



REGION 5

CHICAGO, IL 60604

MEMORANDUM

SUBJECT: CLEAN AIR ACT INSPECTION REPORT
National Galvanizing L.P., Monroe, Michigan

FROM: Daniel Schaufelberger, Environmental Scientist
AECAB (MI/WI)

THRU: Sarah Marshall, Section Supervisor
AECAB (MI/WI)

TO: File

BASIC INFORMATION

Facility Name: National Galvanizing L.P.

Facility Location: 1500 Telb Road, Monroe, MI

Date of Inspection: 05/29/2024

EPA Inspector(s):

1. Daniel Schaufelberger, Environmental Scientist

Other Attendees:

1. Frank Belanger, General Manager, National Galvanizing L.P.
2. Joe Castiglione, Quality/Environmental Manager, National Galvanizing L.P.

Contact Email Address: frank.belanger@nationalgalvanizing.com

Purpose of Inspection: To determine compliance with the Clean Air Act

Facility Type: steel pickling and galvanizing

Regulations Central to Inspection: NESHAP Subpart CCC and Michigan SIP

Arrival Time: 1:25 PM (Eastern)

Departure Time: 3:10 PM (Eastern)

Facility Name: National Galvanizing L.P.
Facility Location: 1500 Telb Rd, Monroe, MI
Date of Inspection: May 29, 2024

Inspection Type:

- ☒ Unannounced Inspection
- ☐ Announced Inspection

OPENING CONFERENCE

- ☒ Presented Credentials
- ☒ Stated authority and purpose of inspection
- ☒ Provided Small Business Resource Information Sheet
- ☒ Provided CBI warning to facility

The following information was obtained verbally from Frank Belanger and Joe Castiglione unless otherwise noted.

Process Description:

National Galvanizing L.P (National Galvanizing or facility) performs pickling and galvanizing of carbon steel coils. The pickling process removes oxidation scale from the surface of the received steel coil by passing the steel strip through pickle tanks containing an HCl solution. The National Galvanizing facility utilizes a push-pull process whereby the flat-rolled carbon steel coils are un-coiled and pushed into the pickling line on one end and pulled and re-coiled out of the pickle line on the other end. After immersion in the three pickle tanks, the steel strip is rinsed in a water tank, and dried, prior to re-coiling. The HCl fumes emitted from the pickle line and associated storage tanks are collected and directed to a 3-tray wet scrubber and demister prior to being vented through a stack to the atmosphere. Water from the wet scrubber is neutralized with NaOH and discharged for treatment by the city.

The cleaned and pickled steel coil is galvanized (i.e., a zinc coating applied to the steel surface) in a continuous steel galvanizing line. The steel coil is unwound and directed to a furnace where it is heated to approximately 1,100 F in a hydrogen/nitrogen atmosphere. This process removes impurities from the steel prior to galvanization. The steel is then passed through a galvanizing pot, containing molten zinc, where a layer of zinc is applied to the steel. The zinc coating is cut to a desired thickness, and the galvanized coil is cooled and rewound.

Staff Interview: The hot dip galvanizing line at the National Galvanizing facility was installed in 1984. At that time, the facility galvanized steel coils that were received at the facility already pickled. The facility's pickle line was installed in 1989. The line is capable of pickling steel strip that is 72 inches wide and up to ½ inch thick. The HCl solution in the pickle line tanks operate at temperature of approximately 185 degrees Fahrenheit and up to 12 percent by weight (wt%) HCl. The virgin HCl is received and stored at the facility at an HCl concentration of 20 wt%. The pickle line scrubber is maintained approximately 2-3 timer per year. The facility measures pressure drop (inches of water) across the scrubber. The pickle line is operating at approximately 300,000 tons of steel per year.

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National Galvanizing has plans to replace all of their pickle tanks and the wet scrubber next year. The pickle tanks will be of a new design. The two virgin HCl tanks were replaced in 2016-2017.

TOUR INFORMATION

EPA Toured the Facility: Yes

Data Collected and Observations:

Following an opening conference, EPA began a tour of the facility at approximately 2:00 PM. The tour viewed steel coils in the finished product area, the continuous galvanizing line; which included the furnace, burners, molten zinc, zinc blocks, and air knives - used to adjust the thickness of the zinc coating. The tour continued on to view the natural gas fired back-up reciprocating generator and the 12.8 MMBtu/hr natural gas fired boiler. Lastly, the tour viewed the steel pickling line, the wet scrubber, the water treatment area, and the HCl loading area. The tour concluded and EPA and National Galvanizing representative re-convened at the conference room to close-out.

Photos and/or Videos: were not taken during the inspection.

Field Measurements: were not taken during this inspection.

RECORDS REVIEW

National Galvanizing provided a 16-page document, generated by their environmental consultant August Mack Environmental, with a subject line of "Air Emissions Inventory, National Galvanizing, Monroe, Michigan." This document, dated September 11, 2018, summarized the consultant's analysis of the facility's criteria pollutant and HAP emissions.

CLOSING CONFERENCE

☒ Provided U.S. EPA point of contact to the facility

Requested documents:

- Requested any stack test reports the facility has for their pickle line scrubber stack

DIGITAL SIGNATURES

Report Author: DANIEL
SCHAUFELBERGER
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SCHAUFELBERGER
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Section Supervisor: SARAH
MARSHALL Digitally signed by
SARAH MARSHALL
Date: 2024.06.12
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