

N1022
MAVILA

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: On-site Inspection

N102258037

FACILITY: METALTEC STEEL ABRASIVE CO		SRN / ID: N1022
LOCATION: 41155 JOY RD, CANTON TWP		DISTRICT: Detroit
CITY: CANTON TWP		COUNTY: WAYNE
CONTACT: Martin Schendel , Director of Quality		ACTIVITY DATE: 05/20/2021
STAFF: Jill Zimmerman	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: Target Inspection		
RESOLVED COMPLAINTS:		

DATE OF INSPECTION : May 20, 2021

TIME OF INSPECTION : 10:10 am

INSPECTED BY : Jill Zimmerman

PERSONNEL PRESENT : Martin Schendel

FACILITY PHONE NUMBER : 734-459-7900

FACILITY EMAIL : mschendel@metaltcesteel.com

FACILITY BACKGROUND

Metaltec Steel Abrasive is located on the southwest corner of Joy Road and Haggerty Road in Canton, Michigan. The area surrounding the facility is an industrial and commercial area. The facility operates Sunday morning through Saturday morning, with most of the work occurring during the traditional third shift time.

The facility melts scrap metal and transforms it into a metal shot used for shot cleaning such things as overpass bridges and other metal structures. The facility has been operating at this location for more than 15 years.

COMPLAINT/COMPLIANCE HISTORY

I received a call from a complainant regarding fallout on his vehicle, which prompted this inspection.

OUTSTANDING VNs

No violation notices (VN) have been issued since the last inspection, which was August 28, 2015.

PROCESS EQUIPMENT AND CONTROLS

Scrap metal is brought to the facility usually by truck. All truck deliveries are prescheduled to ensure that most of the scrap collected during the month is melted during that month. The

process at both foundries is basically the same. The north foundry only produces low carbon steel shot. The south foundry produces low carbon steel shot or high carbon steel shot. The high carbon steel shot passes through the grit process, where it is crushed into a more abrasive product.

The scrap metal is placed in either the storage pit at the north foundry or the storage pad at the south foundry. From either pad, the scrap metal is picked up with a giant magnet and placed into the furnace, where it is melted. After it is melted, it is put in a tundish bowl, where the liquid metal exits through a nozzle into a stream of water. Although all sizes of metal shot are created at all water pressures, larger particles are created with a lower water pressure. After the shot is formed, it is placed in a water bath to cool. After it cools, a large magnet picks up the shot and, after allowing it to drain for about six and a half minutes, it is placed in the dryer. After drying the shot, it is separated by size and placed in a collection barrel for the customer. When high carbon steel shot is created, it will pass through the grit process, where it is crushed to create a more angular product, which is usually used to shot clean highway bridges. The tundishes need to be treated with heat so that the bowl does not melt during the melting process. The facility does this in the bowl garage, which is located on the west end of the property.

The facility uses multiple baghouses to control emissions at both foundries as well as for the crushing process. The facility is in the process of replacing a baghouse with a cartridge dust collector. During this transition time, all emissions from the north and south foundry are passing through the same baghouse. The facility plans to update the malfunction abatement plan (MAP) once the dust collectors are installed and operating.

INSPECTION NARRATIVE

I arrived at the facility at 10:00 am and met with Mr. Schendel. I explained that I had received a complaint about a resident who had debris on his vehicle. Mr. Schendel asked me to share his contact information with the complainant or any future complaints so that the facility could have the vehicle detailed.

Initially, I asked if any changes had been made to the facility, and I was told nothing had changed. We walked through the south foundry. The operators were preparing to pour the liquid metal into the water stream. The melting furnace was operating and melting the metal. The south foundry operates one furnace. The south foundry is permitted for two furnaces, though only one was operating. After the shot is made, if it is high carbon, it travels to the grit process. No visible emissions were observed during the inspection. During the onsite inspection, I was able to watch the melting of the scrap metal.

There are two furnaces that operate as part of the north foundry; otherwise, this process is the same as the south foundry. There is a cooling water collection pond near the north foundry. As needed, the sludge is removed from this pit and transported offsite.

The grit process heat treats the shot and crushes it to achieve a product that can be used more abrasively. There are two baghouses associated with this emission unit.

Next, I met with the employee in charge of maintenance to discuss how the equipment daily operation.

APPLICABLE RULES/PERMIT CONDITIONS

The facility is exempt from 40 CFR 63 subpart ZZZZZ and Rule 949 because it does not meet the definition of a foundry since the molten metal is not poured into molds or casts. The facility is exempt from 40 CFR 63 subpart YYYYY and Rule 948 because the furnaces are not electric arc furnaces. The facility currently operates under permit 258-07, which was issued on October 31, 2007.

PERMIT 258-07

EUGRITPROCESS

1.1 Emission Limits – Compliance – PM10 emission limitations are to be determined by testing at the AQD's request. To date, the AQD has not requested testing. Absent testing, compliance is presumed based on the facility's compliance with the visible emission limit and the control equipment requirements.

1.2 Visible Emission limits. Compliance – During the onsite inspection, no visible emissions were observed from the baghouse associated with the grit process.

1.3 Equipment – Compliance – The facility operates the baghouse such that should the pressure drop move out of the desired operating range, a blow down is initiated. If this does not correct the problem, the baghouse pulls the air from the other equipment in the facility, which causes this equipment to shut down.

