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

Michael R. Pence
Governor

Carol S. Comer
Commissioner

July 08, 2016

Via Email to: jehanning@uss.com
Mr. Joe Hanning, Manager of Environmental Control
U.S. Steel Corporation, Midwest Plant
One North Broadway, MS 70-A
Gary, Indiana 46402

Dear Mr. Hanning:

Re: Inspection Summary 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:	June 27, 2016
Type of Inspection:	Compliance Evaluation Inspection
Inspection Results:	Potential problems were discovered or observed.

After 2016, with the adoption of the Federal E-Reporting Rule, the Indiana Department of Environmental Management (IDEM) will no longer accept paper DMRs or MROs. IDEM recommends the process of enrolling in NetDMR begin at this time. Information on NetDMR can be obtained at http://www.in.gov/idem/cleanwater/2422.htm. If assistance is needed, please contact a member of the Compliance Branch in our office.

The Records/Reports evaluation generated a marginal rating. Some, but not all, of the laboratory reports were available at the US Steel Midwest site for review. The permittee should ensure that all records and information resulting from the monitoring activities required by the permit, including all records of analyses performed, are stored on-site for review.

A copy of the NPDES Industrial Facility Inspection Report is enclosed for your records. Please direct any response to this letter and any questions to Nicholas Ream at 219-730-1691 or by email to nream@idem.IN.gov.

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: June 27, 2016

Type of Inspection: Compliance Evaluation Inspection

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

On Site Representative(s):

First Name	Last Name	Title	Email	Phone
Mark	Henry	Environmental Coordinator	mhenry@uss.com	219-763-5869
Brandon	Miller	Environmental Coordinator	bsmiller@uss.com	219-888-3369

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	2/5/15	6-30-16	mhenry@uss.com

Responsible Official:		
Mr. Joe Hanning, Manager of Environmental Control	Permittee: U.S. Steel Corporation, Midwest Plant	
One North Broadway, MS 70-A	Email: jehanning@uss.com	
	Phone:	Contacted?
Gary, Indiana 46402	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	S	Self-Monitoring	N	Compliance Schedules
S	Effluent/Discharge	S	Operation	S	Flow Measurement		
S	Permit	S	Maintenance	S	Laboratory	S	Effluent Limits Compliance
		S	Sludge	M	Records/Reports	N	Other:

DETAILED AREA EVALUATIONS

After 2016, with the adoption of the Federal E-Reporting Rule, the Indiana Department of Environmental Management (IDEM) will no longer accept paper DMRs or MROs. IDEM recommends the process of enrolling in NetDMR begin at this time. Information on NetDMR can be obtained at http://www.in.gov/idem/cleanwater/2422.htm. If assistance is needed, please contact a member of the Compliance Branch in our office.

Receiving Waters:

S 1. The receiving stream is visibly free of excessive deposits of settled solids, floating debris, oil, scum, or billowy foam.

Comments:
The receiving stream was free of notable foam, algae or solids.

Effluent/Discharge:

S 1. Treated effluent is essentially free of excessive solids, floating debris, oil, scum, or billowy foam.

N 2. Pretreatment discharge into sanitary sewers appears free of excessive oils, grease, solids, or foam and does not appear to be in violation of the local Sewer Use Ordinance.

N 3. Pretreatment discharge into sanitary sewers does not contain materials that pass through or interfere with the

operation of the POTW.

Evaluation of Multiple Outfalls:

Outfall #	Insp. Date	Outfall Inspection Comments
002	6/27/2016	Effluent clear and odorless
003	6/27/2016	Effluent clear and odorless
004	6/27/2016	Effluent clear and odorless
204	6/27/2016	No problems observed

Comments:
The effluent was clear and free of color at the time of the inspection.

Permit:

S 1. Does the facility have a copy of the current permit available for reference.
N 2. If the permit expires within 180 days, has a renewal application been submitted?
S 3. Receiving waters are accurately described in the permit.
N 4. The permit has been properly transferred if there is a new owner.

Comments:
The facility has a valid permit.

Facility/Site:

N 1. The facility has standby power or equivalent provision, If required.
S 2. An adequate alarm or notification system for power or equipment failure is available for the treatment facility.
S 3. Safe and adequate access is provided for inspection of all treatment units and outfalls.
S 4. Facilities and equipment do not appear beyond their useful life.
5. List any safety concerns noted during the inspection in the box below:

Comments:
The facility grounds are well maintained.

