M4074
MANUAL

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

M407441626

FACILITY: GMA INDUSTRIES INC		**SRN / ID:** M4074
LOCATION: 38127 ECORSE RD, ROMULUS		**DISTRICT:** Detroit
CITY: ROMULUS		**COUNTY:** WAYNE
CONTACT: Carl Stevens , President		**ACTIVITY DATE:** 08/18/2017
STAFF: Jill Zimmerman	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** MINOR
SUBJECT: Target Inspection		
RESOLVED COMPLAINTS:		

DATE OF INSPECTION : August 18, 2017
TIME OF INSPECTION : 2:00 pm
LEVEL OF INSPECTION : II
EPA POLLUTANT CLASS : PM
INSPECTED BY : Jill Zimmerman
PERSONNEL PRESENT : Tyson Baird
FACILITY PHONE NUMBER : 734-595-7300
FACILITY EMAIL : tbaird@gmaind.com
FACILITY WEBSITE : gmaind.com

FACILITY BACKGROUND

General Metals and Abrasives Industries (GMA) recycles steel shot and aluminum oxide from various processes, including shot-peening, sandpaper manufacturing, etc. The facility has operated at this site since 1986. The facility operates about one shift per day, five days per week.

REQUIRED PPE

During the onsite inspection, I wore steel toed shoes and safety glasses.

COMPLAINT/COMPLIANCE HISTORY

No complaints have been received regarding this facility. During the last inspection on August 11, 2009, the facility was asked to perform a stack on all the permitted equipment. Based on a review of the file and a discussion with Mr. Baird, it appears that this stack test was performed on EU-ALSCREENING and EU-ALCRUSHING was performed on December 8 and 9, 2009. A stack test on EU-STEELRECLAIM was requested at this time, though this equipment has never been tested.

PROCESS EQUIPMENT AND CONTROLS

There are two separate, but nearly identical, processes for the reclamation of steel shot and grit and for aluminum oxide. The steel is handled on the east side of the facility, while the aluminum is handled on the west side. Spent material (either steel shot or aluminum oxide) of various sizes is delivered in 1500-2000 lb. drums or 4000 lb. tubs and are stored until processing. During processing, the material is dumped into a hopper and then fed via an elevated conveyor through a rotary "heat tube" (kiln), where the material is heated at 350-400 F° for at least 5 minutes to burn off impurities, and then through a rotary ambient air dryer. From there, the material is elevated to the top of the screening process, where the materials are gravity-filtered through two levels of various-sized screens to sort the material into different sizes of grit. The screened material is then fed into drums. These drums are taken to the packaging and warehouse section of the plant, which is in the middle of the facility. Here the product is packaged into 55-gallon drums, 50 lb. bags, or 400 lb. fiber bags for resale.

The aluminum side also has a crushing operation, in which raw materials (ores) are sent through an initial crusher then elevated and conveyed through three additional crushers to produce aluminum fines. The fines are then passed through a magnet to remove any ferrous material and are then sent through a screening system.

The emissions from both process lines are controlled with a cyclone and baghouse system – one on the steel side and two on the aluminum side. The steel and current aluminum screening baghouses were replaced in 2003 or 2004 through the P2 Loan Program. A third baghouse for the aluminum crushing process was installed in 2009 to allow both crushing and screening to be performed at the same time. Daily and monthly checks are performed on the three baghouses and all three baghouses are equipped with a magnehelic gauge to monitor pressure drop.

Material collected by the baghouse and cyclone are covered and stored on-site for one to two weeks before being sold to various companies in the production of other products. The waste from the steel side is used to make briquettes while the waste from the aluminum oxide side is used to make refractory bricks.

INSPECTION NARRATIVE
I arrived at the facility and met with Mr. Baird and Don, the plant manager. Together we discussed the processes at this plant. During the previous inspection, a stack test was requested for the steel line, though it appears that this test was never performed. Mr. Baird was unaware of any requested stack test. He was not the facility contact during the previous inspection. We agreed that the facility should perform the requested stack test by March 1, 2018, which was about six months after this inspection.

Next, we walked through the facility to observe the process. During the facility walkthrough, both lines were operating. It appears that all the dust collectors were operating properly.

