UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

Report Title:	Clean Air Act Inspection of Spray Products
Inspection Date(s):	8/18/2021
Regulatory Program(s):	NESHAP
Company Name:	Spray Products
Facility Name:	Spray Products
Facility Location:	1323 Conshohocken Rd. Conshohocken, PA 19462
Latitude:	40.10564 **Longitude:** -75.31502
County/Parish:	United States
AFS Number:	42-091-02055
Permit Number:	46-00139
NAICS Code:	325998 **SIC:** 2899
Unique Project #:	3E21CA027A

Facility Representatives: **Point of Contact**

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ERIN WILLARD Digitally signed by ERIN WILLARD Date: 2021.10.07 09:26:59 -04'00'

EPA Lead Inspector Signature **Erin Willard** **Date**

1650 Arch Street (3ED21)

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Supervisor Signature Hall, Kristen Digitally signed by Hall, Kristen Date: 2021.10.07 09:23:15 -04'00' **Kristen Hall** **Date**

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I. Introduction

The United States Environmental Protection Agency (EPA) conducted a Clean Air Act (CAA) inspection at Spray Products (Facility) to verify compliance with applicable State and Federal regulations. The Pennsylvania Department of Environmental Protection was notified of the inspection on August 2, 2021 via email. On August 13, 2021, EPA notified the Facility of the planned inspection via phone and email. EPA emailed a list of records for review to Ms. Cortez, prior to the inspection (see Attachment 1). These records are listed in the Records Review section of the report.

A. Summary of the Facility

The Facility is located at 1323 Conshohocken Road, Conshohocken, PA 19462. Spray Products has a second location at 1000 Lake Rd, Medina, OH 44256. Mr. Stem is the VP of Operations and joined the company three years ago. Both Mr. Stem and Ms. Cortez are stationed at the Ohio facility. The Conshohocken facility currently has approximately 90 employees and operates three shifts in a staggered 12-hour schedule, 7 days a week.

Spray Products is a privately-owned, contract aerosol packaging facility that assists companies with all phases of product development including research and development, regulatory support, packaging, and distribution. Some examples of products that Spray Products formulates and packages include paints, tire shines, brake cleaners, and glues. The aerosol cans Spray Products uses come pre-printed, or Spray Products can label the cans on-site. The aerosol cans are also "decorated" on-site which includes the addition of caps, tips, tubes, and valves placed on the cans. Spray Products uses several different propellants including dimethyl ether (DME), hydrocarbons (propane and butane), and 134A.

Spray Products offers customers three options: turnkey, co-pack or customer-owned, and blended contract options. A turn-key contract would consist of Spray Products utilizing its on-site technical staff and chemists to develop the chemical formulation based on what the customer needs, obtaining the raw materials either from the customer or a general supply chain, and Spray Products employees making the product, filling and shipping the finished aerosol products. Customer-owned contracts have Spray Products fill aerosol cans with the finished product supplied to the site, with no exchange of raw materials or manufacturing completed by Spray Products. Lastly, a blended contract has the most manufacturing flexibility for companies to choose how much involvement Spray Products will have regarding formulation and packaging of the products.

The equipment on-site includes two aerosol can filler lines, "Line A" and "Line B", two gasification houses, a boiler room with two boilers, storage tanks, and product blending tanks. The site also has a small research and development lab and a small warehouse storage space.

PADEP issued Spray Products a State Only Operating Permit (Permit No. 46-00139) on May 3, 2017. The facility was purchased and upgraded from an existing company at the site that had a similar business model for over 60 years. The company has been known as Spray Products for approximately 12 years.

Spray Products is classified as minor source for all pollutants, including Volatile Organic Compounds (VOCs), Sulfur Dioxide (SO_2), Nitrogen Oxides (NOx), Carbon Monoxide (CO), and Hazardous Air Pollutants (HAPs), (including toluene and methanol). The Facility is subject to, or potentially subject to the following federal regulations:

- Paints and Allied Products Manufacturing: National Emission Standards for Hazardous Air Pollutants (NESHAP) for Area Sources (40 CFR Part 63 Subpart CCCCCCC)

Spray Products is included in a list of facilities that reports to EPA's Toxics Release Inventory (TRI); however, the online TRI indicates that the last year of reporting was 2014.

