



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

**SUBJECT:** CLEAN AIR ACT INSPECTION REPORT  
St. Paul Brass and Aluminum Foundry, Saint Paul, MN

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

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

**TO:** File

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**BASIC INFORMATION**

**Facility Name:** St. Paul Brass and Aluminum Foundry

**Facility Location:** 954 W Minnehaha Avenue, Saint Paul, MN 55104

**Date of Inspection:** July 12, 2022

**EPA Inspector(s):**

1. Meaghan Pashen, Environmental Engineer
2. Dakota Prentice, Environmental Engineer

**Other Attendees:**

1. David Hartigan, Plant Manager

**Contact Email Address:** davidhartigan@stpaulfoundry.com

**Purpose of Inspection:** To determine facility compliance with National Emission Standards for Hazardous Air Pollutants (NESHAP) for Nonferrous Foundries (40 C.F.R. Part 63, Subpart ZZZZZZ (6Z)) with respect to leaded brass production.

**Facility Type:** Brass and Aluminum Foundry

**Regulations Central to Inspection:** NESHAP for Nonferrous Foundries (40 C.F.R. Part 63, Subpart 6Z), including the obligation to control emissions from each furnace (with some

exceptions), meet mass emission limits from the furnace, and ensure proper operation of the control device.

**Arrival Time:** 8:50 AM

**Departure Time:** 10:15 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: Provided with inspection report.
- ☒ Provided CBI warning to facility

The following information was obtained verbally from David Hartigan unless otherwise noted.

**Process Description:**

The process begins with the delivery of raw material including lead, nickel, zinc, and magnesium, which are common alloys added to brass. The raw material for brass and bronze production, including lead, is melted in two, 2,000 pound (lb) coreless induction furnaces. Melting furnaces are equipped with covers. After metal is melted in furnaces and final alloy addition is complete, it is then tapped into a ladle. There is a hood for emission capture at ladle transfer. After tapping, the material is poured into molds. The facility produces molds using either green sand or air set sand. There is one hood for emission capture at pouring in the green sand department. The sand is removed from the casting and reclaimed where possible. Finishing operations include grinding and tumble blast processes.

**Staff Interview:** The facility produces brass, bronze, and aluminum castings. Currently production is Monday through Friday from the hours of 4:00 AM to 2:30 PM. Annual metal melt production is less than 6,000 tons, designating the facility a small foundry. Subpart 6Z requires enclosure of each melting furnace during melting operations. The leaded brass is not always handled at a controlled furnace.

**TOUR INFORMATION**

**EPA Tour of the Facility:** Yes

**Data Collected and Observations:**

EPA walked the production process. Few to no emissions were observed at the furnaces. There are two baghouses associated with the furnaces. Subpart 6Z requires monitoring and maintenance to ensure emission capture unit performance. EPA requested the records related to emission capture units. It is unclear whether the baghouse associated with the belt grinder is vented to the atmosphere. This baghouse does not have a differential pressure gage. EPA requested documents related to the baghouse at the belt grinder.

**Photos and/or Videos:** were 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:**

- Notice of Compliance Status for NESHAP for Nonferrous Foundries (40 C.F.R. Part 63, Subpart 6Z);
- Information on the baghouse at the belt grinder; and
- Most recent stack tests for dust collectors and any other air emission units.

**Compliance Assistance:** EPA recommended that leaded brass be handled at a controlled furnace.

**Concerns:** EPA expressed concern that emissions generated during leaded brass production are not consistently controlled at each production step. EPA also expressed concern that the baghouse for the belt grinder inside the facility has no differential pressure gage, limiting the facility's ability to monitor the effectiveness of the device.

**DIGITAL SIGNATURES**

Report Author: Pashen, Meaghan Digitally signed by Pashen, Meaghan  
Date: 2022.08.15  
10:51:39 -05'00'

Section Supervisor: Brian Dickens Digitally signed by Brian Dickens  
Date: 2022.08.15  
11:37:19 -05'00'

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**APPENDICES AND ATTACHMENTS**

1. Appendix A – Digital Image Log

**Contains Items Claimed as CBI – Non-Releasable**

**Facility Name:** Saint Paul Brass and Aluminum Foundry

**Facility Location:** 954 W Minnehaha Avenue, Saint Paul, MN 55104

**Date of Inspection:** July 12, 2022

**CONFIDENTIAL BUSINESS INFORMATION ATTACHMENT**

**Facility Name:** Saint Paul Brass and Aluminum Foundry

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**Date of Inspection:** July 12, 2022

Saint Paul Brass and Aluminum Foundry has claimed Image Number 6 as confidential business information.

**Facility Name:** Saint Paul Brass and Aluminum Foundry  
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**APPENDIX A: DIGITAL IMAGE LOG**

|                                          |                                                                  |
|------------------------------------------|------------------------------------------------------------------|
| <b>1. Inspector Name:</b> Meaghan Pashen | <b>2. Archival Record Location:</b> R5 Electronic Records Center |
|------------------------------------------|------------------------------------------------------------------|

| <b>Image Number</b> | <b>File Name</b> | <b>Date and Time (incl. Time zone and DST)</b> | <b>Latitude and Longitude</b> | <b>Description of Image</b> |
|---------------------|------------------|------------------------------------------------|-------------------------------|-----------------------------|
| 1                   | IMG_0134.JPG     | 07/12/2022<br>10:00 AM CST                     | Not available                 | Natural gas ladle heaters   |
| 2                   | IMG_0136.JPG     | 07/12/2022<br>10:01 AM CST                     | Not available                 | Clam furnaces               |
| 3                   | IMG_0137.JPG     | 07/12/2022<br>10:01 AM CST                     | Not available                 | Clam furnaces               |
| 4                   | IMG_0138.JPG     | 07/12/2022<br>10:03 AM CST                     | Not available                 | Aluminum furnace            |
| 5                   | IMG_0139.JPG     | 07/12/2022<br>10:03 AM CST                     | Not available                 | Aluminum furnace            |
| 6                   | IMG_0140.JPG     | 07/12/2022<br>10:05 AM CST                     | Not available                 | Dust collector at cleaning  |

Note: Image Number 6 contains confidential business information