1.4 Stack/Vent Restriction – Compliance – All stacks were installed according to the required height and inside diameter. The stack was raised by twenty feet as part of a class action lawsuit about 7 years ago.

FGFOUNDRYNORTH

2.1 Emission Limits – Compliance – PM10 emission limitations are to be determined by testing at the AQD's request. To date, the AQD has not requested testing. Absent testing, compliance is presumed based on the facility's compliance with the visible emission limit and the control equipment requirements.

2.2 Visible Emission Limits – NA – No visible emissions were observed from the north foundry process during the onsite inspection because this foundry was not operating. The furnace was down for repairs during the onsite inspection.

2.3 Equipment – Compliance – The facility operates the baghouse such that should the pressure drop move out of the desired operating range, a blow down is initiated. If this does not correct the problem, the baghouse pulls the air from the other equipment in the facility, which causes this equipment to shut down.

2.4 Stack/Vent Restrictions – All stacks were installed according to the required height and inside diameter. The stacks have not been altered since they were initially installed.

FGFOUNDRYSOUTH

3.1 Emission Limits – Compliance – PM10 emission limitations are to be determined by testing at the AQD's request. To date, the AQD has not requested testing. Absent testing, compliance is presumed based on the facility's compliance with the visible emission limit and the control equipment requirements.

3.2 Visible Emission Limits – No visible emissions were observed from the south foundry process during the onsite inspection.

3.3 Equipment – Compliance – The facility operates the baghouse such that should the pressure drop move out of the desired operating range, a blow down is initiated. If this does not correct the problem, the baghouse pulls the air from the other equipment in the facility, which causes this equipment to shut down.

3.4 Stack/Vent Restrictions – All stacks were installed according to the required height and inside diameter. The stacks have not been altered since it was installed.

FGFACILITY

4.1 Material Limits – Compliance – The facility preschedules all steel incoming to the facility so that most of the steel can be melted during the month. A review of this scheduled log onsite showed that the facility throughput is below the permitted level. The records shared with me show that about 32,000 tons were melted during 2020 and to date about 15,500 tons were melted in 2021. The limit is 70,000 tons per year.

4.2 Material Limits – Compliance – Natural gas readings are recorded daily at noon. Monthly natural gas usage is recorded in a spreadsheet and is attached to this report. Mr. Schendel stated that this record represents all the natural gas readings at the plant. The records show that 47.41 million cubic feet NG used for 2020 and to date 26.17 million cubic feet NG was used in 2021.

4.3 Process / Operational Limits – Compliance – The facility has a fugitive dust plan to control the dust. Usually once per year the facility treats the dirt roadways with calcium chloride. The majority of the lot is paved to help control fugitive dust.

4.4 Compliance —The facility is operating under the current MAP. There were no upsets observed that would require any changes made to the MAP at this time. The facility is in the process of changing some of the baghouses. After the new dust collectors are installed, the facility will update the MAP.

4.5 Recordkeeping / Reporting / Notification – Compliance – The facility collects monthly records for the natural gas usage, which show that the usages is less than the permitted limit. I will explain to the facility that a 12 month rolling time period record is required based on the permit. However, based on the records shared with me, the facility is under the 12 month limit.

4.6 Recordkeeping / Reporting / Notification – Compliance – The facility collects monthly records for the scrap metal collected, which show that the usage is less than the permitted limit. I will explain to the facility that a 12 month rolling time period record is required based on the permit. However, based on the records shared with me, the facility is under the 12 month limit.

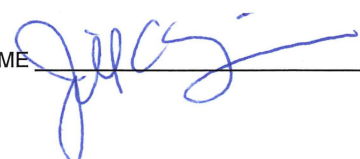
MAERS REPORT REVIEW

This facility is exempt from submitting MAERS.

FINAL COMPLIANCE DETERMINATION

Metaltec Steel Abrasive appears to be operating in compliance with all state and federal regulation as well as all permit conditions. A future inspection would be advised to update the MAP after the baghouses are updated and to clarify information regarding the south foundry.

MAERS Process Group	2021 Total	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	2020 Total	Jan 2020	Feb 2020	Mar 2020	Apr 2020	May 2020	2019 Total
Boiler to the North Foundry	10,052.1100	2,313.0000	2,241.5000	2,330.1000	2,413.0000	1,694.1100	24,240.2640	2,333.4000	2,741.2000	1,824.0000	1,634.7000	1,201.5000	1,201.5000
Boiler to the South Foundry	797.5000	141.0000	141.0000	0.0000	0.0000	0.0000	2,232.2700	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Foundry North	10,849.4100	2,434.3000	2,480.5000	2,300.1000	2,431.1000	1,694.1100	36,472.3140	2,820.0000	2,741.2000	1,824.0000	1,634.7000	1,201.5000	1,201.5000
Metalworks Area	2,890.0500	344.0000	431.0000	1,134.0000	433.0000	224.0000	5,529.1000	330.0000	137.0000	331.0000	114.0000	389.0000	389.0000
Total Total MAERS	13,739.6600	3,232.8000	3,197.0000	4,033.2000	3,378.1000	1,818.2100	32,071.8140	3,111.2000	2,878.2000	2,725.0000	1,779.2000	1,792.0000	1,792.0000
NO Emissions	269	3,265	4,246	4,244	2,873	2,773	3,289	3,421	2,782	4,246	4,184	4,246	4,246
2721	3,721	3,712	3,521	4,091	2,727	2,287							

NAME 

DATE 7/14/2022 SUPERVISOR JK