Operation:

S 1. All facilities and systems necessary for achieving compliance with the terms and conditions of the permit are operated efficiently, including an anticipated bypass report for steps of treatment taken out of service.
S 2. An adequate, qualified operating staff is provided to carry out the operation of the facility, including:
   a. Certified Operator's on-site attendance and/or qualified operations personnel attendance is adequate.
   b. Adequate documentation of operational activities, including system monitoring and cleaning.
   c. Adequate funding to ensure proper operation.
S 3. Solids handling procedures are adequate.
S 4. Documentation of solids removal, handling, and disposal is adequate.

Comments:
All units of treatment appeared to be operating efficiently.

Maintenance:

S 1. A maintenance record system has been established and includes maintenance/repair history and preventative maintenance plan.
S 2. Facility maintenance activities appear adequate.

Comments:
Records of maintenance activities are stored on ERP Oracle system.

Sludge:

S 1. Sludges, screenings, and slurries are handled and disposed of properly.

Comments:
A records review for January 1 through June 1, 2016 conducted during the inspection showed adequate wasting, handling, and disposal of sludge. Non-hazardous sludge is sent to the on-site landfill for disposal. Sludge with chrome is sent to Envirite in Illinois for disposal. An annual report is generated by Weaver Boos regarding the on-site sludge disposal.

Self-Monitoring:

S 1. Samples are taken at pre-designated locations and are representative.
S 2. Flow-proportioned samples are obtained where needed.
S 3. The facility conducts sampling of all waste streams, including type and frequency, as required in the permit.
S 4. Sample collection procedures, including automatic sampling, include:
   a. Samples are refrigerated during compositing.
   b. Proper preservation techniques are used.
   c. Containers and holding times conform to 40 CFR 136.3.

S 5. Sample documentation is adequate and includes:
   a. Dates, times, and locations of sampling.
   b. Name of individual performing sampling.
   c. Instantaneous flow for flow-weighted aliquots.
   d. Chain of Custody records.

N 6. NPDES Permit Total Toxic Organic (TTO) requirements are being met.

S 7. NPDES Permit Whole Effluent Toxicity (WET) testing requirements are being met.

Comments:
The Self Monitoring Program was rated as satisfactory. All sampling practices are conducted accurately and at the frequency required by the permit.

Flow Measurement:

S 1. Flow is properly monitored as required by the permit.

S 2. Flow data and calibration records are available for review.

Comments:
The effluent flow meter was last calibrated on September 17, 2015.

Laboratory:

The following laboratory records were reviewed:

Contract Lab Reports Chain-of-Custody

N 1. The laboratory practices and protocol reviewed were adequate, including:
   a. Written laboratory QA/QC manual.
   b. Samples are properly stored.
   c. Approved analytical methods are used.
   d. Calibration and maintenance of instruments is adequate.
   e. QA/QC procedures are adequate.
   f. Dates of analyses. (and times, where required)
   g. Name of person performing analyses.

S 2. Review of lab records and/or on-site field testing equipment and protocols was found to be adequate.

Contract Lab Information	
ALS	Holland, Michigan

Comments:
All testing and sampling is conducted by ALS of Holland, Michigan.

Records/Reports:

The following records/reports were reviewed:

DMRs for the period of May 2015 to April 2016 were reviewed as part of the inspection.

M 1. All facility records for the period including the previous three years were available for review.

S 2. DMRs and MMRs are completed properly and accurately including:
   a. "No Ex" column is accurate.
   b. Signatory requirements are met.
   c. Reports are prepared by or under the direction of a certified operator.

N 3. Bypass and Noncompliance reporting are adequate.

Comments:
The Records/Reports evaluation generated a **marginal** rating. Some, but not all, of the laboratory reports were available at the US Steel Midwest site for review. The permittee should ensure that all records and information resulting from the monitoring activities required by the permit, including all records of analyses performed, are stored on-site for review.

Compliance Schedules:

N 1. The NPDES Permit Schedule of Compliance monitoring and reporting milestones have been met.

N 2. Agreed Order compliance milestones have been met.

Comments:
The dates for the compliance milestones have not occurred as of the date of the inspection.

Effluent Limits Compliance:

Yes 1. Were DMRs reviewed as part of the inspection?

