumet River. Such discharge shall be limited and monitored by the permittee as specified below:

DISCHARGE LIMITATIONS [3][4]

Outfall 032

Table 1

<u>Parameter</u>	<u>Quantity or Loading</u>		<u>Units</u>	<u>Quality or Concentration</u>		<u>Units</u>	<u>Monitoring Measurement Frequency</u>	<u>Requirements Sample Type</u>
	<u>Monthly Average</u>	<u>Daily Maximum</u>		<u>Monthly Average</u>	<u>Daily Maximum</u>			
Flow	Report	Report	MGD	-	-	-	1 X Monthly	Estimate
Oil & Grease	-----	-----	-----	-----	Report	mg/l	1 X Monthly	Grab
Total Residual Chlorine [5]	0.020	0.045 [1]	lbs/day	8	18	ug/l	Daily [2]	Grab
Ammonia (as N)	Report	Report	lbs/day	Report	Report	mg/l	1 X Weekly	24-Hr. Comp.

Table 2

<u>Parameter</u>	<u>Quality or Concentration</u>		<u>Units</u>	<u>Monitoring Measurement Frequency</u>	<u>Requirements Sample Type</u>
	<u>Daily Minimum</u>	<u>Daily Maximum</u>			
pH	6.0	9.0	s.u.	1 X Monthly	Grab

- [1] Compliance with the daily maximum mass value will be demonstrated if the calculated mass value is less than 0.15 lbs/day.
- [2] Monitoring for TRC shall be 1 X Daily during zebra or quagga mussel intake chlorination, and continue for three additional days after zebra or quagga mussel treatment has completed. See Part I.P. for Zebra and Quagga Mussel Control and Chlorination for additional requirements.
- [3] See the Fact Sheet for the water treatment additives in use at Outfall 032 that have been reviewed and are approved for use at this facility by the Commissioner. In the event that changes are to be made in the use of water treatment additives including dosage rates contributing to Outfall 032, 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 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.
- [4] See Part I.B. of the permit for the Narrative Water Quality Standards.

[5] See Part I.G. of the permit for Pollutant Minimization Requirements.

18. During the period beginning on the effective date of this permit, the permittee is authorized to discharge non-contact cooling water from sheet and tin mills and the atmospheric gas plant, non-process wastewater from Railroad Kirk Yard, steam condensate, and storm water through Outfall 033 to the Grand Calumet River. 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 Grand Calumet River. Such discharge shall be limited and monitored by the permittee as specified below:

DISCHARGE LIMITATIONS [1][5][6]
 Outfall 033

Table 1

<u>Parameter</u>	<u>Quantity or Loading</u>		<u>Units</u>	<u>Quality or Concentration</u>		<u>Units</u>	<u>Monitoring Measurement Frequency</u>	<u>Requirements Sample Type</u>
	<u>Monthly Average</u>	<u>Daily Maximum</u>		<u>Monthly Average</u>	<u>Daily Maximum</u>			
Flow	Report	Report	MGD	-	-	-	1 X Monthly	Estimate
Oil & Grease [2]	-----	-----	-----	-----	Report	mg/l	1 X Monthly	Grab
Phenols (4AAP)	-----	Report	lbs/day	-----	Report	mg/l	1 X Monthly	24-Hr. Comp.
Ammonia (as N)	Report	Report	lbs/day	Report	Report	mg/l	2 X Monthly	24-Hr. Comp.
Total Residual Chlorine [7]	0.013	0.030 [3]	lbs/day	8	18	ug/l	Daily [4]	Grab

Table 2

<u>Parameter</u>	<u>Quality or Concentration</u>		<u>Units</u>	<u>Monitoring Measurement Frequency</u>	<u>Requirements Sample Type</u>
	<u>Daily Minimum</u>	<u>Daily Maximum</u>			
pH	6.0	9.0	s.u.	1 X Monthly	Grab

- [1] There shall be no discharge of process wastewaters through Outfall 033.
- [2] Additional monitoring and reporting requirements are contained in Part I.O., Visible Oil Corrective Action Monitoring Program.
- [3] Compliance with the daily maximum mass value will be demonstrated if the calculated mass value is less than 0.1 lbs/day.
- [4] Monitoring for TRC shall be 1 X Daily during zebra or quagga mussel intake chlorination, and continue for three additional days after zebra or quagga mussel treatment has completed. See Part I.P. for Zebra and Quagga Mussel Control and Chlorination for additional requirements.
- [5] See the Fact Sheet for the water treatment additives in use at Outfall 033 that have been reviewed and are approved for use at this facility by the Commissioner. In the event that changes are to be made in the use of water treatment additives including dosage rates contributing to Outfall 033, 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 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.

