Indiana Department of Environmental Management
We Protect Hoosiers and Our Environment.

100 N. Senate Avenue ● Indianapolis, IN 46204
(800) 451-6027 ● (317) 232-8603 ● www.idem.IN.gov

Eric J. Holcomb
Governor

Bruno Pigott
Commissioner

December 11, 2017

Via Email to: jehanning@uss.com
Mr. Joe Hanning, Manager of Environmental Control
US Steel Corporation, Midwest Plant
6300 US Highway 12
Gary, Indiana 46402

Dear Mr. Hanning:

Re: **Inspection Summary/ Noncompliance Letter**
US Steel Midwest
NPDES Permit No. IN0000337
Portage, Porter County

An inspection of the above-referenced facility or location was conducted by a representative of the Indiana Department of Environmental Management, Northwest Regional Office, pursuant to IC 13-18-3-9. A summary of the inspection is provided below:

Date(s) of Inspection: November 16, 2017 , November 17, 2017

Type of Inspection: Reconnaissance Inspection

Inspection Results: Violations were observed.

The following concerns were noted:

1. Operation was rated as unsatisfactory. Part II. B. 1. of the permit requires all facilities and systems (and related appurtenances) for collection and treatment that are installed or used by the permittee and that are necessary for achieving compliance with the terms and conditions of the permit in accordance with 327 IAC 5-2-8(8) to be maintained in good working order and efficiently operated at all times. The Chrome Treatment facility utilizes identical and parallel treatment facilities referred to as the A Train and the B Train to reduce and remove chromium from wastewater, utilizing pH adjustment and chemical addition. On October 26, 2017, ALS, a third party contractor working for US Steel - Midwest, was conducting routine sampling at Internal Outfall 204 and observed the discharge was blue with visible solids. The ALS contractor notified US Steel personnel. US Steel personnel investigated and found the lamella clarifier of the A Train, the sole train in use at the time, was overflowing with solids in two of the three discharge channels. While the incident is still under investigation by US Steel personnel, it is believed that the operator may not have been conducting visual checks as required. The channel that did not overflow with solids has a turbidity meter that sends the data to a remote office. The

two channels that overflowed did not have turbidity meters. After discovering the problem, the discharge from the A Train was rerouted back to the beginning of the Chrome Treatment system and the B Train was activated. US Steel personnel estimated that it took approximately 15 minutes to cease the discharge of the solids from A Train once the problem was first observed. Corrective actions taken by US Steel - Midwest include: On-site personnel stated that turbidity meters have been ordered for the channels that did not have them previously, two for A Train and two for B Train; Additional pathing was added on the elevated platform for both trains to facilitate viewing and maintenance of both lamella clarifiers; The operator who was on-site was removed from the Chrome Treatment plant and is currently assigned to other duties.

2. Self-Monitoring was rated as unsatisfactory. The permit, Part II. A. 2., states, in part, that the permittee shall take all reasonable steps to minimize or correct any adverse impact to the environment resulting from noncompliance with the permit. During periods of noncompliance, the permittee shall conduct such accelerated or additional monitoring for the affected parameters, as appropriate or as requested by IDEM, to determine the nature and impact of the noncompliance.

   Hexavalent chromium monitoring was not conducted upon noticing that the discharge was blue with visible solids, or upon obtaining a total chromium result above the daily maximum permit limit.

   On-site personnel stated that testing was not accelerated for hexavalent chromium because the portion of the treatment facility experiencing operational deficiencies was subsequent to the portion of the treatment facility in which hexavalent chromium is converted to trivalent chromium. A review of the operational records for 7:00 AM, October 25, 2017 to 7:00AM, October 26, 2017 indicate that pH was in the appropriate range for the chromium reduction to occur.

   However, visual evidence of operational deficiencies, such as discolored effluent or solids leaving the facility or a total chromium result in excess of the daily maximum permit limit should lead the facility to monitor for hexavalent chromium to determine the extent of the impact, even if the on-site personnel believe there will be none or little.

