

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

B519465869

<b>FACILITY:</b> QUALITY PLATING CO		<b>SRN / ID:</b> B5194
<b>LOCATION:</b> 2712 McILWRAITH STREET, MUSKEGON HTS		<b>DISTRICT:</b> Grand Rapids
<b>CITY:</b> MUSKEGON HTS		<b>COUNTY:</b> MUSKEGON
<b>CONTACT:</b> Scott Werschem , President		<b>ACTIVITY DATE:</b> 11/09/2022
<b>STAFF:</b> Scott Evans	<b>COMPLIANCE STATUS:</b> Compliance	<b>SOURCE CLASS:</b> MINOR
<b>SUBJECT:</b> On-site inspection to assess compliance with permits and other rules and regulations.		
<b>RESOLVED COMPLAINTS:</b>		

### Introduction

On November 9, 2022, State of Michigan Department of Environment, Great Lakes, and Energy Air Quality Division (AQD) staff member Scott Evans (SE) conducted an air quality inspection of the Quality Plating facility located at 2712 McIlwraith St. in Muskegon Heights, Michigan, to assess compliance with air quality rules and regulations. Water Resources Division staff members Rikki Oden (RO) and Matt Pfister (MP) were also in attendance of this inspection in order to investigate potential Perfluorooctanesulfonic acid (PFOS) concerns at the facility. This facility is classified as a minor source of hazardous air pollutants (HAPs) and has one active permit to install (PTI): PTI No. 1427-91. It was last inspected on December 11, 2017.

This facility conducts decorative chrome, zinc, and nickel plating of metal products. This process includes multiple stages of dip tanks that include washing, plating chemicals, and rinsing agents. The facility utilizes fume suppressant chemicals to minimize emissions from the open dip tanks, which vent to the facility interior. The zinc plating lines include alkaline zinc and chloride zinc plating capabilities. Much of this equipment was installed prior to the year 1967 and is not subject to new source review permitting. The facility has one control scrubber to capture fumes from one of the automated chrome dip lines.

Upon arrival at the facility, SE, RO, and MP conducted a perimeter inspection of the facility exterior. No visible emissions (VEs) were observed, and no odors were observed. SE, RO, and MP entered the facility and were greeted by Scott Werschem (SW). After a brief discussion of the purpose of the day's visit, an inspection of the site was conducted. This inspection included a trip to the facility roof, which is further discussed below.

### PTI No. 1427-91

This PTI was first approved in 1991 with a supplemental document being approved on May 16, 1994. It is a Minor Source permit that includes five special conditions (SCs).

SC15 requires that hexavalent chrome emissions from the facility not exceed 0.003 milligrams per dry standard cubic meter, corrected to 70°F and 29.92 inHg. Compliance with this requirement is established through the facility's Operation and Maintenance plan. During the inspection it was verified that the facility is following this plan and is within compliance with the associated requirements.

SC16 requires that no VEs may come from the buffing operating and plating/cleaning operations with the exception of moisture. During the inspection it was observed that minimal amounts of water vapor and no other VEs were emitting from the tanks. It was expressed by the facility that no incidents of VEs had occurred at the facility since the last inspection.

SC17 requires that hexavalent chrome emission rates be verified by the facility if it is requested by the AQD. Based on the findings during the inspection, at this time it is not felt that testing is necessary.

SC18 requires that the installed control scrubber be properly installed, maintained, and operated if the facility is in operation. During the inspection, a trip to the roof where this scrubber is installed was conducted. While observing the equipment it was seen that the scrubber was in operation, which was verified by visual confirmation of water flow through a viewing window. There was no flow meter as the PTI does not require the equipment to have one. As the facility uses fume suppressants that are measured in efficacy by surface tension monitoring (discussed later in this report) for primary emission control, there are no requirements under 40 CFR Part 63 Subpart N (the Chrome NESHAP) for the scrubber to have flow meters. There were no signs of leaks or malfunctions on the scrubber or on the surrounding roof areas. A section of pipe had recently been replaced, which staff expressed had been done due to a cracked pipe, demonstrating that the facility regularly inspects and maintains the scrubber.

SC19 requires that any exhaust from the facility be released through an installed stack that is not more than 19 inches in diameter and not less than 22.75 feet above ground level. Though the stack was not measured directly for safety reasons, the stack had not been altered at all since the last inspection and appeared to meet the requirements of the condition.

During the inspection the facility appeared to be compliant with all general and special permit conditions.

### **Other Rules and Regulations**

The chrome plating operations are subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) 40 CFR Part 63 Subpart N. This regulation outlines parameters for operating as a chrome plating facility. This NESHAP has multiple requirements that were discussed and appear to be met. The NESHAP requires that surface tension of chrome tanks not exceed 45 dynes as tested with a stalagmometer. The facility tests this during every refill of the tanks with production chemicals, which is compliant with the requirement of testing every 40 hours of operational time (operation being time when electrical current is run through the tank) and maintains records of these tests, which were provided to the AQD. Provided records show that one instance of a tension reading at 46 dynes occurred on 9/16/2022. At this time no violation will be sent as this was a single instance with minimal exceedance. The facility was advised to keep careful watch of this and to take necessary measures to keep surface tension at approved levels.

The facility also conducts required quarterly inspections of equipment including the scrubber installed to control emissions from this process. As discussed, a recently replaced component of the scrubber demonstrates that the facility does inspect and properly maintain the equipment. Maintenance logs were provided, demonstrating proper recordkeeping procedures regarding this maintenance. The facility uses a fume suppression material to increase surface tension of tank liquids and prevent emissions. This material is called Havachrome Mist Eliminator III and a copy of the SDS is included with this report. The active ingredient is Ethoxylated coconut oil alkyl amine, which has a CAS of 61791-14-8. This chemical appears to meet the requirements of the NESHAP as

it is not a PFOS containing material. This was verified through a review of EPA listed PFOS and PFAS containing materials.

This facility has many old pieces of equipment that, as mentioned above, were installed prior to 1967. This equipment is not subject to air permitting regulation as it is considered grandfathered equipment.

**Conclusion**

At the conclusion of the inspection, the facility appeared to be compliant with all requirements of PTI No. 1427-91 and all other air quality rules and regulations. Though this inspection report does not discuss PFOS concerns in their entirety from a Water Resources Division, the air quality factors investigated appear to indicate that any existing PFOS materials are not related to current air emissions related factors within the facility.

NAME Scott Evans DATE 12/28/2022 SUPERVISOR HH