- [6] See Part I.B. of the permit for the Narrative Water Quality Standards.
- [7] See Part I.G. of the permit for Pollutant Minimization Requirements.

19. During the period beginning on the effective date of this permit, the permittee is authorized to discharge treated wastewater from Internal Outfalls, 604, 605, and 606, non-contact cooling water from the finishing operations, non-contact cooling water from the ferrous chloride recycling discharge, steam condensate, and storm water runoff through Outfall 034 to the Grand Calumet River. 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 Grand Calumet River. Such discharge shall be limited and monitored by the permittee as specified below:

DISCHARGE LIMITATIONS [1][2][6][10][13]

Outfall 034

Table 1

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	-	-	-	Daily	Continuous
CBOD ₅ [4]								
Summer	1,334	2,669	lbs/day	Report	Report	mg/l	2 X Weekly	24-Hr. Comp.
Winter	4,537	9,074	lbs/day	Report	Report	mg/l	2 X Weekly	24-Hr. Comp.
Oil & Grease [5]	1,430	3,660	lbs/day	Report	Report	mg/l	5 X Weekly	3 Grabs/ 24 Hrs.
Total Suspended Solids	Report	Report	lbs/day	Report	Report	mg/l	2 X Weekly	24-Hr. Comp.
Ammonia (as N)	Report	Report	lbs/day	Report	Report	mg/l	2 X Weekly	24-Hr. Comp.
Lead [8]	2.52	5.85	lbs/day	Report	Report	mg/l	2 X Weekly	24-Hr. Comp.
Zinc [8]	Report	Report	lbs/day	Report	Report	mg/l	2 X Weekly	24-Hr. Comp.
Copper [8]	3.8	8.7	lbs/day	0.018	0.041	mg/l	2 X Weekly	24-Hr. Comp.
Cadmium [8]	2.3	3.4	lbs/day	0.011	0.016	mg/l	1 X Monthly	24-Hr. Comp.
Nickel [8]	Report	Report	lbs/day	Report	Report	mg/l	1 X Quarterly [15]	24-Hr. Comp.
Silver [8]	0.042	0.072	lbs/day	0.20	0.34	ug/l	2 X Monthly	24-Hr. Comp.
Total Chromium [8]	Report	Report	lbs/day	Report	Report	mg/l	2 X Weekly	24-Hr. Comp.
Mercury [8][11][12]								
Interim	Report	Report	lbs/day	Report	Report	ng/l	Bi-Monthly [14]	Grab
Final	0.00028	0.00068	lbs/day	1.3	3.2	ng/l	Bi-Monthly [14]	Grab
Phenols (4AAP)	26.00	39.00	lbs/day	Report	Report	mg/l	1 X Weekly	24-Hr. Comp.
Total Residual Chlorine	1.7	3.8 [9]	lbs/day	8	18	ug/l	See Footnote [7]	Grab
Temperature [3]	-----	-----	-----	-----	Report	°F	2 X Weekly	6 Grabs/24-Hrs.
Whole Effluent Toxicity [16]	-----	-----	-----	3.6	-----	TU _c	Quarterly [15]	24-Hr. Comp.

Table 2

Parameter	Quality or Concentration			Monitoring Measurement Frequency	Requirements Sample Type
	Daily Minimum	Daily Maximum	Units		
pH	6.0	9.0	s.u.	1X Daily	Grab
Dissolved Oxygen	5.0		mg/l	1 X Weekly	Grab

[1] The permittee shall only discharge the effluents from Internal Outfalls 604, 605, and 606 through Outfall 034.

[2] The permittee shall monitor Outfalls 034, 604, 605, and 606 on the same days.

