



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET, SW
ATLANTA, GEORGIA 30303-3104

ELECTRONIC MAIL
CONFIRMATION OF RECEIPT REQUESTED

Mr. Stan Atkins
Steel Dynamics Inc.
1945 Airport Road
Columbus, Mississippi 39701
Email: stan.atkins@steeldynamics.com

Re: Compliance Evaluation Inspection
Steel Dynamics Columbus MS Wastewater Treatment Facility
National Pollutant Discharge Elimination System Permit No.: MS0059994

Dear Mr. Atkins:

The U.S. Environmental Protection Agency Region 4 and the Mississippi Department of Environment Quality (MDEQ) conducted a Compliance Evaluation Inspection (CEI) of the above Wastewater Treatment Facility on June 8, 2022. Enclosed are the CEI report and photographs taken during the CEI.

The EPA's inspection noted concerns as outlined in the enclosed CEI report. If you have specific questions regarding this CEI, please contact Mr. Richard Elliott, of my staff, at (404) 562-8691 or via email at elliott.richard@epa.gov.

Sincerely,

Castillo, Jairo

Digitally signed by
Castillo, Jairo
Date: 2022.08.10 12:24:34
-04'00'

Jairo Castillo, P.E., Chief
Wastewater Enforcement Section
Water Enforcement Branch

Enclosure

cc: Michelle Clark
Mississippi Department of Environment Quality
Email: MRCClark@mdeq.ms.gov

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4

Enforcement and Compliance Assurance Division

Water Enforcement Branch

61 Forsyth Street, SW

Atlanta, Georgia 30303



COMPLIANCE EVALUATION INSPECTION REPORT

Steel Dynamics, Inc. WWTF

1945 Airport Road

Columbus, Mississippi 39701

NPDES Permit No. MS0059994

Facility Address:

1945 Airport Road

Columbus, Mississippi 39701

Inspection Date:

June 08, 2022

Inspectors:

Richard Elliott, P.E., Environmental Engineer, EPA Region 4

Tristan Odekirk, Environmental Engineer, EPA Region 4

Ronald Patton, MDEQ

Inspection Report Prepared by:

Richard Elliott, P.E.

July 26, 2022

Project ID: CV- MS-0059994-06-08-2022

COMPLIANCE EVALUATION INSPECTION REPORT
Steel Dynamics, Inc.

Title and Approval Signature Page

Title: Compliance Evaluation Inspection Report
Steel Dynamics, Inc. Columbus, MS

Enforcement Officer:

**RICHARD
ELLIOTT**

Digitally signed by
RICHARD ELLIOTT
Date: 2022.08.10 12:59:41
-04'00'

Richard Elliott, P.E., Environmental Engineer
Wastewater Enforcement Section
Water Enforcement Branch

Date

Approving Official:

Castillo, Jairo

Digitally signed by Castillo,
Jairo
Date: 2022.08.10 12:24:03
-04'00'

Jairo Castillo, P.E., Chief
Wastewater Enforcement Section
Water Enforcement Branch

Date

COMPLIANCE EVALUATION INSPECTION REPORT
Steel Dynamics, Inc.

Compliance Evaluation Inspection
Steel Dynamics, Inc. Columbus, MS
NPDES Permit No. MS0059994

I. INTRODUCTION

On June 8, 2022, representatives from the United States Environmental Protection Agency, Region 4, and representatives from the Mississippi Department of Environment Quality (MDEQ) conducted a Compliance Evaluation Inspection (CEI) of Steel Dynamics Inc., Wastewater Treatment Facility (WWTF). The purpose of the CEI was to evaluate the facility's compliance with its National Pollutant Discharge Elimination System (NPDES) permit and to inspect the wastewater infrastructure at the facility. The inspection was conducted under the authority of Section 308 of the Clean Water Act (CWA), as amended. This narrative report presents the results of the inspection.

The following people were present at this inspection:

<u>Name</u>	<u>Organization/Title</u>	<u>Telephone</u>
Richard Elliott	US EPA/Inspector	404-562-8691
Tristan Odekirk	US EPA/Inspector	404-562-9295
Ronald Patton	MDEQ/Inspector	601-961-5522
Stan Atkins	Steel Dynamics	662-245-4242
Anna Chappell	Steel Dynamics	662-245-4262

II. INSPECTION PROCEDURES

This facility was targeted for inspection because it has had multiple NPDES effluent exceedances in the last 12 quarters. Specifically, the facility was found to be in Significant Non-Compliance (SNC) for the following effluent parameters: Copper, Cyanide, Iron, and Oil & grease. The overall objective of this CEI was to evaluate the cause(s) of these violations and to evaluate compliance with the other requirements of the NPDES Permit. Specific tasks included conducting interviews with the operators, reviewing facility records, and conducting a site visit of the treatment facility.

