



REGION 5

CHICAGO, IL 60604

MEMORANDUM

SUBJECT: CLEAN AIR ACT INSPECTION REPORT
Serigraph, Inc. - Plant 2, West Bend, Wisconsin

FROM: Sasa Dunovic, Inspector/Enforcement Officer
AECAB (IL/IN)

THRU: Nathan Frank, Section Supervisor
AECAB (IL/IN)

TO: File

BASIC INFORMATION

Facility Name: Serigraph, Inc. - Plant 2 (Serigraph)

Facility Location: 3801 Decorah Rd, West Bend, Wisconsin 53095

Date of Inspection: February 20, 2024

EPA Inspector(s):

1. Sasa Dunovic, Inspector/Enforcement Officer
2. Jason Schenandoah, Environmental Engineer

Other Attendees:

1. Jessica Peterson, VP Human Resources
2. Justin Reichert, Director Environmental Health and Safety
3. Al Tackes, Maintenance Lead
4. Tyler Acheson, Hazardous Waste Specialist

Contact Email Address: Jessica Peterson, impeterson@serigraph.com and Justin Reichert, jreichert@serigraph.com

Purpose of Inspection: to investigate compliance with synthetic minor limits

Facility Type: a printing, molding, and custom graphics company

Facility Name: Serigraph, Inc. - Plant 2
Facility Location: 3801 Decorah Rd, West Bend, WI 53095
Date of Inspection: February 20, 2024

Regulations Central to Inspection: Hazardous air pollutants (HAPs) emissions and regulatory requirements associated with the Wisconsin Type G Registration Operation and Construction Permits.

Arrival Time: 10:10 a.m.

Departure Time: 12:10 p.m.

Inspection Type:

- ☒ Unannounced Inspection
- ☐ Announced Inspection

OPENING CONFERENCE

- ☒ Presented Credentials
- ☒ Stated authority and purpose of inspection
- ☒ Small Business Resource Information Sheet not provided. Reason: Not a Small Business
- ☒ Provided CBI warning to facility

The following information was obtained verbally from the Serigraph personnel unless otherwise noted.

Process Description:

Serigraph offers commercial printing and decorative molding services. Some of their products include In-mold decorating, graphic overlays, nameplates, custom signs, and decals. These products are used in various industries, including automotive, electronics, retail, medical, and restaurants.

Printing operations at Serigraph have been performed using conventional and ultraviolet (UV) processes with water-based, solvent-based, and UV-cured inks. Inks are typically delivered in 3-gallon containers, but the most frequently used inks can come in 55-gallon drums. Before printing, Serigraph prepares the inks by mixing or diluting them. The printing is performed on different types of plastic substrates via multiple screen presses followed by curing ovens. Emissions from these processes are captured and redirected through a biofilter. Currently, Serigraph uses one UV printing machine/process. Printing screens are cleaned using water and solvents and maintained to support the printing process in the screen reclaim auxiliary process. Wastewater from this process is combined with water from the biofilter before being discharged to a POTW.

Injection molding is used to produce some of the facility's products. Multiple molders are used for the process, allowing labeling and decorating during the mold cycle. Different resins for in-mold production are supplied by customers.

Cutting and forming are auxiliary processes that support main printing and injection molding operations.

Staff Interview:

The facility is operational 24 hours a day, five days a week, with three shifts. It currently employs around 230 employees. The facility has been transitioning from solvent-based inks to UV-curing inks for the last 3-4 years. Solvents are used for cleaning and reusing printing screens, as well as for diluting and adjusting some inks. The specific solvents used are acetone and a solvent known as "Solvent G" (also referred to as Barsol A-4644, according to the provided SDS).

According to the 2020 National Emission Inventory (NEI), the facility reported emitting 24372.97 pounds of toluene. However, the facility representatives have clarified that the reported emissions were overestimated due to a clerical error. Initially, it was considered a conversion error, where the numbers were mistakenly provided in grams and labeled as pounds. However, further investigation showed that the conversion from grams did not match the reported pounds. Despite this, the usage quantities for the year of the over-reported emissions and other years are similar, and no data supports overestimated emissions.

TOUR INFORMATION

EPA Toured the Facility: Yes

Data Collected and Observations:

We conducted a tour of the facility, starting in the warehouse and proceeding through the biofilter area, ink storage, ink mixing and matching areas, printing screen cleaning and reclaiming area, UV machine area, screen printing area with curing ovens, injection molding, forming, and cutting areas.

While touring the biofilter area, Al Tackes informed us that the biofilter collects vapors from various production areas with the help of two fans. It then uses water as a spray to scrub the emissions and exhausts the cleaned air through two stacks. Mr. Tackes also mentioned that the biofilter can be bypassed and vent emissions directly into the atmosphere. Furthermore, he informed us that the biofilter was once filled with wood bark, but the media was no longer used starting approximately six years prior to the inspection.

Photos and/or Videos: were not taken during the inspection.

Field Measurements: were not taken during this inspection.

CLOSING CONFERENCE

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

Requested documents:

- Air Emission calculation spreadsheets with all supporting information for all emission units for the period January 1, 2020, to December 31, 2022.

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- Copies of the air emission reports submitted to WDNR for the period January 1, 2020, to December 31, 2022.
- Safety Data Sheet (SDS) for Solvent G.
- Narrative explanation of the clerical error with the 2020 emissions report.

Concerns:

The review of the 2020 reported emissions indicated that the facility had emitted toluene in quantities over their Type G Registration Operation and Construction Permit limits.

DIGITAL SIGNATURES

Report Author: Dunovic, Sasa
Digitally signed by Dunovic, Sasa
Date: 2024.03.26 08:41:40 -05'00'

Section Supervisor: NATHAN FRANK
Digitally signed by NATHAN FRANK
Date: 2024.04.02 16:31:44 -05'00'