

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

N388741778

FACILITY: ZD Metal Products, Inc.		SRN / ID: N3887
LOCATION: 1950 Fochtman Industrial Park Drive, PETOSKEY		DISTRICT: Gaylord
CITY: PETOSKEY		COUNTY: EMMET
CONTACT: Karl Gray , HR Manager		ACTIVITY DATE: 09/20/2017
STAFF: Becky Radulski	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: MINOR
SUBJECT: FY17 inspection and records review		
RESOLVED COMPLAINTS:		

Traveled to N3887 ZD Metal Products, Inc. to perform a FY17 inspection to determine compliance with PTI 232-15 on September 20, 2017. The source is located at 1950 Fochtman Industrial Drive, Petoskey, Emmet County, within an industrial complex. Present for the discussion of conditions were Karl Gray (Human Resources Manager, 231-753-2330, karlg@zdmetalproducts.com), Tony McCarty (Plant Manager 231-753-2330) and Joe Chapman (Operations Engineer). Joe accompanied AQD Staff (Becky Radulski, Gaylord) on a site tour.

ZD Metals started operation in 2007 or 2008. In 2015 during an internal environmental audit, it was determined that the source was not exempt as they had previously determined. An application was made to the DEQ and PTI 232-15 was issued in 2016.

ZD Metals is an aluminum die casting facility. It manufactures aluminum pieces for the automobile industry. ZD Metals also had a company in Newberry that cast magnesium pieces. That factory closed in July 2017, and the magnesium products are now made in the Petoskey source using electric melting and holding furnaces. Joe explained that this is because magnesium cannot be melting with natural gas in a productive manner. The Newberry plant (P0702, PTI 57-16) had a PTI for natural gas fueled magnesium melting and holding furnaces.

A fire took place in February 2017 at the facility. The office area and north end of the facility were completely destroyed in the fire; the north section of the facility is gone. All records were destroyed as well. The office area has been moved to the upper level of the factory and a new data record system has been put in place which backs up files to the cloud as well as an offsite location. Production was not affected by the fire.

ZD Metals plans to make changes to the operation when rebuilding the north end of the plant, tentatively scheduled for 2018. This would include replacing the furnaces in FGFURNACE with a new, larger furnace for melting aluminum. The facility is still in the planning stage. The need to get a new permit was discussed, as well as allowing for lead time for getting the permit issued prior to installation.

EU-GDC – permanent mold machine (also associated with EUMELT2).

Sections I, III, IV, V, VII and IX – NA

II.1 – requires there to be less than 0.1 percent by weight of beryllium, cadmium, lead or nickel, and less than 1.0% by weight of manganese. This condition allows the site to NOT be subject to 40 CFR Part 63 Subpart RRR (NESHAP for Area Source Standards for Aluminum, Copper and other Nonferrous Foundries). A Safety Data Sheet was provided for the feed aluminum which demonstrates compliance with this condition.

VI.1 - requires records of new compositions processed in this EU. Records are kept, only 1 composition is currently processed.

VI.2 – requires monthly records of flux used in the holding furnace. No records of flux are being maintained.

VIII.1 – requires SV-GDC (same as stack SV-MELT2) to have maximum diameter of 24 inches and minimum height of 34 feet, unobstructed vertically. The stack appears to meet the height and wide requirements, however the stack has a rain cap approximately 1-2 feet above the stack exit point.

FGFURNACE – two natural gas fired aluminum melting furnaces (EU-MELT1 and EU-MELT2).

Sections I, II, VI - There are multiple violations associated with this flexible group. No emissions are calculated, nor are records being kept. The fire previously mentioned would have wiped out any previous record keeping, however based on discussions with staff, it does not appear that record keeping took place prior to the fire. Record keeping was also not (re) established following the fire.

I.1, 3 and 5 are emission limits for particulate matter (PM) of 0.34 lb/hr, PM10 of 0.46 lb/hr, and PM2.5 of 0.38 lb/hr, respectively. These conditions would require testing, which is not being requested by AQD at this time.

I.2, 4, 6 and 7 are emissions that are to be calculated in VI.4 and 5 for PM (1.47 tpy, 12 month rolling), PM10 (2.01 tpy, 12 month rolling), PM2.5 (1.67 tpy, 12 month rolling) and Nickel alloy (20.15 lb/yr, 12 month rolling), respectively. These calculations have not been made, and monthly/12 month rolling records are not kept. This is a violation.

II.1 and 3 limits the amount of flux to 3.0 pounds of flux per day and 1095 pounds of flux per 12 month rolling. Flux additive was discussed with 'Rocky' in the plant. Rocky uses approximately ¼ of a coffee can of flux per week. However no records are kept, therefore this is a violation.

II.2 and 4 limits the aluminum feed rate to 4.25 tons per day and 1550 tons per 12 month rolling, respectively. Tony indicated ZD Metals is far below these rates, however no records are kept. Therefore this is a violation.

II.5 requires the facility to melt only clean charge, customer returns or internal scrap – this requirement is necessary to avoid being subject to 40 CFR Part 63 Subpart RRR. The facility only melts clean charge, as this is required for clarity of product and required by automakers. The facility meets this condition.

VI.1 and 2 require daily and monthly records of flux and aluminum feed, as well as hours of operation. These records were not available, therefore a violation.

VI.3 requires the facility to keep composition records for metal alloys and flux. These records were available onsite.

Sections III, IV, V and IX – NA

Section VIII – stack requirements. Both stacks appear to meet the height and width requirements, however both have a rain cap, as mentioned above, located approximately 1-2 feet above the stack exit point. This does not meet the requirement to exhaust vertically unobstructed upwards to ambient air, therefore a violation.

EU-HOLD equipment, which had no conditions in the PTI but was listed in the EU table, has been removed.

MACES was updated to add contact and regulatory information.

It is unclear if the magnesium equipment relocated from the Newberry plant requires a

permit. The company has been requested to provide further information.

The facility is not in compliance with several record keeping and emission calculation conditions as indicated above. A violation letter will be sent.

NAME Becky Raduliski

DATE 9/29/17

SUPERVISOR SN

