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

N101936577

FACILITY: NORTHFIELD MANUFACTURING		SRN / ID: N1019
LOCATION: 38549 WEBB, WESTLAND		DISTRICT: Detroit
CITY: WESTLAND		COUNTY: WAYNE
CONTACT: Chris Tynan , Vice President		ACTIVITY DATE: 08/11/2016
STAFF: Jill Zimmerman	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: Target Inspection		
RESOLVED COMPLAINTS:		

DATE OF INSPECTION : 08/11/2016  
 TIME OF INSPECTION : 1:00 pm  
 NAICS CODE : 332997  
 EPA POLLUTANT CLASS : PM  
 INSPECTED BY : Jill Zimmerman, DEQ Detroit  
 PERSONNEL PRESENT : Chris Tynan, Vice President  
 FACILITY PHONE NUMBER : 734-729-2890  
 FACILITY EMAIL ADDRESS : [ctynan@northfieldfoundry.com](mailto:ctynan@northfieldfoundry.com)

### FACILITY BACKGROUND

Northfield Foundry is a job specific metal foundry, making steel and iron castings, the automotive industries and some governmental contract. The facility operates one shift per day, five days per week, with additional time worked when needed. The facility has been at this location since 1984 and no major equipment has been added or removed since the initial set-up, according to staff. The facility is located just west of Hix Street in an industrial Park between Ford Road and Warren Avenue in Westland, Michigan.

### REQUIRED PPE

During the onsite inspection, I wore steel toed shoes and eye protection.

### COMPLAINT/COMPLIANCE HISTORY

The last odor complaint that was received was on March 13, 2014. It appears that the odor complaints stopped around the same time that the facility started using a new binder resin. The MSDS for the new resin is attached to this report.

### PROCESS EQUIPMENT AND CONTROLS

The facility operates the process on a job specific basis, which means parts are made based on client need, and the parts are only made when the client orders the parts. The client sends the specifications for the part to the facility. A sand mold is created, which may include a sand core. The sand core is a holder placed in the mold. Each sand mold is used only once, though the sand is recycled and reused. The metal is melted in one of four melters. The liquid metal is poured into the mold and set. The sand is removed. Extra metal and scrap metal is remelted and reused. There are two melting lines, one for larger parts and one for smaller parts. During the inspection, parts were being made on the small line.

The facility operates one small heat treat furnace, which is fueled by natural gas.

The facility controls the sand reclaimer units with one of two baghouses. The larger baghouse, located in between the two connected buildings, is rated at 40,000 cfm. The smaller baghouse is located on the east side of the building, and is rated at 5,000 cfm. The units are inspected by the maintenance employee and a log is kept of all maintenance

9/19/2016

performed. The bags are changed on a routine schedule and new bags are ordered when the bags are changed, so that a spare set of bags is always available on site.

The final product is packed and shipped to the client. The part specifications are shipped to the client too, unless the part is made frequently in which case, the specifications are stored onsite.

### **INSPECTION NARRATIVE**

I arrived at the facility and met the Mr. Chris Tynan, who is the vice president of the company. Mr. Tynan explained the process and the history of the company before we observed the process. The company moved to this location in 1984, although the company began operation at a different location at an earlier time. Since the last inspection, the facility has changed the binder material used in the sand cores. The MSDS for this chemical is attached to this report.

Next we walked through the plant. Only the small parts line was operating during the inspection. Both baghouses were operating. These units are loud when operating, and at times the company receives noise complaints, though these types of complaints are not regulated by MDEQ-AQD.

Mr. Tynan stated that the parts near the open bay door sometimes create odors, though no odors were detected during the inspection, and no odor complainants have been received recently.

The facility operates a small metal heat treat natural gas fired furnace.

Mr. Tynan stated that the business has been picking up lately, but he thinks that this is because the competitors are going out of business. Mr. Tynan also stated that the company is purchasing equipment at auction, and reselling it as an investment.

### **APPLICABLE RULES/PERMIT CONDITIONS**

The facility's equipment is operating under Wayne County Air Permits C-6714 through C-6719 for:

- Two sand mixers and a sand silo with a bag house
- Two coreless induction melters
- Two coreless induction furnace melters
- Sand mixers, a sand silo and a sand reclaimer with a baghouse
- A tumble blast unit with a dust collector
- Sand reclaimer with a dust collector

These permits were issued on January 4, 1985 and the special conditions are as follows:

1. Compliance – Drop sleeves are required when emptying dust hopper in closed containers. Mr. Tynan stated that these sleeves are present.
2. Compliance – Exhaust stack from the baghouse is at least three feet above the top grade of the building. Visual inspections from the road show the stacks are at least three feet higher than the building.
3. Compliance – Records kept as part of preventative maintenance program indicate inspections of dust collectors. A log is kept by the maintenance employee.

The facility operates three electric furnaces, with a capacity of 3,000 lbs, 2,000 lbs and 500 lbs. These furnaces are exempt from permitting Rule 282 (a)(vi).

**MAERS REPORT REVIEW**  
NA

**FINAL COMPLIANCE DETERMINATION**

Northfield Manufacturing appears to be operating in compliance with all conditions of the Wayne County Permits C-6714 through C-6719. This facility may be subjected to State Rule 949. State Rule 949 covers the emissions standards for iron and steel foundry area sources in the federal MACT 40 CFR Subpart ZZZZZ. A determination on this rule will be determined within the next year.

NAME Jill Zimmerman

DATE 9/19/16

SUPERVISOR JK