

**CWA COMPLIANCE EVALUATION INSPECTION REPORT
U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION 5**

Purpose:

Compliance Evaluation Reconnaissance Inspection

Facility:

Cleveland Cliffs Burns Harbor, LLC
250 US-12
Burns Harbor, Indiana 46304
Porter County
41.625, -87.117

NPDES Permit Number:

IN0000175

Date of Inspection:

August 29, 2022

EPA Representatives:

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Report Prepared by:

Joan Rogers

Inspector Signature/Date: JOAN ROGERS Digitally signed by
JOAN ROGERS
Date: 2022.09.20
12:10:43 -05'00'

Approver Name and Title: Ryan Bahr, Supervisor, Section 2, WECAB

Approver Signature/Date: Bahr, Ryan Digitally signed by
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Date: 2022.09.20
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1. BACKGROUND

The purpose of this report is to describe and document the reconnaissance inspection at the Cleveland Cliffs Burns Harbor facility on August 29, 2022. This inspection was performed pursuant to Section 308(a) of the Federal Water Pollution Control Act, as amended. This was a joint inspection by EPA and the Indiana Department of Environmental Management (IDEM).

The Cleveland Cliffs Burns Harbor (CCBH) facility is one of the largest fully integrated steel mills in North America, with the capacity to produce approximately 5 million tons of raw steel per year. They operate under NPDES Permit No. IN0000175, which was issued on January 1, 2022, and expires on December 31, 2026.

The inspection on August 29, 2022 was a Compliance Evaluation Reconnaissance Inspection to discuss their Water Cannon and treatment lagoons. The inspectors also wanted to observe the outfalls while on site.

2. SITE INSPECTION

Site Entry and Opening Conference

Arrival Time:	9:00 A.M.
Presented credentials?	Yes.
Credentials presented to whom and at what time?	9:25 A.M. to Tom Maicher, Pat Gorman, Morgan Swanson, Joyce Casillas, and Vinod Barot.
Was an opening conference held? With whom?	Yes. Ms. Swanson, Mr. Maicher, Mr. Gorman, Ms. Casillas, and Mr. Barot.

If photographs or documents were taken, does the facility consider any to be Confidential Business Information (CBI)?	No.
Which information does the facility consider to be CBI?	None.
EPA vehicle parked in approved location?	Yes.
Location where EPA vehicle was parked?	Environmental Services Building.

EPA inspector, Ms. Joan Rogers, and IDEM inspectors Mr. Nick Ream, Mr. Ramelito Biscocho, Ms. Margaret (Maggie) Hayes, and Ms. Alyssa Ruthkay, followed Ms. Swanson to the Environmental Services Building conference room from the main office after EPA and IDEM inspectors received their visitor badges. During the opening conference at 9:30 A.M., the inspection team explained that the focus of the inspection was to discuss the operations of the Water Cannon and the treatment lagoons, but other areas would also be discussed and observed.

Treatment Lagoons

The inspection began with a discussion about the sludge in the influent channel of the treatment lagoons. The facility had previously identified that there was significant buildup of sludge in the influent channel which was reducing the flow capacity. Facility representatives have been exploring ways to remove the sludge without causing permit violations from stirring up TSS and oil. A plan to do a five-day trial to dredge the sludge is anticipated for Fall 2022 and would use passive management of silk curtains and oil socks to capture any oil that is released from the sludge. The facility may also use active management of coagulants and flocculants and would work with IDEM if they choose to do that. Mr. Gorman stated that the company would want to be able to immediately complete the project if the five-day trial is successful.

Plans to dredge the lagoons themselves is a longer-term goal as there is sufficient capacity in the lagoons currently. A project to dredge the lagoons would not be as complicated as the influent channel because the facility can isolate one lagoon at a time.

Currently, there are six aerators in the treatment lagoons. Their purpose is mainly for temperature reduction. The current permit, like previous permits, allows for the use of return flows from the lagoons to cool the blast furnaces in the event of an emergency.

During the inspections in June and July, EPA observed that there was vegetation on the weirs of the lagoons. Mr. Gorman stated that following the July inspection, facility personnel went in boats to try to clean the weirs. The effort was deemed too risky for safety and water quality. The facility is not incurring effluent violations from the vegetation built up on the weirs.

EPA and IDEM requested a copy of the Lagoon Core Sample that was completed in 2012 and a copy of the 2020 WWTP lagoon Hydrographic Survey. Ms. Swanson provided those documents to EPA and IDEM inspectors on August 30, 2022.

Water Cannon

The discussion then turned to the operations and use of the Water Cannon, which is used to cool the water in the Storm Ditch before flowing to Outfall 001. The source of the water for the Water Cannon is Lake Michigan. Facility representatives stated that the Water Cannon is equipped with a 24-hour flow meter and a daily report is generated automatically. The flow is reported in NetDMR and the amount of ammonia introduced into the Storm Ditch by the Water Cannon is subtracted out from the total at Outfall 001. Facility representatives in Central Dispatch monitor pH and temperature and will call the Environmental Services personnel if they think the Water Cannon needs to be turned on. Other departments can also turn on the Water Cannon.

