

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

N693363266

<b>FACILITY:</b> Holland Alloys Inc	<b>SRN / ID:</b> N6933
<b>LOCATION:</b> 4524 136th Ave, HOLLAND	<b>DISTRICT:</b> Grand Rapids
<b>CITY:</b> HOLLAND	<b>COUNTY:</b> OTTAWA
<b>CONTACT:</b> Todd Anderson , Plant Manager	<b>ACTIVITY DATE:</b> 06/17/2022
<b>STAFF:</b> Eric Grinstern	<b>COMPLIANCE STATUS:</b> Non Compliance
<b>SUBJECT:</b> Unannounced on-site compliance inspection	
<b>RESOLVED COMPLAINTS:</b>	

Unannounced on-site inspection of Holland Alloys. The facility was targeted for inspection in FY 22 under the statewide initiative evaluating secondary metal processing facilities located in Environmental Justice (EJ) areas. The facility is located in an EJ area using EPA EJSCREEN, based on the population within a one-mile radius of the facility having a Demographic Index, Population of Color, and being Linguistically Isolated at or above the 75<sup>th</sup> percentile on a state-wide basis. An on-site inspection was conducted since it had been >5 years since the last inspection.

Prior to entering the facility, a survey of the area around the facility was made from the public roadway. No VE or odors were noted.

### **FACILITY DESCRIPTION**

The facility is a small jobbing foundry that casts grey and ductile iron as well as steel. The facility is located in an industrial zone between 136<sup>th</sup> Avenue and the railroad tracts to the east. The nearest residential property is located approximately 220 yards northwest of the facility. The second closest residential property is a condominium development that is located approximately 360 yards west of the facility. AQD records show no history of complaints regarding the facility at this location.

The facility currently has approximately 11 employees and operates 5 days (M-F) a week from 06:00 to 16:00.

The exterior of the facility shows one baghouse on the south side and one baghouse on the west side of the building. Neither of the baghouses are currently in use since they are no longer associated with a process.

### **COMPLIANCE EVALUATION**

At the facility, EG met with Greg Hagen, Owner and Todd Anderson, Foundry Supervisor. Mr. Anderson accompanied EG on an inspection of the facility. Below is a summary of the processes and operations at the facility.

The facility caught fire on April 5, 2013. The company rebuilt on the existing site. Mr. Anderson stated that the existing processes in use prior to the fire continue to be in use. In follow-up communication with Mr. Hagan, he stated that the equipment was salvaged from the fire, with any restoration not exceeding 50% of the cost to construct a comparable new process.

The facility holds one permit, PTI No. 66-00, which covers the operation of one 1,500-pound capacity electric induction furnace.

The facility is subject to Subpart ZZZZZ, area source iron and steel foundry NESHAP. The facility is a small area source. The facility submitted the initial notification documents and initially submitted the required semi-annual certifications. The facility has since failed to submit the required semi-annual certifications from 2015 through July 1, 2022.

### **MOLD AND CORE MAKING**

The facility has one sand tower that is equipped with a bin vent filter. At the time of the inspection there was a heavy layer of sand around the sand tower. Mr. Anderson stated that the fill pipe ruptured causing the spill. The pipe has since been fixed. EG discussed the need to clean-up the spilt sand. Within approximately an hour after the inspection, Mr. Anderson called EG to inform that the spilt sand had been cleaned up. The facility uses a sodium silicate binder system for making molds and cores. Sand flows from the sand tower through a continuous sand heater into the sand mixer. The resin and catalyst are then added to the sand. On the outlet of the mixer the facility has added a duct to capture dust generated from the sand fines at the point of exit from the mixer. This duct vents to an internal cartridge collector that vents internally.

The facility also makes cores from precoated shell sand. The facility has four (4) shell core machines (only three have ever been used). Mr. Anderson stated that the shell core machines are original equipment.

The facility previously had a small manual table for making furan molds. The facility no longer makes furan molds.

All molds/cores are coated with an alcohol/zircon mixture that is flared-off. This process was previously determined to be exempt per Rule 287(2)(c).

### **MELTING & POURING**

The facility has three (3) electric induction furnaces. Only one of the three furnaces can be operated at a time. The furnace located on the west end has a holding capacity of 500 pounds, the center furnace has a holding capacity of 1,000 pounds, while the furnace located on the east end has a holding capacity of 1,500 pounds. The 500- and 1,000-pound capacity furnaces are exempt from permitting under Rule 282(2)(a)(vi). The 1,500-pound capacity furnace is permitted under PTI No. 66-00. None of the furnaces have capture or control. There is a general ventilation fan in the roof of the building above the furnaces. The 1,500-pound furnace is generally used for steel and the 1,000-pound furnace is used for iron. The 500-pound furnace is seldom used. The facility inoculates approximately 30% of the iron to create ductile iron. Inoculation is conducted in a standard pour ladle. The facility stated that they have always poured ductile iron.

Pouring is conducted on the floor (non-conveyorized).

**EUFURNACE1 – 1,500 lb. capacity induction furnace PTI 66-00**

## **Emission/Material Limits**

EUFURANCE1 limits particulate emissions from the furnace to 0.10 lb./1,000 pounds of exhaust gas. Compliance is based upon the facility only melting clean charge material which is required by the permit. The facility stated that they only melt 1010 busheling, pig iron, brake rotors and internal runaround. The facility is required to maintain monthly records of the tons of metal melted.

## **COOLING & SHAKEOUT**

Cooling and shakeout are performed on the floor of the plant. All cooling and shakeout are uncontrolled and vent in-plant. The facility previously recycled a portion of the mold sand; however, they have discontinued all sand recycling. Spent sand is stored outside and sent to the landfill.

## **FINISHING**

The facility has two shot blast units, of which only one has ever been used. The shotblast unit that is in operation is equipped with a cartridge collector that vents internally. The unit is exempt from permitting under Rule 285(2)(I)(vi) (B)). Additionally, the facility has various hand grinders and cut-off saws that vent to the general in-plant atmosphere and are exempt from permitting under Rule 285(2)(I) (vi)(B)).

Based on the information and observations made during this inspection, the facility appears to be in compliance at this time with applicable air quality rules and regulations, with the exception of the following:

Failure to submit semi-annual certifications required by the Area Source Iron and Steel Foundry NESHAP, 40 CFR Part 63 Subpart ZZZZZ (63.10890(f)), from 2015 until current.

A Violation Notice will be issued for the above listed violation.

NAME *Eric Grinstern*

DATE 8/8/2022

SUPERVISOR *HH*