

B3259
Manilla

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

B325941470

FACILITY: METROPOLITAN ALLOYS CORP	SRN / ID: B3259
LOCATION: 17385 RYAN, DETROIT	DISTRICT: Detroit
CITY: DETROIT	COUNTY: WAYNE
CONTACT: Henry Szybowicz , Safety & Quality Manager	ACTIVITY DATE: 09/13/2017
STAFF: Jorge Acevedo	COMPLIANCE STATUS: Non Compliance
SUBJECT:	SOURCE CLASS: MINOR
RESOLVED COMPLAINTS:	

COMPANY NAME :Metropolitan Alloys
FACILITY ADDRESS :17385 Ryan, Detroit, MI
STATE REGISTRAT. NUMBER :B3259
SIC CODE :4911
EPA SOURCE CLASS : ~~04~~ Minor
EPA POLLUTANT CLASS : N,C
LEVEL OF INSPECTION : PCE
DATE OF INSPECTION :09/13/17
TIME OF INSPECTION : 2:10 PM
DATE OF REPORT : 09/13/17
REASON FOR INSPECTION : Annual Compliance Inspection.
INSPECTED BY : Jorge Acevedo
PERSONNEL PRESENT : Henry Szybowicz
FACILITY PHONE NUMBER :
FACILITY FAX NUMBER :

INSPECTION NARRATIVE:

On September 13, 2017 AQD Inspector Jorge Acevedo conducted a scheduled inspection of Metropolitan Alloys Corporation. The purpose of the inspection was to determine the facility's compliance with Permit to Install 30-08A. I arrived in the vicinity of the facility around 2:00PM. I observed the facility stacks and did not observe any opacity from the stacks. I entered the facility and met with Henry Szybowicz, Safety and Quality Manager. I explained the purpose of the visit to Mr. Szybowicz. Mr. Szybowicz gave me a brief overview of the facility and led me onto the plant floor for the inspection. I observed several furnaces operating at the time of my inspection. Mr. Szybowicz explained that the furnace #50 is basically a continuous cast as it charges pure zinc to the furnace. The furnaces are all gas fired reverberatory furnaces. Next I observed furnace 30 and 100. Each are ducted to a baghouse as each furnace charges around 90% zinc and 10% alloy. Furnace 30 had a temperature of 1145 degrees Fahrenheit. Furnace 90 and 100 were observed next. I observed two presses that were used to cut final products. Finally, Mr. Szybowicz showed me the warehouse where raw materials were stored. I observed the baghouse which appeared to be in good working order. The baghouse was emptied into three 55 gallon drums. I did not observe any excess material around the drums. Mr. Szybowicz showed me the pressure drop monitoring system. The pressure drop at the time of my inspection was 7 inches of water. There is an alarm set for anything below 6 inches of water. Mr. Szybowicz explained that the temperature monitoring is done and an alarm goes off at a certain set point. After observing the facility, we went back to Mr. Szybowicz's office and I requested records that are required by the Permit to Install. I requested records for the 12 month rolling number of batches. Mr. Szybowicz went and got the records for the 50 Furnace but said he would have to get back to me regarding the other Furnaces. I asked for flux records and Mr. Szybowicz explained that he wasn't sure about this and would have to get back to me. Looking at the records for the 50 Furnace, it appeared that the facility exceeded the limit set in their permit. I explained to Mr. Szybowicz that I would have to send a Violation Notice to the facility for the exceedance of batches. I said I would evaluate the other records and get back to him. I left the facility at 4:10PM. Mr. Szybowicz, in follow up correspondence provided the number of batches for each furnace for the previous two years.

FACILITY BACKGROUND

The Metropolitan Alloys Corporation Facility is a wholesaler of zinc that sells product to electroplating facilities and facilities that manufacture electrical wiring products. The foundry is a secondary zinc production facility. The facility maintains five reverberatory melting furnaces identified as Furnace #30,

Furnace #50, Furnace #80, Furnace #90, and Furnace #100. The facility also maintains a baghouse dust collector that is used to control emissions from Furnace #30 and Furnace #100. This facility is a minor source of particulate emissions and is subject to subpart TTTTTT NESHAP for Secondary Nonferrous Metals Processing Industry. Currently, the DEQ does not have delegation to enforce subpart TTTTTT, as this authority remains with U.S. Environmental Protection Agency.

COMPLAINT/COMPLIANCE HISTORY

There have not been any citizen complaints registered nor violations issued against Metropolitan Alloys Corporation.

