

**DEPARTMENT OF ENVIRONMENTAL QUALITY  
AIR QUALITY DIVISION  
ACTIVITY REPORT: Self Initiated Inspection**

N796837971

<b>FACILITY:</b> OMEGA CASTINGS		<b>SRN / ID:</b> N7968
<b>LOCATION:</b> 301 FRITZ KEIPER BLVD, BATTLE CREEK		<b>DISTRICT:</b> Kalamazoo
<b>CITY:</b> BATTLE CREEK		<b>COUNTY:</b> CALHOUN
<b>CONTACT:</b> Brett Cutshall , Vice President		<b>ACTIVITY DATE:</b> 12/06/2016
<b>STAFF:</b> Rex Lane	<b>COMPLIANCE STATUS:</b> Compliance	<b>SOURCE CLASS:</b> MINOR
<b>SUBJECT:</b> Self Initiated Inspection		
<b>RESOLVED COMPLAINTS:</b>		

On December 6, 2016, MDEQ-Air Quality Division (AQD) staff arrived at Omega Casting, Inc. (hereafter Facility) located at 301 Fritz Keiper Blvd., Battle Creek, MI at 9:10 am to conduct an unannounced air quality inspection. Staff made contact with Mr. Brett Cutshall, Vice President and stated the purpose of the visit and provided him with a business card.

The facility is a stainless steel foundry that manufactures heat resistant conveyor belt castings for the heat treat industry. The facility commenced operations in 1976 and currently employs around ten associates and operates one 8-hour shift five days per week.

The Facility was last inspected by the AQD on 2/15/2007 and was determined to be non-compliant at that time. Facility operations are currently permitted under air use Permit to Install (PTI) No. 294-08A. The stainless steel foundry operations are also subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Iron and Steel Foundries pursuant to 40 CFR Part 63 Subpart ZZZZZ. Staff requested and reviewed material type and usage records and other recordkeeping and reporting records that are required to be maintained by either PTI No. 294-08A and by NESHAP Subpart ZZZZZ.

MSDS information was provided for the resin coated sand used in the shell core and mold machines and the three-part no bake (PEP SET) molding process and these are attached to this inspection report. Per a review of the MSDS information, staff confirmed that these products do not contain methanol which is a prohibited chemical for certain mold and core making lines under the NESHAP Subpart ZZZZZ. The facility submitted their initial NESHAP notification along with the Notification of Compliance Status notifications for Management Practices for metallic scrap, mercury scrap and binder formulations in December 2008. The facility purchases heat resistant stainless steel scrap only from heat treating facilities to ensure no motor vehicle content in the scrap. The facility visually inspects received scrap and utilizes both a hand held and lab spectrometer to verify scrap meets heat resistant stainless steel specifications. The facility is considered to be an existing small foundry by definition under NESHAP Subpart ZZZZZ. Total melt production in 2015 was slightly less than 300 tons of which about half of the total amount consisted of re-melted castings. The 2016 melt production records available through October suggests the annual melt rate will be slightly lower than in calendar year 2015.

The NESHAP semi-annual compliance certifications reports have generally been submitted timely to MDEQ-AQD since a violation notice was sent to the facility on 3/3/10 for non-submittal of the certification report. A pre-inspection file review by staff was not able to locate the first six-month semi-annual compliance certification report for 2013. Mr. Cutshall was able to locate an unsigned copy of the 2013 report in his files which he signed and it is attached to this inspection report.

Staff asked and Mr. Cutshall confirmed that they do not have any boilers as natural gas fired space heaters are utilized; the facility also does not have any emergency generators or cold cleaners. PTI No. 294-08A limits the no bake molding process to 300,000 pounds/month of phenolic urethane binder sand. Based on records provided by Mr. Cutshall, the highest monthly usage rate during the January 2015 through October 2016 time period was 49,158 pounds or about 16% of the material usage limit. The facility is currently maintaining MSDS data and records sufficient to demonstrate compliance with FGFACILITY special conditions under PTI No. 294-08A.

Mr. Cutshall then gave staff a tour of the facility. Required PPE is safety glasses, steel toed boots and hearing protection (i.e. if chop saw in use). Staff was shown the new shell core machine and the no bake and shell molding equipment. The sand silo can hold approximately twenty tons of resinated sand and emissions generated during silo filling are captured by a Torit dust collector that vents inside. The facility has two electric induction furnaces each with a melt capacity of 1500 pounds/hour that vent inside. An employee was manually loading scrap into the northernmost furnace during the inspection. The facility can only melt in one furnace at a time due to the power supply configuration. The facility pours into a 200 pound ladle and manually pours molten

metal into the sand molds on the casting/cooling line. The casting/cooling line exits out the north side of the facility and molds travel approximately seventy feet before making a 180-degree turn and re-entering the building (see attached photos). Cooled molds are then manually removed and dumped on to the floor to separate the castings from the sand. The rough castings are then cleaned by sand blast and/or tumble blast machines prior to finish grinding and/or cutting. All cleaning and finishing equipment emissions are routed to a Torit dust collector that vents inside. The facility has stick and wire welding equipment that exhausts outside.

Staff asked Mr. Cutshall if the facility heat treats any finished castings in house. Mr. Cutshall showed staff an electrically fired infrared heat treatment process on the east end of the facility. The process is exempt from air use permitting under Rule 282(a)(i) because the process does not involve molten materials, oil-coated parts or oil quenching.

Staff thanked Mr. Cutshall for his time and left the facility at 10:30 am. Staff then went through the facility yard to take a closer look at the external portions of the casting/cooling line. Staff observed a small amount of sand that had accumulated on the concrete support pad underneath the casting/cooling conveyor line. The casting/cooling conveyor line is designed with an open bottom to allow for efficient cooling of the molds but presents a potential source of nuisance fugitive dust if mold sand material is allowed to accumulate under the line. On 12/14/2016, staff sent the attached email Mr. Cutshall requesting further action to minimize the risk of fugitive dust generation. On 12/19/2016, Mr. Cutshall emailed staff and the facility has agreed to daily inspection and removal of any accumulated sand underneath the casting/cooling conveyor line.

**The facility is also considered to be in compliance with state air quality regulations based on the facility's written agreement to conduct daily inspection and removal of any accumulated sand underneath the casting/cooling conveyor line. -RIL**

NAME RIL

DATE 12/19/16

SUPERVISOR MB 12/20/2016