DMRs for the period of May 2015 to April 2016 were reviewed as part of the inspection.

No 2. Were violations noted during the review of DMRs?

Comments:

No effluent violations were noted during the period reviewed.

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)
Garry Martin - Portage Pretreatment	219-508-6055

IDEM MANAGER REVIEW

IDEM Manager:	Date:
Rick Massoels	7/6/2016

United States Steel Corporation – Midwest Plant
One North Broadway, MS 70-A
GARY, IN 46402

Via netDMR Attachment

March 28, 2017

Compliance Data Section
Office of Water Quality
Indiana Department of Environmental Management
100 N. Senate Avenue
Indianapolis, IN 46204-2251

February 2017 DMR Addendum

RE: Temperature Reporting Requirements for Outfall 500 at U. S. Steel Midwest

Background

This letter is being submitted as an addendum to the U. S. Steel Midwest facility (Permit IN0000337) Outfall 500 temperature data for the month of February 2017 to address elevated calculated downstream temperatures beginning on February 24th. On February 24th, 2017 at 3:00 PM, the measured upstream temperature of the Burns Ditch reached 49.91 degrees F, at which time the downstream temperature calculated using the model specified in the permit reached 50.87 degrees F. The downstream temperature as calculated using the model remained at or above 50 degrees, which is the Maximum Instream Water Temperature limit specified in the permit in Part III.A.2 Temperature Table 1, for the remainder of the month. By 4:00 PM CST, 1 hour after the calculated downstream temperature rose above 50 degrees, the upstream temperature had increased to 50.34 degrees F, and remained above 50 degrees F until February 25th at 3:00 AM CST. Between this time and February 25th at 4:00 PM, the upstream temperature fluctuated between 49.15 degrees F and 49.93 degrees F. One hour later, on February 25th at 5:00 PM, the upstream temperature reached 50.09 degrees F and remained above 50 degrees F for the remainder of the month. The final result was the calculated downstream temperature being over 50 degrees F for 98 hours in February (1.2% of hours in last 12 months), and 2 days in which the daily max temperature exceeded 3 degrees F above the permit specified limit (53 degrees F calculated from specified limit of 50 degrees F for February)

Response

It is the position of U. S. Steel that the cause of the elevated calculated downstream temperature was due to significantly elevated upstream temperature from natural causes outside the control of U. S. Steel. Per Climatological Rankings on the website of the National Centers for Environmental Information, which is part of the National Oceanographic and Atmospheric Administration (NOAA), February 2017 was the warmest February on record for Climate Division 1 in Indiana since records began in 1895[1]. Climate

[1] https://www.ncdc.noaa.gov/temp-and-precip/climatological-rankings/index.php?periods%5B%5D=1&parameter=tavg&state=12&div=1&month=2&year=2017&asof=on

United States Steel Corporation – Midwest Plant
One North Broadway, MS 70-A
GARY, IN 46402

Division 1 encompasses the region of Indiana in which the Midwest Plant resides. As a result, between midnight on February 24, 2017 and the end of the month, the average upstream temperature in the Burns Ditch was 51.14 degrees F, which is greater than the 50 degree F temperature limit associated with the Midwest Plants NPDES permit. The upstream temperature continued to climb approaching the end of the month, with the average upstream temperature being 53.07 degrees from midnight on February 27th through the end of the month.

At any time during the year when the upstream temperature approaches or exceeds the downstream limit specified in Part III.A.2, it is impossible for U. S. Steel to meet the limit. Based upon the calculation included in Part III.A.8 footnote [2], which specifies the model used to calculate downstream temperature, and the commissioner approved coefficient of 1.017 representing "alpha" in the calculation, during February when the upstream temperature is 49.17 degrees F or greater, even with 0 flow from U. S. Steel the model predicted temperature downstream will be equal to 50 degrees F. As the upstream temperature reaches and exceeds 49.17 degrees F, there is no way that U. S. Steel could ever meet the downstream temperature limit.

Indiana Administrative Code 327 IAC 2-1.5-8(c)(4) states the following:

> (A) There shall be no abnormal temperature changes that may adversely affect aquatic life unless caused by natural conditions.
>
> (B) The normal daily and seasonal temperature fluctuations that existed before the addition of heat due to other than natural causes shall be maintained.

