N7616
MAWILA

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

N761634686

FACILITY: RMT Woodworth Heat Treat		**SRN / ID:** N7616
LOCATION: 45755 FIVE MILE RD, PLYMOUTH		**DISTRICT:** Detroit
CITY: PLYMOUTH		**COUNTY:** WAYNE
CONTACT: TOM VILLEROT , PLANT MANAGER		**ACTIVITY DATE:** 02/04/2016
STAFF: Jill Zimmerman	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** MINOR
SUBJECT: Target Inspection		
RESOLVED COMPLAINTS:		

DATE OF INSPECTION	:	02/04/2016
TIME OF INSPECTION	:	10:30 am
LEVEL OF INSPECTION	:	II
NAICS CODE	:	332811
EPA POLLUTANT CLASS	:	PM
FACILITY PHONE NUMBER	:	734-254-0566
FACILITY FAX NUMBER	:	734-254-0069

FACILITY BACKGROUND

RMT Woodworth Heat Treat moved to the Plymouth location in 2007. The facility relocated from Southfield. The facility operates three shifts per day, seven days per week. The facility heat treats metal parts mostly for the automotive industry.

COMPLAINT/COMPLIANCE HISTORY

On April 15, 2015 I received a complaint from a neighboring facility regarding metallic fallout on vehicles in the parking lot. I was also contacted by the City of Plymouth regarding the fallout. I preformed visible surveillance in the area and observed red staining on the parking lot of RMT Woodworth and the nearby sidewalk.

On June 5, 2015 I met with Mr. Villerot to discuss the fallout complaint. Mr. Villerot said that the baghouse associated with the blasting unit had malfunctioned. At that time, the facility planned to replace the baghouse. The facility also planned to replace the bags more frequently: two times per week as opposed to three times per week. During my February 4, 2016 visit, Mr. Villerot explained that the new baghouse was purchased, but never installed because the facility is no longer using the large blasting equipment. Mr. Villerot said that the facility worked out an agreement with the complainant.

PROCESS EQUIPMENT AND CONTROLS

The facility is permitted for four heat treating lines, though at this time, only three lines are installed and operational. The fourth line had been installed, but has since been dismantled. The tempering furnace for the fourth line is still operational, and is being used as a second tempering furnace for the third line. This will allow the facility to treat different metals at a different temperature with less down time. All lines are considered identical, with the exception of the extra tempering furnace. The maximum amount of metal that can be treated per line is 3000 pounds per hour. The metal pieces, which are received from the customer, are loaded into a bin and the bin is placed onto the roller conveyor system using a fork lift. The parts and bins are completely oil free before entering the hardening furnace.

Once about every twenty-five minutes, a bin is pushed into the hardening furnace. The parts remain in the hardening furnace for about five hours. The furnace can hold 13 bins at one

time. The parts are heated to approximately 1650 F. Each hardening furnace is indirectly heated by natural gas. Combustion gases are vented outside through one of two stacks per line. The interior of the hardening furnace is maintained under positive pressure by flowing "atmosphere" gas into the furnace. The atmosphere gas for all four lines is generated in one of two generators. The gas is formed by combusting natural gas, with the resulting gas make-up of 20% carbon monoxide, 40% hydrogen and 40% nitrogen. The atmosphere gas flares as it exits the furnace.

Once per hour, the hardening furnace entrance and exit doors open and a new bin of parts is added while a completed bin of parts is removed. The bin exiting the furnace is transferred to the oil quench elevator station. The oil quench station doors open, and the bin enters the enclosure. Then the door closes. The bin is then lowered into the quench pit. The parts stay in the oil quench for a few minutes before being lifted out, where the parts and bin drain completely and any oil smoke subsides before the doors open. The chamber is vented to a smog hog mist eliminator, which vents directly into the plant air. The parts bin is transferred to the parts washer station.

The parts are transferred to an automated roller conveyor system and pass through a parts washer unit. Any remaining oil is washed off of the parts. Only hot water, which is heated using natural gas, is used in this part of the process. The combustion emissions are vented to the outside. The parts enter a heated water rinse station next. The parts then enter a tempering furnace where they are heated to approximately 700 F. Finally the parts enter a cooling station where outside air is circulated over the parts.

