UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, ILLINOIS 60604

DATE: FEB 15 2019

SUBJECT: CLEAN AIR ACT INSPECTION REPORT
Greif Packaging, LLC, Alsip, Illinois

FROM: Manojkumar P. Patel, Environmental Engineer
AECAB (MI/WI)

THRU: Sarah Marshall, Section Chief
AECAB (MI/WI)

TO: File

BASIC INFORMATION

Facility Name: Greif Packaging, LLC, Alsip, Illinois

Facility Location: 4300 West 130th Street, Alsip, Illinois 60803

Date of Inspection: 12/18/2018

EPA Inspector(s):
1. Manojkumar P. Patel, Environmental Engineer

Other Attendees
1. Dave Tomaszewski, Plant Manager, Greif Packaging, LLC
2. Lauren Laabs, Mostardi Platt, Consultant for Greif Packaging, LLC

Contact Email Address: dave.tomaszewski@greif.com

Purpose of Inspection: To evaluate compliance with applicable requirements of Illinois State Implementation Plan (SIP) and the Clean Air Act.

Facility Type: NAICS Code 332439 Manufacturing of Metal Containers

Arrival Time: 10:10 AM CST
Departure Time: 2:30 PM CST

Inspection Type:

☒ Unannounced Inspection
☐ Announced Inspection

OPENING CONFERENCE

☒ Credentials Presented
☒ CBI warning to facility provided

The following information was obtained verbally from attendees unless otherwise noted.

Process Description:

Greif Packaging, LLC (the facility) manufactures metal and plastic drums and industrial bulk containers (IBC) with a capacity from 275 gallons to 330 gallons. Metal coils are received by truck. The facility uses 0.006 mm to 1.40 mm steel sheets for drum manufacturing. The sheet metal used in making each steel drum enters an edge grinder, a machine that rids sheets of jagged edges, smoothing them instead. The steel sheets then enter a bender, which contains a cylindrical mold to curve and bend the metal according to the mold.

Once the metal is bent, it is fed by a worker into a spot welding machine, which begins to connect the two ends of the metal sheet into a tube by welding several points along the edge. The flanging operation includes feeding the drum into a flange insertion machine to create rim indentations and edges on the top and bottom of the container. The bead expander takes the drum horizontally and expands beads or rolling hoops around the circumference of the container.

Once the steel cylinder body is created, the bottom piece of the container must be created and then connected. The bottoms are stamped down and cut in a pressing machine using special molds. The pre-curler machine smoothes the edges of each bottom piece to prepare it for seaming it to the drum body. Bottom pieces enter a seaming machine along with a drum body which rotates and presses the two pieces together. The now-seamed item prevents leakage of materials that the container will eventually hold.

The interior coating is a one-layer coating, the thickness varies depending on the customer's specifications. Currently, heat set solvent based coatings are applied to all drum interiors by automatic spray guns. The drums are loaded into a conveyorized oven for curing. This process takes several minutes. The curing oven is natural gas fired, and is set at 500°F. Emissions from the paint spray booth and dryers are vented to a regenerative thermal oxidizer (RTO).

The exterior coating system consists of a spray booth (drum and lid), a conveying line, and a drying oven (350°F - 400°F). An assortment of colored water-based coatings is used on this line. The booth is equipped with several guns where paint is applied to the drum exterior.

Once the exterior coating is applied and the drum is cured, each drum is assembled with the fittings, labels, and caps before being sent to the drum storage area.

TOUR INFORMATION

EPA toured the facility: Yes

Data Collected and Observations:

(1) The facility receives outer rings for open top steel drums from a third party vendor.
(2) The facility sells 98% of its final product to a third party and the reaming 2% of its final product is purchased internally.
(3) The specialty manufacturing process line manufactures light gauge thickness for the specialty drums.
(4) The RTO was installed in or around 2013-2014 and temperature is recorded weekly on a strip chart.
(5) The facility has two blow molding machines to manufacture IBC totes in the steel cages.
(6) The exhaust from the plant processes are routed to the RTO.

Photos and/or Videos: were taken during the inspection.

Field Measurements: were not taken during this inspection.

CLOSING CONFERENCE

Requested documents:

- 3 years of strip charts from RTO;
- 3 years of RTO temperature deviation reports;
- Current Major Modification to Clean Air Act Permit Program (CAAPP) Permit records; and
- Technical Data Sheets for all Interior and Exterior Coatings used at the facility.

