UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, ILLINOIS 60604

DATE:	*See date of Section Chief signature below*
SUBJECT:	CLEAN AIR ACT INSPECTION REPORT Eramet Marietta, Inc., Marietta, Ohio
FROM:	Shilpa Patel, Environmental Engineer AECAB (MN/OH)
	Patrick Miller, Environmental Engineer AECAB (MN/OH)
THRU:	Brian Dickens, Section Chief AECAB (MN/OH)
TO:	File

BASIC INFORMATION

Facility Name: Eramet Marietta, Inc. (Eramet)

Facility Location: 16705 Ohio State Route 7, Marietta, Ohio 45750

Date of Inspection: August 17-19, 2021

EPA Inspector(s):
1. Shilpa Patel, Environmental Engineer
2. Patrick Miller, Environmental Engineer

Other Attendees:
1. Mitch Gillian, Plant Manager
2. Mark Carpenter, EHS Engineer

Contact Email Address: mark.carpenter@eramet.com

Purpose of Inspection: Determine compliance with 40 C.F.R. Part 63 Subpart XXX, including opacity limits on visible emissions from roof monitors by conducting offsite visible emission observations

Facility Type: Ferromanganese and silicomanganese production facility

Regulations Central to Inspection: 40 C.F.R § 63.1620 – 63.1679, including 63.1623(b)(3)

On-site Arrival Time: 9:15 AM
On-site Departure Time: 1:45 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 Mr. Gillian or Mr. Carpenter unless otherwise noted.

Process Description:
Eramet produces silicomanganese and ferromanganese from ore in two electric arc furnaces (EAFs) and the metal oxygen refining (MOR) process furnace. The ore is sorted and stored outside in piles. The ore contains about 48 percent manganese. Other raw materials include carbon, silicon, and iron. Furnace #1 produces silicomanganese and primary emissions from melting are controlled by a newly constructed baghouse. Furnace #12 produces ferromanganese and primary emissions from melting are controlled by a venturi scrubber. A third EAF, Furnace #18, is inoperable after suffering an upset that damaged the furnace.

Each furnace uses three electrodes to melt the ore. Metal and slag are formed in the furnace as the ore melts. The furnace is tapped and the molten metal and slag are cast into ladles through a runner. Furnace #1 has a hood over the tap hole and the ladle to help capture emissions during tapping and route them to the new baghouse. Furnace #12 does not have hoods over the tap hole and ladle but there is duct work near these areas. Slag, which is less dense and floats on top of the metal, overflows from the main transfer ladle into another smaller ladle. Once the transfer ladle is full, the furnace is plugged to end casting. The transfer ladle is then positioned at the next stage where slag is skimmed off the top surface of the ladle.

The transfer ladle is then brought to the MOR for refining. Once the target chemistry is reached, the metal is cast in fines on the ground. Emissions from the casting process are controlled by side draft hoods routed to the MOR baghouse. Once solidified and cooled, the metal is crushed and processed. Any smaller pieces and dust from baghouses can be reused in the process or sold as a product.

Staff Interview:

- Tap to tap time is 2 hours
- On April 28, 2017, EPA's Office of Air Quality Planning and Standards granted a variance to Eramet to use Method 9 versus Alternative Method 082 for opacity readings on the roof monitors. The variance expires June 20, 2023.

TOUR INFORMATION

EPA Tour of the Facility: Yes

EPA was onsite and toured the Facility on August 18, 2021. We observed the following operations:

- Furnace #12 during tapping and pouring into the ladle and observed the air emission capture system. Furnace 12 does not have hoods over the tap hole and ladle but there are two locations at which the nearby ductwork is open and some particulate generated by the furnace is pulled into the ductwork and ultimately controlled by the scrubber;
- Liquid metal transfer into the MOR; and
- Furnace #1 during tapping and pouring into the ladle and observed the air emission capture system. Furnace #1 has hoods over the tap hole and ladle that aid in capturing emissions.

Data Collected and Observations:
Offsite visible emission observations were conducted in accordance with EPA Alternative Method 082 on the roof monitor of #12 Furnace on August 17 and 19, 2021. Visible emissions were observed from the roof monitor of #12 Furnace in the morning and afternoon on August 17, 2021. Visible emissions on August 17, 2021 were analyzed in accordance with EPA Alternative Method 082. The highest 6-minute average opacity was 67%.

Photos and/or Videos: were taken during the inspection.

Field Measurements: were taken during this inspection.

- Visible emission observations were conducted on August 17 and 19, 2021. See Appendix B for opacity reports.

RECORDS REVIEW

- Reviewed examples of Eramet's visible emission observations that were requested; and
- Reviewed examples of baghouse bypass events and how they are documented for Furnace #1.

