REGION 5
CHICAGO, IL 60604

MEMORANDUM

SUBJECT: CLEAN AIR ACT INSPECTION REPORT
Charter Steel, Cuyahoga Heights, Ohio

FROM: Carlo Demma
AECAB (MN/OH)

THRU: Brian Dickens, Section Supervisor
AECAB (MN/OH)

TO: File

BASIC INFORMATION

Facility Name: Charter Steel

Facility Location: 4300 East 49th Street Cuyahoga Heights, OH 44125

Date of Inspection: April 23, 2024

EPA Inspector(s):
1. Carlo Demma, Physical Scientist (Env.)

Other Attendees:
1. Jay, Lawniczak, Senior Environmental Engineer, Charter Steel

Contact Email Address: lawniczakj@chartersteel.com

Purpose of Inspection: Evaluate electric arc furnace and ancillary equipment's fugitive emissions, baghouse capture, and operational procedures.

Facility Type: Steel coil and iron bar manufacturing

Regulations Central to Inspection: The facility is subject to the opacity rules of Subpart YYYYY—National Emission Standards for Hazardous Air Pollutants for Area Sources: Electric Arc Furnace Steelmaking Facilities, which limit the fugitive opacity emissions to 6% on a six-minute average, and Charter Steel's Title V permit which restricts the periods of time during which the door at the west

end of the melt shop is open more than 6 feet above grade for the shortest period of time practicable (both in duration and frequency) to allow scrap cars to enter or exit the melt shop, and specifies requirements for the analysis of Melt Shop baghouse dust.

Arrival Time: 9:25AM
Departure Time: 1:15PM

Inspection Type:
☒ Unannounced Inspection
☐ Announced Inspection

OPENING CONFERENCE

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

The following information was obtained verbally from Jay Lawniczak unless otherwise noted.

Process Description:
Charter Steel operates an electric arc furnace (EAF) to make coil and special bar quality steel (SBQ) products. Over 90% of the material charged into the EAF is scrap, the reminder of the material added is lime, coal, and other alloys depending on job order. Electricity is used to melt and produce a steel heat. Each heat can last about 50 mins until tap. After slag off and tap the heat is transferred to a ladle car which takes it to the Ladle Metallurgy Furnace (LMF) where the heat is refined to specific specialty grades. Charter Steel can typically do about 23-25 heats per day. The DEC baghouse controls emissions from the metal bath when the electrode is activated. The canopy baghouse controls fugitive emissions associated with charging and tapping inside the Melt Shop. Most heats (nearly 80%) are sent to the vacuum tank degasser (VTD) for further refinement. The VTD is not controlled, as it operates under vacuum, that is connected to a steam ejector. The steel ladle is tapped into the tundish which casts into four individual strands of 6X6 billet by 28 feet long. The semi-finished product can become SBQ or coil as job order demands.

Staff Interview:
Facility personnel indicated to EPA that daily visible emission reads (VE's) are taken off the west side door. If the west side door becomes inoperable then the facility will perform USEPA Method 9 readings on every single heat, until it is fixed. Melt Shop baghouse dust reports are generated from a third-party recycler that Charter Steel uses to log chromium, magnesium, manganese, lead, zinc, and mercury content levels. The mercury levels were very low and nearly non-detect. As of March 2024, Charter Steel's production throughput was 600,647 tons (rolling summation).

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TOUR INFORMATION

EPA Toured the Facility: Yes

Data Collected and Observations:
During the tour, EPA monitored the Melt Shop for some time on the west side, but did not see any visible emissions emanating from the Melt Shop roof monitor. EPA did not perform Method 9 or Alt Method -082. EPA photographed the canopy pickup point at the top of the Melt Shop. EPA inspected the west side door for leaks, but did not see any VE's from the door. Later in the tour, EPA did note the presence of emissions emanating from the lower portion of the Melt Shop. Upon further inspection, the source of the emissions was determined to be a propped open door on the north side of the Melt Shop that led to a corridor which ultimately led to the Melt Shop's control room area. EPA then inspected the DEC's plenum pressure which read 10.5 inches/W.C. while in operation.

Photos and/or Videos: were taken during the inspection and are listed in Appendix A.

Field Measurements: were not taken during this inspection.

CLOSING CONFERENCE

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

Requested documents:

- Daily VE reads from melt shop baghouse stack from the previous 3 months.
- Quarterly reports for all of CY 2023 and 1st quarter of 2024.
- Most recent stack test of melt shop baghouse.
- Production throughput for all of CY 2023 and 1st quarter of 2024.
- One year worth (April 2023 to April 2024) of Melt Shop dust analysis reports.
- A copy of the Scrap Management Plan.

Concerns: EPA stated that propping the door open is a concern as, it allows emissions to subvert the roof monitor and control equipment. EPA stated that the doors to the Melt Shop should remain closed.

DIGITAL SIGNATURES

Report Author: CARLO DEMMA Digitally signed by CARLO DEMMA Date: 2024.06.18 08:21:54 -05'00'

Section Supervisor: BRIAN DICKENS Digitally signed by BRIAN DICKENS Date: 2024.06.18 13:20:12 -05'00'

APPENDICES

1. Appendix A: Digital Image Log and Digital Video Log

Facility Name: Charter Steel
Facility Location: 4300 East 49th Street
Date of Inspection: April 23, 2024

APPENDIX A: DIGITAL IMAGE LOG AND DIGITAL VIDEO LOG

Inspector Name: Carlo Demma **Archival Record Location:** Enf_CharterSteel_OH_24_InspRpt

Image Number	File Name	Date and Time (incl. Time zone and DST)	Description of Image
1	IMG_0490.JPG	4/23/2024 10:38	West Melt Shop door
2	IMG_0491.JPG	4/23/2024 10:38	West Melt Shop door_2
3	IMG_0492.JPG	4/23/2024 10:51	Charging EAF
4	IMG_0493.JPG	4/23/2024 10:56	Charging EAF
5	IMG_0494.JPG	4/23/2024 11:00	EAF Melt
6	IMG_0495.JPG	4/23/2024 11:00	EAF Melt
7	IMG_0496.JPG	4/23/2024 11:13	Melt Shop canopy pickup
8	IMG_0497.JPG	4/23/2024 11:13	Melt Shop canopy pickup_2
9	IMG_0498.JPG	4/23/2024 11:13	Melt Shop canopy pickup_3