III. FACILITY DESCRIPTION

Steel Dynamics is one of the largest domestic steel producers and metal recyclers in the United States. The Columbus, MS operations is part of the company's flat rolled division producing

COMPLIANCE EVALUATION INSPECTION REPORT
Steel Dynamics, Inc.

rolled and coated sheet steel. The WWTF combines acidic process wastewater with cooling water that has had direct contact with product or machinery during the manufacturing process.

The combined effluent is equalized, neutralized by the addition caustic soda and clarified before discharge to a holding pond. The process utilizes four Equalization tanks, two Neutralization tanks and three 40-ft diameter clarifiers. Effluent pH is controlled during treatment and synthetic polymers are used to aid settling and metal precipitation. A Dissolved Air Floatation (DAF) separator is used to treat wastewater from a separate manufacturing area that produces coated steel. Effluent from the DAF is combined with acidic and direct contact wastewater in an equalization tank. DAF effluent is then treated as described above before discharge. Final effluent from the pond is discharged into an unnamed tributary to Gilmer Creek. The facility is permitted under the NPDES permit number MS0059994.

IV. FIELD EVALUATION

1. Permit

The NPDES permit became effective on April 01, 2022, and expires on March 31, 2027. The WWTF does not have a flow permit limit. The facility treats 45 to 60 Gallons per Minute of wastewater. The amount of wastewater treated depends on how much raw material the plant is processing.

2. Records/Reports

Monthly Operating Reports (MORs) and Discharge Monitoring Reports (DMRs) and records for several months in 2022 were checked for agreement with NPDES self-monitoring program requirements regarding sampling documentation, equipment calibration, and reporting of parameter concentrations and loadings. The self-monitoring records, including the chain of custody records, calibration sheets, laboratory bench sheets, and commercial laboratory results, were maintained for a minimum of three years. Spot checking of NPDES monitoring data elements was conducted and the data reviewed was found to be consistent and accurately reported.

3. Operation & Maintenance

The WWTF is staffed 24 hours per day for seven (7) days per week. The operators work on shifts to operate the WWTF. Routine maintenance of the facility is conducted by plant personnel, but specialized maintenance is done by contractors as needed.

Polymers are added to the wastewater to enhance flocculation and settling. Wastewater is clarified and the sludge formed is processed by a plate-press before being hauled to a landfill for disposal. Effluent from the clarifier is further treated in lagoons before being discharged to the receiving stream. The facility has had difficulties meeting permit limits for Copper and Iron.

COMPLIANCE EVALUATION INSPECTION REPORT
Steel Dynamics, Inc.

4. Sludge Handling

The WWTF utilizes a press to reduce the water content of the sludge that is removed from the bottom of the clarifiers. Effluent from the filter press is returned to the beginning of the treatment process and the solids are hauled to the County landfill.

5. Sampling/Laboratory

All NPDES required samples are collected by a contractor including in-situ testing, calibration and recording. All laboratory analyses are conducted by a commercial laboratory. The facility collects samples according to the sampling frequencies and sample type described in the permit. The contract laboratory collected samples at the required frequency. Composite samples are collected for Chromium, Copper, Cyanide, Iron, Lead, Zinc and Total Suspended Solids (TSS) analyses. Grab samples are collected for pH, Naphthalene, Oil & Grease and Tetrachloroethylene analyses.

Calibration logs of instruments used for in-situ testing are maintained. All NPDES test methods conformed to 40 CFR 136 according to the commercial laboratory results. This facility will likely experience continued difficulties in consistently meeting effluent limits without significant improvements.

The commercial laboratory is:

Waypoint Analytical Laboratory
235 Highpoint Dr
Ridgeland, MS 39157
601.957.2676

This commercial laboratory was not evaluated.

6. Flow Measurement

The daily flow from the WWTF varies depending on production at the facility. The facility has the capacity to treat 45 to 60 Gallons per Minute. There is no flow limit in the permit. Flow from the facility is measured at the outfall using a Parshall flume and ultrasonic depth measure meter.

COMPLIANCE EVALUATION INSPECTION REPORT
Steel Dynamics, Inc.

7. Effluent and Receiving Waters

The final effluent was free of floating solids, visible sheen and other debris. Slight foaming was observed at the discharge point. The receiving water was not observed due to inaccessibility at the time of inspection.

V. RECOMMENDATIONS

- a. The facility should consider hiring an outside contractor to investigate and ascertain the reason for the Copper and Iron effluent limit exceedances.
- b. The facility should consider installing additional tankage to provide redundancy in clarification and neutralization processes.



Figure 1: *Left* – Pond & discharge weir. *Right* – Effluent from Pond prior to flow measurement.

End of Report