

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

N552531972

FACILITY: ELM PLATING CO		SRN / ID: N5525
LOCATION: 2395 E HIGH ST, JACKSON		DISTRICT: Jackson
CITY: JACKSON		COUNTY: JACKSON
CONTACT: Ryan Morton , Plant Manager		ACTIVITY DATE: 10/23/2015
STAFF: Michael Gabor	COMPLIANCE STATUS: Compliance	SOURCE CLASS: Minor
SUBJECT: Scheduled Inspection		
RESOLVED COMPLAINTS:		

**Minor Source Inspection****State Registration Number (SRN): N5525****Facility Contact****Ryan Morton (RM) – Plant Manager, (517) 783-5536****Allen Kinsler (AK) – Environmental Compliance, (517) 990-1035;  
[allen.kinsler@elmplating.com](mailto:allen.kinsler@elmplating.com)****Purpose**

On October 23, 2015, I conducted a scheduled, multi-media inspection, unannounced, of the Elm Plating Company, Plant Number 2 (EPC2) facility in Jackson. This multi-media inspection was conducted by representatives from the Water Resources Division, Ken Mroczkowski, the Office of Waste Management and Radiological Protection, Tim Sonnenberg, and the Air Quality Division (AQD), Michael Gabor. The purpose of the inspection was to determine the facility's compliance status with the applicable federal and state air pollution regulations, particularly Michigan Act 451, Part 55, Air Pollution Control Act and administrative rules. This facility was last inspected on June 29, 2011.

**Facility Location**

The facility is located in the city of Jackson at 2395 E. High St., in a mixed commercial and industrial area. A public park is located about 1,000 feet south of the facility.

**Facility Background**

EPC2 operates a hard coat anodizing aluminum process and mainly processes parts for the auto industry, e.g. transmission valves. Aluminum alloy parts, which are machined offsite, are anodized to create a corrosion resistant and hardened "surface coating." After being processed, the parts are shipped back to their customers. The "surface coating" is produced by an anodization process, which is done by passing a direct current through an electrolytic solution. The current causes impurities within the aluminum to be drawn to the surface of the metal part. Currently, this facility has 48 employees.

**Regulatory Applicability**

According to the U.S. Environmental Protection Agency (EPA), this facility is classified as a minor air pollution source. At this time, the facility is not subject to the Michigan

Air Emissions Reporting System (MAERS) requirements. EPC2 has previously demonstrated compliance under a Michigan Air Pollution Control Rule 336.1290 (Rule 290) permit to install exemption. The facility has voided all past-issued Permits to Install.

### Arrival & Facility Contact

Visible emissions or odors were not observed upon our approach to the facility via East High Street. We arrived at approximately 9:20 am, entered the facility, requested access for an inspection, and provided identification / business cards. We were met by RM and requested that we wait for AK's arrival prior to conducting the inspection. A pre-inspection conference was held with RM and AK, during which a copy of the MDEQ brochure: *Rights and Responsibilities Environmental Regulatory Inspections* was provided. We informed RM and AK of our intent to conduct a facility inspection and to review various records required by Rule 290. RM and AK extended their full cooperation during the inspection, accompanied us during the full duration of the inspection, and fully addressed our questions.

### Emission Unit Details

The anodizing process consisted of 11 4x6x4-feet, 720-gallon tanks. The tanks were organized in-line to each other according to the anodizing process (Figure 1). Tank number 1 contained a parts cleaner [Aluminum Cleanser NST, which contains diethylene glycol butyl ether (CAS Number 112345; Initial Toxic Screening Level / ITSL 20 micrograms/meters cubed), which is also known as butyl carbitol] and was heated to about 120 degrees Fahrenheit. Past compliance demonstration was shown through Rule 290(a)(ii)(A). Tank 2 contained rinse water. Tanks 3 through 6 were considered the "hard coating" / anodizing tanks and contained 20% sulfuric acid (CAS Number 7664939; Initial Toxic Screening Level / ITSL 10 micrograms/meters cubed, 8-hour average, per online Toxics Screening Level Query tool, note number 9; identified as a carcinogen but an Initial Risk Screening Level (IRSL) has not yet been derived). Tank 6 was added as an exempt process unit in September 2015. Past compliance demonstrations for the Aluminum Cleaner NST and sulfuric acid were shown through Rules 290(a)(ii)(A) and 290(a)(ii)(C), respectively. Tanks 7 through 11 followed and contained rinse water. A natural gas dryer followed the process line. Air emissions from the process were captured by a duct system that drew air from above the process line tanks and discharged emissions to the atmosphere via a stack.

### Pre-Inspection Meeting

During the pre-inspection meeting, RM summarized their operations. He described the anodization process (i.e. to coat a metal part, such as aluminum, with a protective oxide). Their waste water is discharged at a certain pH, to the public sewer system with the city providing monitoring. RM also summarized the main components of the process, as documented above in the *Emission Unit Details* section. We then proceeded to tour the facility and operation.

### Onsite Inspection

RM and AK then escorted us, as we conducted the onsite tour portion of the

inspection. RM pointed out the area where parts were received and then sorted and placed on racks for anodization. The parts were cast and machined offsite and arrived in a relatively clean condition. RM then walked us through the process, beginning with tank 1, where the parts were cleaned. The entire hard coating process takes about 45 minutes, with the actual anodizing step (tanks 3 through 6) taking the most time. The parts were then taken through the rinse tanks (tanks 7 through 11). During the process, the parts are air-agitated to ensure a through clean or rinse. After the rinse step, the parts were taken to a natural gas dryer. Future process developments may include using sonic agitation. I informed RM to be sure that before they construct or make any modification(s) to their process, to be sure that the action is exempt from obtaining a permit to install (PTI) or to obtain a PTI prior to the construction, etc.

