CLEAN WATER ACT INSPECTION REPORT
U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION 5

Purpose: Inspection Report – National Pollutant Discharge Elimination System Permit, Industrial Stormwater

Facility: Ellwood Engineered Castings, 7158 Hubbard Masury Road, Hubbard, Ohio 44425

NPDES Permit Number: OH0011801

Dates of Inspection: July 26, 2022

Facility Representatives:
Nathan Cesene, Project Engineer, ncesene@elwd.com

Report Prepared by:
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I. INTRODUCTION

I. A. Site Entry and Inspection Objectives

Region 5 Lead Inspector, Jessica Stromsdorfer, arrived at Ellwood Engineered Casting (the "Site," "Ellwood," or "Facility"), located at 7158 Hubbard Masury Road, Hubbard, Ohio, at 9:00 AM (ET) on 7/26/2022 for an unannounced inspection. Region 5 Lead Inspector presented her credentials to Nathan Cesene and informed the Site that this was a Region 5 inspection to determine compliance with the Clean Water Act (CWA) and the National Pollutant Discharge Elimination System (NPDES) permit program. The inspection was conducted under the authority of EPA Region 5's National Pollutant Discharge Elimination System (NPDES) permit program and Section 308 of the Clean Water Act (CWA).

This report is based on information supplied by Ellwood Engineered Casting representatives, observations made by the Region 5 inspector, and records and reports maintained by the permittee and Region 5 including: direct observations made by Region 5 Inspector(s), photographs taken by Region 5 inspector(s), physical evidence collected by Region 5 inspector(s), measurements taken by Region 5 inspector(s), verbal or written statements made by information supplied by Ellwood Engineered Casting representatives(the permittee) during or subsequent to the on-site Inspection, and materials, processes, data, photographs, or documents shown, demonstrated, or submitted to Region 5 inspector(s) by Ellwood Engineered Casting representatives during or subsequent to the on-site Inspection. In addition, information gathered prior to or after the Inspection from a review of USEPA, State, and public records may be included in this report.

The following personnel were involved in the CWA inspection of the Ellwood Facility:

ELLWOOD:	Nathan Cesene, Project Engineer
EPA:	Jessica Stromsdorfer, CWA inspector Ben Atkinson, CWA inspector

I. B. Facility/Site Description

This was a CWA NPDES direct discharger and industrial storm water inspection. The Facility is an iron foundry that produces iron castings used for the steel making industry. According to the Facility representatives, the steel and iron scrap foundry only operates at night to conserve energy costs and only uses non-contact cooling water. In 2020, the Facility also began operation of Ellwood Aluminum, which processes aluminum scrap, producing wastewater. Product is stored both inside and outside.

The Facility's stormwater plan provides the following description of the property:
Approximately 25% of the site is paved with asphalt or covered with buildings. The remaining area is covered with gravel, grass, and low vegetation. Stormwater flow from surface and roof areas is directed to catch basins that flow to Outfalls 005, 006, 007. Outfall 004 discharges treated sanitary wastewater only. Outfall 005 discharges non-contact cooling water and stormwater from the wet extended detention basin on the southwest corner of the site, which collects water from the operation on the western side of the site including the Meltshop, Scrap Yard, Maintenance Building, and Security Office. The Facility is governed under NPDES Permit No. OH0011801 for the discharges to the Little Yankee Run and Little Yankee Run Reservoir.

The Facility has outfalls for non-contact cooling water, treated sanitary wastewater, and stormwater containing treated process wastewater. According to the storm drainage map provided by the Facility after the inspection, the property has three designated drainage areas for stormwater. Stormwater on the western 35.5 acres of the property drains to a a wet extended basin on the southwestern corner of the property, which discharges to Outfall 005. Stormceptors at Outfalls 006 and 007 are also connected to the

basin. On the northwest part of the property, Outfall 004 discharges 14 acres of stormwater and the treated sanitary wastewater. On the eastern part of the property, stormwater from about 25.7 acres flows to Outfall 001. Process wastewater is monitored at Internal Monitoring Station 601 and discharges through Outfall 008.

