



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 1

5 Post Office Square, Suite 100

Boston, MA 02109-3912

Clean Air Act Inspection Report

Drafted: February 22, 2024

Finalized: April 2, 2024

EPA Inspectors: Davianna Vasconcelos, Environmental Engineer, Air Compliance Section /DMV/
Jack Melcher, Senior Enforcement Coordinator, Air Compliance Section
Grace Perry, Environmental Engineer, Air Compliance Section

EPA Reviewer: Darren Fortescue, Manager, Air Compliance Section /DEF/

Date of Inspection: February 15, 2024

Facility Name: Southcoast Plating, Inc. (d/b/a Star Plating)

ICISAir ID#: MA0000002512000319

Facility Location: 41 Coffin Ave, New Bedford, MA 02746

Mailing Address: 41 Coffin Ave, New Bedford, MA 02746

Disclaimer:

Unless otherwise noted, this report describes conditions at the facility/property as observed by EPA inspector(s), and/or through records provided to and/or information reported to EPA inspector(s) by facility representatives and as understood by the inspector(s). This report may not capture all operations or activities ongoing at the time of the inspection. This report does not make final determinations on potential areas of concern. Nothing in this report affects EPA's authorities under federal statutes and regulations to pursue further investigation or action.

Inspection Attendees:

Name	Title	Organization
Davianna Vasconcelos	Environmental Engineer	EPA R1
Jack Melcher	Senior Enforcement Coordinator	EPA R1
Grace Perry	Environmental Engineer	EPA R1
Tamara Ribeiro	Safety Manager	Star Plating
Jack Coutinho	Plant Manager	Star Plating

Facility/Process Description:

Southcoast Plating, doing business as Star Plating, located at 41 Coffin Avenue in New Bedford, Massachusetts, uses semi-manual and automatic barrel plating processes to plate parts such as springs and bolts with metals including zinc, hexavalent chromium, and trivalent chromium.

Carlton Neves has been the owner of Star Plating for 14 years.

Number of Employees and Working Hours:

The facility operates Monday through Thursday from 8:00 a.m. to 4:00 p.m. The facility has six permanent employees and five temporary employees.

Potentially Applicable Clean Air Act Requirements:

- 40 CFR Part 63, Subpart N – National Emission Standards for Chromium Emissions from Hard and Decorative Chromium Electroplating and Chromium Anodizing Tanks
- 40 CFR Part 63, Subpart WWWW – National Emission Standards for Hazardous Air Pollutants: Area Source Standards for Plating and Polishing Operations

Previous Enforcement Actions:

A “Detailed Facility Report” from EPA’s Enforcement and Compliance History Online database indicates that there have been no informal or formal enforcement actions taken against the facility by the Air Compliance Section in the last five years.

Opening Conference:

EPA Representatives Davianna Vasconcelos, Jack Melcher, and Grace Perry arrived at the facility at 9:12 a.m. and followed Tamara Ribeiro, Safety Manager, to her office. Ms. Vasconcelos presented her credentials to Ms. Ribeiro and explained the purpose of the inspection was to complete a partial compliance evaluation under the Clean Air Act. Ms. Vasconcelos explained that if any information that should be considered Confidential Business Information (CBI), a claim can be processed accordingly. Ms. Vasconcelos gave Ms. Ribeiro a copy of the EPA Small Business Fact Sheet.

Ms. Ribeiro said that she had no knowledge of current state or federal operating permits.

Ms. Ribeiro presented EPA representatives with 2022 Tier II Emergency and Hazardous Chemical Inventory, 2022 Form R Chemical Calculations, and Chemical Purchase List for review.

Facility Tour:

Ms. Ribeiro led EPA representatives to the South Plant, located on the south side of Coffin Avenue, where the group met Jack Coutinho, Plant Manager. Mr. Coutinho led EPA representatives through the plating process.

