

NPDES Permit No. IL0000329
Notice No. MEL:14051401.mel

Public Notice Beginning Date: **August 14, 2014**

Public Notice Ending Date: **September 15, 2014**

National Pollutant Discharge Elimination System (NPDES)
Permit Program

Draft Reissued NPDES Permit to Discharge into Waters of the State

Public Notice/Fact Sheet Issued By:

Illinois Environmental Protection Agency
Bureau of Water,
Division of Water Pollution Control
Permit Section
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276
217/782-0610

Name and Address of Discharger:

United States Steel Corporation
Granite City Works
1951 State Street
Granite City, Illinois 62040

Name and Address of Facility:

United States Steel Corporation
Granite City Works
20th and State Street
Granite City, Illinois 62040
(Madison County)

The Illinois Environmental Protection Agency (IEPA) has made a tentative determination to issue a NPDES permit to discharge into the waters of the state and has prepared a draft permit and associated fact sheet for the above named discharger. The Public Notice period will begin and end on the dates indicated in the heading of this Public Notice/Fact Sheet. The last day comments will be received will be on the Public Notice period ending date unless a commentor demonstrating the need for additional time requests an extension to this comment period and the request is granted by the IEPA. Interested persons are invited to submit written comments on the draft permit to the IEPA at the above address. Commentors shall provide his or her name and address and the nature of the issues proposed to be raised and the evidence proposed to be presented with regards to those issues. Commentors may include a request for public hearing. Persons submitting comments and/or requests for public hearing shall also send a copy of such comments or requests to the permit applicant. The NPDES permit and notice number(s) must appear on each comment page.

The application, engineer's review notes including load limit calculations, Public Notice/Fact Sheet, draft permit, comments received, and other documents are available for inspection and may be copied at the IEPA between 9:30 a.m. and 3:30 p.m. Monday through Friday when scheduled by the interested person.

If written comments or requests indicate a significant degree of public interest in the draft permit, the permitting authority may, at its discretion, hold a public hearing. Public notice will be given 45 days before any public hearing. Response to comments will be provided when the final permit is issued. For further information, please call Mark E. Liska at 217/782-0610.

The applicant is engaged in production of flat rolled steel products in an integrated steel mill (SIC 3312, 3316, and 2999). Plant operation results in an average discharge of 25.0 MGD of treated process wastewater from outfall 001, 0.455 MGD of coke by-products wastewater from outfall A01, 0.604 MGD of cold rolling mill wastewater from outfall B01, and 0.20 MGD of landfill leachate wastewater from outfall C01.

Application is made for new and existing discharge(s) which are located in Madison County, Illinois. The following information identifies the discharge point, receiving stream and stream classifications:

Outfall	Receiving Stream	Latitude		Longitude		Stream Classification	Biological Stream Characterization
001	Horseshoe Lake	38° 41' 31"	North	90° 06' 28"	West	General Use	Not Rated

To assist you further in identifying the location of the discharge please see the attached map.

The stream segment RJC receiving the discharge from outfall(s) 001 is on the draft 2012 303(d) list of impaired waters and is not a biologically significant stream on the 2008 Illinois Department of Natural Resources Publication – *Integrating Multiple Taxa in a Biological Stream Rating System*.

The following parameters have been identified as the pollutants causing impairment:

Designated Use	Potential Cause
Fish Consumption	PCBs
Aesthetic Quality	Aquatic Algae, Phosphorus, Total Suspended Solids

The discharge(s) from the facility shall be monitored and limited at all times as follows:

