



REGION 5

CHICAGO, IL 60604

MEMORANDUM

SUBJECT: CLEAN AIR ACT INSPECTION REPORT
Amsted Rail Company, Inc., Groveport, Ohio

FROM: David Sutlin, Environmental Engineer
AECAB (MN/OH)

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

TO: File

BASIC INFORMATION

Facility Name: Amsted Rail Company, Inc.

Facility Location: 3900 Bixby Road, Groveport, Ohio 43125

Date of Inspection: November 6-8, 2023

EPA Inspector(s):

1. David Sutlin, Environmental Engineer
2. Sasha Letuchy, Environmental Engineer

Other Attendees:

1. Lila Jones, Attorney, Department of Justice
2. Susan Tennenbaum, Attorney, EPA Region 5 Office of Regional Counsel
3. Sophie Grueterich, Attorney, EPA Region 5 Office of Regional Counsel
4. Bobby Randhawa, Vice President, GCT
5. Tyler Govett, Sr. Mechanical Engineer, GCT
6. Samuel Boxerman, Attorney, Sidley Austin LLP
7. Robert Ribbing, Environmental Director, Amsted Rail
8. Paul Sheppard, Environmental Manager, Amsted Rail
9. Amy Kosbab, Environmental Manager, Amsted Rail
10. Additional attendees for Amsted Rail

Purpose of Inspection:

The main purpose of this inspection was to assess uncaptured emissions from the facility's two electric arc furnaces (EAFs) by collecting parametric data, taking field measurements, and recording videos of the EAFs in operation. This work was carried out primarily by Gas Cleaning Technologies, with assistance from EPA. In addition, EPA took opacity readings of emissions from the EAFs building's roof monitor and took differential pressure (DP) readings for various baghouses at the facility.

Facility Type: Steel Foundry

Regulations Central to Inspection: National Emission Standards for Hazardous Air Pollutants from Steel Foundry Area Sources; Title V Permit No. P0103976; Title V Renewal Permit No. P0119336.

The Title V permit states that the EAFs building's roof monitor has an opacity limit of 20% as a 6-minute average, that baghouses #7 and #10 each have an allowable DP range of 3 – 10 inches WC, baghouse #17 has an allowable DP range of 3 – 11 inches WC, and baghouse #5 has an allowable DP range of 4 – 10 inches WC.

November 6

Arrival Time: 9:00 AM

Departure Time: 4:30 PM

November 7

Arrival Time: 9:00 AM

Departure Time: 4:30 PM

November 8

Arrival Time: 9:00 AM

Departure Time: 1:15 PM

Inspection Type:

- ☐ Unannounced Inspection
☒ Announced Inspection

PROCESS DESCRIPTION

The facility casts wheels for rail cars. A charge bucket loads cold scrap and carbon additive into one of two EAFs. Occasionally there is a second charge several minutes after the first charge. Typically there is no heat of molten steel at the time of the initial charge. After a charge is completed, a cover moves into place and the electrodes are lowered into the EAF for the melt phase. During melting emissions are vented through a side draft hood to a single shaker, 12-compartment baghouse. During melting, slag is removed through a side door in the furnace. There is an emission capture hood over the slag door. Lime and oxygen are also injected into the EAF during melting. Once the melt phase is complete, the furnaces is tilted and the molten steel is tapped into a ladle. In order for tapping to occur, the EAF's tap hole is cleared either with a prybar or, if necessary, using an oxygen lance. There is a push/pull capture system installed on EAF2 to capture a portion of the tapping emissions. After tapping, the molten steel is poured into graphite molds, cooled, and then the wheel castings and molds are

processed through various downstream operations. These include cope and drag cleaners, hot wheel grinders, wheel cleaner, and peener & chamfer. These units are controlled by baghouses that are monitored for differential pressure.

TOUR INFORMATION

EPA Tour of the Facility: Yes

Data Collected and Observations:

EPA observed all phases of the EAF cycle for both EAF1 and EAF2, from various locations in the melt shop and from the control room. The majority of uncaptured emissions were observed during charging and tapping, with some uncaptured emissions observed during melting.

Since EPA's last inspection, the facility has modified its slag handling operation to allow slag to cool inside rather than outside the EAFs building, and then to load the slag onto trucks that pull into a building extension next to the slag pit. EPA toured the new slag handling building extension to better understand where and how slag is loaded onto the trucks. Because slag removal now occurs only on weekends, the actual loading operation could not be observed.

EPA recorded the following baghouse DP readings:

Emission Unit	Baghouse	DP Readings (In WC)	DP Limits (In WC)
Cope Cleaner (P002)	#7	5.5 – 10.5	3 – 10
Drag Cleaner, (P003)	#10	4 – 8	3 – 10
Grinders (P004, P005, P006)	#17	5.2	3 – 11
WCPC (P017, P018, P022)	#5	7.5 – 8.5	4 – 10

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

Field Measurements: were taken during this inspection.

- EPA took digital opacity video recordings of emissions exiting the EAFs building's roof monitor during operation of EAF1 and EAF2.

DIGITAL SIGNATURES

Report Author: **DAVID SUTLIN**  Digitally signed by DAVID SUTLIN
Date: 2024.01.04 15:22:38 -06'00'

Section Supervisor: **BRIAN DICKENS**  Digitally signed by BRIAN DICKENS
Date: 2024.01.04 15:40:43 -06'00'

Facility Name: Amsted Rail Company, Inc.
Facility Location: 3900 Bixby Road, Groveport, Ohio 43125
Date of Inspection: November 6-8, 2023

APPENDICES AND ATTACHMENTS

1. Appendix A: Digital Image Log

Facility Name: Amsted Rail Company, Inc.
Facility Location: 3900 Bixby Road, Groveport, Ohio 43125
Date of Inspection: November 6-8, 2023

APPENDIX A: DIGITAL IMAGE LOG

1. Inspector Names: Sasha Letuchy (1-2) and David Sutlin (3-9)	2. Archival Record Location: EPA Region 5 Electronic Records Center
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Image Number	File Name	Date and Time	Description of Image
1	PXL_20231108_142725363.jpg	2023:11:08 09:27:25	Overhead door to side opening of slag loading building extension
2	PXL_20231108_142735254.jpg	2023:11:08 09:27:35	Inside of slag loading building extension
3	PB080324.JPG	2023:11:08 10:05:48	Grinders DP Gauge
4	PB080325.MOV	2023:11:08 10:11:00	Cope Cleaner DP Gauge
5	PB080326.JPG	2023:11:08 10:11:36	Cope Cleaner DP Gauge
6	PB080327.JPG	2023:11:08 10:21:08	Drag Cleaner DP Gauge
7	PB080328.MOV	2023:11:08 10:22:00	Drag Cleaner DP Gauge
8	PB080329.MOV	2023:11:08 10:27:00	WCPC DP Gauge
9	PB080330.JPG	2023:11:08 10:27:49	WCPC DP Gauge