

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Scheduled Inspection

N074530561

FACILITY: CROWN GROUP THE LIVONIA		SRN / ID: N0745
LOCATION: 31774 ENTERPRISE DR, LIVONIA		DISTRICT: Detroit
CITY: LIVONIA		COUNTY: WAYNE
CONTACT: Carl Vogt , Corporate Environmental Engineer		ACTIVITY DATE: 08/06/2015
STAFF: Jonathan Lamb	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: Compliance inspection, FY '15		
RESOLVED COMPLAINTS:		

INSPECTED BY: Jonathan Lamb, AQD
PERSONNEL PRESENT: Carl Vogt, Corporate Environmental Engineer;
Jason Nowak, Environmental Engineer
CONTACT PHONE NUMBER: (586) 575-9800
FACILITY PHONE NUMBER: (734) 421-7300
FACILITY FAX NUMBER: (734) 421-8370

FACILITY BACKGROUND:

The Crown Group - Livonia Plant is a minor source which has operated in an industrial park in Livonia since 1985. The primary operation at the plant is to coat automobile parts for Tier I and II suppliers. Crown Group - Livonia currently employs 60 workers and operates one shift, 4 AM to 5 PM Monday through Friday, with some maintenance done during the evenings. The ownership group changed from The Crown Group, Inc. to The Crown Group Co. in May 2013. The corporate office is based in Warren, MI.

This site was a Title V source until December 30, 2003, when ROP No. 199600122 was voided and most of the equipment is covered under the Rule 290 exemption. However, PTI 116-00 for the burn-off oven remained active at that time.

COMPLAINT/COMPLIANCE HISTORY:

Crown Group - Livonia was a source of numerous odor complaints from nearby businesses from 2010 through 2013. The facility was issued a Violation Notice on December 14, 2012, for Rule 901 violations observed as part of complaint investigations, which confirmed strong e-coat/paint odors impacting nearby areas. In response, the company closed some roof hatches and raised some of the e-coat stacks in mid-2013. The frequency of complaints dropped shortly afterwards, and no complaints have been received since November 2013.

No permit violations were noted during the last inspection, performed on June 26, 2012.

PROCESS DESCRIPTION AND EQUIPMENT:

The Crown Group – Livonia uses electro-deposition and powder coating to coat miscellaneous metal parts, mainly for the automotive industry. These parts currently include trailer hitches, engine cradles, and bumper brackets. Since December 2002, the company has used only water-based coatings which have no HAPs and low VOC content.

The electro-deposition coating process ("e-coat") uses an overhead monorail system to move parts through the coating process. Parts are hung on racks and sent through a parts washer and then run through a zinc phosphate rinse (which improves adhesion of the e-coat) and then rinsed. Parts are then dipped into an e-coat tank, rinsed, and then baked in a 3-stage curing oven at around 400°F. Afterwards, some parts may pass through an automated powder coat applicator and baked again before being unloaded and shipped out. The emissions from the e-coat line are exhausted uncontrolled through stacks on the roof. The e-coat line is permitted under General PTI No. 25-12. The powder coat portion of the line is also exempt under Rule 287(d).

A wax coating line was installed in 2011. The line consists of two booths in which a water-based wax is sprayed inside engine cradles. Dry filters are used to control particulates from the spray application. After the wax is

applied, the engine cradles pass through an electric infra-red oven to cure the wax. There are no VOC or HAP emissions from the wax; however, there are VOC emissions from the mineral spirits used to clean the spray applicators. The facility estimates that approximately 10 gallons of mineral spirits are used per year. The wax line is owned by Chrysler, and per Mr. Vogt, the line may be discontinued and removed by the end of 2015. The wax line is being operated using the Rule 290(a)(i). Records are maintained, as required.

A burn-off oven (EUCleaningOven) was installed in Feb. 2000, and is used to remove dried coatings from the metal racks used in the e-coat process. The oven is used one to three times per day, and each burn-off cycles lasts about 2.5 hours. Emissions are controlled with an afterburner, which burns at a minimum of 1450°F. The burn-off oven is permitted by PTI No. 116-00.

Waste waters generated in the coating processes are run through a wastewater treatment system prior to discharge to the city sewer system. The wastewater treatment system is exempt per Rule 285(m).

There are some storage tanks on site, including a 5,800-gallon e-coat paint storage tank, which is exempt per Rule 284(i), and two 9,093-gallon acid storage tanks, which hold 8% phosphoric acid solution and are exempt per Rule 284(h)(ii).