Outfall: 001 Treated Process Wastewater

PARAMETER	LOAD LIMITS lbs/day DAF (DMF)		REGULATION	CONCENTRATION LIMITS mg/l		REGULATION
	30 DAY AVERAGE	DAILY MAXIMUM		30 DAY AVERAGE	DAILY MAXIMUM	
Flow (MGD)				Measure		35 IAC 309.146
pH				6.0 - 9.0		35 IAC 304.125
CBOD ₅	2085	4170	35 IAC 304.120(c)	10	20	35 IAC 304.120(c)
Total Suspended Solids	2502	5004	35 IAC 304.120(c)	12	24	35 IAC 304.120(c)
Oil & Grease	1511	3492	40 CFR 420	15	30	35 IAC 304.124
Iron (total)	417	834	35 IAC 304.124	2	4	35 IAC 304.124
Iron (dissolved)		209	35 IAC 302.208		1	35 IAC 302.208
Lead (total)	5.3	16	40 CFR 420	0.09	0.4	35 IAC 302.208
Zinc (total)	12	33	40 CFR 420	1	2	35 IAC 304.124
Cyanide (total)	19	35	35 IAC 304.124	0.01	0.02	35 IAC 302.208
Cyanide (available by OIA 1677)	1.1	4.6	35 IAC 302.208	0.0052	0.022	35 IAC 302.208
Phenol (4AAP)	5.0	10	Variance of 301(g) of CWA		0.1	35 IAC 302.208
Fluoride		834	IPCB AS 90-4		4	IPCB AS 90-4
Ammonia Nitrogen*						
Spring/Fall	438	2206	35 IAC 355	2.1	10.1	35 IAC 355
Summer	438	3128	35 IAC 355	2.1	15	35 IAC 355
Winter	874	1616	35 IAC 355	4.0	7.4	35 IAC 355
March	605	1616	35 IAC 355	2.9	7.4	35 IAC 355
Phosphorus					Monitor Only	35 IAC 309.146

*Spring/Fall is April-May and September-October. Summer is June-August. Winter is November-February. Weekly average limits

apply for Spring/Fall and Summer. Weekly average limits are as follows: Spring/Fall: 5.2 mg/L; Summer: 5.4 mg/L. No weekly average limit applies in Winter or March.

PARAMETER	LOAD LIMITS lbs/day DAF (DMF)		REGULATION	CONCENTRATION LIMITS mg/l		REGULATION
	30 DAY AVERAGE	DAILY MAXIMUM		30 DAY AVERAGE	DAILY MAXIMUM	
Outfall: A01 - Coke By-Products Wastewater						
Flow (MGD)				Measure		
Naphthalene		0.10	40 CFR 420			
Benzo(a)pyrene		0.15	40 CFR 420			
Total Suspended Solids					Monitor	
Outfall: B01 - Cold Rolling Mill Wastewater						
Flow (MGD)				Measure		
Tetrachloroethylene		1.1	40 CFR 420			
Naphthalene		0.69	40 CFR 420			
Outfall: C01 - Landfill Leachate Wastewater						
Flow (MGD)				Measure		

Load Limit Calculations:

- A. Load limit calculations for the following pollutant parameters were based on an average flow of 25.0 MGD and using the formula of average flow (MGD) X concentration limit (mg/l) X 8.34 = the average or maximum load limit (lbs/day): for outfall 001, CBOD₅, Total Suspended Solids, Iron (total), Iron (dissolved), Cyanide (Total), Cyanide (available), Fluoride, and Ammonia as Nitrogen.
- B. Production based load limits were calculated by multiplying the average production by the effluent limit contained in 40 CFR 420. Production figures utilized in these calculations for the following subcategories are as follows:

Subcategory	Production Rate
Subpart A - Coke Making Subcategory	1454 tons/day
Subpart C - Iron Making Subcategory	7793 tons/day
Subpart D - Steel Making Subcategory	7793 tons/day
Subpart F - Continuous Casting Subcategory	8579 tons/day
Subpart G - Hot Forming Subcategory	11,362 tons/day
Subpart I - Acid Pickling Subcategory	3084 tons/day
Subpart J - Cold Forming Subcategory	2065 tons/day
Subpart K - Alkaline Cleaning Subcategory	1656 tons/day
Subpart L - Hot Coating Subcategory	1656 tons/day

For outfall 001: Oil & Grease, Lead, Zinc, and Phenol (4AAP); for outfall A01: Naphthalene and Benzo(a)pyrene; for outfall B01: Naphthalene and Tetrachloroethylene were limited using Federal production based load limits. The following sample calculation shows the methodology utilized to determine production based load limitations:

For outfall B01, Naphthalene Daily Maximum Load Limit = Effluent Limitation from 40 CFR 420.103(a)(5)-BAT x Production Rate = 0.000167 lb/1000 lb product x 2065 tons/day x (2000 lb/ton) = 0.69 lb/day = Naphthalene Daily Maximum Load Limit at outfall B01.

When several subcategories have effluent limitations for a pollutant, the load limits from each subcategory are added to obtain the total federal production based load limit.