### Post-Inspection Meeting

Prior to departing, I requested records for 2014 and January through September 2015 to demonstrate compliance with Rule 290 by October 30, 2015. AK indicated that he would email them to me. I informed RM and AK that I did not note any issues or concerns during the inspection, but I would need to review their records prior to making a final compliance determination. We thanked RM and AK for their time and cooperation, and departed the facility at approximately 10:20 am.

### Recordkeeping Review

I requested records to demonstrate compliance with Rule 290 for 2014 and January through September 2015 by October 30, 2015, close of business.

AK emailed several of the requested recordkeeping items to me on November 1, 2015, and included operational data for the year 2014 and January through September 2015 (Aluminum Cleaner NST records are attached). I granted the facility an additional week and requested all items by November 6, 2015. See the attached email dated November 2, 2015, which detailed my questions, comments, concerns, and the additional recordkeeping items that were requested. On November 7, 2015, AK provided finalized records for monthly sulfuric acid emissions and a description of the emission units / process to demonstrate compliance with Rule 290 (attached). On November 9, 2015, I requested and received a Safety Data Sheet for the aluminum cleaner (attached). All final versions of the provided recordkeeping items have been attached to this report.

The records reviewed for the requested timeframe for the Aluminum Cleaner NST indicate that the highest monthly emission of 48.95 pounds of butyl carbitol occurred during March of 2015, and appears to be in compliance with Rule 290(a)(ii)(A)'s monthly emission limits of 1,000 pounds (uncontrolled).

The records reviewed for the requested timeframe for sulfuric acid indicate that the highest monthly emission of 2.337 pounds occurred during September of 2015, and appears to be in compliance with Rule 290(a)(ii)(C)'s monthly emission limits of 20 pounds (uncontrolled).

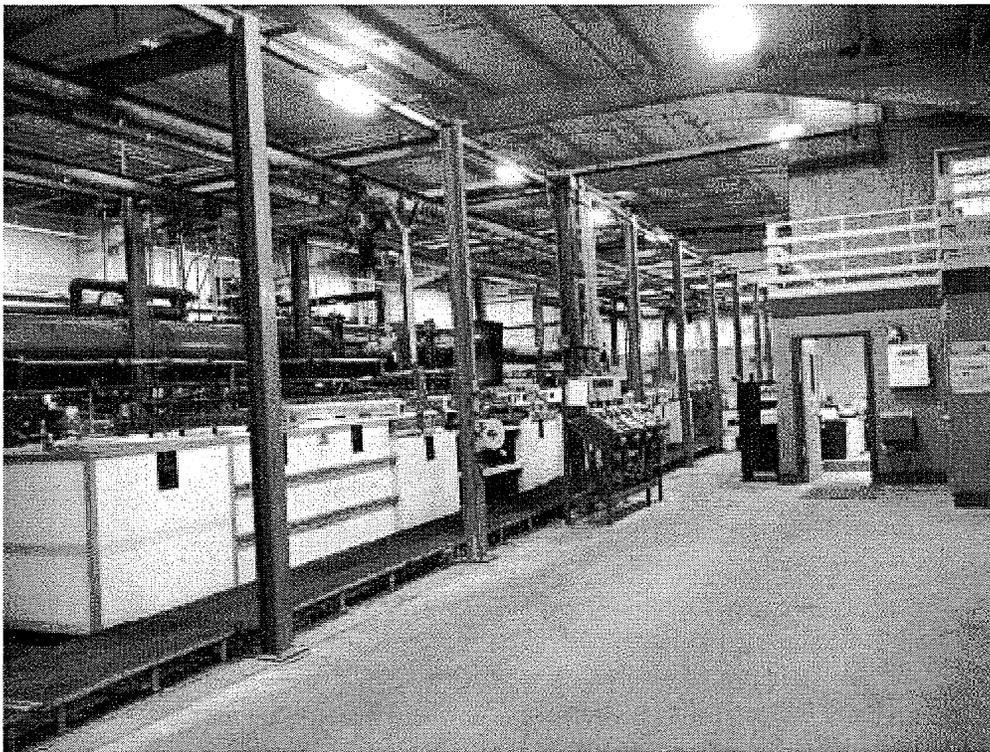
In addition, EPC2 provided records to demonstrate compliance with Rule 290(b), which requires a description of the emission unit, and with Rule 290(c), which requires records of material use and calculations identifying the quality, nature, and quantity of the air contaminant emissions are maintained in sufficient detail to demonstrate that

the emissions meet the emission limits outlined in this rule. EPC2 also referenced a rule 290 demonstration letter they submitted in September 26, 2011 as additional background regarding their calculations, etc. and is attached to this report.

It appears that EPC2 is maintaining adequate records in an adequate format.

### Compliance Summary

Based upon the inspection and the review of the records, EPC2 appears to be in substantial compliance. However, several correspondences with EPC2 were necessary in order to establish several recordkeeping items. I would recommend that EPC2 pursue additional steps to ensure that the current recordkeeping system continuously track emissions in order to demonstrate compliance with Rule 290.



**Image 1(Figure 1) :** Anodizing Process Line, beginning with Tank 1. 10/23/15, 10:00 am.

NAME Michael M. Miller

DATE 11/16/15

SUPERVISOR [Signature]