OUTSTANDING CONSENT ORDERS

None

OUTSTANDING LOVs

None

OPERATING SCHEDULE/PRODUCTION RATE

PROCESS DESCRIPTION

Basically clean zinc scrap is purchased and charged to any of five natural gas-fired reverberatory melt furnaces. The molten zinc is then poured into molds of various shapes and sizes. Fugitive emissions may emit during this process.

Furnace #30 was installed in 1988 and is currently down for relining. The furnace is used in secondary zinc production by melting zinc dross and zinc scrap with aluminum addition. Aluminum addition is typically 10% to 15% per batch. Emissions from the furnace are controlled by a baghouse that exhausts through a stack. The melted zinc is poured into molds. The molds are quenched with recirculating water with steam venting through a roof vent.

The furnace capacity is as follows:

- Maximum heat input capacity of 5.0 million British thermal units (mmBTU) per hour
- Maximum batch capacity of 60,000 pounds
- Maximum throughput of 3,600,000 pounds per year
- Maximum throughput of 0.21 tons per hour based on yearly throughput

Furnace #50 was installed in 1989, Wayne County Permit No. C-7641 was issued on April 10, 1989. The furnace is used in secondary zinc production by melting pure zinc, Emissions from the furnace exhaust through a stack identified as S-50. The melted zinc is poured into molds.

The furnace capacity is as follows:

- Maximum heat input capacity of 3.5 million British thermal units (mmBTU) per hour
- Maximum batch capacity of 50,000 pounds
- Maximum throughput of 3,900,000 pounds per year
- Maximum throughput of 0.22 tons per hour using yearly throughput

Furnace #80 was installed in 1988. The furnace is used in secondary zinc production by melting pure zinc with aluminum addition, Aluminum addition is typically 10% to 15% per batch. Emissions from the furnace exhaust through a stack identified as S-80. The melted zinc is poured into molds. The molds are quenched with water only with steam venting through a roof vent.

The furnace capacity is as follows:

- Maximum heat input capacity of 7.0 million British thermal units (mmBTU) per hour
- Maximum batch capacity of 110,000 pounds
- Maximum throughput of 6,600,000 pounds per year
- Maximum throughput of 0.38 tons per hour using yearly throughput

Furnace #90 was installed in 1988. The furnace is used in secondary zinc production by melting high grade zinc with aluminum addition. Aluminum addition is typically 10% to 15% per batch, Emissions from the furnace exhaust through a stack identified as S-90. The melted zinc is poured into molds. The molds are quenched with water only with steam venting through a roof vent.

The furnace capacity is as follows:

- Maximum heat input capacity of 6.0 million British thermal units (mmBTU) per hour
- Maximum batch capacity of 60,000 pounds
- Maximum throughput of 3,600,000 pounds per year
- Maximum throughput of 0.21 tons per hour using yearly throughput

Furnace #100 was installed in 1988. The furnace is used in secondary zinc production by melting zinc dross and zinc scrap. Emissions are controlled from the same baghouse as Furnace #30. The melted zinc is poured into molds

The furnace capacity is as follows:

- Maximum heat input capacity of 7.0 million British thermal units (mmBTU) per hour - Maximum batch capacity of 85,000 pounds
- Maximum throughput of 9,800,000 pounds per year
- Maximum throughput of 0.56 tons per hour using yearly throughput

EQUIPMENT AND PROCESS CONTROLS

5 Gas Fired Reverberatory Furnaces
 2 Controlled with a Baghouse

APPLICABLE RULES/PERMIT CONDITIONS:

Compliance with PTI 30-08A is described below:
FLEXIBLE GROUP SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FGFURNACES	All five reverberatory furnaces at the facility.	EU FURNACE#30 EU FURNACE#50 EU FURNACE#80 EU FURNACE#90 EU FURNACE#100

The following conditions apply to: FGFURNACES

I. EMISSION LIMITS

Pollutant	Limit	Time Period *	Equipment	Compliance Determination
PM	0.10lbs/1,000 lbs gas	TEST PROTOCOL	FGFURNACES	Undetermined-Stack Test needed. Visible observations indicated that there were no issues with opacity.

* Test Protocol shall specify averaging time.

II. MATERIAL LIMITS

The permittee shall not use flux in FGFURNACES that contains more than 15% by weight sodium fluorosilicate.¹ (R 336.1224, R 336.1225)

Compliance- MSDS was received during inspection and flux that is used is less than 15% by weight sodium fluorosilicate.

