

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

B519442673

FACILITY: QUALITY PLATING CO		SRN / ID: B5194
LOCATION: 2712 McILWRAITH STREET, MUSKEGON HTS		DISTRICT: Grand Rapids
CITY: MUSKEGON HTS		COUNTY: MUSKEGON
CONTACT: Scott Werschem , President		ACTIVITY DATE: 12/11/2017
STAFF: Chris Robinson	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: The purpose of this inspection was to determine the facility's compliance status with PTI No. 1427-91 and other applicable air quality rules and regulations.		
RESOLVED COMPLAINTS:		

AQD staff Chris Robinson (CR) conducted an unannounced schedule site inspection of Quality Plating Company (Quality) (SRN No. B5194) located at 2712 McIlwraith Street, Muskegon Heights, MI on Monday December 11, 2017 to fulfill a FY'2018 requirement. CR arrived at the facility at approximately 1:00 pm and met with Ms. Debra Hawkins, Secretary, who provided required records, Mr. Ted Morrell, Maintenance Manager, and Mr. Scott Werschem, President, who provided pertinent information as well as a site tour.

CR presented Ms. Hawkins and Mr. Werschem with proper identification and informed them of AQD's intent to conduct an inspection to determine compliance status with respect to Permit-To-Install (PTI) No. 1427-91 and any other applicable air rules and regulations. At no time during the inspection were odors or visible emissions detected. Discussions with Ms. Hawkins and Mr. Werschem indicated that with the exception of the removal of some equipment, there have not been any significant changes since the last inspection conducted on July 14, 2010. Since the last inspection Quality has removed one of the two automatic zinc barrel plating lines, the small automatic zinc plating line and the two mechanical bead plating lines.

Weather conditions were approximately 30F with SSE winds at approximately 12mph overcast with light snow. Due to the weather CR could not safely access the rooftop, by extension ladder, to visually inspect the control scrubber.

#### **FACILITY DESCRIPTION**

Quality is a zinc, nickel, and chrome plating facility. They have automatic and manual, barrel, and mechanical plating lines. Quality has one automatic zinc barrel plating line, one large automatic zinc plating line and one manual zinc hoist line. The zinc lines utilize either alkaline zinc or chloride zinc. All the remaining lines have a series of wash tanks, a plating tank and a series of rinse tanks. All the lines, except for the large automatic line, vent to the in-plant environment and are exempt from permitting under Rule 285(2)(r)(i,iv or vii). In addition, most of the lines were installed before 1967, and are considered grandfathered. A chemical list and safety data sheets were provided and are included in **Attachment A**.

#### **COMPLIANCE EVALUATION**

Quality's chromic acid plating line is subject to the requirements of PTI No. 1427-91 and the National Emission Standards for Chromium Emissions from Hard and Decorative Chromium Electroplating and Chromium Anodizing Tanks (Chrome NESHAP 40CFR Part 63 Subpart N), which is discussed below. The chrome line can also be used to plate with nickel. Nickel plating is completed in a different tank than the chrome plating. Parts can be plated in both nickel and chrome, or just nickel or chrome.

#### **PTI No. 1427-91**

This permit is for the facility's chromic acid plating operations only and it has five (5) special conditions (SC 15-19).

Special Condition 15 establishes the NESHAP (**40CFR Part 63 Subpart N**) emission limit for Hexavalent chrome. The emission limit is 0.003 mg per dry standard cubic meter, corrected to 70°F and 29.92" Hg. To comply with this condition, the line must be operated properly. The Operation and Maintenance (O&M) Plan was written to define proper operation. The plant appears to be complying with this condition, based on the requirements in the O&M plan. The most recent O&M plan was provided and is included in **Attachment B**.

Per Special Condition No. 16 of the PTI, visible emissions are not allowed. As noted above there were no visible emissions noted during the inspection. However, the chromic acid line was not operating. Based on discussions with Mr. Werschem and Mr. Morrell and as noted in previous inspection reports, a control scrubber is installed. Maintenance is conducted as necessary to keep it in good operating condition. A maintenance log and quarterly

inspection checklist were provided and are included in **Attachment C**. Per Mr. Werschem and Mr. Morrel, the chromic acid plating line is only operated when the control scrubber is operating properly as required in Special Condition No. 18.