B. Inspection Opening Conference

At 9:00 am on August 18, 2021, EPA inspectors arrived at the Facility for a CAA Inspection and conducted a brief opening conference. Spray Products was represented by Ms. Cortez, EHS Manager, and Mr. Stem, VP of Operations. Also, Helen Morris and Gnandjo Coulibaly (PADEP) were present. The opening conference took place at the corporate offices located at 1000 Conshohocken Road, Suite 100, Conshohocken, PA 19428. EPA inspectors, Erin Willard and Isabella Powers, presented their credentials and explained the purpose of the visit was to conduct a full compliance evaluation (FCE) to determine compliance with their permit and any applicable regulations. Additionally, EPA informed the facility representatives of their right to claim any confidential business information (CBI). At that time, Spray Products did not claim any specific piece of information as CBI; however, Mr. Stem did indicate that there was the possibility that photos may be claimed as such.

II. Site Activity/Process Description

Mr. Stem and Ms. Cortez provided the EPA and PADEP inspectors an overview of the facility operations during the opening conference. The representatives explained that Spray Products fills metallic cans with various products and adds a propellant to each can allowing it to spray the product. Spray Products receives raw materials from a wide variety of vendors via tanker truck, rail, and parcel. The products are unloaded directly from the trucks into storage or blending tanks. Spray Products has no trucks, the company contracts the trucks out for shipping and distribution of the products.

All storage tanks at the facility are above ground (AST), and they are all metallic. Many of the products are brought in as bulk solvents and blended into finished intermediates (FI). Spray Products purchases solvents and propellants in bulk. Each AST (other than the propellant tanks) is equipped with an atmospheric vent, which opens at approximately 3 psi (pounds per square inch) to allow for filling and breathing losses. The tanks that hold the propellants are pressurized, and the control vents have a set point for safety. Propellants stored at the site are known as NP-70 and A108 (hydrocarbons); and 134A, 152A, and 1234ZE (refrigerants). Tanks are blended either with recirculation pumps (outdoor tanks) or with agitators to emulsify ingredients (indoor tanks). Mr. Stem and Ms. Cortez provided EPA and PADEP with a site plot plan, which included the location of each tank, its use and contents, size in gallons, process line locations, and boilers. EPA noted that some of the tanks are designated to hold "resin" and asked if those tanks are heated (in order to keep the resin flowable). Mr. Stem indicated that is not necessary, and that the product in the resin tanks is something commonly called "Bondo", which is used as a filling agent in autobody applications. EPA also noted that there is a designated

nitrocellulose storage area; this material is highly flammable. Mr. Stem indicated that is a material used in only one or two products and has not been manufactured in roughly nine months. Nitrocellulose is only present on the site when those products are being manufactured; otherwise the storage area is empty.

In order to calculate VOC emissions from the propellant filling process, Spray Products uses a loss factor (called a "blowoff spec") provided by the manufacturer of the filling equipment, which estimates the standard loss of VOC (the blowoff specification) per aerosol can when the propellant is added and the filling tip is removed from the can. Spray Products then multiplies that value by the total number of cans filled to formulate an emissions value annually. All cans, no matter the size or contents use the same factor.

The propellant addition occurs in an enclosed area called a gas house, and the equipment is known as a gasser unit. Because there is the potential for explosions to occur due to the nature of the propellants, the gasser unit is located in a cement block structure with a dedicated stack that vents directly to the atmosphere. Mr. Stem indicated that because both lines were operating during the inspection, the gas house process equipment would not be able to be viewed, for safety reasons. He indicated that the facility in Ohio has a camera inside its gas house, and he could show EPA and PADEP a video of what that unit looks like as it is operating, in lieu of viewing the units at the Conshohocken site.

The A-Line is a "through-the-valve" (TTV) gasser which adds propellant through the valve of the aerosol cans using pressure and the propellant is typically a hydrocarbon blend. Mr. Stem explained the TTV process pushes the propellant into the can via a mechanical plunger mechanism, and that when the gasser tip pulls away from the valve stem, a small amount of propellant is released from the gasser fill tip (essentially a small amount of overfill from the line that doesn't go into the can). The B-Line is a high-speed rotary line that charges the aerosol cans with CO_2 through a process called under the cup gassing. This process uses gravity instead of pressure to fill each can with the product. Spray Products does not employ any air emissions control devices on either filling line, so the VOC loss from propellants to the atmosphere is accounted as 100%.

