



REGION 1

BOSTON, MA 02109

Clean Air Act Inspection Report

I. Background

Inspection Date: March 27, 2025

Inspection Type: Partial Compliance Evaluation

EPA Inspector: Karen Peltier, Environmental Engineer, Enforcement and Compliance Assurance Division, Air Compliance Section

KAREN
PELTIER

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KAREN PELTIER
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EPA Reviewer: John Melcher, Senior Enforcement Coordinator, Air Compliance Section

JOHN MELCHER

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Facility Name: Spectrum Coatings Laboratories, Inc.

ICIS Air ID#: RI0000004400791011

Facility Location: 217 Chapman Street
Providence, RI 02905

Mailing Address: Same

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
Karen Peltier	Environmental Engineer	US EPA, Region 1, ECAD-Air Compliance Section
Earl Faria, Jr.	President	Spectrum Coatings Laboratories, Inc. ("Spectrum")

Facility/Process Description:

The facility is a manufacturer of military and industrial coatings, including polyurethanes, epoxies, baking enamels, water based coatings and air dry finishes. A detailed facility report regarding the facility's compliance with federally enforceable environmental regulations can be obtained from EPA's Enforcement and Compliance History Online website, "ECHO", via the following link:

<https://echo.epa.gov/detailed-facility-report?fid=110002087553>

Potentially Applicable Federal Air Regulations Evaluated:

- 40 CFR Part 63, Subpart CCCCCC – National Emission Standards for Hazardous Air Pollutants for Paint and Allied Products ("40 CFR 63 Subpart 7C")

State Air Permit: Not applicable

Previous Enforcement Actions: No Clean Air Act enforcement actions identified in the past ten years.

II. Inspection

The facility was notified on March 24, 2025, via telephone communication, that EPA would be conducting a Clean Air Act inspection of the facility on March 27, 2025. The EPA inspector arrived at the facility on March 27, 2025 at approximately 8:20 a.m. The weather was 40 degrees F, with sunny skies.

A. Opening Conference:

Upon entrance to the facility, the EPA inspector met with Mr. Faria, President of Spectrum. The EPA inspector was brought to a conference room located in the front portion of the facility. The inspector detected a mild solvent odor upon entrance to the conference room located at the front of the facility. The EPA inspector introduced herself and presented her EPA inspector credentials to Mr. Faria and stated that the purpose of the inspection was to conduct a Clean Air Act inspection of the facility. EPA provided the facility a hard copy of the following Small Business Resource Information Sheet during the inspection. This document provides information that may assist small businesses in identifying and complying with environmental requirements:

<https://www.epa.gov/sites/default/files/2017-06/documents/smallbusinessinfo.pdf>

Mr. Farias confirmed the NAICS code for the facility is 322510, Paint and Coating Manufacturing and provided the following information regarding the facility:

- Operating Schedule: 8:00 a.m. to 4:30 p.m., Monday – Friday, 51 weeks/yr
- Shutdowns: week of July 4th annually
- No. of employees: 7 FTEs, 1 PTE

Spectrum produces specialty coatings and paints for the military and industry. Mr. Faria stated that the facility does not produce architectural or industrial maintenance coatings at the facility. The facility produces solvent and water based enamel, epoxy and urethane coatings. The coatings are made by mixing, blending and grinding of various binders/resins, pigments, solvents, water and additives. The binders include resins such as alkyds, acrylics, vinyl-acrylics, vinyl acetate/ethylene (VAE), polyurethanes, polyesters, melamine resins, epoxy, silanes/siloxanes or oils. The facility mixes the solvent, binder, additives such as extenders and pigments in tanks ranging from two to 100 gallons in capacity. Mr. Faria stated that there have not been any changes to the processes or equipment at the facility since June 1, 2009.

Mr. Faria explained that there are not a lot of fumes generated and that the tanks are covered with plastic and a lid. Local exhaust ventilation is used mostly for nuisance dust, such as asbestos free talc and precipitated silica. There are five local exhaust collection points associated with this local exhaust system used for ventilation at the manufacturing area/mixing stations that vent outside of the building, via one of two exhaust fans located on the exterior of the building. Mr. Faria stated that an initial visual inspection of the dust collector and associated ductwork was conducted when it was installed in 2020. A visible emissions test was not conducted on the unit since it vents inside the building.

A wet mill is utilized for blending dry pigments that contain strontium chromate and zinc chromate with solvents or water. Dry pigments containing these constituents are never blended in the basket mill. They are converted to a smooth coating via wet milling prior to being processed in the basket mill. A basket mill is used to reduce the particle size of the pigments. The facility has two 25 hp dispersers/mixers and two drill presses for mixing coatings.