The facility operates two sandblasting units, each which vent to a separate baghouse. The larger unit vents to a baghouse on the west side of the facility, which then vents to the outside of the building. The larger sandblasting unit is no longer used at this facility, and the facility is in the process of selling the newly purchased baghouse associated with this this unit.

INSPECTION NARRATIVE

I arrived at the facility at 10:30 am on February 4, 2016 to perform an inspection. I met with Mr. Tom Villerot, plant manager, and we discussed the process and any changes made to the facility since my last visit in June 2015.

Mr. Villerot explained that since the fallout complaints about a year ago, the facility no longer uses the large sandblasting unit and associated baghouse. This equipment is disconnected from operating and is currently for sale. Mr. Villerot also stated that RMT Woodworth and the complainant worked out a settlement agreement.

Mr. Villerot and I walked through the facility, where he explained the process. During the inspection, the smaller sandblasting unit was not being used. The larger unit is currently for sale, and is not being used. Two of the heat treating lines were operating during the onsite inspection.

Monthly records between July 2015 and December 2015 were collected for both the quench oil usage and the amount of metal processed. These records are attached to this report.

APPLICABLE RULES/PERMIT CONDITIONS

The facility is currently operating all four lines under permit 203-06A, which was issued on May 11, 2007. The special conditions for this permit are as follows:

1.1 Compliance – Based on the stack testing which occurred on February 12, and 13,

2008, each line would emit 0.30 pounds pm per hour. If this value was applied to all four permitted lines and the lines were assumed to be operating 24 hours per day, 7 days per week, the facility would emit 5.26 TPY, which is less than permitted amount of 14.0 TPY.

1.2 Compliance – The six-minute average for visible emissions from the process shall not exceed 10%. During the onsite inspection, no opacity was observed rising from the stack.

1.3 Compliance – mist eliminators are present at the facility, and appear to be working.

1.4 Compliance – Monthly virgin quench oil records and monthly amounts of metal treated for collected during the onsite stack testing. Records were collected between July 2015 and December 2015 for the quench oil and between July 2015 and December 2015 for the amount of metal processed. These records are attached to this report.

1.5 Compliance – Stack testing on line 1 occurred on February 12 and 13, 2008. The completed report was received on April 1, 2008. The report shows that the PM emissions reported during the test are lower than the permitted limit.

1.6 Compliance – an acceptable malfunction abatement plan dated April 24, 2007 was received, and is on file.

The smaller sand blaster onsite vents to a baghouse. This equipment is exempt from permitting by Rule 285 (I)(iv)(C).

The larger sand blaster has been removed from this facility. The associated baghouse for this unit is still on site, but is for sale. This baghouse is currently not operating at this facility.

MAERS REPORT REVIEW

MAERS for 2015 was submitted on February 23, 2016, and was reviewed on February 29, 2016. On February 29, 2016 I emailed Mr. Villerot regarding the MAERS because no PM emissions were reported. On February 29, 2016 I received an email response from Mr. Robert Woodworth. Mr. Woodworth explained that Mr. Villerot was not currently working for RMT Woodworth and Mr. Woodworth would be looking into resolving the MAERS emission question. On April 24, 2016 I received a message from Mr. Tom Villerot, who was responsible for this information. He said that he had just returned from an extended leave, and would look into this. On May 24, 2016 I asked Mr. Villerot for his answer to my emissions question. Mr. Villerot said that he would check with the consultant and let me know. As of 05/27/2016 I have not received an answer. The reported value is consistent with the values reported in the previous year.

FINAL COMPLIANCE DETERMINATION

RMT Woodworth appears to be operating in compliance with all state and federal regulations, as well as all permit conditions. No fallout episodes have occurred in almost a year, and the equipment that caused the episode is no longer being used by the facility.

NAME Jill C Zimmerman DATE 9/20/16 SUPERVISOR JK