- [3] See Part III.A. of the permit for the Temperature Requirements.
- [4] Summer limitations apply from July 1 through September 30. Winter limitations apply from October 1 through June 30.
- [5] Additional monitoring and reporting requirements are contained in Part I.O., Visible Oil Corrective Action Monitoring Program.
- [6] The following wastewater treatment systems may be added to reduce the CBOD₅ on a continuous year-round basis:
- (i) Internal Outfall 604- Chlorination (sodium hypochlorite) treatment.
 - (ii) Internal Outfall 605- Chlorination (sodium hypochlorite) treatment.
 - (iii) Outfall 034 – Sodium Bisulfite addition (de-chlorination).
- [7] Continuous chlorination at the above outfalls is permitted on a year-round basis. The wastewater shall be de-chlorinated prior to discharge from Outfall 034. Monitoring for TRC shall be daily during zebra or quagga mussel intake chlorination, and 2 X Weekly during continuous chlorination treatment when the intake is not being treated for zebra mussels. See Part I.P. for Zebra and Quagga Mussel Control and Chlorination for additional requirements.
- [8] The permittee shall measure and report identified metals as total recoverable metals.
- [9] Compliance with the daily maximum mass value will be demonstrated if the calculated mass value is less than 12.7 lbs/day.
- [10] See Part I.B. of the permit for the Narrative Water Quality Standards.
- [11] See Part I.R. for Mercury Monitoring Requirements.
- [12] The permittee has up to a sixty (60) month schedule of compliance as outlined in Part I.E. of the permit in which to meet the final effluent limitations for Mercury. Interim limitations shall apply until the final limits take effect.
- [13] See the Fact Sheet for the water treatment additives in use at Outfall 034 that have been reviewed and are approved for use at this facility by the Commissioner. In the event that changes are to be made in the use of water treatment additives including dosage rates contributing to Outfall 034, 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 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.

- [14] Bi-monthly monitoring shall be conducted in the months of February, April, June, August, October, and December of each year.
- [15] 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.

- [16] See Part I.L. of the permit for Biomonitoring Requirements.

20. During the period beginning on the effective date of this permit, the permittee is authorized to discharge treated process wastewaters from cold rolling, acid pickling, alkaline cleaning, hot coating, electroplating, and hot strip mill oil cellars through Internal Outfall 604 to the Grand Calumet River via Outfall 034. Samples taken in compliance with the monitoring requirements below shall be taken at a point representative of the discharge but prior to commingling with any other process or non-process waters. Such discharge shall be limited and monitored by the permittee as specified below:

DISCHARGE LIMITATIONS [1][2]
Outfall 604

Parameter	Quantity or Loading		Units	Quality or Concentration		Units	Monitoring Measurement Frequency	Requirements Sample Type
	Monthly Average	Daily Maximum		Monthly Average	Daily Maximum			
Flow	Report	Report	MGD	-	-	-	Daily	Continuous
Total Suspended Solids	2,901	6,455	lbs/day	Report	Report	mg/l	2 X Weekly	24-Hr. Comp.
Oil & Grease	Report	Report	lbs/day	Report	Report	mg/l	5 X Weekly	3 Grabs/ 24 Hrs.
Total Recoverable Chromium [4]	28.25	45.77	lbs/day	Report	Report	mg/l	2 X Weekly	24-Hr. Comp.
Zinc [4]	33.42	70.00	lbs/day	Report	Report	mg/l	2 X Weekly	24-Hr. Comp.
Lead [4]	Report	Report	lbs/day	Report	Report	mg/l	2 X Weekly	24-Hr. Comp.
Total Cyanide [3]	10.74	19.83	lbs/day	Report	Report	mg/l	1 X Quarterly [7]	See Part I.Q.
Cadmium [4]	Report	Report	lbs/day	Report	Report	mg/l	1 X Quarterly [7]	24-Hr. Comp.
Hexavalent Chromium [6][8]	0.15	0.46	lbs/day	Report	Report	mg/l	1 X Weekly	Grab
Copper [4]	Report	Report	lbs/day	Report	Report	mg/l	2 X Weekly	24-Hr. Comp.
Nickel [4]	39.32	65.76	lbs/day	Report	Report	mg/l	1 X Quarterly [7]	24-Hr. Comp.
Silver [4]	Report	Report	lbs/day	Report	Report	mg/l	2 X Monthly	24-Hr. Comp.
TTO [5]	-----	35.19	lbs/day	-----	-----	-----	1 X Monthly	24-Hr. Comp.
Naphthalene	-----	1.68	lbs/day	-----	-----	Report	2 X Weekly	24-Hr. Comp.
Tetrachloroethylene	-----	2.51	lbs/day	-----	-----	Report	2 X Weekly	2 Grabs/ 24 Hrs