II. OBSERVATIONS

The inspection began with an opening conference in the administrative building. Three Ellwood representatives were present, including: Nathan Cesene, Facilities Manager; Scott Ball, Safety Specialist; and Hank Stull; Human Resources Specialist. The Region 5 lead inspector provided a CBI warning to the facility. There was discussion on the necessary PPE for a tour of the Site. The EPA inspection team then conducted a tour of the production areas, excluding the melt shop, which is inactive during day hours and does not use process water.

Inspectors walked from the administrative office east to view the Pattern Shop, Foundry, and Ellwood Aluminum buildings, viewing the indoor processes as well as the eastern stormwater drainage area and Outfalls 006, 007, 001, 008, and 002. The inspection team walked along the southern part of the property to view the stormwater basin, Outfall 005, and drainage area to 005. Inspectors then walked north along the west side of the property to view the Water Treatment Plant and Outfalls 004 and 003 and 004 drainage area.

Inspectors and Mr. Cesene discussed the creation and reclamation of patterns and molds at the Facility. The Facility produces custom solid metal products by pouring molten metal into molds they design and create. In the Pattern Shop, these patterns for molds are created from wood or styrofoam. According to Mr. Cesene, there is a closed loop boiler and sprinkler in the building and no drains.

Casting the molds involves the use of a sand-like ceramic material, which is pumped into the Foundry building from trucks outside, used to create molds, then reclaimed. Inspectors observed spilled ceramic material at the location where material is pumped in from a truck (Photo 10) and spilled reclaimed ceramic sand near a silo (Photo 7).

Ceramic sand is hardened through use of sulfuric acid and a resin binder. Due to varying weather throughout the year, sulfuric acid of different strengths is used. During most seasons, the Facility uses acid and binder that are stored in permanent 5,000-gallon tanks in the Foundry building (Photo 11). At other times, totes of acid are used instead (Photo 9). Inspectors observed empty acid totes east of the Pattern Shop (Photo 8). Mr. Cesene explained that drainage in this production area goes through stormceptors at Outfalls 006 or 007, which flow to the stormwater basin. Outfall 007 did not have signage near the inlet; inspectors estimated that the sign was about 20 yards away (Photos 14, 18). Inspectors noticed that some catch basins in this drainage area had sediment traps and others did not (Photos 3, 5). Mr. Cesene explained that some catch basins have inlet bags (Photos 31, 33).

Inspectors and Mr. Cesene discussed the use of chemically treated water in aluminum processing. A chemical mixture is added to water that is used to cool and treat molded aluminum. The Water Treatment Building houses those chemicals. Inspectors observed process water chemicals without secondary containment (Photos 12, 13, 20, 21, 25). Mr. Cesene states that staff checks water quality weekly. Inspectors viewed the internal monitoring location, Internal Monitoring Station 601 (Photos 15, 16). Aurora Environmental conducts the sampling at this location.

The inspection team viewed the process water treatment area (contact cooling water system) and observed a belt skimmer removing oil from wastewater. It was observed during the inspection that the skimmer had

been adapted from the manufacturer design to collect the skimmed oil in an empty chemical tote, allowing oil spillage (Photos 26, 27). Mr. Cesene stated that the skimmer has been operating like that since the aluminum shop was built and they plan to add a rope skimmer.

The inspection team viewed metal scrap and products stored indoors and outdoors along the eastern and southern edge of the property. According to the Facility stormwater collection map, much of this material was beyond the stormwater drainage areas (Photo 34) with uncontained scraps visibly entering vegetated area near the water (Photo 35, 43). Inspectors observed more material near waterway without a berm or structure to prevent the material from entering the waterway (Photos 36, 37, 39, 40). Mr. Cesene described recent and future changes to the storage area along the southern part of the property, including:

- The product storage area was graded within the week leading up to the inspection.
- Within a week, the Facility plans to move scrap to add concrete bays and catch basins within four weeks.
- The Facility is working with the Army Corps of Engineers to determine if they can fill an area on the south side of the property.

