REGION 5
CHICAGO, IL 60604

MEMORANDUM

SUBJECT: CLEAN AIR ACT INSPECTION REPORT
Cleveland-Cliffs – Tek & Kote, New Carlisle, Indiana

FROM: Jason Schenandoah, Environmental Engineer
AECAB (IL/IN)

THRU: Nathan Frank, Section Supervisor
AECAB (IL/IN)

TO: File

BASIC INFORMATION

Facility Name: Cleveland-Cliffs - Tek & Kote (Cleveland Cliffs)

Facility Location: 30755 Edison Rd, New Carlisle, IN 46552

Date of Inspection: September 4, 2024

EPA Inspector(s):

1. Jason Schenandoah, Environmental Engineer
2. Sasa Dunovic, Environmental Engineer

Other Attendees:

1. Gene Hankey, Division Manager, Cleveland Cliffs
2. John Fujawa, Finishing Plant Support Process Manager, Cleveland Cliffs
3. Walter Tamukong, Corporate Program Director for Regulation and Permitting, Cleveland Cliffs*
4. Wayne Steelman, Program Manager for Environmental Compliance, Cleveland Cliffs
5. Julie Neiner, Environmental Administrative Assistant, Cleveland Cliffs
6. Aaron Langness, Plant Manager, Cleveland Cliffs
7. Dan Nimtz, President of USW Local 9231, Cleveland Cliffs
8. Cody Behler, Process Mechanic, Cleveland Cliffs
9. Patrick Kohne, Operations Manager, Cleveland Cliffs
10. Aaron Varmette, Tandem Mill Mechanic, Cleveland Cliffs
11. Michael Sczcepanek, Process Mechanic, Cleveland Cliffs
12. Mike Wilkie, Operations Manager, Cleveland Cliffs

13. Mike Bensen, Operations Manager, Cleveland Cliffs
14. Paul Karkiewicz, Air Compliance Inspector, Cleveland Cliffs

Contact Email Address: eugene.hankey@clevelandcliffs.com

Purpose of Inspection: To evaluate emission control units at the facility.

Facility Type: Steel processing facility

Regulations Central to Inspection: Emission units at the facility are subject to permit emission limits.

Arrival Time: 9:25 am
Departure Time: 2:30 pm

Inspection Type:
☒ Unannounced Inspection
☐ Announced Inspection

OPENING CONFERENCE

☒ Presented Credentials
☒ Stated authority and purpose of inspection
☐ Provided Small Business Resource Information Sheet
☒ Small Business Resource Information Sheet not provided. Reason: Not a small business
☒ Provided CBI warning to facility

The following information was obtained verbally from Cleveland Cliffs personnel unless otherwise noted.

Company Ownership: Prior to December 2020, the facility was owned and operated as a joint venture between ArcelorMittal and Nippon. In December 2020, Cleveland Cliffs bought out ArcelorMittal and subsequently bought out Nippon next and became the sole owner of the facility.

Process Description:
Hot band metal coils arrive from Indiana Harbor to the facility via rail for that day's operations; no hot band is stored at the facility. Hot band is first processed through the continuous descale cold mill (CDCM). In the CDCM, coils are first welded together end to end and then fed into the CDCM. The coils are rolled over a series of pinch rollers to break off the scale formed on the hot band coils before entering an acid bath of 18% hydrochloric acid to pickle the coil and remove iron oxides. After the acid bath the coils are trimmed to the customer's desired width before entering the tandem cold mill (TCM). In the TCM, the thickness of the coils is reduced to customer specifications by pressing the coil through a series of rolls. The coil is then rerolled and cut. From the TCM, the coils can go to either the continuous anneal process line (CAPL) or the continuous galvanizing line (CGL). Emissions from the

welding and pinch roll operations are controlled via baghouses. Emissions from the acid bath are controlled via a scrubber and emissions from the TCM are controlled via a mist eliminator.