Extensive DMR data show that there is no potential to exceed the water quality standard for zinc at end-of-pipe. Because of this, the 30-day average concentration limit and the daily maximum concentration limit for zinc are now based on limits pursuant to 35 Ill. Adm. Code 304.124 instead of 35 Ill. Adm. Code 302.208. Zinc will continue to also have load limits based on regulations pursuant to 40 CFR 420 and will continue to be sampled twice per week.

Although the concentration limits for zinc have increased, not only have the load limits decreased, the changes do not result in an actual increase of zinc loading due to the improved monitoring data. The discharge is not subject to an anti-degradation assessment pursuant to 35 Ill. Adm. Code 302.102(d)(7).

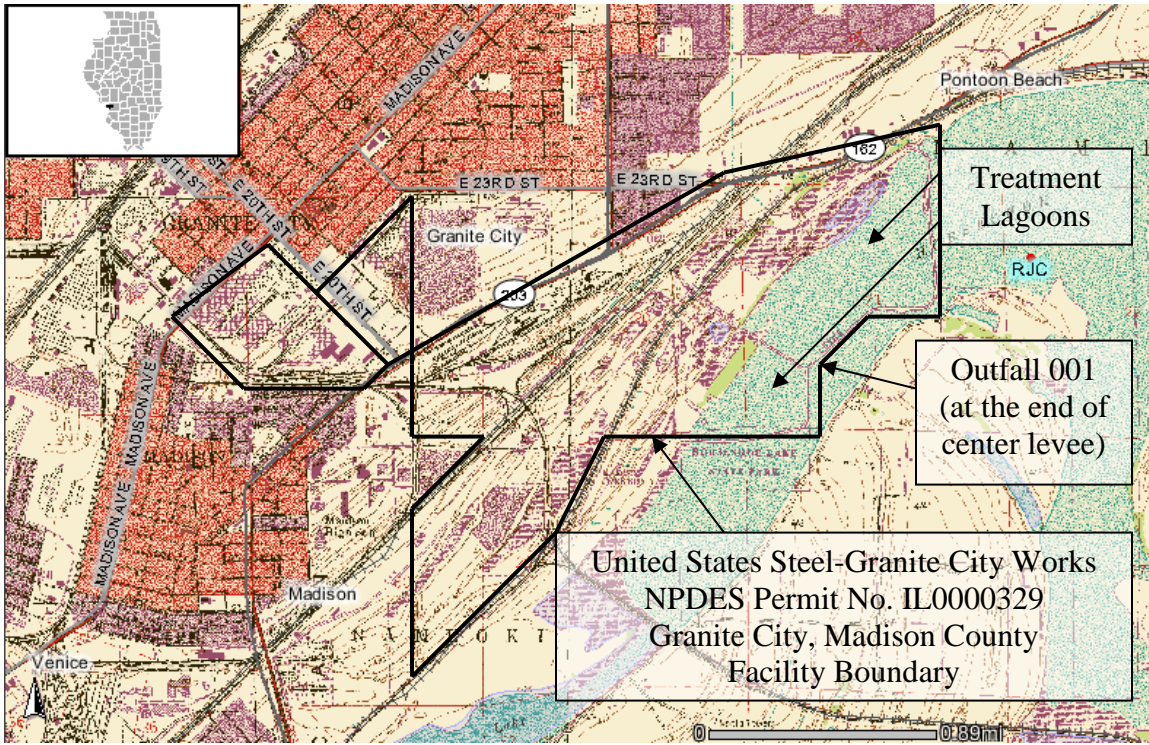
The process wastewater is used primarily for cleaning the metal and is not used for cooling purposes. The discharge is not subject to 316(b) regulations.

The intake consists of 4 pumps which can pump 13,900 GPM each and pump through a 54-inch diameter pipe. When pumping at the DAF of 25.0 MGD, they give a flow velocity of approximately 2.4 feet/second.

The load limits appearing in the permit will be the more stringent of the State and Federal Guidelines.

The following explain the conditions of the proposed permit:

Special Conditions are used to clarify discharge and monitoring requirements. Samples for each outfall shall be taken at points representative of each waste stream. A Certified Class K operator is required. Non-compliance loads of zinc may be demonstrated to not be in violation of the permit limits by submitting calculations for zinc background credits, which will account for any zinc that is drawn into the system when the influent water is taken from the Mississippi River. The permittee shall take additional metals monitoring at outfall 001.



