

M4323  
MAWKA

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

M432350455

<b>FACILITY:</b> METROPOLITAN ALLOYS CORP		<b>SRN / ID:</b> M4323
<b>LOCATION:</b> 13600 GIRARDIN, DETROIT		<b>DISTRICT:</b> Detroit
<b>CITY:</b> DETROIT		<b>COUNTY:</b> WAYNE
<b>CONTACT:</b> Chuck Kennedy , Plant Manager		<b>ACTIVITY DATE:</b> 09/18/2019
<b>STAFF:</b> Gerald Krawiec	<b>COMPLIANCE STATUS:</b> Compliance	<b>SOURCE CLASS:</b> MINOR
<b>SUBJECT:</b> Scheduled Inspection for FY 2019		
<b>RESOLVED COMPLAINTS:</b>		

AQD staff conducted a scheduled inspection for FY 2019 of Metropolitan Alloys dba MAC CASTINGS Inc. located at 13600 Girardin in the City of Detroit. The purpose of the inspection was to determine the facility's compliance with applicable state and federal air pollution rules and regulations in addition to AQD Permit No. 50-09. Plant Manager, Chuck Kennedy accompanied AQD staff on the inspection.

**BACKGROUND:**

MAC CASTINGS has been in business at this location since 1985. Chuck Kennedy has been an employee since 1988. Over the past few years, MAC's business has declined. Currently, dependent on customer demand the plant does not run daily. When busy they will run two 8-hour shifts/day, more commonly the 18-20 employees are working 32 hours a week.

**FACILITY DESCRIPTION:**

MAC Castings Incorporated is a primary smelter, manufacturing Zinc anodes for its customers. MAC Castings utilizes two (2) 500-kilowatt channel induction and holding furnaces; with a holding capacity of 260,000 lbs.

In addition, a 305 hp diesel fuel-fired reciprocating engine powered generator is available for emergency electrical power.

**PROCESS DESCRIPTION:**

Basically, high quality (pure) zinc, clean charge, customer returns, or internal scrap is melted in the two electric furnaces (FGFURNACES). The molten zinc is poured into casting of various shapes and sizes per customer specifications. The main products are used in electro-galvanizing. Electro-galvanizing is a process in which a layer of zinc is bonded to steel in order to protect against corrosion.

MAC Castings utilizes two (2) identical 500-kilowatt channel induction and holding furnaces (EU-1 and EU-2); with a holding capacity of 130,000 lbs. each for a total of 260,000 lbs. As of September 2019, the average daily production rate is 172,000 lbs./day when running 2 shifts/day.

The main material used for charging is restricted to Special High Grade (SHG) Strip Jumbos and SHG V-100 purchased directly from a zinc manufacturer.

No flux is used in the process and all dross material is sold to an outside source.

There is no control device employed and there were no visible emissions at the time of this inspection. Based upon the required use of clean, very high-grade material, it is expected that emissions are low.

In addition, the 305 hp diesel fuel-fired reciprocating engine powered generator (EU-3) is used for emergency power generation in case of a utility power outage. The generator is run occasionally just to ensure that it is

operable in the event of an electric power failure. Its main purpose is to provide enough electricity to maintain high enough temperatures to keep the metal molten for a long enough time period to empty the furnaces. There is not enough electrical power produced to maintain production.

#### INSPECTION NARRATIVE:

Upon arrival, I conducted a pre-inspection conference with Plant Manager, Chuck Kennedy. Staff discussed AQD Permit No. 50-09, Mr. Kennedy is familiar with the permit. We then conducted an inspection of the plant's process equipment (EU-1 and EU-2, described above).

Upon inspection of EU-3 the diesel generator (Caterpillar 3300 rated at 250 KVA), the hour meter reading was 194.5. During the last inspection of this facility on September 20, 2017 the hour meter read 193.7. EU-3 has operated less than 2 hours in the last 2 years. Monthly operating records and proof of the fuel sulfur content are kept in the office.

In the office, a review of the monthly generator usage logs indicates this unit was last maintained on June 14, 2018 and ran only 11 minutes. The hour meter reading recorded that day started at 194.0. This unit has not been run since that date (extremely low usage). Marathon No.2 Ultra Low Sulfur Diesel fuel is used which contains a maximum of 15 ppm Sulfur, the Safety Data Sheet (SDS) was reviewed and a copy is attached.

#### COMPLIANCE DETERMINATION:

Currently, Mac Castings is operating in compliance with AQD PTI 50-09 and other applicable requirements.

NAME



DATE

10/31/19

SUPERVISOR

JK