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

B777370760

FACILITY: K C JONES PLATING CO DIV OF CHEMETCO		**SRN / ID:** B7773
LOCATION: 321 W 10 MILE RD, HAZEL PARK		**DISTRICT:** Warren
CITY: HAZEL PARK		**COUNTY:** OAKLAND
CONTACT: David Clarke , Corporate Technical Manager		**ACTIVITY DATE:** 10/30/2023
STAFF: Mark Dziadosz	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** MINOR
SUBJECT: FY 2024 Inspection		
RESOLVED COMPLAINTS:		

On Monday, October 30, 2023, I, Michigan Department of Environment Great Lakes and Energy-Air Quality Division staff Mark Dziadosz, conducted an announced scheduled inspection of KC Jones Plating Company (B7773), located at 321 West 10 Mile Road Hazel Park, MI. The purpose of this inspection was to determine the facility's compliance with the Federal Clean Air Act Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act of 1994, PA 451, as amended, and Permit to Install (PTI) No. 2-18.

I arrived at KC Jones Plating Company at 1:00 PM and met with David Clarke-Corporate Technical Manager, Brock Kogut-Maintenance Manager, Jeffrey Stone-Vice President Operations, and Zach Graham-Plant Manager. Prior to the inspection, records were requested on 10/23/2023 and were received on 10/27/23. Upon arrival, we discussed the electronic records and discussed operations. I was then taken on a tour of the facility.

KC Jones Plating Company operates 24 hours a day Monday through Saturday (three eight-hour shifts). 47 people are currently employed by the company. KC Jones plates metal parts with nickel and zinc. The parts are received from Tier II metalworking shops for the automotive, heavy truck, aerospace, agricultural, and alternative energy industries. The company also plates some parts for the military. In 2018, the company consolidated all active permits into PTI #2-18. A kolene metal surface preparation line which was covered under PTI 109-99A is no longer present at the facility. This was verified during the inspection. A request to void the PTI was submitted on 10/31/2023. The facility has three electroless nickel plating lines (EUElectrolessNi_101, EUELECTROLESS_102, EUENiLINE1_107), a zinc auto electroplating line (EUZnNiLine_111), and a zinc/nickel barrel line (formerly high tin bronze electro plating line (EUHTB_113).

PTI No. 2-18

FGPlatingLines

Five plating lines that consist of an electroless nickel-barrel line (EUElectrolessNi_101), zinc auto electroplating line (EUZnNiLine_111), electroless nickel rack line (EUELECTROLESS_102), electroless nickel

plating line (EUENiLINE1_107), and a zinc/nickel barrel line. The zinc/nickel barrel line was changed from a high tin bronze line in 2021. The facility provided an exemption report for this change and all changes are exempt. The report was dated 2023. EUElectrolessNi_101, EUZnNiLine_111, EUELECTROLESS_102, and EUENiLINE1_107 are each controlled by a packed bed scrubber dedicated to their operation. Emissions from the zinc/nickel barrel line (former EUHTB_113) are controlled by two packed bed scrubbers arranged in parallel.

SC I.1-2 An ammonia emission limit of 0.9 lbs/hr for EUELECTROLESS_102, an ethylenediamine emission limit of 1.2 lbs/hr for EUELECTROLESS_102. Per V.2, the AQD has not requested stack testing to demonstrate compliance with these limits. However, SC VI.3c requires the facility to calculate ammonia and ethylenediamine pound per hour rates based on the current make-up of the baths. See SC VI.3c.

SC I.3-4 A hydrogen chloride emission limit of 0.19 lbs/hr for EUZnNiLine_111 tank #110, a formaldehyde emission limit of 0.0085 lbs/hr for EUZnNiLine_111 tank #106. Per V.1, the AQD has not requested stack testing to demonstrate compliance with these limits.

SC III.1 The permittee shall not operate any of the plating lines in FGPlatingLines unless a malfunction abatement plan (MAP) as described in Rule 911(2), has been submitted within 60 days of permit issuance, and is implemented and maintained. A copy of the plan is in the AQD file. The plan appears to meet the requirements. The scrubbers are located on the roof and the facility has had issues with plugging of the pressure drop monitors. The company was taking pressure drop readings once per day/week with a portable magnehelic rather than continuously monitoring. I asked the facility to reconnect the magnehelics and add maintenance for plugs to the MAP.

SC IV.1 The permittee shall not operate any plating line in FGPlatingLines unless the associated scrubber system(s) are installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes but is not limited to monitoring and maintaining the packed bed scrubber systems within the parameters as described in the MAP, as required by SC III.1. The permittee is monitoring and maintaining the scrubber systems according to the MAP. The permittee has had problems with the lines to the magnehelic freezing, I asked the facility to add maintenance for plugs/freezing to the MAP.

