

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

P033246317

FACILITY: CASTING SERVICES GROUP		SRN / ID: P0332
LOCATION: 1717 13TH STREET, MENOMINEE		DISTRICT: Upper Peninsula
CITY: MENOMINEE		COUNTY: MENOMINEE
CONTACT: Matt Bourion , Engineer		ACTIVITY DATE: 09/05/2018
STAFF: Joe Scanlan	COMPLIANCE STATUS: Compliance	SOURCE CLASS: Minor
SUBJECT: Unannounced inspection to determine compliance with PTI#51-12A and any additional applicable Michigan Air Pollution Control Rules		
RESOLVED COMPLAINTS:		

On 9/05//2018 I conducted an unannounced inspection of this facility. My initial contact was Mr. Matt Bourion, the plant engineer.

Casting Services Group is a recycler of metal chips from machine turnings and borings supplied from various outside sources. These metal chips contain high concentrations of cobalt, nickel, and chromium. These shavings are melted into bars that are shipped out to other sources to be remelted and made into other products. When the shavings are received, they may have various contaminations on them such as water, water soluble coolant (Trim E206) and machine lubricant (300 Waylube). MSDS sheets for the later two are on file. The chips are received in 55-gallon plastic drums and are dumped into concrete bins where excess liquids are allowed to drain and are collected. The drained materials are placed in containers and loaded into the feeder for the rotary dryer.

Initial PTI # 51-12 (voided) was issued to Casting Services Group on 4/4/2012 for a natural gas-fired burn-off oven, Bayoc Model BB265 (EUBURNOFF). This is the original burn-off oven that was used to burn off the aforementioned liquids/contaminants on the metal chips and was installed on 4/25/2012. The unit is a rotating drum that is filled with the metal chips and rotates during the burn-off process to ensure all the metal chips are adequately cleaned. EUBURNOFF utilizes an afterburner with an interlock system in case of an afterburner malfunction. EUBURNOFF is still on-site however it is rarely used.

Monitoring/recordkeeping requirements for EUBURNOFF are:

- Monitor temperature in the afterburner, recording data at no less than 15-min intervals;
- Record malfunction of control equipment, thermocouple calibration, maintenance of unit;
- MSDS for contaminants on chips

EUBURNOFF has operated sporadically since 2014.

In April 2014 the facility requested a permit modification to supplement the original burn off oven with a new EnviroAir Model BD 10 rotary natural gas-fueled continuous-fired borings and chip dryer (EUCSG1). The facility now uses EUCSG1 as the primary unit for processing the metal chips versus the original EUBURNOFF. PTI# 51-12A was issued on 7/29/2014.

EUCSG1 has a primary chamber that is 14" in diameter and 102" long. There is a 42" long cooling section at the discharge. Materials are heated indirectly in the cylinder by firing through an opening formed by the furnace shell. The furnace burner is rated at 250,000 Btu/hr and the unit is provided with a smoke hood to capture oil, water, coolants, and dust. A cyclone is installed between the smoke hood and the thermal oxidizer (afterburner). The thermal oxidizer vaporizes water, coolant, and oil residues and operates at 250cfm @ a minimum operating temperature of 1400 degrees F (operating range is 1400 to 1750 F). EUCSG1 is controlled by an Allen Bradley PLC-based control system utilizing three Honeywell UDC2300 high-temperature controllers and three Honeywell flame safeguards. There is an interlock within the thermal oxidizer control panel which assures the primary chamber will be shut down in the event of an oxidizer malfunction.

In lieu of a VOC pph limit PTI#51-12A utilizes a material usage limit of 2000 TPY of metal chips for EUCSG1.

**Monitoring/recordkeeping requirements for EUCSG1 are:**

- Monitor temperature in the combustion chamber of the thermal oxidizer (afterburner) continuously, recording data at no less than 15-min intervals;
- Record the amount of material processed (2000 TPY limit)

**Burn-off of the metal chips seems to be conducted in waves. Presently the burn-off oven is operated about 16 hours per day for 2 months and a stock pile of "clean" shavings is accumulated. The unit may not be run for some time until more "clean" shavings are needed. Material throughput of metal chips for 8/2017 to 8/2018 was well below 225,000 lbs (1125 Tons). This is well below the limit of 1000 TPY.**

**The data loggers used to monitor and record the combustion temperature in the thermal oxidizer for EUCSG1 have not operated due to lack of maintenance (batteries were discharged and never replaced-- in excess of a year). This is a violation of PTI# 51-12A, EUCSG1 SC IV.3 and SC VI.2; a VN will be issued to the facility. Upon realizing the data logger malfunction, Mr. Bourion immediately replaced the batteries however a significant amount of data was lost and/or not recorded.**

**This facility is located in a highly visible area. No complaints have been received regarding the facility.**

**A discussion was held with Mr. Bourion regarding maintenance of monthly records. No other violations of the Air Pollution Control Rules or PTI # 51-12A were observed during this inspection.**

NAME



DATE

10/1/18

SUPERVISOR