3. Effluent Limits Compliance was rated unsatisfactory. While the DMRs and MMRs were not yet available for October 2017 at the time of the inspection, a violation of the daily maximum loading for total chromium for Outfall 304 was reported to IDEM on October 31, 2017.

Part II. A. 1. of your permit requires you to comply with its terms and conditions. Any noncompliance with the terms of your permit may subject you to an enforcement action which can include the imposition of penalties. You are required to immediately take all necessary measures to comply with the terms and conditions of your NPDES Permit, specifically those violations identified above.

Within 30 days of receipt of this letter, a written detailed response documenting correction of the concerns listed above and/or a plan for assuring future compliance must be submitted to this office. Failure to respond adequately to this letter may result in formal enforcement action. Please direct your response to this letter to the attention of Bridget S. Murphy, at our letterhead address or via email to wwViolationResponse@idem.IN.gov. Any questions should be directed to Nicholas Ream at 219-730-1691 or by email to nream@idem.IN.gov. Thank you for your attention to this matter.

Sincerely,

Rick Massoels, Deputy Director
Northwest Regional Office

Enclosure

NPDES Industrial Facility Inspection Report

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

NPDES Permit Number:	Facility Type:		Facility Classification:	TEMPO AI ID
IN0000337	Industrial	Major	D	14435

Date(s) of Inspection: November 16, 2017 , November 17, 2017

Type of Inspection: Reconnaissance Inspection

Name and Location of Facility Inspected:			Receiving Waters/POTW:	Permit Expiration Date:
US Steel Midwest 6300 US Highway 12 Portage	IN 46368	County: Porter	Portage Burns Waterway to Lake Michigan	3/31/2021 Design Flow: NA

On Site Representative(s):

First Name	Last Name	Title	Email	Phone
Brandon	Miller	Environmental Coordinator	bsmiller@uss.com	219-888-5869
Mark	Henry	Operations	mhenry@uss.com	
Tim	Sullivan	Environmental Coordinator		

Was a verbal summary of the inspection given to the on-site rep? **Yes**

Certified Operator:	Number:	Class:	Effective Date:	Expiration Date:	Email:
Mark Henry	20376	D	7-1-16	6-30-18	mhenry@uss.com

Responsible Official:	Permittee:	Contacted?
Mr. Joe Hanning, Manager of Environmental Control 6300 US Highway 12 Gary, Indiana 46402	US Steel Corporation, Midwest Plant Email: jehanning@uss.com Phone: Fax:	No

INSPECTION FINDINGS

- ○ Conditions evaluated were found to be satisfactory at the time of the inspection. (5)
- ○ Violations were discovered but corrected during the inspection. (4)
- ○ Potential problems were discovered or observed. (3)
- ◉ Violations were discovered and require a submittal from you and/or a follow-up inspection by IDEM. (2)
- ○ Violations were discovered and may subject you to an appropriate enforcement response. (1)

AREAS EVALUATED DURING INSPECTION

(S = Satisfactory, M = Marginal, U = Unsatisfactory, N = Not Evaluated

S	Receiving Waters	S	Facility/Site	U	Self-Monitoring	N	Compliance Schedules
S	Effluent/Discharge	U	Operation	N	Flow Measurement		
S	Permit	N	Maintenance	N	Laboratory	U	Effluent Limits Compliance
		N	Sludge	N	Records/Reports	N	Other:

DETAILED AREA EVALUATIONS

The inspection was conducted as a response to, and focuses upon, an October 2017 total chromium permit limit exceedance at internal Outfall 304.

Receiving Waters:

Comments:

The receiving stream at Outfall 004 was free of notable foam, algae or solids on November 16, 2017.

Effluent/Discharge:

Comments:

The effluent was clear and free of color at the time of the inspection on November 16, 2017.

Permit:

Comments:

The facility has a valid permit.

Facility/Site:

Comments:

The facility grounds are well maintained.