The plant has two natural gas boilers (14.6 and 11.7 MMBTU, respectively), which are exempt per Rule 282(b)(i).

APPLICABLE RULES/ PERMIT CONDITIONS:

Note: Emission records from June 2012 through July 2015 were reviewed to determine compliance for this inspection. Emission records, MSDS/Environmental Data Sheets, and current facility map can be found in the orange facility file.

The facility was issued Permit No. 116-00 on August 18, 2000, for the burn-off oven (EUCleaningOven).

Permit 116-00, Special Conditions:

1. IN COMPLIANCE. All notifications are sent to AQD-Detroit Office, as required.
2. IN COMPLIANCE. Afterburner is used to control emissions.
3. IN COMPLIANCE. Oven operates at a minimum temperature of 1450°F and minimum retention time of 0.75 seconds in the secondary chamber (afterburner).
4. IN COMPLIANCE. Burn-off oven is operated according to manufacturer specifications.
5. IN COMPLIANCE. An operation manual and maintenance logs are maintained and were reviewed during the inspection.
6. NOT IN COMPLIANCE. The chart recorder for the afterburner temperature is installed but did not appear to be operating correctly at the time of inspection. Prior to my inspection, Crown Group already had contacted Honeywell to calibrate the chart recorder later this month. Mr. Vogt contacted me on September 8, 2015, to notify me that the chart recorder has been recalibrated and was correctly monitoring the temperature. I reviewed the new chart recorders and it appeared to be properly monitoring and recording the afterburner temperature, and the afterburner was operating in a range of 1450 F-1500 F.
7. IN COMPLIANCE. Only metal parts with cured paint are burned in the oven.
8. IN COMPLIANCE. Stack dimensions meet minimum permit requirements.

General Permit to Install No. 25-12 was issued on February 28, 2012, for the electro-coating deposition line.

General PTI No. 25-12, Special Conditions:

I. Design Parameters: IN COMPLIANCE. E-Coat line meets the permit specifications for the application of the coating and stack heights. Some stacks were extended in 2013 in response to odor complaints.

II. Material Usage/Emission Limits: IN COMPLIANCE. A review of records from June 2012 through July 2015 show coating usage and VOC emissions remaining fairly consistent, with the highest 12-month rolling VOC

emissions being 6.48 tons for the 12-month rolling time period ending in July 2014, which is below the permit limit of 10 tons/12-month rolling total. The highest monthly total VOC emissions during the compliance time period was 1312 lbs., in August 2012, which is below the permit limit of 2000 pounds VOC/month. At the time of inspection, the 12-month rolling total was 5.78 tons VOC. Since the VOC emissions from the Rule 290-exempt wax coating line are very minimal, the facility is well under the permit limit of 30 tons VOC/12-month rolling time period for all coating lines.

III. A. Monitoring/Recordkeeping: IN COMPLIANCE. Records of material usage and emissions are maintained on a monthly and 12-month rolling basis, as required by the permit. MSDS and Technical Data Sheets are kept for all coatings. The current coating used by the e-coat has a VOC content of 0.53 pounds VOC per gallon (minus water).

IV. Operational Parameters: IN COMPLIANCE. Wastes are stored and disposed of properly.

V. Allowed Modifications: IN COMPLIANCE. No changes to equipment have been made. Facility changed coatings in August 2012.

VI. Add-On Controls: NOT APPLICABLE. No add-on controls are associated with the e-coat line.

EMISSION REVIEW:

A review of the facility emission records from January 2012 through July 2015 shows the following calendar year VOC emissions:

2012: 6.44 tons
 2013: 6.10 tons
 2014: 6.32 tons
 2015 (through July): 3.18 tons

The facility reports that there are no HAP emissions during this time period.

FINAL COMPLIANCE DETERMINATION:

During the inspection, The Crown Group – Livonia was not in compliance with Special Condition 6 of PTI No. 116-00. Since the facility had already contacted Honeywell to repair the chart recorder prior to my inspection and I was able to verify compliance at the time of writing this report, a Violation Notice will not be issued. However, I will request that the facility revise and submit their operation and maintenance plan to help prevent recurrence of this issue. The facility was in compliance with all other conditions of PTI No. 116-00 and the conditions of PTI No. 25-12, and maintained the proper records to demonstrate that the wax line is exempt under Rule 290.

NAME

[Signature]

DATE

9-11-15

SUPERVISOR

JK