REGION 5
CHICAGO, IL 60604

MEMORANDUM

SUBJECT: CLEAN AIR ACT INSPECTION REPORT
Crown Cork & Seal, Bradley, Illinois

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

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

TO: File

BASIC INFORMATION

Facility Name: Crown Cork & Seal

Facility Location: 1035 E North St, Bradley, IL 60915

Date of Inspection: November 7, 2024

EPA Inspector(s):
1. Sasa Dunovic, Inspector/Enforcement Officer
2. Justin Smith, Environmental Engineer

Other Attendees:
1. Ian O'Dowd, EHS Coordinator

Contact Email Address: Ian.Odowd@crowncork.com – Ian O'Dowd

Purpose of Inspection: to investigate compliance with Synthetic Minor limits for hazardous air pollutants (HAPs)

Facility Type: The facility manufactures aluminum beverage cans.

Regulations Central to Inspection: HAP emissions and regulatory requirements associated with the Clean Air Act Permit Program (CAAPP) Permit number 95110105 , the state implementation plan (SIP), and 40 CFR Part 60 Subpart WW, Standards of Performance for the Beverage Can Surface Coating Industry.

Arrival Time: 10:10 a.m.
Departure Time: 12:35 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
Was any information collected during the inspection claimed as CBI?
☒ Yes ☐ No.

Information Claimed as CBI: Material safety data sheets (MSDS) for various coatings and solvents, air emission calculations, and toxic release inventory (TRI) emission calculations.

The following information was obtained verbally from Crown Cork & Seal personnel unless otherwise noted.

Process Description:
The facility manufactures bodies of two-piece aluminum beverage cans. The two-piece can manufacturing is a continuous high-speed process that includes fabrication and coating operations.

The can manufacturing process begins with cup blanking and drawing. Here, aluminum coils are fed into two high-speed presses that punch out cup-shaped blanks. These blanks then undergo ironing and doming, where they are forced through a series of rings to elongate and shape the bottom into a dome. The cans are then trimmed to a precise length.

Next, the cooling lubricants needed for the cupping presses and wall ironers are washed from the surface with acid, and the can is rinsed with deionized water in a multi-stage washing process. Once clean, the cans move to the printing and varnishing station, where they are rolled against a cylinder to print in different designs. The facility has four decorators, but only three can operate simultaneously. Once the cans are printed, they are baked to dry and cure the ink.

To ensure the contents remain safe, the inside of the cans receives a protective coating in the lacquer spray machine (LSM). This coating is applied through inside spraying and then cured in an internal bake oven (IBO). The cans are then necked in to reduce the diameter at the top, preparing them for the final stages, where the can rims are flanged to facilitate the attachment of the top end.

Staff Interview:
The facility operates continuously, 24/7/365, with scheduled maintenance shutdowns planned throughout the year. Currently, about 150 employees support the facility's operations, working in four shifts.

The facility does not have any air emission control devices installed on its production emission units or storage tanks. Isopropyl alcohol (IPA) is the only solvent used in the production. The coatings for can design prints are exclusively supplied by INX International Ink Co., while both the finishing (clear coat or overvarnish) and the interior body spray are provided by the Sherwin-Williams Company.

To calculate air emissions required by CAAPP, the facility tracks the usage of inks, exterior over varnish, interior body spray, and cleaning solvent (IPA). These calculations are performed using a spreadsheet provided by the company's headquarters. Although the facility uses a variety of colors for can designs, all ink usage is aggregated into a single category for emission calculation purposes. The emissions for the toxic release inventory are calculated at the company's regional office based on the usage and production records provided by the facility.

TOUR INFORMATION

EPA Toured the Facility: Yes

Data Collected and Observations:
EPA began a tour of the facility, starting with the two cup blanking and drawing presses, where sheets of metal were transformed into cup shapes. Next, EPA moved on to the ironing and doming lines, where we observed the processes that ensured the cups had a smooth surface and the desired curvature.