Mr. Coutinho and EPA representatives first viewed the semi-manual plating line. Mr. Coutinho said the barrel dimensions were approximately 32 inches in length and 14 inches in diameter. Ms. Vasconcelos noted two semi-manual barrel plating lines. Mr. Coutinho said only one was in operation due to limited incoming product. Mr. Coutinho explained the plating process as follows:

1. Cleaning: sodium hydroxide, approximately 10 minutes, cleaning the oils off the parts, automatic agitation
2. Double Rinse: one dirty water and one clean water, 1-2 mins each
3. Hydrochloric Acid: approximately 10 minutes, automatic agitation
4. Zinc Chloride: approximately 40 minutes to 2 hours depending on the parts being coated, particular parts undergo automatic agitation, particular parts remain still
5. Fresh Water Rinse
6. Colored Chromate – depending on part specification, temperature monitored between 80° to 90°F
 - a. Trivalent blue
 - b. Trivalent yellow
 - c. Hexavalent yellow
 - d. Black, Red, Olive, White
7. Fresh Water Rinse
8. Dry: automatic spin and heat

Mr. Coutinho said the colored chromate phase does not use electrical charge during the plating process. Mr. Coutinho said hexavalent yellow is only used once a year for approximately 200 pounds of product that is special ordered.

Mr. Coutinho said that automatic barrel plating lines follow the same process as the semi-manual line except the barrels are automatically moved from one phase to the next. Mr. Coutinho said the time in each phase can be changed based on the product in the barrels ranging from 3 to 10 minutes.

Mr. Coutinho explained Star Plating has the following automatic barrel plating lines:

- 52-barrel line in operation
- 44-barrel line not in operation due to limited incoming product
- 46-barrel line not in operation due to limited incoming product
- 46-barrel line (larger barrels) in operation part time

Mr. Coutinho explained some products undergo passivation with 6% nitric acid.

Mr. Coutinho led EPA representatives to the chromate reduction tank and explained that used chromate liquid is added to the tank and the pH is balanced using sulfuric acid. Mr. Coutinho said the liquid is then piped underground to the waste treatment system in the North Plant, located on the north side of Coffin Avenue.

Mr. Coutinho led EPA representatives to the North Plant that houses two automatic barrel plating lines that are not in operation due to limited incoming product. Mr. Coutinho led EPA representatives to the waste treatment system that consists of a sludge treatment tank and a clarifier.

Mr. Coutinho led EPA representatives to the rear exterior of the North Plant to the hazardous waste container. Mr. Coutinho said the container is picked up approximately every three months. Ms. Vasconcelos noted the accumulation start date was January 2, 2024.

Closing Conference:

EPA representatives followed Ms. Ribeiro back to her office and Ms. Vasconcelos initiated a closing conference. Ms. Ribeiro presented an Industrial Hygiene Assessment for Hexavalent Chromium for review.

Ms. Vasconcelos explained that an inspection report would be written and emailed to Ms. Ribeiro. Ms. Vasconcelos explained that no compliance determinations are made in the field.

EPA representatives departed at 10:53 a.m.

Records Reviewed:

- 2022 Tier II Emergency and Hazardous Chemical Inventory – Ms. Vasconcelos noted “not subject to 112r” and “NAICS 332813”
- 2022 Form R Chemical Calculations – Ms. Vasconcelos noted “Hexavalent Chromium – total weight 774 lbs, on product 205 lbs, by-product 539 lbs”
- Chemical Purchase List – Ms. Vasconcelos noted “Trivalent blue liquid, Trivalent clear chromate, Black chromate liquid, Olive chromate liquid, Yellow chromate liquid, Yellow chromate dye, Zinc (multi), Tin (multi)”
- Industrial Hygiene Assessment for Hexavalent Chromium – Ms. Vasconcelos noted the report was dated 10/31/2023. Ms. Vasconcelos noted OccuHealth Inc. conducted an industrial hygiene assessment for hexavalent chromium on 10/24/2023. Air sampling was conducted to determine compliance with OSHA regulatory limits. Results indicate that the employees monitored were not exposed to hexavalent chromium above regulatory limits.

Copies of Records Received:

- Hazardous Waste Manifest dated 9/21/2023
- 2022 Tier II Emergency and Hazardous Chemical Inventory for the reporting period 1/1/22 to 12/31/22
- Master Chemical List
- Industrial Hygiene Assessment for Hexavalent Chromium dated 10/31/2023