Because the natural upstream temperature was within 2 degrees or higher of the 50 degree limit for February, the downstream temperature exceedances were due to natural upstream conditions.

In addition, Permit IN0000337 specifies in III.A.1 that at no time shall the Delta T between upstream monitored temperature and downstream calculated temperature be greater than 2 degrees F, which U. S. Steel maintained compliance with for the duration of the month. Between midnight on February 24th and the end of the month, the highest hourly temperature increase from the measured upstream location to the model calculated downstream compliance point (Delta T) was 1.43 degrees F. From the time the calculated downstream point first reached 50 degrees until the end of the month, the highest calculated Delta T was 1.07 degrees F.

Based upon the abnormally elevated temperatures seen at the location in February, naturally occurring elevated upstream temperature of the Burns Ditch, and the fact that U. S. Steel did not increase the upstream temperature by more than 1.43 degrees F versus the permit specified limit of 2 degrees F, it is the position of U. S. Steel that the discharge from U. S. Steel Outfalls 002, 003, and 004 was not in violation of Part III.A of NPDES Permit IN0000337 during the month of February. Additionally, U. S. Steel requests to discuss this part of the permit with IDEM and would like to pursue modification of the permit to address scenarios when the upstream temperature of the river makes it physically and mathematically impossible for U. S. Steel to meet the downstream temperature limits of the Burns Ditch waterway.

United States Steel Corporation – Midwest Plant
One North Broadway, MS 70-A
GARY, IN 46402

If you should have any questions, concerns or need additional information, please contact Brandon Miller at (219) 888-3369, or via electronic mail at BMiller@uss.com.

Sincerely,

Joseph Hanning

Joseph Hanning
Director - Environmental
United States Steel Corporation
Gary Works, Midwest, East Chicago Tin and Granite City Works

United States Steel Corporation – Gary Works
One North Broadway, MS 70-A
Gary, IN 46402

CERTIFIED MAIL

February 13, 2014

Donald Daily
Indiana Department of Environmental Management
Office of Water Quality
Mail Code 65-42
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

RE: Inspection Summary/Violation Letter Response
United States Steel Corporation – Midwest Plant
NPDES Permit Number IN000037

Dear Mr. Daily:

This letter is in response to the written Inspection Summary/Violation Letter (Letter) that was issued by the Indiana Department of Environmental Management (IDEM) on January 16, 2014 and received by the United States Steel Corporation – Midwest Plant (U. S. Steel) on January 22, 2014. Please note that while U. S. Steel is providing this response in good faith, this response is not intended to be an admission or indicate culpability on behalf of U. S. Steel.

The Letter was issued to U. S. Steel subsequent to a compliance evaluation inspection of the Midwest Plant on December 12, 2013. The Letter stated the following:

1. A white discoloration was observed to be entering Burns Waterway from Outfall 004, which is a violation of Part I. B. of the facility's NPDES permit. As a result, the Receiving Waters Appearance and Effluent Appearance evaluation area was rated as "unsatisfactory;"
2. Operations and Maintenance of the facilities and systems that are necessary for achieving compliance with the terms and conditions of the NPDES was rated as "marginal" due to the east Dissolved Air Flotation (DAF) Unit being off-line for repairs during the compliance evaluation; and
3. The Effluent Limits Compliance evaluation area was rated as "marginal" due to a self-reported violation of the limits detailed in Part I. A. of the NPDES permit.

Receiving Waters and Effluent Appearance

The following was summarized in a letter to IDEM that was submitted on December 17, 2013. The white discoloration that was observed was a result of an upset condition that occurred from the caustic cleaner system on the Continuous Annealing line. The caustic cleaner entered the wastewater treatment system at a rate greater than normal resulting in the white discoloration that was observed at Outfall 004. The discoloration was corrected on the same day that it was discovered.

In order to prevent a recurrence, the caustic cleaner discharge point at the Midwest Plant Continuous Annealing line is being retrofitted with a metering device to restrict the rate of discharge. Until the discharge line is retrofitted, caustic cleaner will not be discharged to the wastewater treatment system

from the Continuous Annealing line. Wastewater discharge sampling that was conducted during the timeframe in which the discoloration was occurring showed that no parameters exceeded NPDES permit limits for Outfall 004.

