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

B557844309

FACILITY: Light Metals Corp		**SRN / ID:** B5578
LOCATION: 2740 Prarie St SW, WYOMING		**DISTRICT:** Grand Rapids
CITY: WYOMING		**COUNTY:** KENT
CONTACT: Brenda Taylor , Purchasing Manager		**ACTIVITY DATE:** 05/04/2018
STAFF: Adam Shaffer	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** MINOR
SUBJECT: Scheduled, unannounced inspection.		
RESOLVED COMPLAINTS:		

Air Quality Division (AQD) staff Adam Shaffer (AS) arrived at the facility at 10:50 am on May 4, 2018 to complete a scheduled, unannounced inspection. The weather conditions were mostly cloudy, winds from the west/southwest at over 30mph, and middle 60's°F.

Facility Description

Light Metals Corporation (LMC) is an aluminum fabrication company. The site currently does not operate under a permit, but instead utilizes exemptions for all onsite processes.

Compliance Evaluation

LMC is potentially subject to 40 CFR Part 63 Subpart WWWWWW – Plating and Polishing: National Emission Standards for Hazardous Air Pollutants: Area Source Standards for Plating and Polishing Operations. However, the MDEQ AQD has not been delegated authority by EPA over this MACT; therefore, it was not reviewed for compliance.

Prior to entering the facility, offsite odors and emissions observations were made. A solvent odor was noted to the east of the company; however, the odor was brief, and no complaints have been received from surrounding sites. Upon entering the site brownish yellow emissions were observed coming from a stack that was later verified to be from the anodizing line. The brownish yellow emissions were brief and based on weather conditions at the time, no accurate visible emission readings could be taken.

AQD staff AS met with Mr. Scott Oberski, Laboratory Manager, and Ms. Brenda Taylor, Purchasing Manager, who provided a tour of the facility and helped answer site specific questions. Additionally, Mr. Kevin Kane, Consultant, was part of the initial and wrap up discussions during the inspection. Following the inspection, all additional requested information was from Mr. Kane.

The following observations were made throughout the walk through of the facility.

- **One extrusion press was observed on site where aluminum tubes shipped on site are extruded to the appropriate size. Following the extrusion press the aluminum parts are stretched. The aluminum parts are then heat aged based on part specifications by a heat-treating oven.**
- **Following the heat aging process, the aluminum metal parts are sent to the initial part of the fabrication area. This area consisted of two main sawing machines and several smaller saws where the metal parts are cut into small pieces. Emissions from the sawing machines go through a settling chamber and a dust collector before being vented internally. Hoppers were observed where**

metal particulate from the dust collectors are collected into.

- Several maintenance areas were observed with various equipment including saws and drill presses.
- The main fabrication area was observed during the inspection. In this area, various metal processes including punching holes, drilling etc. are completed. Several dust collectors were observed. All emissions from this portion of the facility are vented internally.
- A welding area was observed where parts are welded.
- Seven computer numerical control (CNC) machines were observed during the inspection where holes are punched through metal parts. The metal parts are quenched with what appeared to be water. The machines are self-contained, and the water is reused.
- One anodizing line was observed in operation during the site inspection. Metal parts are first loaded on racks and then proceed through the anodizing line. The line consists of thirty-one tanks. Half of the tanks are rinse tanks with the remaining tanks including sodium hydrogen, sulfuric acid, nitric acid, and nickel acetate. Numerous stacks were observed that are associated with the anodizing line.
- A buffing area was observed during the inspection where metal parts are buffed and polished. Two vents from the buffing area vent outside to what appears to be two bag collection systems and one cyclone.
- The wastewater treatment part of the facility was next observed. Wastewater from onsite processes is sent here to be treated before being sent offsite. One 30,000-gallon tank where wastewater is initially sent to before being separated out was observed.
- The bulk storage tank area was observed where tanks containing nitric acid, sulfuric acid, phosphoric acid, and caustic soda were observed. The tanks are each 5,000 gallons in size.
- Two boilers were observed during the course of the inspection. One boiler was 8.40 MMBtu/hr in size and was installed in 1958. The second boiler was 6.3 MMBtu/hr in size and was installed in 2013. Based on the size of the boilers they are not subject to federal new source performance standards.
- An inspection of the rooftop was completed. Numerous stacks in the location of the anodizing line were observed. Black staining was observed around the outside of one stack.
- Two die washers were observed during the inspection that are used for cleaning of aluminum left behind in dies. A stack was observed connected to the die washers that vents externally.

Rule 278a Request

Following the site inspection, a Rule 278a request dated May 16, 2018 was sent to the company requesting a list of all exempt equipment/processes, descriptions, what exemptions LMC believe are applicable and an analysis demonstrating that Rule 278 does not apply to any process or process equipment. A response to the Rule 278a request was received by AQD staff on June 15, 2018. Several email exchanges following the receival of the Rule 278a response were completed to verify various items noted. Additional information regarding each potentially exempt item is discussed further below.