SIGNATURES

Report Author: _____ Date: 2-14-19

Section Chief: _____ Date: 2-15-19

APPENDICES AND ATTACHMENTS

1. Digital Image Log

APPENDIX A: DIGITAL IMAGE LOG

1. Inspector Name: Manojkumar P Patel	**2. Date(s) of Inspection:** 12/18/2018
3. Company/Facility Name: Greif Packaging, LLC, Alsip, Illinois	**4. Street Address, City, State:** 4300 West 130th Street, Alsip, Illinois 60803
5. Number of Images: 47	**6. Archival Record Location:** "USB Labeled as GREIF PACKAGING LLC, CAA INSPECTION DECEMBER 18, 2018

Image Number	File Name	Date and Time (incl. time zone and DST)	Latitude and Longitude	Description of Image
1	IMG_7095.JPG	12/18/2018 12:31		Uncoil Steel
2	IMG_7096.JPG	12/18/2018 12:32		Steel Sheets Storage Area
3	IMG_7097.JPG	12/18/2018 12:33		Steel Sheet Welding Machine
4	IMG_7098.JPG	12/18/2018 12:33		Welded Steel Cylinder
5	IMG_7099.JPG	12/18/2018 12:34		Flange and Beads (both ends)
6	IMG_7100.JPG	12/18/2018 12:34		Flange and Bead Conveyor
7	IMG_7101.JPG	12/18/2018 12:35		W Beader and Neck End
8	IMG_7102.JPG	12/18/2018 12:35		Reduced Top Edge
9	IMG_7103.JPG	12/18/2018 12:36		Conveyor with Steel Drums
10	IMG_7104.JPG	12/18/2018 12:39		Interior Coating Paint Booth
11	IMG_7105.JPG	12/18/2018 12:39		Paint Booth Interior
12	IMG_7106.JPG	12/18/2018 12:39		Interior Coating Paint Booth - Lances
13	IMG_7107.JPG	12/18/2018 12:42		Paint Drums for Coating Process
14	IMG_7108.JPG	12/18/2018 12:42		Paint Drums
15	IMG_7109.JPG	12/18/2018 12:42		Paint Drums
16	IMG_7110.JPG	12/18/2018 12:42		Paint Drums
17	IMG_7111.JPG	12/18/2018 12:44		RTO pickup from Paint Booth + Curing Oven
18	IMG_7112.JPG	12/18/2018 12:45		RTO Pickup from Curing Oven (Mid-Section)
19	IMG_7113.JPG	12/18/2018 12:47		Curing Oven Outlet (Exhaust to Atmosphere) Not Ducted to R
20	IMG_7114.JPG	12/18/2018 12:48		Outlet of the RTO (Drums are coated internally)
21	IMG_7115.JPG	12/18/2018 12:52		Bottom is inserted to the Steel Cylinder
22	IMG_7116.JPG	12/18/2018 12:54		Exterior Paint Oven (Black Color Coating)
23	IMG_7117.JPG	12/18/2018 12:55		Exterior Curing Oven (Entrance End)
24	IMG_7118.JPG	12/18/2018 12:55		Exterior Curing Oven (Middle Section Entrance)
25	IMG_7119.JPG	12/18/2018 12:56		Exterior Coating Cooling Chamber Exhaust (to Atmosphere) N
26	IMG_7120.JPG	12/18/2018 12:59		Silk Screening
27	IMG_7121.JPG	12/18/2018 13:01		RTO Temperature Control Panel
28	IMG_7122.JPG	12/18/2018 13:02		RTO Ducting Layout Screen
29	IMG_7123.JPG	12/18/2018 13:02		Strip Chart Recorder

30	IMG_7125.JPG	12/18/2018 13:04		Closer View of Inlet Duct
31	IMG_7126.JPG	12/18/2018 13:04		Main Header to RTO
32	IMG_7127.JPG	12/18/2018 13:05		RTO
33	IMG_7128.JPG	12/18/2018 13:11		IBC Manufacturing Process
34	IMG_7129.JPG	12/18/2018 13:16		Parts Paint Booth (Ducted to RTO)
35	IMG_7130.JPG	12/18/2018 13:18		Parts Wicket Oven (Not Operating at the time of Visit)
36	IMG_7131.JPG	12/18/2018 13:20		Wicket Oven End (Parts Exit Point)
37	IMG_7132.JPG	12/18/2018 13:27		Specialty Drum Interior Spray Booth
38	IMG_7133.JPG	12/18/2018 13:27		Specialty Paint Booth Exit End
39	IMG_7134.JPG	12/18/2018 13:28		Specialty Curing Oven
40	IMG_7135.JPG	12/18/2018 13:28		Specialty Interior Curing Oven
41	IMG_7136.JPG	12/18/2018 13:35		Composite Blow Molding Machine
42	IMG_7137.JPG	12/18/2018 13:35		Blow Molding Machine (Closer View)
43	IMG_7138.JPG	12/18/2018 13:35		Blow Molding Machine (View)
44	IMG_7139.JPG	12/18/2018 13:35		Composite Blow Molder
45	IMG_7140.JPG	12/18/2018 13:35		Composite Drum Plastic Bottles
46	IMG_7141.JPG	12/18/2018 13:37		Composite Drum (Plastic Bottles are inserted into Metal Drun
47	IMG_7142.JPG	12/18/2018 13:40		Facility's Product Mix Display