Operations and Maintenance

On the date of the compliance evaluation inspection, the east DAF unit, which is used primarily to treat for Oil and Grease (O&G) was off-line for engineering improvements. As a result, the IDEM's Inspector rated the facility's Operation and Maintenance as "marginal." U. S. Steel respectfully disagrees with the Inspector's opinion in this instance.

In the Operations Section of the NPDES Industrial Facility Inspection Report, the facility was rated as "marginal" for ensuring that "all facilities and systems necessary for achieving compliance with the terms and conditions of the permit are operating efficiently." It should be noted that, while the east DAF unit was off-line, wastewater was routed through a second DAF unit, which was engineered to singularly manage the facility's wastewater flows. The discoloration observed at Outfall 004 was in no way related to the east DAF unit's operational status on the day of the compliance evaluation inspection. At no time was wastewater being ineffectively treated or bypassing treatment.

During the timeframe in which the east DAF unit was off-line for upgrading, the maximum concentration of O&G at Outfall 004 was 3.2 mg/L. The maximum loading of O&G at Outfall 004 was 266 lbs/day, which is only 34.8% of the NPDES permit limit (765 lbs/day). Furthermore, discharge sampling during the time when the east DAF unit was off-line confirmed that no NPDES permit limits of any kind were exceeded at Outfall 304, indicating that the facility was operating all of the necessary facilities to properly treat the wastewater and ensure compliance with the terms and conditions of the NPDES permit. Therefore, the "marginal" rating should be revised to "satisfactory" in order to accurately reflect the status of the facility's wastewater treatment system.

In the Maintenance Section of the NPDES Industrial Facility Inspection Report, the facility was rated as "marginal" indicating that "facility maintenance activities" may not be adequate. The facility's maintenance activities and procedures are adequate, as they identified an opportunity to improve the system. On the day of the inspection, U. S. Steel personnel were in the process of retrofitting the east DAF unit with more robust mechanical equipment in order to minimize the need for on-going future maintenance. Taking the unit off-line for upgrades while maintaining adequate wastewater treatment is appropriate and consistent with good preventative maintenance practices, and the status of the maintenance activities should be revised to "satisfactory."

It should be noted that the upgrades to the east DAF unit have been completed, and both DAF units are in full operation.

Effluent Limits Compliance

The following was summarized in a letter to IDEM that was submitted on February 8, 2013. Internal Outfall 304 is the mathematically combined discharge of Internal Outfall 204 (Chrome Treatment) and Internal Outfall 104 (Final Treatment Plant). Internal Outfall 304 ultimately discharges to Burns Waterway through Outfall 004. On February 3, 2013, a treatment plant process control pH excursion occurred on one of the two process water treatment trains at the Chrome Treatment Plant. The pH excursion allowed soluble chromium to pass through to the discharge of Internal Outfall 204 and subsequently to Internal Outfall 304. At the time, the process control configuration would not have

triggered an alert at the final pH adjustment tank in which both treatment trains combine prior to discharge.

In order to prevent a recurrence, U. S. Steel equipped each treatment train with automated process controls upstream from where the treatment trains combine at the final pH adjustment tank prior to discharge. Accordingly, U. S. Steel revised its internal procedures, and the associated corrective action guidance, to reflect the new automated process controls.

Environmental Stewardship is a core value at U. S. Steel. As part of this value, we strive to have clear communication with all regulatory agencies. U. S. Steel respectfully requests a response from IDEM regarding our concerns with the "marginal" ratings for Operations and Maintenance in the NPDES Industrial Facility Inspection Report. Please call me at 219-888-3369 or e-mail me at LELegler@uss.com if you need additional information.

Sincerely,

Lauren Legler
Manager, Environmental Control
United States Steel Corporation
Gary Works, Midwest Plant, East Chicago Tin Operations

cc: J. Hanning – U. S. Steel
E. Williams – U. S. Steel
L. Zemba – U. S. Steel
F. Monteleone – U. S. Steel

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Donald Daily
IDEM- Office of Water Quality
Mail Code 65-42
100 North Senate Avenue
Indianapolis, IN 46204

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Sent To Donald Daily
IDEM- Office of Water Quality
Street, Apt. No., or PO Box No. Mail Code 65-42
100 North Senate Avenue
City, State, ZIP+4 Indianapolis, IN 46204

PS Form 3800, August 2006 See Reverse for Instructions

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