- [1] Bypasses of process wastewaters from the above sources around the Terminal Treatment Plant are permitted only in accordance with Section B.2., Part II of this permit. The permittee shall not use cyanide plating solutions in any metal finishing operations, unless expressly authorized by a modification of this permit.
- [2] Samples taken in accordance with the monitoring requirements above shall be taken at a point representative of the discharge but prior to entry into Outfall 034.
- [3] Cyanide shall be measured and reported as Total Cyanide. See Part I.Q. for additional requirements.
- [4] The permittee shall measure and report the identified metals a total recoverable metals.
- [5] The limitation for TTO (Total Toxic Organics) applies to the summation of all quantifiable values greater than 0.01 mg/l for all toxic organics listed under 40 CFR 433.11(e) which are reasonably expected to be present. This is a federal effluent guideline based limitation and is not an authorization to discharge toxic

organic compounds at levels which cause or may cause water quality violations. The discharge of organic compounds at level which cause or may cause water quality violations is prohibited. The intent of this limitation is to assure that any solvent or other products in use at the plant, which contain any of the listed toxic organic compounds, are disposed of properly, and not dumped, spilled, discharged or leaked.

Certification Statement

In lieu of monthly monitoring for TTO, the party responsible for signing the monthly discharge monitoring report (DMR) forms may make the following statement, as part of the DMR: "Based on my inquiry of the persons directly responsible for managing compliance with the permit limitations for TTO, I certify that, to the best of my knowledge and belief, no disposal of concentrated toxic organics into the wastewaters has occurred since filing of the last discharge monitoring report. I further certify that this facility is implementing the Toxic Organic Pollutant Management Plan submitted to the Compliance Evaluation Section of the Office of Water Quality, as required by this permit." The Certification Statement may not be used until completion of the Toxic Organic Pollutant Management Plan required by Part I.N. of this permit.

If the above mentioned responsible party is unable to make the above Certification Statement because of discharge or spills of any TTO compounds, the Permittee is required to notify IDEM in accordance with Part II.C.3 of this permit.

- [6] 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 136.6 Table IB). Therefore, the grab sample must be analyzed within 24 hours.
- [7] 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.

- [8] For purposes of calculating the monthly average mass, loadings to be reported on the DMR forms, concentration values below the limit of quantitation (LOQ) of

0.94 ug/l may be assigned a value of zero for purposes of calculating the monthly average mass limit.

21. During the period beginning on the effective date of this permit, the permittee is authorized to discharge treated process wastewaters from the 84" Hot Strip Mill through Internal Outfall 605 to the Grand Calumet River via Outfall 034. Samples taken in compliance with the monitoring requirements below shall be taken at a point representative of the discharge but prior to commingling with any other process or non-process waters. Such discharge shall be limited and monitored by the permittee as specified below:

DISCHARGE LIMITATIONS [1]
 Outfall 605

<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>		
Flow	Report	Report	MGD	-	-	-	Daily	Continuous
Total Suspended Solids	725	2,175	lbs/day	Report	Report	mg/l	2 X Weekly	24-Hr. Comp.
Oil & Grease	Report	1,450	lbs/day	----	Report	mg/l	5 X Weekly	3 Grab/ 24-Hr.

- [1] The permittee may discharge process wastewater from the 84" Hot Strip Mill only through Outfall 605, and oil cellar discharges through Outfall 604 (Terminal Treatment Plant). Non-contact cooling water from the 84" Hot Strip Mill shall only be discharged through Outfall 039.

