



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

SUBJECT: CLEAN AIR ACT INSPECTION REPORT
Chromium Industries LLC

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

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

TO: File

BASIC INFORMATION

Facility Name: Chromium Industries LLC

Facility Location: 4645 W Chicago Ave, Chicago, IL 60651

Date of Inspection: 11/9/2021

EPA Inspector(s):

1. Brittany Cobb, Environmental Engineer
2. Emma Leeds, Environmental Engineer

Other Attendees:

1. Keith Summers, Maintenance/Environmental Coordinator

Contact Email Address: ksummers@chromiumind.com

Purpose of Inspection: To determine compliance with the Clean Air Act

Facility Type: Hard chromium electroplating facility

Regulations Central to Inspection: 40 CFR Part 63 Subpart N: National Emission Standards for Chromium Emissions from Hard and Decorative Chromium Electroplating and Chromium Anodizing Tanks (NESHAP Subpart N) and any other applicable regulations and permits.

Arrival Time: 1:30 PM CT

Departure Time: 4:00 PM CT

Inspection Type:

- ☒ Unannounced Inspection
- ☐ Announced Inspection

OPENING CONFERENCE

- ☒ Presented Credentials
- ☒ Stated authority and purpose of inspection
- ☒ Provided Small Business Resource Information Sheet via email
- ☒ Provided CBI warning to facility

The following information was obtained verbally from Keith Summers unless otherwise noted.

Process Description:

Chromium Industries LLC (“Chromium Industries” or “Facility”) performs hard chrome plating on steel rolls of various sizes and occasionally cast iron. There are eight hard chrome tanks at the Facility. The large tanks are in building #1 and are the following sizes (gallons): 2678, 2860, 2505, and 11000. The small tanks are in building #3 and are the following sizes (gallons): 735, 475, 1700, 745. All of the tanks use hexavalent chrome as the plating solution. The Facility also performs blasting/polishing.

There are four composite mesh pad (CMP) scrubbers to control emissions. Three of the CMP scrubbers (scrubber #1, #2, and #3) are connected through a plenum in building #1 to control the emissions from the large tanks. The fourth composite mesh pad scrubber (scrubber #4) is in building #3 and controls all four small tanks. There are six pads in each composite scrubber, and scrubber #2 has an additional HEPA filter. There is also one baghouse/dust collector to control emissions from blasting/polishing.

Staff Interview:

Chromium Industries had a performance test conducted on all four composite mesh pad scrubbers in 1998. The required pressure drop from this study for scrubber #1 was 1.7 inches of water column (” WC), #2 was 1.9” WC, #3 was 2.2” WC. According to Keith, the pressure drop can be plus or minus 2” WC for each. In 2015 a four stage HEPA filter was added to scrubber #2. Then a USEPA Method 306A Stack Test was performed on scrubber #2 to increase the allowable pressure drop from 1.9 to 3.3” WC. Chromium Industries records pressure drop daily and performs semiannual cleanings of the composite mesh pads. Acetone and mineral spirits are used as cleaners.

The chrome tanks are at least 20 years old. They are occasionally emptied and replenished with fresh chrome. The emptied chrome is treated as hazardous waste and is stored in waste and holding tanks and covered.

TOUR INFORMATION

EPA Tour of the Facility: Yes

Data Collected and Observations:

EPA Inspectors were led on a tour of the Facility by Keith Summers, starting in building 2 and moving to building 3. Composite mesh pad scrubbers #1, #2, and #3 were operational and EPA observed the pressure drop for scrubber #1 was 2.7" WC, #2 was 3.8" WC, #3 was 3.8" WC. EPA also noticed the small chrome tanks were not well maintained and there was debris and wood in and around the tanks (IMG_1361.JPG, IMG_1362.JPG, IMG_1363.JPG). EPA was informed that these tanks had not been turned on for months and scrubber #4 was not running. The chrome solution would be emptied into the hazardous waste tanks and replaced before the Facility starts electroplating in these tanks again.

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

Field Measurements: were not taken during this inspection.

RECORDS REVIEW

1. SDS for chromic acid
2. SDS for sulfuric acid
3. 2015 Performance test for composite mesh pad scrubber #2
4. 40 CFR Part 63, Subpart N MACT Ongoing compliance status reports for area sources (40 C.F.R. § 63. 63.347(h)) for 2020
5. Record of the sizes and contents of all the tanks

CLOSING CONFERENCE

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

Requested documents:

1. Registration of Smaller Sources (ROSS) Permit
2. 1998 performance test
3. 40 CFR Part 63, Subpart N MACT Ongoing compliance status reports for area sources (40 C.F.R. § 63. 63.347(h)) for 2018 – 2021
4. Daily pressure drop data for October 2021
5. Daily amp hour summary
6. Description and frequency of inspections/maintenance
7. Annual emission calculation for 2018 – 2021

DIGITAL SIGNATURES

Brittany Cobb

Digitally signed by
Brittany Cobb
Date: 2022.01.07
08:00:02 -06'00'

Report Author: _____

**SARAH
MARSHALL**

Digitally signed by
SARAH MARSHALL
Date: 2022.01.07
09:37:47 -06'00'

Section Supervisor: _____

APPENDICES AND ATTACHMENTS

A. Digital Image Log

Facility Name: Chromium Industries LLC
Facility Location: 4645 W Chicago Av, Chicago, IL 60651
Date of Inspection: November 9, 2021

APPENDIX A: DIGITAL IMAGE LOG

1. Inspector Name: Emma Leeds	2. Archival Record Location: <i>https://usepa.sharepoint.com/:f:/r/sites/R5_Work/r5erc/ecad/AECAB%20Library/Enf_Chromium%20Industries_IL_21_Inspection/Photos?csf=1&web=1&e=8IIts0</i>
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Image Number	File Name	Date and Time (incl. Time zone and DST)	Description of Image
1	IMG_1360.JPG	11/9/2021 2:52 PM CT	Large chrome electroplating tank
2	IMG_1361.JPG	11/9/2021 3:12 PM CT	Small chrome electroplating tank
3	IMG_1362.JPG	11/9/2021 3:12 PM CT	Small chrome electroplating tank
4	IMG_1363.JPG	11/9/2021 3:13 PM CT	Small chrome electroplating tank
5	IMG_1364.JPG	11/9/2021 3:16 PM CT	Dust collector for polishing