Following this, EPA watched the multi-stage washing process, during which each cup was cleaned to remove any impurities. The washing process occurs in six stages. The first three stages are different acid washing, the fourth and fifth are rinsing operations, while a mobile enhancer is applied in the final, sixth stage. After washing, EPA visited the printing and varnishing station, where designs were applied to the cups. During the inspection, three out of the four decorators were operational. Following that, EPA observed lacquer spray machines that applied a protective coating to the inside of the cups. There are 24 spray guns in total, with 8 on each of the 3 production lines.

The tour then continued to the necking and palletizing process, where the cups were shaped and organized for shipping. Additionally, EPA visited the bulk storage tanks for varnishes and the ink storage area. The bulk storage tanks are located in a dedicated room. This room contains three fixed-

roof tanks, each fitted with a stack extending through the roof of the building (image #8). The labels on the tanks indicated that two of them were storing Sherwin-Williams 9823001 varnish, while the third tank contained Sherwin-Williams 22Q14AL varnish (images #5, 6, and 7). During the inspection, a very strong paint/solvent odor was present in the room.

During the inspection on the production floor, EPA observed an IBC tote containing Sherwin-Williams V70Q38AA inside spray (image #4). Additionally, EPA noted several 20-pound INX buckets of design ink (images #1, 2, and 3). Among those observed were the following inks: 1311109, 1129862, 1299549, 1632214, 1571738, and 1641793.

Photos and/or Videos: were taken during the inspection and are listed in Appendix A.

Field Measurements: were not taken during this inspection.

RECORDS REVIEW

- Emission calculations spreadsheet:
  - The facility tracks the usage of the following coatings and solvents:
    - Interior Body Spray 9823-001
    - Interior Body Spray 70Q11AA
    - Exterior Overvarnish 22Q14AG
    - Exterior Overvarnish 9201821
    - Ink INX
    - Cleaning Solvent IPA

CLOSING CONFERENCE

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

Requested documents:

1. MSDS for the following materials:
   - Inside Spray, 9823-0001
   - Inside Spray, 70Q11AA
   - Varnish, 22Q14AG
   - Varnish, 9201821
   - Ink, INX
   - Material stored in the IBC container labeled Sherwin Williams, V70Q38AA, located on the production floor.
   - Material stored in the two bulk tanks labeled Sherwin Williams, 9823001.
   - Material stored in the one bulk tank labeled Sherwin Williams, 22Q14AL.
   - Materials used in the 6 stages of the washing process.

- Any additional material used for the can coating (exterior or interior) at the facility that was not requested above.

2. Actual air emissions calculations for the Facility, in editable spreadsheet covering calendar years 2020 through 2023 (seen during the inspection).
3. TRI emissions calculations for the Facility, in editable spreadsheet or other native format covering calendar years 2020 through 2023.

DIGITAL SIGNATURES

Report Author: Dunovic, Sasa Digitally signed by Dunovic, Sasa Date: 2024.12.10 16:29:07 -06'00'

Section Supervisor: NATHAN FRANK Digitally signed by NATHAN FRANK Date: 2024.12.13 15:48:01 -06'00'

APPENDICES

1. Appendix A: Digital Image Log and Digital Video Log

APPENDIX A: DIGITAL IMAGE LOG AND DIGITAL VIDEO LOG

Inspector Name: Justin Smith **Archival Record Location:** Images

Image Number	File Name	Date and Time (CST)	Description of Image
1	IMG_0667.JPG	11/7/2024 12:53	Several 16-pound INX buckets of design ink – wide shot
2	IMG_0668.JPG	11/7/2024 12:53	INX AP LOVOC DYE TEAL ink bucket, close shot
3	IMG_0669.JPG	11/7/2024 12:53	INX AP LOVOC DYE TEAL ink bucket, close shot
4	IMG_0670.JPG	11/7/2024 13:09	IBC tote containing Sherwin-Williams V70Q38AA inside spray
5	IMG_0671.JPG	11/7/2024 13:12	Label on one of the bulk storage tanks
6	IMG_0672.JPG	11/7/2024 13:12	Label on one of the bulk storage tanks
7	IMG_0673.JPG	11/7/2024 13:12	Label on one of the bulk storage tanks
8	IMG_0674.JPG	11/7/2024 13:13	Three bulk storage tanks with stacks extending through the roof of the building