Mr. Faria stated that dust emissions generated from the addition of dry pigments containing zinc chromate and strontium chromate are captured using a dust collection system that discharges inside of the building and does not have any rigid stationary ductwork. This dust collector was installed in 2020, following EPA's Clean Air Act Inspection of the facility. The dust captured in the dust collector system is disposed of as hazardous waste. Mr. Faria stated that the weekly inspection of the dust collector includes turning the unit on/off, visual inspection of the flexible ductwork for leaks, cleaning the dust collector. Mr. Faria stated the dust collector inspections conducted to date have not required implementation of corrective actions. Mr. Faria stated that annual maintenance/inspections are conducted of the interior of the dust collector for structural integrity and of the fabric filter in June.

Mr. Faria stated the facility continues to operate a distillation system to recover spent solvent from the cleaning process. The solvent cleaning system consists of four pots that contain solvent that increases in contaminant concentration, ranging from clean to extremely dirty solvent. The tanks used to make the paints and coatings are cleaned by taking an open bucket of solvent from the dirtiest solvent pot and adding it to the tank and using a scrub brush to scrub the inside of the tank. The spent solvent

wash from this process is recycled back into first pot. The cleaning process continues by repeating these steps with the proceeding solvent pots, ending with a solvent wash from the cleanest solvent pot. The spent solvent from the first pot is sent to the distillation system for solvent recovery. The solids collected in the bottom of the first pot are disposed of as hazardous waste along with the bottoms from the distillation system. Fresh solvent is added into pots 2 to 4 as needed. Records of solvent addition to the solvent cleaning system are not maintained. The solvent can be a mixture of solvents used at the facility. Solvents utilized at the facility, include but are not limited to the following:

- Toluene
- Xylene
- Methyl ethyl ketone
- Methyl isobutyl ketone
- Acetone; and
- Isopropyl alcohol

The solvents listed above are stored in “bulk” 300-gallon totes. Working and breathing losses from the totes are discharged to the atmosphere, via a manifold vent line that discharges outside of the building. The solvents are transferred from the totes to a 100-gallon day tank. Mr. Faria stated that a measuring stick is used to gauge the contents in the tank and that the measuring stick never measures any solvent losses. Tilly supplies the bulk solvents stored in the 300-gallon totes and Univar supplies other solvents in 55-gallon drums. Mr. Faria stated that benzene and methylene chloride are not utilized at the facility. Mr. Faria provided certificates of analysis for the toluene and xylene purchased for the facility. The certificates of analysis showed measured trace benzene concentrations of 9 ppm (<0.001 weight percent) and 0.0028 wt. percent benzene, which is below the 0.10 weight percent threshold specified in 40 CFR 63, Subpart 7C to meet the definition of a “Material containing HAP”.

Mr. Faria stated that the facility still operates the Weil-McLain boiler. This boiler is 0.7 MMBtu/hr. heat input capacity and utilizes No. 2 distillate oil as a fuel source. Mr. Faria stated that No. 2 distillate fuel is used as a fuel source for the boiler and that annual tune-ups are conducted on the unit. The facility continues to operate a small spray booth to apply coatings to sample panels that are four inches by six inches in size, to check for gloss and color. This is conducted approximately four to five times per day and utilizes approximately one fluid ounce of coating. The facility utilizes two Devilbiss MCB spray guns. These guns are equipped with conventional spray nozzles. The spray booth vents outside the building. There are no filters present on the exhaust from the spray booth.

Mr. Faria explained that VOC and HAP air emissions are determined by “mass balance”, using emission factors derived from historical measurements taken of evaporative losses and added a factor of 10% to account for fugitive emission losses. The emission factor is applied to the annual total consumption (determined using start and ending inventories and purchases). Mr. Faria states that emissions have been mostly consistent year to year. Specific emission factors have been developed for individual coatings. If any solvent is used in the process that is not measurable, an emission factor determined for known quantities plus 10% is added to this value to account for fugitives. The facility reports zero air emissions for the chromate pigments usage since there is a dust collector in place for these coatings and the dust collector vents inside the building.

B. Records Review

40 CFR 63, Subpart 7C: Records of Inspections & Testing:

Mr. Faria was not able to provide records documenting the annual inspections conducted on the dust collector. Weekly Mr. Faria presented records of weekly visual inspections conducted on the dust collector system which consisted notation of the dates these inspections logged on monthly calendars. Notations are made on the calendars of the dates that coatings made with dry chromium pigments were manufactured. The EPA inspector stated that the documentation provided did not include all the information required to be recorded for each inspection, as detailed in 63.11602(b)(1-6) of 40 CFR 63, Subpart 7C, specifically the records did not include: the time of the inspection; the person conducting the inspection activity, the technique or method used, the operating conditions during the activity; the results and description of corrective actions taken. Mr. Faria stated that no corrective actions have been taken to date and therefore, not documented.