22. During the period beginning on the effective date of this permit, the permittee is authorized to discharge non-contact cooling water from steel finishing operations, miscellaneous non-process wastewater, and storm water runoff through Internal Outfall 606 to the Grand Calumet River via Outfall 034. Samples taken in compliance with the monitoring requirements below shall be taken at a point representative of the discharge but prior to commingling with other process or non-process waters. Such discharge shall be limited and monitored by the permittee as specified below:

DISCHARGE LIMITATIONS [1][2][3]
 Outfall 606

<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>		
Flow	Report	Report	MGD	-	-	-	Daily	24-Hr. Total
Oil & Grease	----	----	----	----	Report	mg/l	1 X Weekly	Grab
Total Chromium	----	----	----	----	Report	mg/l	1 X Monthly	24-Hr. Comp
Zinc [4]	----	----	----	----	Report	mg/l	1 X Monthly	24-Hr. Comp
Lead [4]	----	----	----	----	Report	mg/l	1 X Monthly	24-Hr. Comp
Phenols (4AAP)	----	----	----	----	Report	mg/l	1 X Monthly	24-Hr. Comp

- [1] The permittee may discharge non-process wastewaters associated with steel finishing operations via the 84" X 91" sewer to the final oil skimming basin at Outfall 034 for treatment prior to discharge through Outfall 034.
- [2] The permittee shall monitor Outfall 606 for oil and grease, total chromium, lead, zinc, and phenols (4AAP) on the same days that monitoring for Outfalls 034, 604 and 605 occurs.
- [3] Corrective action will be initiated after an investigation of any reported discharges of process wastewaters discharging from Outfall 606.
- [4] The permittee shall measure and report the identified metals as total recoverable metals.

23. During the period beginning on the effective date of this permit, the permittee is authorized to discharge north blast furnace non-contact cooling water, No. 5 electric power station non-contact cooling water, Co-Generation Plant non-contact cooling water, steam condensate, and storm water runoff through Outfall 035 to Lake Michigan. Samples taken in compliance with the monitoring requirements below shall be taken at a point representative of the discharge but prior to entry into Lake Michigan. Such discharge shall be limited and monitored by the permittee as specified below:

DISCHARGE LIMITATIONS [1][6][7][10][11]
Outfall 035

<u>Parameter</u>	<u>Quantity or Loading</u>		<u>Table 1</u>				<u>Monitoring Measurement Frequency</u>	<u>Requirements Sample Type</u>
	<u>Monthly Average</u>	<u>Daily Maximum</u>	<u>Units</u>	<u>Quality or Concentration</u>		<u>Units</u>		
				<u>Monthly Average</u>	<u>Daily Maximum</u>			
Flow	Report	Report	MGD	-	-	-	Daily	Continuous
Oil & Grease [2] [13]	-----	-----	-----	-----	Report	mg/l	1 X Weekly	Grab
Temperature [3]								
Discharge	-----	-----	-----	-----	Report	°F	1 X Hour	Continuous
Intake [4]	-----	-----	-----	-----	Report	°F	1 X Hour	Continuous
Thermal Discharge		See Footnote [5] for Effluent Limitations				BTU/Hr	Daily	Continuous
Total Residual Chlorine [9][12] 10		24 [8]	lbs/day	8	18	ug/l	Daily	Grab

<u>Parameter</u>	<u>Table 2</u>			<u>Monitoring Measurement Frequency</u>	<u>Requirements Sample Type</u>
	<u>Quality or Concentration</u>		<u>Units</u>		
	<u>Daily Minimum</u>	<u>Daily Maximum</u>			
pH	6.0	9.0	s.u.	1 X Monthly	Grab

- [1] The permittee may discharge non-contact cooling waters from blast furnace and sintering operations only through Outfalls 015, 018, 019, and 035.
- [2] Additional monitoring and reporting requirements are contained in Part I.O., Visible Oil Corrective Action Monitoring Program.
- [3] See Part III.A.2. for additional temperature requirements.
- [4] The permittee shall continuously monitor intake temperature at the No. 2 Pump Station.
- [5] The effluent limitation is 1.211 billion BTU/hour as a maximum daily average. Monitoring shall include flow and intake and outlet temperatures as measured across the condensers on the continuous basis. The daily average BTU's/hour shall be calculated as follows: the BTU's/hour shall be determined once each hour and those volumes shall be averaged over a 24 our period for each day.