Operation:

Comments:

Operation was rated as **unsatisfactory**. Part II. B. 1. of the permit requires all facilities and systems (and related appurtenances) for collection and treatment that are installed or used by the permittee and that are necessary for achieving compliance with the terms and conditions of the permit in accordance with 327 IAC 5-2-8(8) to be maintained in good working order and efficiently operated at all times.

The Chrome Treatment facility utilizes identical and parallel treatment facilities referred to as the A Train and the B Train to reduce and remove chromium from wastewater, utilizing pH adjustment and chemical addition. On October 26, 2017, ALS, a third party contractor working for US Steel - Midwest, was conducting routine sampling at Internal Outfall 204 and observed the discharge was blue with visible solids. The ALS contractor notified US Steel personnel. US Steel personnel investigated and found the lamella clarifier of the A Train, the sole train in use at the time, was overflowing with solids in two of the three discharge channels.

While the incident is still under investigation by US Steel personnel, it is believed that the operator may not have been conducting visual checks as required. The channel that did not overflow with solids has a turbidity meter that sends the data to a remote office. The two channels that overflowed did not have turbidity meters.

After discovering the problem, the discharge from the A Train was rerouted back to the beginning of the Chrome Treatment system and the B Train was activated. US Steel personnel estimated that it took approximately 15 minutes to cease the discharge of the solids from A Train once the problem was first observed.

Corrective actions taken by US Steel - Midwest include: On-site personnel stated that turbidity meters have been ordered for the channels that did not have them previously, two for A Train and two for B Train; Additional pathing was added on the elevated platform for both trains to facilitate viewing and maintenance of both lamella clarifiers; The operator who was on-site was removed from the Chrome Treatment plant and is currently assigned to other duties.

Self-Monitoring:

Comments:

Self-Monitoring was rated as **unsatisfactory**. The permit, Part II. A. 2., states, in part, that the permittee shall take all reasonable steps to minimize or correct any adverse impact to the environment resulting from noncompliance with the permit. During periods of noncompliance, the permittee shall conduct such accelerated or additional monitoring for the affected parameters, as appropriate or as requested by IDEM, to determine the nature and impact of the noncompliance.

Hexavalent chromium monitoring was not conducted upon noticing that the discharge was blue with visible solids, or upon obtaining a total chromium result above the daily maximum permit limit.

On-site personnel stated that testing was not accelerated for hexavalent chromium because the portion of the treatment facility experiencing operational deficiencies was subsequent to the portion of the treatment facility in which hexavalent chromium is converted to trivalent chromium. A review of the operational records for 7:00 AM, October 25, 2017 to 7:00AM, October 26, 2017 indicate that pH was in the appropriate range for the chromium reduction to occur.

However, visual evidence of operational deficiencies, such as discolored effluent or solids leaving the facility or a total chromium result in excess of the daily maximum permit limit should lead the facility to monitor for hexavalent chromium to determine the extent of the impact, even if the on-site personnel believe there will be none or little.

Effluent Limits Compliance:

No 1. Were DMRs reviewed as part of the inspection?

Comments:

Effluent Limits Compliance was rated **unsatisfactory**. While the DMRs and MMRs were not yet available for October 2017 at the time of the inspection, a violation of the daily maximum loading for total chromium for Outfall 304 was reported to IDEM on October 31, 2017.

IDEM REPRESENTATIVE

Inspector Name:	Email:	Phone Number:
Nicholas Ream	nream@idem.IN.gov	219-730-1691

Other staff participating in the inspection:

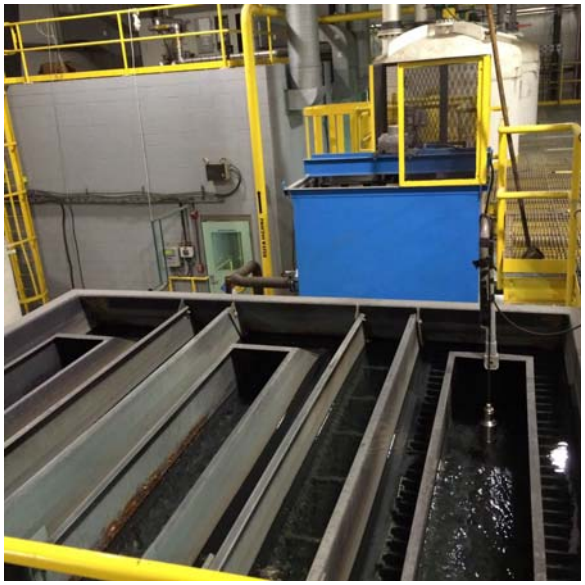
Name(s)	Phone Number(s)