Public Notice of Draft Permit

Public Notice Number MEL:14051401.mel is hereby given by Illinois EPA, Division of Water Pollution Control, Permit Section, 1021 North Grand Avenue East, Post Office Box 19276, Springfield, Illinois 62794-9276 (herein Agency) that a draft National Pollutant Discharge Elimination System (NPDES) Permit Number IL0000329 has been prepared under 40 CFR 124.6(d) for United States Steel Corporation, Granite City Works, 20th and State Streets, Granite City, Illinois 62040 for discharge into Horseshoe Lake from the United States Steel Corporation, Granite City Works, 1951 State Street, Granite City, Illinois 62040, (Madison County). Facility is an integrated steel mill, located in Granite City, in Madison County, in Southeastern Illinois. The plant makes its own coke in on-site Coke Ovens. Two Iron Blast Furnaces are used to make molten iron. Steel is made in two Basic Oxygen Furnaces, using scrap steel and molten iron. The steel is formed into slabs by two Continuous Casters. Steel slabs are converted into rolls by an 80-inch Hot Strip Mill, pickled in a Hydrochloric Acid Pickling station, and cold formed by a Direct Application Cold-Rolling Mill. The facility also employs two Galvanizing Lines for finishing of the steel. The final product from the facility is coiled sheet steel, though some steel is sold as cast slabs or unfinished coils.

The application, draft permit and other documents are available for inspection and may be copied at the Agency between 9:30 A.M. and 3:30 P.M. Monday through Friday. A Fact Sheet containing more detailed information is available at no charge. For further information, call the Public Notice Clerk at 217/782-0610.

Interested persons are invited to submit written comments on the draft permit to the Agency at the above address. The NPDES Permit and Joint Public Notice numbers must appear on each comment page. All comments received by the Agency not later than 30 days from the date of this publication shall be considered in making the final decision regarding permit issuance.

Any interested person may submit written request for a public hearing on the draft permit, stating their name and address, the nature of the issues proposed to be raised and the evidence proposed to be presented with regards to these issues in the hearing. Such requests must be received by the Agency not later than 30 days from the date of this publication.

If written comments and/or requests indicate a significant degree of public interest in the draft permit, the permitting authority may, at its discretion, hold a public hearing. Public notice will be given 30 days before any public hearing.

SAK:MEL:14051401.mel

NPDES Permit No. IL0000329

Illinois Environmental Protection Agency

Division of Water Pollution Control

1021 North Grand Avenue East

Post Office Box 19276

Springfield, Illinois 62794-9276

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

Reissued (NPDES) Permit

Expiration Date:

Issue Date:

Effective Date:

Name and Address of Permittee:

United States Steel Corporation
Granite City Works
1951 State Street
Granite City, Illinois 62040

Facility Name and Address:

United States Steel Corporation
Granite City Works
20th and State Street
Granite City, Illinois 62040
(Madison County)

Discharge Number and Name:

001 Treated Process Wastewater
A01 Coke By-Products Wastewater
B01 Cold Rolling Mill Wastewater
C01 Landfill Leachate Wastewater

Receiving Waters:

Horseshoe Lake

In compliance with the provisions of the Illinois Environmental Protection Act, Title 35 of Ill. Adm. Code, Subtitle C and/or Subtitle D, Chapter 1, and the Clean Water Act (CWA), the above-named permittee is hereby authorized to discharge at the above location to the above-named receiving stream in accordance with the standard conditions and attachments herein.

Permittee is not authorized to discharge after the above expiration date. In order to receive authorization to discharge beyond the expiration date, the permittee shall submit the proper application as required by the Illinois Environmental Protection Agency (IEPA) not later than 180 days prior to the expiration date.

Alan Keller, P.E.
Manager, Permit Section
Division of Water Pollution Control

SAK:MEL:14051401.mel

NPDES Permit No. IL0000329

Effluent Limitations and Monitoring

1. From the effective date of this permit until the expiration date, the effluent of the following discharge(s) shall be monitored and limited at all times as follows:

Outfall(s): 001 Treated Process Wastewater – (DAF = 25.0 MGD)

Treated Process Wastewater consists of wastewater from the blast furnace, basic oxygen furnace, 80" hot strip mill, landfill leachates, galvanizing lines, sanitary, stormwater runoff, continuous casters, boiler blowdown, maintenance shops, laboratories, coke plant, cold mill, continuous pickler, and miscellaneous flows