- [6] There shall be no discharge of blast furnace or sinter plant process wastewaters or process wastewater residuals through Outfall 035.
- [7] The permittee is prohibited from undertaking any deliberate action that would result in a degradation of water quality of the OSRW, unless the action complies with the applicable provisions of 327 IAC 5-2-11.7. In addition, whether or not this permit contains a limitation for a BCC, the permittee shall monitor for any BCC known or believed to be present in the discharge, from any point or nonpoint source over which the permittee has control. If there is an increase in loading of a BCC, above normal variability and attributable to a deliberate action, the permittee shall immediately notify IDEM of the increase. If IDEM determines the increased discharge of the BCC does not qualify under one of the exceptions under 327 IAC 5-2-11.7(b) or (c) and is attributable to a deliberate action of the permittee, the permittee shall eliminate the increase.
- [8] Compliance with the daily maximum mass value will be demonstrated if the calculated mass value is less than 78.5 lbs/day.
- [9] Monitoring for TRC shall be 1 X Daily during zebra or quagga mussel intake chlorination, and continue for three additional days after zebra or quagga mussel treatment has been completed. See Part I.P. for Zebra and Quagga Mussel Control and Chlorination for additional requirements.
- [10] See the Fact Sheet for the water treatment additives in use at Outfall 035 that have been reviewed and are approved for use at this facility by the Commissioner. In the event that changes are to be made in the use of water treatment additives including dosage rates contributing to Outfall 035, 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 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.
- [11] See Part I.B. of the permit for the Narrative Water Quality Standards.
- [12] See Part I.G. of the permit for Pollutant Minimization Requirements.
- [13] If oil and grease is measured in the effluent in significant quantities, the source of such discharge is to be investigated and eliminated. The facility is required to investigate and eliminate any significant or measured concentration of oil and grease (quantities in excess of 5 mg/l). The intent of this requirement is to assure that oil and grease is not added to once-through cooling water in measurable quantities (5 mg/l).

24. During the period beginning on the effective date of this permit, the permittee is authorized to discharge non-contact cooling water from the 5- Stand Cold Reduction Mill, North Sheet Mill Annealing, the No. 6 and 8 Galvanized lines, air compressor non-contact cooling water, steam condensate, and storm water runoff through Outfall 037 to Lake Michigan. Samples taken in compliance with the monitoring requirements below shall be taken at a point representative of the discharge but prior to entry into Lake Michigan. Such discharge shall be limited and monitored by the permittee as specified below:

DISCHARGE LIMITATIONS [1][7][8][9]
Outfall 037

Parameter	Quantity or Loading		Units	Quality or Concentration			Monitoring Measurement Frequency	Requirements Sample Type
	Monthly Average	Daily Maximum		Monthly Average	Daily Maximum	Units		
Flow								
Interim	Report	Report	MGD	----	----	----	1 X Weekly	Estimate
Final [6]	Report	Report	MGD	-	-	-	Daily	Continuous
Temperature Discharge								
Interim	----	----	----	----	Report	°F	1 X Week	Grab
Final [6]	----	----	----	----	Report	°F	1 X Hour	Continuous
Intake	----	----	----	----	Report	°F	1 X Hour	Continuous
Thermal Discharge [6]					Report	BTU/Hr	Daily	Continuous
Oil & Grease [2] [11]	----	----	----	----	Report	mg/l	1 X Weekly	Grab
Zinc [3]	----	Report	lbs/day	----	Report	mg/l	1 X Monthly	24-Hr. Comp.
Phenols (4AAP)	----	Report	lbs/day	----	Report	mg/l	1 X Monthly	24-Hr. Comp.
Total Residual Chlorine [10]	0.20	0.45 [4]	lbs/day	8	18	ug/l	Daily [5]	Grab

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

- [1] There shall be no discharge of process wastewater through Outfall 037.
- [2] Additional monitoring and reporting requirements are contained in Part I.O., Visible Oil Corrective Action Monitoring Program.
- [3] The permittee shall measure and report the identified metals as total recoverable metals.
- [4] Compliance with the daily maximum mass value will be demonstrated if the calculated mass value is less than 1.5 lbs/day.
- [5] Monitoring for TRC shall be 1 X Daily during zebra or quagga mussel chlorination, and continue for three additional days after zebra or quagga mussel

treatment has been completed. See Part I.P. for Zebra and Quagga Mussel Control and Chlorination for additional requirements.