The last steps for the aerosol cans include a warm water bath that ensures there are no weaknesses or leaks in the cans that would cause them to explode and "decoration". The decoration process includes the addition of caps, tips, and tubes to the aerosol cans. The aerosol cans come pre-printed or are labeled on-site. Spray Products does not paint or use adhesives or glues to label the cans.

In addition to the manufacturing lines and storage tanks, Spray Products operates two small, natural gas boilers, that provide comfort heat and heat for the water bath. Mr. Stem indicated the facility is a large-quantity generator (LQG) under RCRA. The opening conference concluded at 10:45 am.

III. Observations

EPA inspectors drove approximately a mile from the corporate office to the operating site, 1323 Conshohocken Rd. Conshohocken, PA 19462, and were led on a walkthrough of the Facility at 10:56 am by Ms. Cortez, Mr. Stem, Mr. Jordan (Corporate Engineer), and Shelley Anderson (Plant Manager) of Spray Products. Helen Morris and Gnandjo Coulibaly (PADEP) were also present for the walkthrough. EPA inspectors noted photos would be taken during the Facility walkthrough (Attachment 2 and 4). All of the photos taken on-site were later claimed as CBI.

The EPA inspectors, PADEP inspectors, and Spray Products personnel entered Building #1 of the Facility through the employee entrance. The EPA and PADEP had their temperatures checked and signed-in to the visitor logbook. Mr. Jordan explained B-Line was running a water-based paint that day and using hydrocarbon propellants, which is a source of VOCs.

Upon entering, EPA inspectors noticed large stacks of packaged cans and inquired if those cans were finished products. Mr. Jordan answered that this area near the entrance was for storage and the cans were empty with no cap or valve. These cans would eventually go into the filling area.
The first location the group entered was the room for "B-Line". Mr. Stem explained that the "decoration" process occurs here where the Spray Products employees place caps, tips, and valves on the aerosol cans, after the enclosed metal water bath portion of the line. The cans were moving on a conveyor line across the room at the time of the tour. Cans entered this room directly from the gas house, which is a separate room; these cans are already filled with product and contain the propellant. On this day, B-Line was running water-based paint.

The group exited the B-Line room through a door that led directly to the B-Line Filling Room. EPA requested to photograph the filler, and Mr. Stem indicated this was not a unit that Spray Products typically allowed to be photographed. After some discussion, Mr. Stem allowed EPA to take the photograph but stated that it would be a CBI claimed photograph.

Upon exiting the room holding the B-Line filler, the group went outside to observe the storage tanks, blending tanks, and gasification room exterior. Mr. Stem explained the gasification room was a very hazardous location, so we were unable to enter the area. This room is always unmanned when in operation and personnel only enter during startup or shutdown. The gasification room is where the propellants are introduced into the aerosol cans. Each time a can is filled, Mr. Stem explained there are "blow off specs", which Mr. Stem also explained equates to approximately 2 grams (g) of VOC emissions per can, regardless of the can's contents or size

The EPA inspectors walked around the area outside to observe the storage and blending tanks. The plot plan includes each of the tank's sizes, designations, and contents. Mr. Jordan explained the propellants are delivered by tanker truck and when the trucks are unloaded, the tanks are filled to 85% for all vessels. The EPA inspectors asked what happens to the headspace when the tanks are being filled. Mr.

Jordan answered that each tank is naturally aspirated, and the headspace is vented directly to the atmosphere through a vent. The EPA inspectors asked if the tanks are permitted by PADEP and Mr. Jordan answered the tanks are covered by PA Labor and Industry ("L&I") rules and requirements and are inspected on an every-10-year basis, except for the propellant tanks, which have an annual inspection requirement.

The EPA inspectors inquired about the pressure in the propellant tanks and what would happen if they were over pressured. Mr. Jordan explained the relief valve (RV) would open and let the headspace out. The RV for these tanks is set to 275 psi. The EPA inspectors asked if the tanks were single or double walled and Mr. Jordan said they were single-walled, carbon steel tanks. Mr. Jordan also explained that the propellant tanks system is a closed loop from the tank farm to the gas house, with no other vents except for the RVs located on the storage tanks. The EPA inspectors inquired about other small tanks that were across the lot from the storage and blending tanks. Mr. Stem answered the tanks were the deionized (DI) water tanks. DI water is used by the facility in some of its formulations.