2. The permittee shall not use more flux per batch in FGFURNACES than that specified in the following table:

FURNACE	POUNDS OF FLUX PER BATCH
30	60 ¹
50	30 ¹
80	90 ¹
90	70 ¹
100	90 ¹

(R 336.1224, R 336.1225)

NONCOMPLIANCE- Records are not kept on amount of flux added to the batch.

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not produce more batches per 12-month rolling time period than that specified in the following table:

FURNACE	BATCHES PER 12-MONTH ROLLING TIME PERIOD AS DETERMINED AT THE END OF EACH CALENDAR MONTH
30	60 ¹
50	78 ¹
80	60 ¹
90	60 ¹
100	115 ¹

(R 336.1224)

NONCOMPLIANCE-Records indicate that batch limit was exceeded for Furnace 50 , Furnace 30, and Furnace 80.

The permittee shall not melt post-consumer metal scrap in FGFURNACES. (R 336.1225, R 336.1901, 40 CFR Part 63, Subpart TTTTTT)

NONCOMPLIANCE-Furnace 30 and 100 use metal scrap in creating alloys.

IV. DESIGN/EQUIPMENT PARAMETERS

1. After 120 days, the permittee shall not operate EUFURNACE#30 or EUFURNACE#100 unless the baghouse control is installed, maintained, and operated in a satisfactory manner. (R 336.1331, R 336.1910)

Compliance- Furnace 30 and 100 are connected to baghouse and appeared to working satisfactorily

2. Within 120 days, the permittee shall install, calibrate, maintain and operate in a satisfactory manner a temperature monitoring device in the exhaust gas stream entering the baghouse to monitor and record the temperature on a continuous basis, during operation of EUFURNACE#30 or EUFURNACE#100. (R 336.1910)

Compliance- Temperature is monitored with and an alarm if it goes below the setpoint.

3. Within 120 days, the permittee shall continuously monitor and record, in a satisfactory manner, the operation of the baghouse fan. The monitoring system shall provide an audio alarm when the baghouse fan stops operating. (R 336.1910)

Compliance- Monitoring is done and alarm goes off if fan stops operating.

V. TESTING/SAMPLING

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1201(3))

1. The permittee shall keep, in a satisfactory manner, the following records at the frequency indicated:

records of the description and weight of materials charged in each furnace - daily
batches made in each furnace – monthly

The permittee shall keep all records on file at the facility for a period of at least five years and make them available to the Department upon request.

(R 336.1225, R 336.1901, 40 CFR Part 63, Subpart TTTTTT)

Compliance- Records are kept daily

2. The permittee shall keep, in a satisfactory manner, records of the percent by weight of sodium fluorosilicate in the flux. The permittee shall keep all records on file at the facility for a period of at least five years and make them available to the Department upon request. ¹ (R 336.1225)

Compliance- Records are kept regarding the percent by weight.

3. Within 120 days, the permittee shall monitor, in a satisfactory manner, the temperature in the exhaust gas stream entering the baghouse on a continuous basis, during operation of FGFURNACES. Temperature data recording shall consist of measurements made at equally spaced intervals, not to exceed 15 minutes per interval. (R 336.1910)

Compliance- Monitoring of temperature is conducted.

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

Within 120 days, the exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
S-DC1	38 ¹	28 ¹	R 336.1225
S-50	24 ¹	30 ¹	R 336.1225
S-80	24 ¹	30 ¹	R 336.1225
S-90	24 ¹	30 ¹	R 336.1225

Compliance- The stack height and diameter appeared to correct height.

IX. OTHER REQUIREMENTS

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

APPLICABLE FUGITIVE DUST CONTROL PLAN CONDITIONS:

N/A

MAERS REPORT REVIEW:

Not applicable. The facility is not required to submit Michigan Air Emissions Reporting System (MAERS). While the facility is considered a Category III facility (area source) because it is subject to 40 CFR Part 63, Subpart TTTTTT, at this time the AQD does require this type of facility to submit MAERS or pay the annual fee required for Category III facilities.

FINAL COMPLIANCE DETERMINATION:

Based on the inspection and review of the submitted records, it appears that the facility is not operating in compliance with applicable regulations. A Violation Notice was sent on November 6, 2017.

NAME 

DATE 11/6/17

SUPERVISOR W.M.