UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, ILLINOIS 60604

DATE: ***August 3, 2021***

SUBJECT: CLEAN AIR ACT INSPECTION REPORT
A & R Custom Chrome Plating, Chicago, IL

FROM: Brittany Cobb, Environmental Engineer
AECAB (MI/WI)

THRU: Sarah Marshall, Section Chief
AECAB (MI/WI)

TO: File

BASIC INFORMATION

Facility Name: A & R Custom Chrome Plating

Facility Location: 4556 W 62nd St., Chicago IL, 60629

Date of Inspection: June 25, 2021

EPA Inspector(s):
1. Alexandra (Sasha) Letuchy, Environmental Engineer
2. Brittany Cobb, Environmental Engineer

Other Attendees:
1. Abraham Chavez, Owner and Operator, A & R Custom Chrome Plating

Contact Email Address: anrplating@comcast.net

Purpose of Inspection: To determine Clean Air Act (CAA) Compliance.

Facility Type: Nickel, copper and chrome electroplating facility.

Regulations Central to Inspection: 40 CFR part 63, subpart WWWWWW – National Emission Standards for Hazardous Air Pollutants: Area Source Standards for Plating and Polishing Operations; 40 CFR part 63, subpart N - National Emission Standards for Chromium

Emissions From Hard and Decorative Chromium Electroplating and Chromium Anodizing Tanks.

Arrival Time: 10:30 AM Central Time (CT)
Departure Time: 12:15 PM CT

Inspection Type:
☒ Unannounced Inspection
☐ Announced Inspection

OPENING CONFERENCE

☒ Presented Credentials
☒ Stated authority and purpose of inspection
☒ Small Business Resource Information Sheet not provided. Reason: Included with inspection report via email.
☒ Provided CBI warning to facility

The following information was obtained verbally from Abraham Chavez unless otherwise noted.

Process Description:
A & R Custom Chrome Plating receives items from customers for nickel and chrome plating. Typical items include car parts and occasional household objects. The items are first sandblasted and then polished. Then they go through the plating line consisting of a series of tanks which includes several water rinses, sulfuric acid, an activator with sulfuric acid, and copper, nickel, and chrome electroplating. Hexavalent chromium is used. Items are put into the chrome tank for approximately 30 seconds and the nickel tank for 30 to 45 minutes. The tanks are heated by electric heaters up to 130 degrees F. The chrome tank is kept at 111 degrees F.

This facility uses a wetting agent to control air emissions in the chrome tank at their discretion. A quart is added every few months to the chrome tank and samples are taken into a lab once or twice per year to test for surface tension (dynes/cm). The last sample was taken in January 2021. Wetting agent is also added to the nickel and coppers tanks, but surface tension is not measured in these tanks. PH is measured for the nickel tank to ensure it is between 3.8 – 4.0. There is no maintenance or inspections performed on the chrome tank. The tanks are covered with tarps overnight.

The facility typically operates from 8:00 AM to 5:00 PM, Monday - Friday. Electroplating is only performed 3 days of the week. Copper plating is performed on Tuesdays, while nickel and chrome plating are performed Wednesdays and Thursdays. There is a maximum of 8 items plated per day.

Staff Interview: Abraham has been the owner for 20 years and is currently the only employee. Previously, the site used to run production lines, but they haven't in 10 years. The chrome tank

has reportedly not gone below 40 dynes and the amount of raw materials added to tank is tracked. Abraham does not know of any complaints from neighbors.

TOUR INFORMATION

EPA Tour of the Facility: Yes

Data Collected and Observations:
EPA inspectors went on a tour of the facility and looked at the sandblasters, polishing machines, and electroplating tanks. There were two sandblasters. The large one was nonoperational and the smaller one had a vacuum and glass shield. There were two polishers, both operational. There were approximately 15 tanks for electroplating. The inspectors were shown the chemicals used in the tanks and pH strips. None of the tanks were covered upon inspection.

Photos and/or Videos: were taken during the inspection.

Field Measurements: were not taken during this inspection.

RECORDS REVIEW

1. Emission Factors and Equations
2. 2020 Annual Emissions Report
3. 2011 Monthly Emissions with Supporting Calculations

CLOSING CONFERENCE

☒ Provided U.S. EPA point of contact to the facility

Requested documents:

A portion of these documents were requested during the inspection. The full list of requested documents was requested via email on 7/6/2021.

1. Lifetime Operating Permit
2. Construction Permit
3. Decorative chrome plating emission factors used for annual emission report calculations
4. 2018, 2019, and 2020 Annual emissions report
5. 40 CFR part 63, subpart WWWWWW MACT Annual Certification/Report (40 C.F.R. § 63.11509(c)) for years 2017 - 2020
6. 40 CFR part 63, subpart N MACT Ongoing compliance status reports for area sources (40 C.F.R. § 63. 63.347(h)) for years 2017 – 2020
7. Records of surface tension measurements expressed in dynes per centimeter (dynes/cm) for 2017 - present

SIGNATURES

X Cobb, Brittany

Digitally signed by Cobb, Brittany
Date: 2021.08.03 12:21:03 -05'00'

Brittany Cobb
Environmental Engineer

X SARAH MARSHALL

Digitally signed by SARAH MARSHALL
Date: 2021.08.03 12:28:16 -05'00'

Sarah Marshall
Section Chief

APPENDICES AND ATTACHMENTS

1. Digital Image Log

Facility Name: A & R Custom Chrome Plating
Facility Location: 4556 W 62nd St., Chicago IL, 60629
Date of Inspection: June 25, 2021

APPENDIX A: DIGITAL IMAGE LOG

1. **Inspector Name:** Brittany Cobb	2. **Archival Record Location:** https://usepa.sharepoint.com/:f:/r/sites/R5_Work/r5erc/ecad/AECAB%20Library/Enf_A%20R%20Custom%20Chrome_IL_21/Enf_A%20R%20Custom%20Chrome_IL_21_Inspection?csf=1&web=1&e=lbbIrG

Image Number	File Name	Date and Time (incl. Time zone and DST)	Description of Image
1	Photo 1.jpg	6/25/2021, 11:20 CST	Chrome Plating Emission Factors and Equations
2	Photo 2.jpg	6/25/2021, 11:20 CST	2011 Monthly Emissions with Supporting Calculations
3	Photo 3.jpg	6/25/2021, 11:21 CST	2020 Annual Emissions Report Page 1
4	Photo 4.jpg	6/25/2021, 11:21 CST	2020 Annual Emissions Report Page 2
5	Photo 5.jpg	6/25/2021, 11:42 CST	Electroplating chemical additive
6	Photo 6.jpg	6/25/2021, 11:54 CST	5-gallon bucket of the wetting agent: E-Wet 701W Air
7	Photo 7.jpg	6/25/2021, 12:02 CST	Bottle of Khemex used in the electroplating tanks