SC IV.2 The permittee shall install, calibrate, maintain and operate in a satisfactory manner, a device to monitor the pressure drop across each of the scrubber systems for FGPlatingLines on a continuous basis. The scrubbers are located on the roof, and each has a pressure drop monitor installed. However, the facility has had issues with plugging of the pressure

drop monitors. At the time of the inspection, the company was taking pressure drop readings once per day/week (as required) with a portable magnehelic rather than continuously monitoring. I asked the facility to reconnect the magnehelics and update the MAP to address the freezing/plugging issue.

SC IV.3 The permittee shall install, calibrate, maintain and operate in a satisfactory manner, a device to monitor the liquid flow rate across each of the scrubber systems for FGPlatingLines on a continuous basis. The permittee is continuously monitoring the liquid flow rate across each scrubber.

SC IV.4 The permittee shall install, calibrate, maintain and operate in a satisfactory manner, a device to monitor the pH of each of the scrubber systems for FGPlatingLines on a continuous basis. The permittee is continuously monitoring the pH across each scrubber. Ph meters are calibrated every 3 months.

SC V 1 & 2 Upon request of the AQD District Supervisor, the permittee shall verify hydrogen chloride and formaldehyde emission rates from EUZnNiLine_111 and Upon request of the AQD District Supervisor, the permittee shall verify ammonia and ethylenediamine emission rates from EUELECTROLESS_102. The AQD has not requested emission testing. However, SC VI 3c requires the facility to calculate the ammonia and ethylenediamine emission rates on a lb/hr basis from the current representative bath makeup. The facility's record shows compliance with the respective emission limits.

SC VI.1 The permittee shall perform inspections of each of the scrubber systems for FGPlatingLines as follows:

a) Determine the pH, liquid flow rate and pressure drop for each of the packed bed scrubbers on a weekly basis. If the pH, liquid flow rate or pressure drop of the control varies by more than what is recommended by the scrubber manufacturer and as specified in the MAP, the permittee shall document the variation, and review the operation and maintenance procedures. The permittee shall document any corrective action.

b) Visually inspect the packed bed scrubbers, on a quarterly basis, to ensure there is proper drainage, no build up on packed beds, and no evidence of chemical attack on the structural integrity of the control devices.

c) Visually inspect ductwork from the tanks to the packed bed scrubbers, on a quarterly basis, to ensure there are no leaks.

The facility is performing the necessary inspections. During the site visit, I reviewed inspection records from 2021 to present.

SC VI.2 The permittee shall keep the following records:

a) The weekly pH, liquid flow rate and pressure drop readings,

b) Records of all inspections required by SC VI.1 and any inspections specified by the MAP.

c) Production records, including addition of make up materials to the tanks in EUZnNiLine_111.

The facility is keeping the required records. During the site visit, I reviewed production records, inspection records, pH, liquid flow rate, and pressure drop readings from 2021 to present. Records presented during the inspection dated back to 2015.

SC VI.3 The permittee shall keep the following records for EUELECTROLESS_102:

a) Monthly usage records of all ammonia and ethylenediamine containing materials.

b) Daily records of the hours of operation for each electroless nickel plating tank.

c) Calculations of ammonia and ethylenediamine emission rates on a pound per hour basis from the current representative bath make-up. This calculation must be revised when the representative bath makeup is modified.

The facility is keeping the required records. In April 2022, the facility changed base chemicals and ammonium hydroxide is no longer used. Prior to April 2022, the highest ammonia calculated emissions in the time period reviewed was in December 2021 at 0.062 lb/hr (Limit 0.9 lb/hr). The highest ethylenediamine (EDA) emissions in the time period reviewed was in January 2023 at 1.020 lb/hr (Limit 1.2 lb/hr).

SC VIII.1-6 The exhaust stacks of FGPlatingLines discharge unobstructed vertically. Stack dimensions not verified during this inspection.

SC IX.1. The permittee shall comply with all provisions of the National Emission Standards for Hazardous Air Pollutants as specified in 40 CFR Part 63 Subparts A and WWWWWW, as they apply to each plating line in FGPlatingLines.

The facility is meeting the provisions.

Based on the information gathered during the inspection, KC Jones Plating Company appears to be in compliance with the Federal Clean Air Act Part

55, Air Pollution Control, of the Natural Resources and Environmental Protection Act of 1994, PA 451, as amended, and PTI No. 2-18.

NAME _____ DATE 02/07/2024 SUPERVISOR _____