



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

SUBJECT: CLEAN AIR ACT INSPECTION REPORT
Atlas Foundry Company, Inc.

FROM: Dakota Prentice, Environmental Engineer
AECAB (IL/IN)

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

TO: File

BASIC INFORMATION

Facility Name: Atlas Foundry Company, Inc.

Facility Location: 601 N. Henderson Ave., Marion, Indiana

Date of Inspection: February 6, 2023

EPA Inspector(s):

1. Dakota Prentice, Environmental Engineer
2. Laura Neudorf, Environmental Engineer

Other Attendees:

1. LeRoy Welling, Project Engineer, Atlas Foundry Company
2. David V. Mulinaro, Air Compliance Inspector, IDEM

Contact Email Address: LeRoy Welling – leroy.welling@atlasfdry.com

Purpose of Inspection: to determine compliance with the facility's Federally Enforceable State Operating Permit (FESOP)

Facility Type: Gray Iron Foundry

Regulations Central to Inspection: National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries Area Sources at 40 C.F.R. Part 63, Subpart ZZZZZ

Arrival Time: 1:35 PM EDT

Facility Name: Atlas Foundry Company, Inc.
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Date of Inspection: February 6, 2023

Departure Time: 4:25 PM EDT

Inspection Type:

- ☒ Unannounced Inspection
- ☐ Announced Inspection

OPENING CONFERENCE

- ☒ Presented Credentials
- ☒ Stated authority and purpose of inspection
- ☒ Provided Small Business Resource Information Sheet – via email
- ☐ Small Business Resource Information Sheet not provided
- ☒ Provided CBI warning to facility

The following information was obtained verbally from LeRoy Welling unless otherwise noted.

Process Description:

Gray iron casting production begins with the delivery of raw materials. This raw material includes pig iron, brake rotors and drums, and slit steel. The facility also remelts scrap metal generated in house. The raw material is charged to one of two 9,000-pound electric induction furnaces (EIFs). At the completion of a furnace heat cycle, the molten metal is tapped into a 50,000-pound holding furnace. As needed, the holding furnace is tapped into one of two 3,000-pound traveling ladles where alloy ingredients, consisting of various metals (including copper, cobalt, tin, and carbon black), can be added manually. The traveling ladle allows the metal to be transported to the pour deck where the metal is added to one of two auto pour units with dedicated mold lines. The auto pour units pour the metal into molds that then move down a cooling section of the mold line. From the cooling line the molds move to shakeout, consisting of two rotary drum units that remove sand from the castings. The castings then travel through a series of finishing steps to remove sprues and runners, including two shotblast units, manual grinding, and robotic grinding, as needed. Approximately 30 tons per day of sand is sent off-site to a landfill.

The facility produces molds using lake sand, water, a clay binding agent, and pressure at a muller. A release agent is sprayed onto the compressed sand. The interior of the mold, the core, is produced using either a hot box or cold box technique. The hot box, or shell core, method uses a resin sand mixture with applied heat. The cold box method uses lake sand mixed with a two-part epoxy. This mixture is then exposed to amine gas to create the core. After formulation, a water-based dip is applied to the cores, and the cores are then sent through drying ovens.

Staff Interview: The facility is currently operating at a capacity of 100 tons per day of metal melted and poured. The EIFs use side draft hoods, which will be modified in conjunction with the replacement of the EIF existing baghouse (Baghouse E) in July of 2023. In 2021, the facility restarted the fans in the roof monitors, which improved air quality in the meltshop. The facility has multiple baghouses and one wet scrubber (wet collector) to control emissions from the

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numerous emission units onsite. Pressure drop at each baghouse is checked each morning, at minimum, and water flow, air flow, water pump amperage, and water temperature of the wet scrubber are monitored. The pressure drop operating point for Baghouse D is 3 to 9.5 inches of water (in H₂O), and the operating point for Baghouse A is 3 to 7 in H₂O. Method 9 readings are performed two times per year.

TOUR INFORMATION

EPA Tour of the Facility: Yes

Data Collected and Observations:

EPA observed the EIFs in operation and observed uncaptured emissions at the North Melt Furnace. A supplemental hood was placed on the North Melt Furnace following EPA's arrival to the meltshop. At the time of inspection, Baghouses A and D were each operating with a pressure drop of 5 in H₂O. The remaining emission units at the facility had already ceased operation for the day.

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

Field Measurements: were not taken during this inspection.

CLOSING CONFERENCE

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

Requested documents:

- The most recent performance test conducted at the facility;
- The basis of a claim of 50% capture at pouring/cooling documented in the facility's FESOP;
- Test results performed in association with the core cold box process, which generates volatile organic compound emissions;
- SDS for hot box core process resin;
- SDS for core dip material;
- SDS for mold release agent material;
- SDS for solvent used for degreasing;
- Design airflow of roof vent fans;
- Five years of annual floor sweepings disposal records;
- Five years of annual production records;
- A copy of the Scrap Management Plan;
- Six months of records for parameters monitored on all baghouses and the wet scrubber;
- Two years of Method 9 (Opacity) readings; and
- Three years of annual emission calculations and the associated spreadsheets.

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DIGITAL SIGNATURES

Report Author: DAKOTA
PRENTICE Digitally signed by
DAKOTA PRENTICE
Date: 2023.02.16
12:39:08 -06'00'

Section Supervisor: Frank,
Nathan Digitally signed by Frank,
Nathan
Date: 2023.02.17
14:25:46 -06'00'

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APPENDICES AND ATTACHMENTS

Appendix A: Digital Image Log

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APPENDIX A: DIGITAL IMAGE LOG

1. Inspector Name: D. Prentice	2. Archival Record Location: Region 5 Electronic Records Center
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Image Number	File Name	Date and Time (EDT)	Latitude and Longitude	Description of Image
1	IMG_0313.JPG	2023:02:06 13:53:58	NA	North Melt Furnace
2	IMG_0314.JPG	2023:02:06 13:58:10	NA	North Melt Furnace
3	IMG_0315.JPG	2023:02:06 14:00:22	NA	North Melt Furnace
4	IMG_0316.JPG	2023:02:06 14:02:40	NA	Location of New Baghouse E
5	IMG_0317.JPG	2023:02:06 15:36:10	NA	DISA A Cooling Line
6	IMG_0318.JPG	2023:02:06 15:47:21	NA	Wet Collector Operating Parameters