PARAMETER	LOAD LIMITS lbs/day DAF (DMF)		CONCENTRATION LIMITS mg/l		SAMPLE FREQUENCY	SAMPLE TYPE
	30 DAY AVERAGE	DAILY MAXIMUM	30 DAY AVERAGE	DAILY MAXIMUM		
Flow (MGD)	See Special Condition 1				Measure When Monitoring	
pH	See Special Condition 2		6.0 - 9.0		2/Week	Grab
CBOD ₅	2085	4170	10	20	2/Week	Composite
Total Suspended Solids	2502	5004	12	24	2/Week	Composite
Oil & Grease	1511	3492	15	30	2/Week	Grab
Iron (total)	417	834	2	4	2/Week	Composite
Iron (dissolved)		209		1	2/Week	Composite
Lead (total)	5.3	16	0.09	0.4	1/Quarter	Composite
Zinc (total)	12	33	1	2	2/Week	Composite
Cyanide (total)	19	35	0.1	0.2	2/Week	Composite
Cyanide (available by 01A 1677)	1.1	4.6	0.0052	0.022	2/Month	Composite
Phenol (4AAP)	5.0	10		0.1	2/Week	Composite
Fluoride		834		4	2/Week	Composite
Ammonia-Nitrogen*						
Spring/Fall	438	2206	2.1	10.1	2/Week	Composite
Summer	438	3128	2.1	15.0	2/Week	Composite
Winter	874	1616	4.0	7.4	2/Week	Composite
March	605	1616	2.9	7.4	2/Week	Composite
Phosphorus				Monitor Only	1/Month	Grab

*For Ammonia as Nitrogen, Spring/Fall is April-May and September-October. Summer is June-August. Winter is November-February. Weekly average limits will apply. For Spring/Fall, weekly average limit is 5.2 mg/L (1084 lb/day). Summer weekly average limit is 5.4 mg/L (1126 lb/day). There is no weekly average limit for Winter or March.

NPDES Permit No. IL0000329

Effluent Limitations and Monitoring

1. From the effective date of this permit until the expiration date, the effluent of the following discharge(s) shall be monitored and limited at all times as follows:

Outfall(s): A01, B01, C01

PARAMETER	LOAD LIMITS lbs/day DAF (DMF)		CONCENTRATION LIMITS mg/l		SAMPLE FREQUENCY	SAMPLE TYPE
	30 DAY AVERAGE	DAILY MAXIMUM	30 DAY AVERAGE	DAILY MAXIMUM		
Outfall A01 - Coke By-Products Wastewater						
Flow (MGD)	See Special Condition 1				Continuous	Measure
Total Suspended Solids				Monitor	1/Month	Composite
Naphthalene		0.10			2/Week	Composite
Benzo(a)pyrene		0.15			2/Week	Composite
Outfall: B01 - Cold Rolling Mill Wastewater						
Flow (MGD)	See Special Condition 1				When Monitoring	Measure
Tetrachloroethylene		1.1			2/Year	Grab
Naphthalene		0.69			1/Month	Grab
Outfall: C01 - Landfill Leachate Wastewater						
Flow (MGD)	See Special Condition 1				Continuous	Measure

Special Conditions

SPECIAL CONDITION 1. Flow shall be reported as a daily maximum and a monthly average, and shall be reported on the monthly Discharge Monitoring Report Form.

SPECIAL CONDITION 2. The pH shall be in the range 6.0 to 9.0. The monthly minimum and monthly maximum values shall be reported on the DMR form.

SPECIAL CONDITION 3. If an applicable effluent standard or limitation is promulgated under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a)(2) of the Clean Water Act and that effluent standard or limitation is more stringent than any effluent limitation in the permit or controls a pollutant not limited in the NPDES Permit, the Agency shall revise or modify the permit in accordance with the more stringent standard or prohibition and shall so notify the permittee.

SPECIAL CONDITION 4. The use or operation of this facility shall be by or under the supervision of a Certified Class K operator.

SPECIAL CONDITION 5. For purposes of this permit, load limits for Phenol (4AAP) have been based on actual plant discharges, and load limits for Ammonia (as N) have been based on water quality standards, and are included in accordance with a 301(g) variance of the Clean Water Act approved by the USEPA. Any changes to these load limits can only be made following Public Notice and opportunity for hearing.

SPECIAL CONDITION 6. The permittee may show that an apparent noncompliance of load limits for zinc is not a violation by applying background credits for intake waters and by submission of calculations as defined below.