Special Condition No. 17 states that testing, at the owner's expense, for verification of hexavalent chrome emission rates may be required. At this time testing is not being requested nor does it appear to be required.

The exhaust stack for this line was not explicitly measured. However, Observations were made, and it appeared to meet the dimensions specified in Special Condition No. 19 with a maximum diameter of 19-inches and height of not less than 22.75-feet above ground level. Exhaust gases appeared to be discharged unobstructed vertically to the ambient air.

#### **40CFR Part 63 Subpart N (Chrome NESHAP)**

Quality conducts surface tension testing of the chrome tank at least every 40 hours of operation using a stalagmometer. Operating hours of the chromic acid plating line are only tracked for time periods when an electrical current is sent through the chrome tank and is based on how many parts are dipped. Hours are tracked to determine when surface tension testing is required.

The Chrome NESHAP requires the chromic acid to have a surface tension of equal to or less than 45 dynes when testing with a stalagmometer or equal to or less than 35 dynes when testing with a tensiometer. Since the facility uses a stalagmometer, they are allowed 45 dynes. Records were provided and are included in **Attachment C**. Based on the records, Quality appears to be in compliance with this limit.

The Chrome NESHAP requires subject facilities to conduct quarterly inspections on all tanks and scrubber equipment. Quality tracks these tasks on a checklist which was provided and is included in **Attachment C**. Based on discussions, the scrubber flow is checked frequently. Although the system is not required to have a flow meter, the water is observable. The water for the scrubber is contained in a closed loop system. When the discharge tank is full, the water is sent to the in plant waste treatment system before discharge to the Muskegon Wastewater Treatment Plant.

The Chrome NESHAP prohibits the use of PFOS based fume suppressants. The SDS for Quality's fume suppressant (Havachrome Mist Eliminator II) did not contain any chemical information, therefore CR contacted the manufacturer (Haviland) for additional information. Per conversations and email from Mr. Jeremy Drudy, Haviland's EHS/Regulatory Specialist, the main chemical is *Ethanaminium,N,N,N-triethyl-,salt with 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-1-octanesulfonic acid* (CAS No. 56773-42-3). Mr. Drudy indicated that this chemical is no longer manufactured. A follow-up call with Mr. Werschem confirmed that Quality is in the process of using up the remaining Havachrome Mist Eliminator II but will be switching to a new product once they run out, which should be in the next month or two. Email correspondence with Haviland is provided in **Attachment A** along with the 2015 Havachrome Mist Eliminator II SDS. Quality also provided a 2010 SDS for this product. It was identified as Tetraethylammonium perfluorooctane sulfonate with a CAS no. of 56773-42-3. Based on information known about this chemical and considering that the CAS number does not match the CAS number of PFOS (1763-23-1), at this time this product is not considered to be in violation of Subpart N for containing PFOS.

The Chrome NESHAP requires a subject facility to prepare and maintain on-site an Ongoing Compliance Status Report, which were current and available for review. The most recent report (1/1/2017 through 6/30/2017) was provided and is included in **Attachment D**. These reports are prepared semi-annually, but Quality has requested to switch to an annual frequency as allowed in 63.347(h). To process this request as required by 63.347(g)(3), Quality will need to submit a "Request to reduce frequency of on-going compliance status reports" as required by 63.343(h)(3). Ms. Hawkins has been informed of this requirement.

#### **COMPLIANCE DETERMINATION**

Based on observations and discussions made during the December 11, 2017 inspection, and a subsequent records review, Quality Plating Company appears to be in compliance with PTI No. 1427-91 and any other applicable air quality rules and regulations.

#### **List of Attachments**

Attachment A - Chemical List and Safety Data Sheets

Attachment B - 2005 O&M Plan

Attachment C - Maintenance Log and Quarterly Inspection Checklist

Attachment D - Ongoing Compliance Status Report

NAME

Chris Johnson

DATE

1/5/2018

SUPERVISOR

HB