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

N737464577

FACILITY: Plastic Plate Kraft		**SRN / ID:** N7374
LOCATION: 5675 KRAFT AVENUE, CASCADE TWP		**DISTRICT:** Grand Rapids
CITY: CASCADE TWP		**COUNTY:** KENT
CONTACT: Karen Baweja , Supervisor of Air Quality		**ACTIVITY DATE:** 08/09/2022
STAFF: April Lazzaro	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** MAJOR
SUBJECT: Unannounced, self-initiated Partial Compliance Evaluation.		
RESOLVED COMPLAINTS:		

Staff, April Lazzaro arrived at the facility to conduct an unannounced scheduled inspection of the Lacks Kraft Plating facility and met with Karen Baweja, Supervisor of Air Quality. We met with other Lacks staff during the inspection, including Jeff Cowdry, Plant Manager. The purpose of the inspection was to determine compliance with state and federal regulations and to conduct a Partial Compliance Evaluation that included a visual inspection of the facility process equipment, control devices and associated parameters.

FACILITY DESCRIPTION

The Lacks Plastic Plate Kraft location is a decorative chrome electroplating facility that primarily electroplates on automotive parts but also on plumbing fixtures, household appliances and business machines. The process consists of pretreatment, alkaline cleaning, acid dipping, and strike plating of copper, copper electroplating, nickel electroplating, and chromium electroplating. Electroless copper, conditioner, and rack stripping are controlled by wet scrubbers while the chrome plating and etching are controlled by composite mesh pad scrubbers. The facility is a major source of Hazardous Air Pollutants and equipment at the facility is regulated pursuant to MI-ROP-N7374-2015a.

The chrome plating operations are subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Chromium emissions in Subpart N.

Except for boilers and the emergency generator, all emission units are subject to the toxic air contaminant requirements under Rule 225. In addition, EUCONDITIONER, EUELECTROLESSCU, and FGNICKEL are subject to Rule 702 Best Achievable Control Technology (BACT). The five boilers are subject to NESHAP Subpart DDDDD. One emergency generator is identified as subject to NESHAP Subpart ZZZZ.

COMPLIANCE EVALUTION

EUCONDITIONER

This material is no longer utilized at the facility.

EUPREETCHTANK

This emission unit includes one tank used to pre-etch plastic parts prior to plating. Emissions were evaluated in April 2022.

EUCHROMEETCH

This emission unit includes two etch tanks currently filled w/ chromic etch solution, however the permit allows for three. The third tank is empty and is used when one of the other tanks is switched out or for future use as a third production tank. For clarity, the AQD would require that a new stack test be conducted ASAP following the use of the three chromic etch tanks all at one time because emissions from the 3 tanks operating at one time has not been tested before. The chromic acid etch tanks are not subject to the Chrome NESHAP, however they do utilize a PFOS free mist suppressant to help reduce chromic acid mist. The permit states that, "The permittee shall not operate any tank in EUCHROMEETCH unless the chemical fume suppressant containing a wetting agent is applied in quantities and at a frequency to ensure the surface tension of each tank does not exceed, at any time during operation, the surface tension as specified in the MAP or the surface tension as measured during the most recent stack test, whichever is lower.

Data collected during the inspection on the control device is as follows: Pressure drop of scrubber was 2.934" H_2O, pressure drop of the evaporator was 1.125" H_2O. Surface tension of Tank #1 was 42 dynes/cm and Tank #2 was 45 dynes/cm. The limit established during the most recent test was 45 dynes/cm for both tanks, and the data indicates compliance. Lacks lab staff indicated they had just added additional fume suppressant to Tank #2 as it was right at the limit.

The quarterly preventative maintenance (PM) report was requested, received and reviewed. No issues were identified. Due to recent issues with chromic acid breakthrough, the manufacturer has recommended some changes to the pad washdown frequency. These changes have been incorporated in the MAP.

A visual observation did not identify any issues on the day of the inspection.