APPLICABLE RULES/PERMIT CONDITIONS
This facility operates under permit to install (PTI) 211-08. The special conditions are:

EU-ALCRUCHING

I. Emission Limits

1. Compliance – The PM emissions are limited to 0.01 lb/1000 lb exhaust. This limit was set by a stack test protocol. This stack test occurred on December 8 and 9, 2009. The tests showed an emission rate 0.003 lb/1000 lb exhaust.
2. Compliance – The PM emissions are limited to 0.54 pph. This limit was set by a stack test protocol. This stack test occurred on December 8 and 9, 2009. The test showed an emission rate of 0.101 pph.
3. Compliance – During the onsite inspection, I did not observe VE's great than 5 % from any parts of the aluminum line

II. Material Limits

NA

III. Process/Operational Restrictions

1. Compliance – A Malfunction Abatement Plan (MAP) has been approved by AQD and appears to be properly implemented.

IV. Design/Equipment Parameters

1. Compliance – During the onsite inspection, it appeared that the baghouses are installed and operating properly

V. Testing/Sampling

1. Compliance – Stack testing was performed on December 8 and 9, 2009.

VI. Monitoring/Recordkeeping

NA

VII. Reporting

NA

VIII. Stack/Vent Restrictions

1. Compliance – The stacks were installed properly and have not been modified since the installation.

IX. Other Requirements

NA

EU-ALSCREENING

I. Emission Limits

1. Compliance – The PM emissions are limited to 0.01 lb/1000 lb exhaust. This limit was set by a stack test protocol. A stack test was completed on December 8 and 9, 2009. The tests showed an emission rate 0.002 lb/1000 lb exhaust.
2. Compliance – The PM emissions are limited to 0.63 pph. This limit was set by a stack test protocol. This stack test occurred on December 8 and 9, 2009. The test showed an emission rate of 0.083 pph.
3. Compliance – During the onsite inspection, I did not observe VE> 5% coming from the process line.

II. Material Limits

NA

III. Process/Operational Restrictions

1. Compliance – A Malfunction Abatement Plan (MAP) has been approved by AQD and appears to be properly implemented.

IV. Design/Equipment Parameters

1. Compliance – The baghouse for this process line was installed and appears to be operating properly during the onsite inspection.

V. Testing/Sampling

1. Compliance – A stack test was completed on December 8 and 9, 2009

VI. Monitoring/Recordkeeping

NA

VII. Reporting

NA

VIII. Stack/Vent Restrictions

1. Compliance – The stack for this process line was installed properly, and has not been modified since the last onsite inspection.

IX. Other Requirements

NA

EU-STEEKRECLAIM

I. Emission Limits

1. Undetermined – The PM emissions are limited to 0.01 lb/1000 lb exhaust. This limit was set by a stack test protocol. A stack test was requested in 2009, though this test never occurred. I requested a stack test to be completed by March 1, 2018.
2. Undetermined – The PM emissions are limited to 1.08 pph. This limit was set by a stack test protocol. A stack test was requested in 2009, though this test never occurred. I requested a stack test to be completed by March 1, 2018
3. Compliance – During the onsite inspection, I did not observe VE> 5% coming from the process line.

II. Material Limits
NA

III. Process/Operational Restrictions
NA

IV. Design/Equipment Parameters
1. Compliance – The baghouse for this process line was installed and appears to be operating properly during the onsite inspection.

V. Testing/Sampling
NA

VI. Monitoring/Recordkeeping
NA

VII. Reporting
NA

VIII. Stack/Vent Restrictions
1. Compliance – The stack for this process line was installed properly, and has not been modified since the last onsite inspection.

IX. Other Requirements
NA

MAERS REPORT REVIEW
GMA is not required to submit MAERS.

FINAL COMPLIANCE DETERMINATION
GMA appears to be in compliance with all permit conditions except the PM emissions from the steel line. I was unable to determine compliance since no stack testing has been performed on this line. A stack test was requested by an inspector in 2010, however, it appears that this test has not yet occurred. I gave the facility until March 1, 2018 to complete this stack test request, which will verify the emissions from the steel line.

NAME Jeff Zimmerman DATE 9/29/17 SUPERVISOR JK