David Greinke - IDEM - Emergency Respon...	219-730-4035

IDEM MANAGER REVIEW

IDEM Manager:	Date:
Rick Massoels	11/27/2017

Inspection Photographs



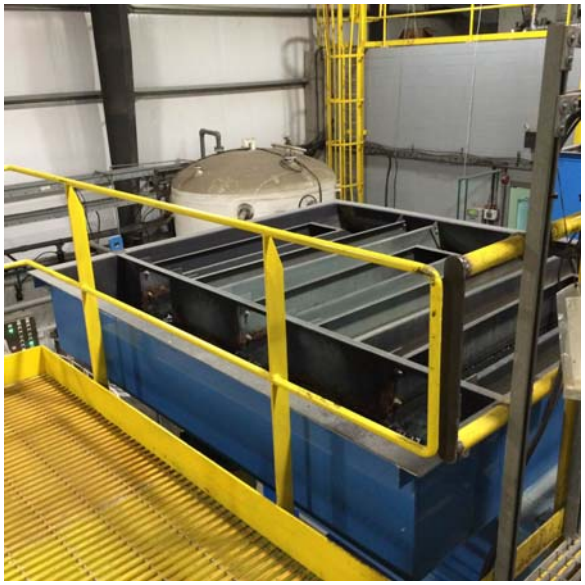
Facility:
US Steel Midwest

Photographer:
Nicholas Ream

Date: 11/16/2017 Time: 3:15 PM

Others Present:
David Greinke, Brandon Miller, Tim Sullivan, Mark Henry

Location/Description:
South view of the lamella clarifier on A Train. Only one channel has a turbidity meter. Meters have been ordered for the other channels on both trains.



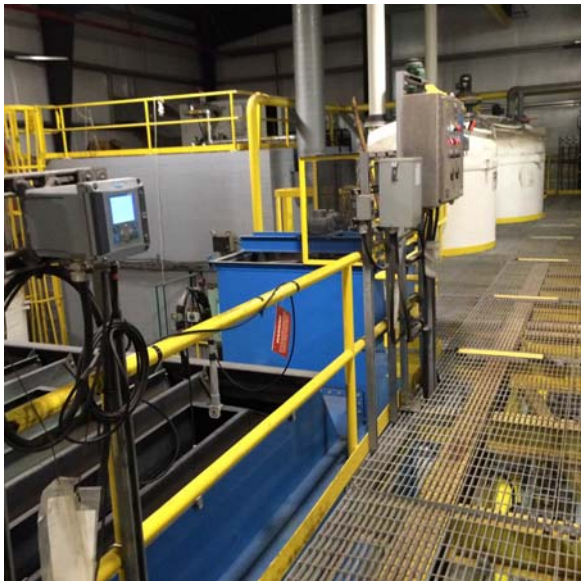
Facility:
US Steel Midwest

Photographer:
Nicholas Ream

Date: 11/16/2017 Time: 3:15 PM

Others Present:
David Greinke, Brandon Miller, Tim Sullivan, Mark Henry

Location/Description:
Southeast view of the lamella clarifier of the A Train. The walkway on the left was installed after the total chromium exceedance in October 2017 to assist with observing and maintaining the clarifier.



Facility:
US Steel Midwest

Photographer:
Nicholas Ream

Date: 11/16/2017 Time: 3:15 PM

Others Present:
David Greinke, Brandon Miller, Tim Sullivan, Mark Henry

Location/Description:
South view of the A Train.