The capacity of the Water Cannon is 20,000 GPM and the July average was 6,600 GPM. There have been no temperature violations in 2022 at Outfall 001.

Facility Walkthrough

See Attachment A for the photolog of the photos taken during the facility walkthrough. EPA and IDEM concluded the interview portion of the inspection at 10:14 A.M. and stated that they would like to observe the Water Cannon, the treatment lagoons, and Outfall 002, Outfall 003, Outfall 011, and Outfall 001.

Outfall 003

The inspectors followed the facility personnel to Outfall 003 and arrived at 10:21 A.M. The inspectors did not observe any issues with Outfall 003 on the day of the inspection and observed Perch and Rainbow Trout in the pond at the Outfall.

Outfall 002

The inspectors followed the facility personnel to Outfall 002 and arrived at 10:40 A.M. Prior to the July inspection, Mr. Barot designed and installed a spray bar at the head of the outfall structure. The spray consisted of recirculated lake water and was intended to knock down the foam in the outfall. Since then, Mr. Barot designed and installed a second spray bar closer to the end of the outfall structure. This spray bar is intended to knock down any foam that escapes the first spray bar. Both spray bars run continuously.

On the day of the inspection there was a small amount of foam on the outside of the permanent boom within the outfall structure. There was no foam observed at the soft boom outside the outfall structure.

Mr. Barot checks on the spray bars daily, and anecdotally stated that he believes that the increase in fish that he has observed around Outfall 002 is due to the increase in Dissolved Oxygen from the spray bars.

Water Cannon

At 11:02 A.M., EPA and IDEM arrived at the Water Cannon along the Storm Ditch. EPA observed the Mag Meter that was installed in the pipe that feeds water to the Water Cannon from Lake Michigan. EPA also observed the control panel and electronics for the Water Cannon and Mag Meter. Facility representatives were unsure if the meter was calibrated regularly. After the inspection, on August 30, 2022, Ms. Swanson sent an email confirming that the magnetic flowmeter is calibrated annually, and the most recent calibration was completed on July 16, 2022. On September 2, 2022, Ms. Swanson sent an email with an attachment titled, "MEU Power and Utilities Magnetic Flowmeter Calibration Verification Report" for the annual flow meter calibration completed on October 28, 2021.

Outfall 011

The inspection team arrived at Outfall 011 with the facility personnel at 11:21 A.M. While passing the weirs of the lagoons, EPA observed that there was vegetation growing on the weirs.

EPA and IDEM inspectors observed the composite sampler. The temperature on the inside, as read from a thermometer in water, was 4.0°C. The display on the composite sampler stated the temperature was also 4.0°C. The tubing was last changed on July 6, 2022 and was slightly discolored on the day of the inspection. The water by Outfall 011 was clear on the day of the inspection. The temperature of the water at Outfall 011 was 86.4°F and had a pH of 8.

The inspectors observed the temperature log for the refrigerator for the reagent for the daily Total Residual Chlorine monitoring. The temperatures were all at or below 4°C. The reagent's expiration date was February 12, 2023.

Treatment Lagoons

EPA and IDEM arrived at the treatment lagoons at 11:29 A.M. EPA again observed the vegetation on the weirs. Five of the six aerators were on, three in the North Lagoon and two in the South Lagoon. EPA, IDEM and the facility personnel drove along the berm between the lagoons going from east to west. The weirs and outfall for the lagoons are on the east side of the lagoons and the headers for the influent to the lagoons are on the west side. While driving on the berm between the lagoons, EPA observed vegetation growing out of the berms of both lagoons such that the berms could not be observed for structural integrity.

There are headers along the west end of both lagoons to allow the influent flow to disperse across the lagoons evenly. EPA observed vegetation growing in the header space and in the west end of each lagoon such that the flow was not being allowed to flow evenly. At the south end of the South Lagoon, it did not appear to have any flowing water at that location. Facility personnel did not know when the last time that vegetation was cut in the header or on the berms.

Outfall 001

At 11:50 A.M., the inspection team arrived at Outfall 001. EPA did not observe a sheen in the receiving waterbody on the day of the inspection. EPA observed that the temperature in the auto-sampler was 2.5°C. The tube was not discolored on the day of the inspection and was last changed on July 6, 2022. EPA also observed the weir upstream of the sample housing building and it looked intact and there was no debris caught on it.

EPA and IDEM provided a brief closing conference at Outfall 001 and then exited the area at 12:06 P.M.

3. DOCUMENTS RECEIVED FROM FACILITY

- None

4. AREAS OF CONCERN

- A. The vegetation on the berms of the treatment lagoons prevents facility personnel from inspection and evaluating the berms for structural integrity.
- B. The vegetation in the lagoons and in the headers on the west side of the treatment lagoons is causing the influent to not flow into the lagoons in a uniform manner.

5. LIST OF ATTACHMENTS

- A) Photolog