- [6] See Part III.A.2. and A.3. for additional temperature requirements and compliance schedule for continuous monitoring requirements for temperature and flow.
- [7] See the Fact Sheet for the water treatment additives in use at Outfall 037 that have been reviewed and are approved for use at this facility by the Commissioner. In the event that changes are to be made in the use of water treatment additives including dosage rates contributing to Outfall 037, 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 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 is prohibited from undertaking any deliberate action that would result in a degradation of water quality of the OSRW, unless the action complies with the applicable provisions of 327 IAC 5-2-11.7. In addition, whether or not this permit contains a limitation for a BCC, the permittee shall monitor for any BCC known or believed to be present in the discharge, from any point or nonpoint source over which the permittee has control. If there is an increase in loading of a BCC, above normal variability and attributable to a deliberate action, the permittee shall immediately notify IDEM of the increase. If IDEM determines the increased discharge of the BCC does not qualify under one of the exceptions under 327 IAC 5-2-11.7(b) or (c) and is attributable to a deliberate action of the permittee, the permittee shall eliminate the increase.
- [9] See Part I.B. of the permit for the Narrative Water Quality Standards.
- [10] See Part I.G. of the permit for Pollutant Minimization Requirements.
- [11] If oil and grease is measured in the effluent in significant quantities, the source of such discharge is to be investigated and eliminated. The facility is required to investigate and eliminate any significant or measured concentration of oil and grease (quantities in excess of 5 mg/l). The intent of this requirement is to assure that oil and grease is not added to once-through cooling water in measurable quantities (5 mg/l).

25. During the period beginning on the effective date of this permit, the permittee is authorized to discharge non-contact cooling water from the 84" Hot Strip Mill, non-contact cooling water from the reheat furnaces, emergency overflows from the 84" Hot Strip Mill roughing mill scale pit, steam condensate, non-contact cooling water from a cooling tower and storm water through Outfall 039 to Lake Michigan. Samples taken in compliance with the monitoring requirements below shall be taken at a point representative of the discharge but prior to entry into Lake Michigan. Such discharge shall be limited and monitored by the permittee as specified below:

DISCHARGE LIMITATIONS [1][5][6][7]

Outfall 039

Table 1

Parameter	Quantity or Loading			Quality or Concentration			Monitoring Measurement Frequency	Requirements Sample Type
	Monthly Average	Daily Maximum	Units	Monthly Average	Daily Maximum	Units		
Flow								
Interim	Report	Report	MGD	-----	-----	---	1 X Weekly	Estimate
Final [4]	Report	Report	MGD	-----	-----	-----	Daily	Continuous
Temperature Discharge								
Interim	-----	-----	-----	-----	Report	°F	1 X Week	Grab
Final [4]	-----	-----	-----	-----	Report	°F	1 X Hour	Continuous
Intake [4]	-----	-----	-----	-----	Report	°F	1 X Hour	Continuous
Thermal Discharge [4]					Report	BTU/Hr	Daily	Continuous
Oil & Grease [9]	-----	-----	-----	-----	Report	mg/l	1 X Weekly	Grab
Total Residual Chlorine [8]	3.7	8.3 [2]	lbs/day	8	18	ug/l	Daily [3]	Grab

Table 2

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

- [1] There shall be no discharge of process wastewater through Outfall 039, except as provided for by Part II.B.1., 2. and 3.
- [2] Compliance with the daily maximum mass value will be demonstrated if the calculated mass value is less than 27.5 lbs/day.
- [3] Monitoring for TRC shall be 1 X Daily during zebra or quagga mussel intake chlorination, and continue for three additional days after zebra or quagga mussel treatment has completed. See Part I.P. for Zebra and Quagga Mussel Control and Chlorination for additional requirements.
- [4] See Part III.A.2. and A.3. for additional temperature requirements and compliance schedule for continuous monitoring requirements for temperature and flow.