- EUANODIZETANKS – This unit is for the one anodizing line that was observed. In the Rule 278a response LMC believes that the anodizing line is exempt per the following exemptions which are Rule 285(l)(iii), Rule 285(r), and Rule 290(a)(ii). A list of all materials used and the applicable exemption for that specific material was provided.
  - Following the initial review of the demonstration, several more recent safety data sheets (SDS) were provided that appear to be acceptable.
  - Components of proprietary blends in several of the tanks listed were verified by suppliers and appear to be acceptable.
  - It was verified that all chromium in materials listed is trivalent chromium.
  - Several materials such as diammonium phosphate, aluminum, dissolved aluminum, phosphoric acid, formaldehyde and nickel di(acetate) tetrahydrate were discussed on why these items were not included in the PTE. Responses were received and concluded to be acceptable.

  The tables for the tank components and anodizing line PTE following the verification of the items noted above were resubmitted to AQD staff. The PTE is a onetime demonstration to show potential emissions are within acceptable limits. It was concluded that the anodizing line appears to be exempt per Rule 285(l)(iii), Rule 285(r), and Rule 290(a)(ii).

- EUBOILER1, EUBOILER2, EUBILLETOVEN, EUNEWHEATTREAT, EUAMU1 through EUAMU24, EUWATERHEATER1, EUWATERHEATER2 – These units are for the various equipment onsite including the two boilers, heat treat oven and water heaters LMC believes to be exempt per Rule 282(b)(i). This exemption appears to be applicable.
- EUCOLDCLEANER – This unit is for the one cold cleaner stated on site that has an air / vapor interface of less than 10 square feet and LMC believes is exempt per Rule 281(h). This exemption appears to be applicable.
- EUCAUSTICTANK – This tank contains a water solution of an inorganic base. The tank is 5,000 gallons in size and LMC believes the tank to be exempt per Rule 284(h). An SDS was provided for the material stored. After further review, this exemption appears to be applicable.
- EUNITRICTANK – This tank contains nitric acid that is not more than 20% by weight. The tanks are 5,000 gallons in size and LMC believes the tank to be exempt per Rule 290(a)(ii). Actual and potential yearly emissions were calculated using throughputs from 2014. The actual and potential yearly nitric acid emissions calculated for EUNITRICTANK total 0.0122 tons and 0.0266 tons respectively per year. This is well below the 1,000 lb monthly limit. Based on the records provided, this exemption appears applicable.
- EUSULFURICTANK – This tank contains sulfuric acid with a solution of 93.10% by weight that LMC believes to be exempt per Rule 284(h)(i). Supporting documentation was provided verifying the solution was less than 99% sulfuric acid. It was stated that this percentage has stayed consistent. Based on this the exemption appears to be applicable.
- EUPHOSPHORICTANK – This tank contains phosphoric acid that is less than 99% by weight and LMC believes to be exempt per Rule 284(h)(ii). A Certificate of Analysis dated February 6, 2015, identifies a phosphoric acid content of 79.88%, which is well below the limit. Based on this, the exemption appears to be

acceptable.

- EUEXTFAB – This unit is for the metal fabrication and outdoor metal chip collectors. Documentation supporting the installation of this unit in 1976 was provided. LMC believes that this emission unit is exempt per Rule 285(k). After further review, this appears to be acceptable.
- EUEXTBUFF – This unit is for the metal grinding and buffing areas with an associated outdoor metal chip collector to capture emissions. Previously it had been concluded that the unit was potentially exempt per Rule 290 if LMC submit additional documentation verifying that emissions from this unit would comply with a limit of 0.01 lbs / 1,0000 lbs. However, it was stated by LMC that upon additional research and review the equipment was either installed before 1967 and is grandfathered or installed after 1967 and is exempt per Rule 36(h)(vi) in affect in 1967 (currently Rule 285(2)(l)(vi). Additionally, LMC started operations in 1962 and the supporting documentation had stated the unit had been installed since at least 1969. After further review, this appears to be acceptable at this time.
- EUDIEWASHER – This unit is for the two die washers on site that are used to clean aluminum left behind in dies. The die washers use a sodium hydroxide solution that is approximately 50% by weight. The washers both discharge through one stack and the mixture is heated electrically. Additionally, the mixture is not heated above its boiling point. LMC believes that the washers are exempt per Rule 281(e). An SDS was provided for the material used and it was verified by the supplier that the mixture does not contain any VOCs. Based on this the exemption appears to be applicable.

The table for the facility wide PTE and GHG PTE following the verification of the items noted above were resubmitted to AQD staff.

Conclusion

Based on observations made during the facility walk through and records provided from the Rule 278a request, LMC appears to be in compliance with applicable air quality rules at this time.

NAME Adam F Shaffer DATE 09/26/18 SUPERVISOR