The load calculations for comparison to Zinc load limits shall be made as follows:

$$M = (C_e - C_r) \times F \times 8.34$$

Where:

M = Outfall 001 load limit (lbs/day)

C_e = Outfall 001 effluent concentration (mg/l)

C_r = Intake water concentration (mg/l)

F = Outfall 001 effluent flow (MGD)

Concentrations limits for outfall 001 are absolute and no background credit shall be allowed.

SPECIAL CONDITION 7. The Permittee shall record monitoring results on Discharge Monitoring Report (DMR) Forms using one such form for each outfall each month.

In the event that an outfall does not discharge during a monthly reporting period, the DMR Form shall be submitted with no discharge indicated.

The Permittee may choose to submit electronic DMRs (NetDMRs) instead of mailing paper DMRs to the IEPA. More information, including registration information for the NetDMR program, can be obtained on the IEPA website, <http://www.epa.state.il.us/water/net-dmr/index.html>.

The completed Discharge Monitoring Report forms shall be submitted to IEPA no later than the 15th day of the following month, unless otherwise specified by the permitting authority.

Permittees not using NetDMRs shall mail Discharge Monitoring Reports with an original signature to the IEPA at the following address:

Illinois Environmental Protection Agency
Division of Water Pollution Control
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276

Attention: Compliance Assurance Section, Mail Code # 19

Special Conditions

SPECIAL CONDITION 8. Samples taken in compliance with the effluent monitoring requirements for internal outfall A01 shall be taken at a point representative of the discharge of Coke By-Products Wastewater, but prior to mixing with any other wastewater sources. Samples taken in compliance with the effluent monitoring requirements for internal outfall B01 shall be taken at a point representative of the discharge of Cold Rolling Mill wastewater, but prior to mixing with any other wastewater sources. Samples taken in compliance with the effluent monitoring requirements for internal outfall C01 shall be taken at a point representative of the discharge of Landfill Leachate Wastewater, but prior to mixing with any other wastewater sources. Samples taken in compliance with the effluent monitoring requirements for outfall 001 shall be taken at a point representative of the discharge, but before entering the receiving water.

SPECIAL CONDITION 9. The Agency has determined that the effluent limitations in this permit constitute BAT/BCT for storm water which is treated in the existing treatment facilities for purposes of this permit reissuance, and no pollution prevention plan will be required for such storm water. In addition to the chemical specific monitoring required elsewhere in this permit, the permittee shall conduct an annual inspection of the facility site to identify areas contributing to a storm water discharge associated with industrial activity, and determine whether any facility modifications have occurred which result in previously-treated storm water discharges no longer receiving treatment. If any such discharges are identified the permittee shall request a modification of this permit within 30 days after the inspection. Records of the annual inspection shall be retained by the permittee for the term of this permit and be made available to the Agency on request.

SPECIAL CONDITION 10. The Permittee shall monitor the effluent from Outfall 001 for the following parameters on a 2/year basis. This Permit may be modified with public notice to establish effluent limitations if appropriate, based on information obtained through sampling. The sample shall be a 24-hour effluent composite except as otherwise specifically provided below and the results shall be submitted on the DMR's to IEPA. The parameters to be sampled and the minimum reporting limits to be attained are as follows:

<u>STORET CODE</u>	<u>PARAMETER</u>	<u>Minimum reporting limit</u>
10197	Antimony	5.0 ug/L
01002	Arsenic	0.05 mg/L
01007	Barium	0.5 mg/L
01027	Cadmium	0.001 mg/L
01032	Chromium (Hexavalent) (grab)	0.01 mg/L
01034	Chromium (total)	0.05 mg/L
01042	Copper	0.005 mg/L
01055	Manganese	0.5 mg/L
71900	Mercury	0.2 ug/L
01067	Nickel	0.005 mg/L
01147	Selenium	0.005 mg/L
01077	Silver (total)	0.003 mg/L

Unless otherwise indicated, concentrations refer to the total amount of the constituent present in all phases, whether solid, suspended or dissolved, elemental or combined, including all oxidation states.

The analyses for the above parameters shall meet the detection limits as established for accepted test procedures listed in 40 CFR 136.

All samples for mercury must be analyzed by EPA Method 1631E using the digestion procedure described in Section 11.1.1.2 of 1631E, which dictates that samples must be heated at 50°C for 6 hours in a bromine chloride (BrCl) solution in closed vessels.