The EPA inspectors wanted to understand how the tanks were cleaned and emptied. Mr. Jordan and Mr. Stem both explained the tanks are not cleaned because the only products held in the tanks are clean and solvent based. Before the tanks are filled again, the employees ensure the tanks are completely empty before adding more solvents or additives. Many of the tanks are dedicated, meaning they store only one solvent or material. Paints are blended and mixed using the indoor vessels, no pigments are ever added to the outdoor tanks. In order to minimize the need for cleaning those indoor vessels, Spray Products follows a production wheel to facilitate mixing and blending in an order that does not require cleaning between each batch.

From the outside area where the tanks and gasification room are, the group entered the boiler room. Spray Products has two boilers that are used for comfort heat and heat for the water baths that the aerosol cans undergo. The boilers operate year round. Mr. Jordan explained the boilers were recently inspected. The boilers are rated at approximately 2 MMBTU/hr (the permit indicates each is rated at 2.06 MMBTU/hr).

The group exited the boiler room and entered Building #2 where the "A-Line" and "A-Line Filler" are located. Mr. Stem explained the A-Line is not a rotary line as the B-Line is, instead the A-Line is an indexing linear fill line, used for thick/viscous products, such as glues. A piston type mechanism fills each can and ensures the inside of the fill tube is cleaned with each fill. The product being run at the time of the inspection was a spray-on glue. The gasification room for A-Line was on the other side of a wall, so the inspection team did not directly view it.

After observing the A-Line, the tour was complete and the group exited by walking through a warehouse area where finished aerosol cans are stored.

The walkthrough concluded at 12:00 pm. EPA and PADEP left the site for a lunch break.

IV. Records Review

The records review commenced at 1:00 pm. EPA inspectors reviewed documents requested in the August 13, 2021 email to Ms. Cortez (see Attachment 1). EPA requested records in an electronic format wherever possible. Ms. Cortez and EPA reviewed the requested document list and agreed upon a submission schedule via email. Records were not provided at the time of the inspection by Ms. Cortez, but the EPA inspectors and she agreed upon a timeline for the submission of the records. The records list and discussion of each can be found as Attachment 3 to this report.

V. Closing Conference

After the records review, EPA inspectors, Ms. Cortez, Mr. Stem, Helen Morris (PADEP), and Gnandjo Coulibaly (PADEP) had a brief closing conference to ask additional questions and discuss observations. The EPA inspectors noted that the investigation is on-going, and any areas of concern identified in the final reports do not necessarily reflect a violation or deviation, rather, they are areas that will require further investigation. EPA also noted that they would issue an inspection report within in 60 days, with a copy to the State. Simultaneously, EPA will perform a detailed review of records and may have additional questions. The inspection concluded at 2:10 pm.

The following have been identified as *potential* issues during the inspection. They are issues that require either further investigation by EPA or additional information or explanation by Spray Products.

- Mr. Stem and Ms. Cortez indicated that the owner of the company had submitted a letter to EPA's Toxic Release Inventory (TRI) Section indicating that the company had been incorrectly submitting a TRI emissions report; this assertion was based on a review of NAICS codes that are not required to report emissions. PADEP pointed out that the NAICS code in the letter is not the code associated with the facility's permit. The EPA inspectors asked for a copy of the letter[1] and relayed to Spray Products that EPA would look over the letter and possible exemption.
- It appears that the facility does not incorporate any storage tank emissions into their total annual site-wide emissions.

[1] Ms. Cortez submitted this letter by email to Erin Willard on August 24, 2021

VI. Attachments

Attachment 1: Email correspondence to Ms. Cortez of records requested to review during inspection

Powers, Isabella

From: Willard, Erin
Sent: Friday, August 13, 2021 12:01 PM
To: rcortez@sprayproducts.com
Cc: Powers, Isabella; Morris, Helen; jigallage@pa.gov
Subject: EPA CAA Inspection at Spray Products Conshohocken, PA August 18-19, 2021
Attachments: Spray Products List of Records for inspection.docx

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Renee,

Thanks for speaking with me about the CAA inspection next week. The EPA inspection team (Isabella Powers and me) along with the PADEP group will arrive at the site around 9:00am on Wednesday August 18, 2021. We have also reserved 8/19 as a spillover day for continuing the inspection if necessary. We will have our own safety equipment, and will also provide face coverings, per Spray Products site requirements.