EUELECTROLESSCU

EUELECTROLESSCU was subject to a case-by-case Maximum Achievable Control Technology (MACT) review under Section 112(g) of the federal Clean Air Act because HAP emissions for formaldehyde and methanol are greater than 10 tons per year for an individual HAP and 25 tons per year for combined HAPs. Section 112(g) (and adopted by reference in Rule 299(2)(b)) requires that any constructed or reconstructed major source of HAPs be equipped with MACT to control HAP emissions if a source specific MACT standard for the source category has not been promulgated under Section 112(d) or Section 112(h). MACT for EUELECTROLESSCU was determined to be a packed bed scrubber system with methanol and formaldehyde emission limits.

This emission unit consists of one electroless copper tank. Stack testing was conducted in April of 2021. Emission limits are in place for formaldehyde- 1.1 lb/hr, methanol- 9.00 lb/hr and sodium hydroxide- 0.22 lb/hr. Emission rates reported are formaldehyde- 0.1023 lb/hr, methanol 5.86 lb/hr and sodium hydroxide- 0.0212lb/hr. The results for methanol show a marked increase from the last stack test. Scrubber parameters recorded during the inspection were as follows. Flow- 169.7 gpm, bleed off- 3.39 gpm and the pressure drop was 0.503" H_2O.

A visual observation did not identify any issues on the day of the inspection.

EUKPGENSET

This is one 190 brake horsepower natural gas fired 4 stroke rich burn spark ignition internal combustion engine. The unit is properly maintained and is listed as a certified engine on EPA's spreadsheet for large spark ignition 2011 to present list which was confirmed by using the family name of the engine as listed in the ROP application. (ECESB06.8GDB) The engine is being operated pursuant to manufacturer's instructions.

FGNEUTCATACC

This flexible group includes the neutralizer tank (sulfuric acid), two catalyst tanks (hydrochloric acid) and accelerator tank (hydrochloric acid). There are no emission limits, however the permit requires that the facility include this FG in the MAP to ensure proper ventilation/fan operation. This equipment is continuously monitored for electrical current draw and a visual inspection is conducted once per quarter.

A visual observation did not identify any issues on the day of the inspection.

FGCOPPER

This flexible group includes one copper strike tank containing copper sulfate and sulfuric acid and six acid copper tanks containing copper sulfate, ferrous sulfate and sulfuric acid. There are no emission limits, however the permit requires that the facility include this FG in the MAP to ensure proper ventilation/fan operation. This equipment is continuously monitored for electrical current draw and a visual inspection is conducted once per quarter.

A visual observation did not identify any issues on the day of the inspection.

FGNICKEL

This flexible group includes 5 semi brite nickel plating tanks, two brite nickel plating tanks, six platinum/nickel plating tanks and one durni (micro-porous) nickel plating tank. Emissions from this equipment is uncontrolled.

A visual observation did not identify any issues on the day of the inspection.

FGCHROME1

This flexible group includes three decorative chrome electroplating tanks and a shared composite mesh pad scrubber system and fume suppressant for control. The startup date for each tank is June 2013. Compliance with NESHAP Subpart N is met using the control device. The surface tension requirement is limited to 45 dynes/cm and is a state only requirement.

As indicated above all Lacks facilities use the same mist suppressant, and no PFOS has been used at this facility.

Surface tension readings taken the day of the inspection are as follows: Tank #1- 41 Tank# 2- 40 and Tank #3- 38 dynes/cm. All values indicate compliance with the 45 dyne/cm limit.

A visual observation did not identify any issues on the day of the inspection.

FGSTRIPTANKS

This flexible group includes one chrome strip tank containing sodium hydroxide and one nitric acid strip tank. These two tanks are controlled by a packed bed scrubber equipped with mist eliminators. Data collected during the inspection on the control device is as follows: Flow- 253.4 gpm, bleed off 4.6 gpm and pressure drop of scrubber was 2.197" H_2O.

A visual observation did not identify any issues on the day of the inspection.

FGBOILERS

This flexible group includes 5, natural gas fired, 1.8 MMBtu/hr boilers subject to minimal requirements of 40 CFR Part 63, Subpart DDDDD. The first 5-year compliance report for these boilers was submitted on January 31, 2019. The next tune-up and report are due prior to January 31, 2024. The USEPA CEDRI reporting system must be used.

CONCLUSION

Lacks Plastic Plate Kraft facility was in compliance at the time of the inspection.

NAME April Lazzaro DATE 09/15/2022 SUPERVISOR HH