CLOSING CONFERENCE

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

Requested documents:

- Facility layout;
- VE Readings for each furnace and MOR for the last six months;
- Previous four quarters of deviation reports;
- Description/documentation of upgrades to emission capture and control equipment for NESHAP XXX; and
- Action Plan for Furnace #12 scrubber.

Concerns: EPA discussed concerns the lack of capture of emissions despite ductwork pickups near several locations at Furnace #12 and the potential for visible emissions out of the roof monitor.

DIGITAL SIGNATURES

Report Author: PATRICK MILLER Digitally signed by PATRICK MILLER Date: 2021.10.14 16:23:52 -05'00' _____

Section Chief: _____

APPENDICES AND ATTACHMENTS

1. Digital Image Log
2. Opacity Reports for August 17, 2021

Facility Name: Eramet Marietta Inc.
Facility Location: 16705 Ohio State Route 7, Marietta, Ohio 45750
Date of Inspection: August 19, 2021

APPENDIX A: DIGITAL IMAGE LOG

1. **Inspector Name:** Patrick Miller	2. **Archival Record Location:** Enf_Eramet Marietta Inc_OH_21/Enf_Eramet Marietta Inc_OH_21_Inspection/Photos

Image No.	File Name	Date and Time (Eastern)	Lat. and Long.	Description of Image
1	IMG_2151.JPG	2021:08:18 10:38:25		Furnace 12 Spout and Ladle
2	IMG_2152.JPG	2021:08:18 10:40:26		Furnace 12 Tapping
3	IMG_2153.JPG	2021:08:18 10:42:50		Furnace 12 Casting into Ladle
4	IMG_2154.JPG	2021:08:18 10:43:24		Furnace 12 Casting into Ladle with Emissions
5	IMG_2155.JPG	2021:08:18 10:43:49		Furnace 12 Casting into Ladle with Emissions
6	IMG_2156.JPG	2021:08:18 10:44:12		Furnace 12 Casting Hood Above Runner Spout and Side Hood
7	IMG_2157.JPG	2021:08:18 10:47:22		Furnace 12 Casting with Slag Overflowing into Second Ladle
8	IMG_2158.JPG	2021:08:18 10:50:52		Furnace 12 Casting with Slag Overflowing into Second Ladle
9	IMG_2159.JPG	2021:08:18 10:53:34		Furnace 12 Casting with Slag Overflowing into Second Ladle
10	IMG_2160.JPG	2021:08:18 10:55:23		Furnace 12 Plugging
11	IMG_2161.JPG	2021:08:18 11:01:46		Slag skimming of Ladle
12	IMG_2162.JPG	2021:08:18 11:02:47		Slag skimming of Ladle with Side Draft Opening
13	IMG_2163.JPG	2021:08:18 11:03:02		Slag skimming of Ladle with Emissions
14	IMG_2164.JPG	2021:08:18 11:03:08		Slag skimming of Ladle with Emissions
15	IMG_2165.JPG	2021:08:18 11:04:17		Slag skimming of Ladle with Emissions
16	IMG_2166.JPG	2021:08:18 11:05:22		Slag skimming of Ladle with Emissions
17	IMG_2167.JPG	2021:08:18 11:06:02		Slag skimming of Ladle with Emissions
18	IMG_2168.JPG	2021:08:18 11:06:14		Slag skimming of Ladle with Emissions
19	IMG_2169.JPG	2021:08:18 11:30:14		MOR before Transfer
20	IMG_2170.JPG	2021:08:18 11:32:19		MOR during Transfer
21	IMG_2171.JPG	2021:08:18 11:33:45		MOR after Transfer
22	IMG_2172.JPG	2021:08:18 12:33:10		#1 Furnace Baghouse
23	IMG_2173.JPG	2021:08:18 12:33:25		#1 Furnace Baghouse Gas Cooling and Duct Work
24	IMG_2174.JPG	2021:08:18 12:48:32		#1 Furnace Tapping
25	IMG_2175.JPG	2021:08:18 12:48:38		#1 Furnace Tapping with Hood Over Ladle
26	IMG_2176.JPG	2021:08:18 12:48:53		#1 Furnace Tapping
27	IMG_2177.JPG	2021:08:18 12:48:56		#1 Furnace Tapping

28	IMG_2178.JPG	2021:08:18 12:49:55		#1 Furnace Tapping
29	IMG_2179.JPG	2021:08:18 12:53:54		#1 Furnace Tapping Overfilled Ladle with Emissions
30	IMG_2180.JPG	2021:08:18 13:06:16		#1 Furnace Ladle Slag Skimming
31	IMG_2181.JPG	2021:08:18 13:06:25		#1 Furnace Ladle Slag Skimming
32	IMG_2182.JPG	2021:08:18 13:06:34		#1 Furnace Ladle Slag Skimming

APPENDIX B: OPACITY REPORTS FOR AUGUST 17, 2021