I've attached here the list of records we'd like to review. As I mentioned, I think that you'll find most of it is required by your permit, and so should not require you to create extra records. Please let me know if you have any further questions.

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Attachment 2: Photo Log

CBI	Photo Number	Photo Description	Date/Time
CBI	1	CBI – "B-Line" Room. The "decoration" process occurs here including the addition of caps, tips, and valves to the aerosol cans.	8/18/21
CBI	2	CBI – "B-Line" Room. The cans were moving on a conveyor line. Cans enter this room directly from the gas house where the cans are filled with product and propellant.	8/18/21
CBI	3	CBI – "B-Line" Filler. The aerosol cans are filled before moving on the conveyor belt to the "B-Line" for decoration.	8/18/21
CBI	4	CBI – "Tank farm" (left) including storage and blending tanks, and "B-Line" gasification room (right).	8/18/21
CBI	5	CBI – Boilerplate of boiler #2, including model number, gross output, gas input, maximum working pressure.	8/18/21
CBI	6	CBI – Boilerplate of boiler #1, including model number, gross output, gas input, maximum working pressure.	8/18/21

Attachment 3

1. A plot plan of the facility, including each process area and the location of each emissions source, storage tank or vessel. Provide a list of all process equipment including but not limited to chemical reactors, mixing kettles, distillation columns, batch reactors, process vents, containers, surface impoundments, separators, transfer systems, pressure relief devices, vent systems, control devices, extraction equipment, and oxidizers
    a. Paper copy of the map provided at inspection
2. Provide a copy of each Initial Notification, Notification of Compliance Status and deviation reports as submitted to PADEP or EPA, in accordance with the permit and each applicable state or federal rule.
    a. None available now, but staff is still reviewing files, requested by Wednesday August 25.
3. A list of all federal rules the facility is subject to
    a. Subpart 7C has methylene chloride – stored in drums, no annual report annual report unless deviations.
4. Fugitive and visible emissions monitoring records
    a. Scanned and will send today, August 18.
5. A copy of each Request for Determination (RFD) and Plan Approval issued by PADEP
    a. None. There may have been an application for a C Line in 2018 but they have not moved forward with the project
6. Monthly production records, including both the volume of product produced, the number of batches, and the amount of feedstock utilized.
    a. Production reports back to 2018, but there is a portion that looks differently – available now, and will email.
    b. Asked for tank throughputs by tank from 1/1/19 to present – will send by August 25.
    c. Emission tracking Excel sheet will be provided after staff confirms the source of each emission factor, will email by August 25.
7. All MSDS sheets for materials present at the site.
    a. Ms. Cortez will send MSDS sheets for the materials that are “raw” and stored on site on a regular basis, along with several MSDS sheets for the most common products made (paint and glue). EPA will send the list of HAPs for them to search the database to see if there are products that have those added in smaller amounts, will email on August 25, using TRI values.
    b. Owner of Spray Products sent an email saying the company is “not required to file TRI for this site”, to Lauren O. Davis. Ms. Cortez will send EPA a copy of the letter sent to Land and Chemicals
8. A full set of emissions calculations (actual and potential), including those for VOCs, HAPs, NOx, CO, PM and SO2, on both a monthly and annual basis. Include an example calculation, the emissions factors used and the sources of those factors.
    a. Will be covered by the answers to #6
9. A list of each tank at the facility, including the size, construction date, construction material and roof type, last date of inspection, and the current contents of the tanks with the associated vapor pressure data.
    a. They have info but need to put it into a comprehensive list for August 25 submittal
10. A list of each combustion source at the facility. For boilers and engines, include the size in mmBTU or brake horsepower, the fuel type, the construction date, and the date of the

last maintenance or tuneup. They will provide EPA the natural gas records for the boilers – use PECO bills.