Adjacent to the metal piles, the inspection team viewed the manhole for Outfall 008, where process wastewater is directed (Photos 41, 42). Mr. Cesene explained that the manhole was previously not protected from stacked product and the lid had been knocked off, causing inflow in December of 2021. Inspectors viewed Outfalls 008, 001, and 002, and observed a film on the water below Outfalls 001 and 008 (Photos 44-46). Outfall signs 002, 005, 003 were obscured or on the ground (photo 47, 60, 70). According to Mr. Cesene, Outfalls 003, 002, and 001 were eliminated when the basin was added, and all basin effluent exits Outfall 005. This is reflected in a permit modification effective since November 1, 2020.

The inspection team went inside the Ellwood Aluminum building to observe the aluminum production and how the water is used in the process (Photos 48-50). Within and upon exiting the building, inspectors saw resin tanks without secondary containment (Photos 51-53) and ceramic sand near a catch basin (Photo 54).

The inspection team viewed the stormwater basin and Outfall 005 (Photos 58-63). Next, they visited the sanitary wastewater treatment area (Photo 67). The treatment process includes a holding tank, digester, sand filter, and UV disinfection. The effluent continuously discharges, and the operator refers to pumps 1 and 2 to measure the flow since the sampler at Outfall 004 does not work (Photos 68, 69). The part of the property that drains to 004 does not include any production areas.

III. RECORDS REVIEW

The following documents were received following the inspection, by request:

- Most recent cyanide sampling log/lab results for Outfalls 005, 006 and 007 (June 2022)
- Sludge removal report (March 2022)
- SWPPP (included in ICP plan)
- SWPPP annual report (2021)
- SWPPP monthly report (June 2022)
- DMR's: April, May, June 2022
- Stormwater/Catch Basin map
- SPCC (included in ICP)
- Compliance notifications/documents from Ohio EPA (2021, 2022)
- NPDES permit

IV. AREAS OF CONCERN

The presentation of areas of concern does not constitute a formal compliance determination or violation.

Area of Concern	Finding
Effluent Quality	Effluent limit violations – sporadic, but ongoing exceedances at Outfalls 004 and 008 since 2018. (Ammonia, total suspended solids, aluminum, iron, lead, zinc, oil & grease, oxygen demand.)
	Benchmark value exceedances at Outfalls 006 and 007. Specifically, aluminum, copper, total suspended solids, zinc.
	Film observed on waterway below Outfall 008.
Pollutant Containment	Insufficient controls (grading, berms, erosion control) observed in scrapyard, allowing potential discharge of metals and untreated stormwater. Scrap metal observed beyond contained stormwater flow area.
	Process waste observed in collection area to Outfalls 006 and 007 (where only stormwater is permitted). Specifically, spilled ceramic material, skimmed oil from contact cooling water.
	Process materials without secondary containment. Specifically, Water treatment chemicals, resin tanks.
Reporting & Submissions	Failure to submit full DMRs in 2021.
	No Benchmark Controls analysis reported. N/A written on 2021 SWPPP annual report question about benchmark exceedances, despite the occurrence 2021 exceedances.
Other	Nonfunctioning flow meter for Outfall 004.
	Outfall signage is inconsistent. Specifically, some are obscured, down, or distanced.

V. CLOSING CONFERENCE AND FOLLOW UP

The Region 5 Lead Inspector held a closing conference for the inspection with Facility personnel then exited the facility at 1:20 PM (ET) on 7/26/2022. During the closing conference, Region 5 Lead Inspector discussed the observations and Areas of Concern identified during the inspection. Observations and Areas of Concern have not yet been evaluated for a formal compliance determination.

The group discussed the following areas of concern at the closing conference:

- Secondary containment in process water room,
- Manhole sign,
- Belt skimmer, and
- Metal and untreated stormwater could spill over into waterway.