

**DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Scheduled Inspection**

B563552449

FACILITY: WOLVERINE BRONZE CO		SRN / ID: B5635
LOCATION: 28178 HAYES RD, ROSEVILLE		DISTRICT: Southeast Michigan
CITY: ROSEVILLE		COUNTY: MACOMB
CONTACT: Kevin Barrickman , HSE Coordinator		ACTIVITY DATE: 02/12/2020
STAFF: Shamim Ahammod	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Conducted a scheduled inspection of Wolverine Bronze Company (SRN#B5635)		
RESOLVED COMPLAINTS:		

On Wednesday, February 12, 2020, Michigan Department of Environment, Great Lakes and Energy (EGLE) - Air Quality Division (AQD) staff, I, Shamim Ahammod, conducted a scheduled inspection of Wolverine Bronze Company (SRN#B5635) located at 28178 Hayes Road, Roseville, Michigan. The purpose of the inspection was to determine the facility's compliance with the requirements of the federal Clean Air Act; Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451) and the Air Pollution Control Rules and Permit to Install (PTI) Nos. 43-16, 164-11, 114-95A, 806-90 and 896-79.

INSPECTION & REGULATORY ANALYSIS

I arrived at the facility at approximately 11:00 AM. I entered the Customer Service office and identified myself to a member of the office staff. This staff member directed me to Mr. Kevin Barrickman from Wolverine Bronze Company. I introduced myself to Mr. Barrickman and stated the purpose of the inspection. During the pre-inspection meeting, we discussed PTI Nos. 43-16, 164-11, 114-95A, 806-90 and 896-79.

SOURCE DESCRIPTION

The facility is a non-ferrous foundry. The facility primarily casts aluminum alloys, but also uses bronze, copper and beryllium alloys. The facility casts parts primarily for the automotive and aerospace industries. The facility consists of plant 1, plant 2, plant 3 and pattern shop.

REGULATORY ANALYSIS

The facility is currently classified as a synthetic minor source with an opt-out permit (PTI No. 164-11). The facility also holds the follow permits to install: PTI Nos. 43-16, 114-95A, 806-90 and 896-79. Additionally, the facility has a number of emission units for which are under exemptions or listed as grandfathered from permitting.

The facility is subject to the Aluminum, Copper and other Nonferrous Foundries Area Sources NESHAP, Subpart ZZZZZZ.

PTI No. 43-16

On September 12, 2016, PTI No. 43-16 was issued to install and operate a pair low-pressure crucible aluminum melting furnace (EULOWPRESSURE1 and EULOWPRESSURE2) and two reverberatory aluminum melting furnaces (EUEASTDEV and EUWESTDEV).

- At the time of inspection, melting furnaces, EULOWPRESSURE1, EULOWPRESSURE2, and EUEASTDEV were operating, except EUWESTDEV.

FGLPFURNACES

A pair low-pressure crucible aluminum melting furnaces heated by electric resistance, with a bath capacity of 1,200 pounds each, is located in Plant 2 South (Low Pressure Casting Plant). The furnaces are indexed, meaning the two furnaces do not melt simultaneously or pour simultaneously.

Emission Units: EULOWPRESSURE1, and EULOWPRESSURE2

Emission Limits

NA

MATERIAL LIMITS

Material	Actual amount Based on permittee's record from January through December 2019	Limit	Compliance
SC I.1. Aluminum charged to furnace	1000 lbs/day	3.3 tons/day	Yes
SC I.2. Total flux charged to furnace	≤0.66 lbs/day	7 lb / day	Yes

Per SC II.3, the permittee shall not melt in FGLPFURNACES any material other than clean charge, or customer returns, or internal scrap, as defined by 40 CFR Part 63 Subpart RRR. Mr. Barrickman made sure that they are not melting in FGLPFURNACES any material other than clean charge, or customer returns, or internal scrap.

Process/Operational Restrictions

Per SC III.2, permittee does not feed charge to both EULOWPRESSURE1 and EULOWPRESSURE2 simultaneously.

Monitoring/Recordkeeping

Per SC VI.2, the permittee keeps records of the weight and description of all charge materials and fluxing materials or agents added to FGLPFURNACES on a daily basis.

FGDEVFURNACES

Two reverberatory aluminum melting furnaces located in Plant 3.

Emission Units: EUEASTDEV, EUWESTDEV

Pollution Control Equipment: NA

Material Limits

Material	Actual amount Based on permittee's record from January through December 2019	Limit	Compliance
SC II.1. Aluminum charged to furnace	≤3050 lb	26.4 tons / day	yes
SC II.2. Total flux charged to furnace	≤4 lb	17.5 lb / week	yes

Per II.3, the permittee does not melt in FGDEVFURNACES any material other than clean charge, or customer returns, or internal scrap, as defined by 40 CFR Part 63 Subpart RRR. **RRR)**

Monitoring/Recordkeeping

Per VI.1, the permittee keeps records of the weight and description of all charge materials and fluxing materials or agents added to FGDEVFURNACES on a daily basis. The permittee also calculates the total flux materials added to FGDEVFURNACES on a weekly basis.