Coil entering the CAPL is first welded together in the front of the line. It then enters a caustic bath of 2-2.5% NaOH to remove oils from the coil. It then enters a furnace where the coil is heated, followed by a "soak" section that maintains the coil at a constant temperature, and finally it enters a cooling section where it is air cooled and then quenched. The amount of time that the coil remains in each phase is dependent upon the product type. After the quench, the coils are sent to a nickel flash where the coil is sent through a bath of nickel solution. Finally, coils enter a temper mill where force and tension are placed on the coil to strengthen and create desired textures on the metal before being rolled up and cut to the desired length. Some coils from the CAPL are shipped directly to the customer, as is, while some product is sent to the electro galvanizing line (EGL). There is a scrubber that controls emissions from the caustic bath and another scrubber controls fumes post treatment.

Coils from the CDCM that go to the CGL are welded together and then sent through a caustic bath of 2-2.5% NaOH to remove oils from the coil. From the caustic bath the coil enters a furnace to be heated. The heated coil then enters a molten zinc bath; nitrogen is blown over the zinc covered coil to maintain the desired zinc thickness. The zinc coated coil is then sent through a cooling tower to be air cooled. The coil then enters a skin pass mill to be tempered for strength and desired texture. 30% of the product goes through a pre-phosphating coating process to add Chemphos to the surface. The Chemphos is added as a pretreatment for customers that treat the coils with phosphorus. Finally, the coils are rolled up and cut to length. Emissions from the caustic bath and the skin pass mill are each controlled by separate scrubbers.

At the EGL, some coils for processing come from the CAPL and others come from customers as cold rolls. The coils are welded together at the start and sent through caustic bath of 2-2.5% NaOH to clean oils from the coil. Zinc disolved in acid solution is then electroplated to the coil in the 24 cells of the electroplating line. Afterwards, the coil is rolled up and cut to length. Emissions from the pre-cleaning, cleaning, and plating sections are each controlled by an individual scrubber.

TOUR INFORMATION

EPA Toured the Facility: Yes

Data Collected and Observations:
Parametric data was recorded at the various emissions control systems throughout the facility and is listed below:

- CDCM welder baghouse pressure drop: 7.1" H_2O
- CDCM pinch roll baghouse pressure drop: 1.95" H_2O
- CDCM acid bath scrubber flow: 465 gallons/minute
- CDCM acid bath pressure drop: 5.5" H_2O
- CAPL cleaning section scrubber flow: 36.6 gallons/minute

- CAPL cleaning section scrubber pressure drop: 2.7" H_2O
- CAPL post treatment scrubber flow: 126 gallons/minute
- CAPL post treatment scrubber pressure drop: 8.0" H_2O
- CGL cleaning section scrubber flow: 66.2 gallons/minute
- CGL cleaning section scrubber pressure drop: 0.7" H_2O
- CGL skin pass mill scrubber flow: 36 gallons/minute
- CGL skin pass mill scrubber pressure drop: 2.09" H_2O
- EGL plating scrubber flow: 126 gallons/minute
- EGL cleaning scrubber pressure drop: 7.5" H_2O

When viewing the exhaust stack for the mist eliminator serving the TCM, there were visible emissions that appeared to include particulate matter and not just steam.

The CAPL post treatment scrubber pressure drop meter (PT-105P) readout was flashing when the pressure drop observation was made.

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

Field Measurements: were not taken during this inspection.

CLOSING CONFERENCE

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

Requested documents:

- Last two years' worth of parametric data for all emission units
- Documentation of corrective actions for any parametric data that was out of the permitted range for the last two years
- Preventative maintenance schedule for the TCM mist eliminator
- Latest performance test report for the TCM mist eliminator
- Date of the last TCM mist eliminator baffle change out prior to the latest performance test
- SDS for Chemphos
- Operations manual for PT-105P

DIGITAL SIGNATURES

Report Author: JASON SCHENANDOAH Digitally signed by JASON SCHENANDOAH Date: 2024.10.30 10:39:33 -05'00'

Section Supervisor: Frank, Nathan Digitally signed by Frank, Nathan Date: 2024.11.01 15:47:47 -05'00'