40 CFR 63, Subpart 7C: Notifications:

- An Initial Notification was received by EPA on February 25, 2020.
- A Notification of Compliance Status was received by EPA on March 3, 2020.

40 CFR 63, Subpart 7C: Annual Compliance Certifications:

Mr. Faria was unable to provide records of the annual compliance certification reports required pursuant to section 63.11603(b) of 40 CFR 63, Subpart 7C and stated he did not understand what information was required to be documented in the reports. The EPA inspector reviewed this section of the standard with Mr. Faria.

Safety Data Sheets (SDSs): A spot check of SDSs was conducted. Mr. Faria provided the SDSs for the following chromate containing pigments used at the facility: Zinc Chromate-C220/C240, Basic Zinc Chromate-233, in addition to Strontium Chromate-176. These compounds all contain greater than 0.1 percent by weight chromium.

C. Facility Tour

At approximately 11:20 a.m., Mr. Farias provided the EPA Inspector a tour of the facility. The following observations were made by the EPA Inspector during the walk-through:

Distillation Unit: Located in the Warehouse, the unit was not in operation at the time of the inspection. The EPA Inspector observed an exhaust hose that vents outside of the building near the distillation unit. Mr. Faria explained that a blower located outside the building that vents fugitives from this room needed to be repaired.

Flammable Storage Areas: The “bulk solvent storage” totes and associated day tanks were observed in this area. The tote storage system had a manifolded vent system that discharged outside the back of the building.

Production Area: A strong solvent odor was detected in this area. The inspector viewed the equipment associated with the coating production process, including liquid dispersers, drill presses, scales, basket mill and the solvent cleaning process equipment. A dust collector was observed adjacent to the mixing station that is used for the manufacture of chromium based products. This dust collector vents directly inside the building. Mr. Faria showed the EPA Inspector a lid that was custom made for the containers used for the manufacture of the chromium based coatings. The lid fits around the shaft of the mixer and has a flexible hose connection to the duct collector. The following information was obtained from a label on the duct collector:

Model: DCH1-BI
DCH11-03 BI
4 HP
Manufacture Date: 3-4-20
Stage 1: 7FRO-2020
Contract #: 200494-1

There was also a sticker on the dust collector that detailed the steps to take to clean the filter system. There are two points of discharge to the atmosphere from this area that consists of two local exhaust fans that provide local exhaust ventilation at five pick-up points for the coating manufacturing and scale areas.

The inspector noted that the solvent pots associated with the cleaning system were not covered and contained solvent. There was an intense solvent odor in this area. Mr. Faria stated that the pots are left open during the workday and closed at night.

There is a vent from the spray booth that discharges outside the building. There is a baffle located in front of the spray booth vent prior to discharge to the atmosphere. There are two DeVilbiss-MCB conventional spray guns that operate at 30 psi air pressure used in the spray booth.

D. Closing Conference

The EPA Inspector reviewed the apparent record keeping requirements with respect to 40 CFR 63, Subpart 7C. Mr. Faria asked if he could send documents/records to EPA post-inspection. The EPA Inspector stated that he could submit whatever information he thought was relevant and thanked Mr. Faria for his time and cooperation.

The EPA Inspector departed the facility at approximately 12:30 p.m.

E. Post Inspection

On March 28, 2025, Mr. Faria submitted the following documentation to EPA, in follow-up to the March 27, 2025 inspection, via email correspondence:

- Updated inspection records for the dust collector to include additional information required to be recorded by 40 CFR 63, Subpart 7 C;
- A copy of the February 2020 Notification of Compliance; and
- Annual Compliance Certification Reports for 2020, 2021, and 2024 (dated 3/28/25).

Mr. Faria stated that he found the Annual Compliance Certification Reports for 2020 and 2021 post-inspection. The 2024 Annual Compliance Certification was completed post inspection and dated March 28, 2024. No deviations from 40 CFR 63, Subpart 7C standard were reported in these reports. Mr. Faria stated the 2022 and 2023 reports were not completed due to an oversight that occurred during the Covid pandemic and lockdowns. Mr. Faria stated that he reviewed the records for the weekly inspections of the dust collection system for 2022 and 2023 and there were no deviations or corrective actions taken during those years and that they remained in compliance during this period.