PTI No. 114-95A

On February 9, 2012, EGLE-AQD issued the PTI No. 114-95A to the facility to install and operate two natural gas-fired aluminum melting furnace (EUFURNACE5 and EUFURNACE6). At the time of inspection, EUFURNACE5 and EUFURNACE6 were not in operation. Mr. Barrickman informed me that they have not been operated these units since January 2019.

PTI No. 164-11

On February 9, 2012, EGLE-AQD issued the PTI No. 164-11 for the FGFACILITY - all process equipment source-wide including equipment covered by other permits, grand-fathered equipment and exempt equipment.

The following conditions apply Source-Wide to: FGFACILITY

POLLUTION CONTROL EQUIPMENT: Various particulate control equipment

EMISSION LIMITS

Pollutant	Actual emissions Based on Permittee's record from January through December 2019	Limit	Equipment	Testing / Monitoring Method	Compliance
SC I.1, PM	≤0.3 tpm	Less than 7.5 tons per month	FGFACILITY	SC VI.3	Yes
SC I.2, PM10	≤0.2 tpm	Less than 7.5 tons per month	FGFACILITY	SC VI.3	Yes
SC I.3, VOC	≤0.19 tpm	Less than 7.5 tons per month	FGFACILITY	SC VI.3	Yes
SC I.4, Individual HAP	Was less than 0.75 tpm	Less than 0.75 tons per month	FGFACILITY	SC VI.3	Yes
SC I.5, Aggregate HAPs	≤0.04 tpm	Less than 1.87 tons per month	FGFACILITY	SC VI.3	Yes

MATERIAL LIMITS

Material	Actual Metal melted Based on Permittee's record from January through	Limit	Equipment	Testing / Monitoring Method	Compliance

	December, 2019				
SC II.1, Metal Charged	≤64.4 tons per month	1,641.3 tons per month	FGFACILITY	SC VI.2	Yes
SC II.2, Sand Processed in Mechanical Mixers	≤539.8 tons per month	13,262 tons per month	FGFACILITY	SC VI.2	Yes
SC II.3, Phenolic Urethane Binder Processed in Mechanical Mixers	≤6 tons per month	132.6 tons per month	FGFACILITY	SC VI.2	Yes

MONITORING/RECORDKEEPING

Per VI.2, the permittee keeps the following information on a monthly basis for FGFACILITY:

- Metal charge records in tons per calendar month.
- Sand processed in mechanical mixers records in tons per calendar month.
- Phenolic urethane binder usage in tons per calendar month.

I reviewed the records and found the permittee satisfies the SC VI.2.a-c and more details stated in material limits section (SC II.1-3).

Per VI.3, the permittee maintained the following information on a monthly basis for FGFACILITY:

- PM, PM10, and VOC emission calculations determining the monthly emission rate in tons per calendar month.
- Individual and aggregate HAP emission calculations determining the monthly emission rate of each in tons per calendar month.

I reviewed the records and found the permittee satisfies the SC VI.3.a-b and these requirements have been verified in emission limit section (SC I.1-5).

PTI No. 896-79

PTI No. 896-79 was issued to install and operate the relocated woodworking operations and cyclone dust collector located at 28178 Hayes Avenue, Roseville, MI. At the time of inspection, cyclone dust collector was not in operation.

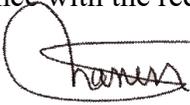
PTI No. 806-90

On 2/6/1980, PTI No. 806-90 was issued to install and operate return sand reclamation system. At the time of inspection, sand reclamation system was in operation. Per SC 15, I did not observe any visible emission. Per SC 17, the cyclone and baghouse are installed with the sand reclamation system. The permittee did not replace the filters in last several years. However, the following things are done to the dust collector by the maintenance department of the facility on as needed basis.

- Grease motors on Blower and Rotary Valve
- Grease blower bearing
- Grease rotary valve
- Check condition of belts and chain
- Check condition and operation of unit
- Check condition of Filters
- Visually check unit for leaks

The dust collector is also equipped with Magnehelic and Photohelic pressure gauges which are monitored visually during startup of the sand reclamation system. These gauges are monitored electronically while the system is operating keeping track of the pressure in the dust collector.

In conclusion, based on the on-site inspection, reviewing records, Wolverine Bronze Company is in compliance with the requirements of PTI Nos. 43-16, 164-11, 114-95A, 806-90 and 896-79.

NAME 

DATE July 22, 2020

SUPERVISOR 