



REGION 5

CHICAGO, IL 60604

MEMORANDUM

SUBJECT: CLEAN AIR ACT INSPECTION REPORT
St. Marys Foundry Inc., St. Marys, Ohio

FROM: Meaghan Pashen, Environmental Engineer
AECAB (MN/OH)

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

TO: File

BASIC INFORMATION

Facility Name: St. Marys Foundry Inc.

Facility Location: 405 E. South Street, Saint Marys, Ohio

Date of Inspection: April 3, 2025

EPA Inspector(s):

1. Meaghan Pashen, Environmental Engineer
2. Olivia Davidson, Physical Scientist
3. David Sutlin, Environmental Engineer

Other Attendees:

1. Angela Dine Schmeisser, Director, St. Marys Foundry
2. Scott Anderson, Environment and Safety, St. Marys Foundry
3. Matt Pettus, Quality Manager, St. Marys Foundry
4. Craig Schmeisser, Environmental Consultant, St. Marys Foundry

Contact Email Address: adine@stmfoundry.com

Purpose of Inspection: Investigate compliance with National Emission Standards for Hazardous Air Pollutants (NESHAP) for Iron and Steel Foundries Area Sources Subpart ZZZZZ and Title V Permit P0134490 (the Permit).

Facility Name: St. Marys Foundry Inc.
Facility Location: 405 E. South Street, Saint Marys, OH
Date of Inspection: April 3, 2025

Facility Type: Small iron foundry

Regulations Central to Inspection:

NESHAP Subpart ZZZZZ at 40 CFR 63.10890, including the management practices and compliance requirements for small foundries.

The Permit at Condition (C)(16)(c)(b), including the requirement that “the permittee shall vent [furnace] emissions to a baghouse designed with a capture efficiency of 90% and a control efficiency of 99%.”

The Permit at Condition (C)(16)(d)(1), including the requirement that “the acceptable range established for the pressure drop across the baghouse is between 2 to 8 inches of water.”

The Permit at Condition (C)(16)(d)(2), including the requirement that “the permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across the baghouse when the controlled emissions units are in operation.”

The Permit at Condition (C)(16)(d)(3), including the requirement that “the permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stacks serving [furnace] emissions units.”

Arrival Time: 9:30 AM

Departure Time: 11:00 AM

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

Was any information collected during the inspection claimed as CBI?

☐ Yes ☒ No.

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

Company Ownership: Ariel purchased St. Marys Foundry Inc. in 2024.

Process Description:

St. Marys Foundry Inc. (the facility) is an iron foundry that manufactures large gray and ductile iron castings for the natural gas industry. Raw materials primarily include internal scrap, pig iron, steel busheling, and sand. Scrap is preheated before being charged into one of two electric induction furnaces (furnaces 1 and 2). If the facility is making ductile iron, inoculant is added into the ladle. Prior to tapping, the facility will add various alloys and materials to the ladle, including magnesium, molybdenum, copper, carbon, and flux, to achieve a desired chemistry in the melt. Pouring into molds and metal cooling occurs on the melt floor. Once castings solidify, they go through the shakeout process to remove castings from molds, which is controlled by a baghouse. Castings are then sent to heat treat ovens and finishing operations. Additionally, the facility has core making operations in four main rooms (A, B, C, and D rooms). Reclaimed sand is used for molds. Core mixers are controlled by dust collectors. After a graphite wash, cores are lit on fire for VOC combustion.

Staff Interview:

The facility is a small foundry under NESHAP Subpart ZZZZZ, and metal melt is limited to 14,400 tons/year. Furnaces 1 and 2 have a capacity of 20 tons each and rotate between gray and ductile iron. EPA requested annual emissions calculations, including methodology and emission factors, for the past three years.

The facility only pours at night due to electricity costs. Approximately 1 kilowatt is used during the day to slowly melt metal with full power not until 7 PM. Furnaces are covered during the day. Furnace cycle time varies depending on product. Metal pouring and cooling is uncontrolled.

The Permit requires the facility to vent furnace emissions to a baghouse designed with a capture efficiency of 90% and a control efficiency of 99%. The baghouse has not been stack tested. EPA requested furnace baghouse manufacturer's recommendations/operating manual. Visible emissions observations are taken at the baghouse stack. Facility personnel stated that the presence of visible emission at the baghouse stack and associated emission units is rare. Baghouse differential pressure is monitored daily. EPA requested the baghouse daily differential pressure readings for the past three months.

NESHAP Subpart ZZZZZ at 40 CFR 63.10890(a) requires compliance with pollution prevention management practices for metallic scrap. Scrap is inspected to prevent the use of restricted material. Steel busheling is run through a spectrometer. The facility does not use automotive scrap.

TOUR INFORMATION

EPA Toured the Facility: Yes

Data Collected and Observations:

EPA observed the furnaces. The facility was not pouring during the inspection; however the furnaces were holding metal at 2500 degrees Fahrenheit. The Permit requires the facility to properly install, operate, and maintain equipment to continuously monitor the pressure drop, in inches of water,

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across the baghouse when the controlled emissions units are in operation. During the inspection, baghouse pressure drop measured 0.8 inches of water. There are three ceiling exhaust fans in the melt area. Two of the fans exhaust to atmosphere, and the fan above the furnaces is routed to a baghouse. When the baghouse is in operation, the two fans exhausting to atmosphere are turned off. EPA observed the baghouse stack, and there were no visible emissions.

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:

- Material SDS sheets for inoculation material used at the facility;
- Furnace baghouse daily differential pressure readings for the past three months;
- Furnace baghouse manufacturer's recommendations/operating manual; and
- Annual emissions calculations, including methodology and emission factors, for the past three years.

DIGITAL SIGNATURES

Report Author: MEAGHAN PASHEN Digitally signed by MEAGHAN PASHEN
Date: 2025.05.28 16:39:11 -05'00'

Section Supervisor: BRIAN DICKENS Digitally signed by BRIAN DICKENS
Date: 2025.06.02 07:35:11 -05'00'