

M4623  
manila

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

M462345609

FACILITY: CROWN GROUP, LYNCH ROAD PLANT		SRN / ID: M4623
LOCATION: 6334 LYNCH RD., DETROIT		DISTRICT: Detroit
CITY: DETROIT		COUNTY: WAYNE
CONTACT: Jason Nowak, Environmental Engineer		ACTIVITY DATE: 08/15/2018
STAFF: Jonathan Lamb	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Targeted inspection, FY 2018		
RESOLVED COMPLAINTS:		

INSPECTED BY: Jonathan Lamb, MDEQ - AQD  
DATE OF INSPECTION: August 15, 2018  
PERSONNEL PRESENT: Jason Nowak, Environmental Engineer  
FACILITY PHONE NUMBER: (313) 922-8433  
FACILITY FAX NUMBER: (313) 922-8469  
FACILITY CONTACT NUMBER: (248) 408-8354 (Mr. Nowak, mobile phone)  
FACILITY WEBSITE: www.ppgcoatingservices.com

**FACILITY BACKGROUND:**

The Crown Group – Lynch Road Plant started production at this site in July 2004. MSX International – Special Vehicles operated at this address previously. Operations at this site replaced operations at The Crown Group – Detroit Plant, located at 6300 E. Seven Mile, which closed shortly afterwards. The Crown Group was purchased by PPG Industries, Inc., in October 2017, making The Crown Group a wholly-owned subsidiary of PPG Industries, Inc., though the facility will still be known as The Crown Group – Lynch Road Plant. Effective September 2018, the corporate office for The Crown Group will move from Warren to PPG Industries, Inc., 5875 New King Ct., Troy, MI 48098.

This site currently coats automobile axles for Chrysler's Warren Truck and Toledo assembly plants, Ford's Kentucky truck plant, and GM's American Axle facility. The plant operates two shifts, 5:30 AM to 2:00 PM and 4:30 PM to 1:00 AM, Monday through Friday with occasional weekend work. There are approximately 100 employees at this site.

**COMPLAINT/COMPLIANCE HISTORY:**

There are no records of complaints being received for this facility.

Following an inspection of the facility performed on March 29, 2016, The Crown Group – Lynch Road Plant was issued a Violation Notice, dated May 27, 2016, for exceeding monthly and 12-month rolling VOC limits and failing to maintain accurate records of VOC emissions and VOC content of the coating, based on the conditions of General Permit to Install No. 46-04. To resolve the violations, The Crown Group applied for new Permit to Install (PTI No. 168-16), which was issued on December 21, 2016, and recalculated the VOC content of the coatings used based on manufacturer's formulations. These corrective actions effectively resolved the violations cited in the Violation Notice dated May 27, 2016.

**PROCESS DESCRIPTION/INSPECTION NARRATIVE:**

The Crown Group coats automobile axles and axle tubes for heat and corrosion protection using a single coating line. Axle coating is sequenced with production at the assembly plant on an as-needed basis; most axles are shipped directly to the assembly plant after coating with little warehousing of coated axles on site. To start the coating process, axles are loaded on racks and are carried through the process via a continuous overhead conveyor. The parts first go through a nine-stage pre-treatment process: Stages #1 and #2 spray a heated alkaline cleaner on the axles to remove oils, lubricants and dirt; the axles are rinsed with city water in Stages #3 and #4; a surface conditioner is applied in Stage #5 before the application of zinc phosphate (for corrosion control) in Stage #6. After

the application of zinc phosphate, the parts are rinsed with city water in Stage #7, applied with a sealer in Stage #8, before a final reverse osmosis water rinse in Stage #9. The facility treats wastewater from the pre-treatment process on site; any waste sludge collected during the wastewater treatment is disposed of as hazardous waste (currently sent to US Ecology – Detroit South).

After pre-treatment, the parts are then dried in a forced-air oven before coating. The coating process consists of four paint booths: The first two paint booths use automated HVLP bell sprayers, with each booth coating opposite sides of the axle. In the next two paint booths, touch-up painting is done using either conventional automated bell sprayers or HVLP manual sprayers, depending on the configuration of the part being coated. The spray booths are equipped with dry filters to control particulate, which are changed at least once per shift.

After painting, the axles enter a drying oven, which operates at 165°F. The parts take approximately thirteen minutes to pass through the oven; the oven does not cure the paint but makes it dry to the touch and able to ship off to the assembly plants. The full process, from pre-treatment through drying oven, is permitted as EUPTANDCOATLINE.

There is no burn-off oven on site. The racks/hangars used to carry the parts through the coating process are sent to a facility off-site that uses burn-off ovens to remove paint build-up.

The facility currently uses one water-based black coating: TechKote WA2951 FE, made by Fortech Products. A paint specialist at Crown Group went through the formulation data and recalculated the actual VOC content of WA2951 FE to be 0.283 lb/gallon (minus water).

No purge or clean-up solvents are used. Spray nozzles and other parts are cleaned using a mix of a non-VOC cleaner (Simple Green) and water in an ultrasonic cleaning tank.

#### **APPLICABLE RULES/ PERMIT CONDITIONS:**

Crown Group – Lynch Road was issued Permit to Install (PTI) 168-16A on June 5, 2018, which replaced PTI No. 168-16, which had been issued on December 21, 2016. The purpose of this modification was to eliminate restrictions on the number of hours the facility could perform manual spraying, once it was determined that the manual sprayers met BACT requirements. There were no changes to emission or material limits in this modification. This permit also restricts HAP emissions below major source thresholds, allowing the facility to opt out of Title V permitting requirements.

Monthly VOC emissions and material usage records from January 2017 through July 2018 were reviewed to determine compliance, which covers a compliance period during which conditions from PTI Nos. 168-16 and 168-16A were applicable. These records can be found in the orange facility file.

#### **PTI No. 168-16A, Special Conditions:**

#### **EUPTANDCOATLINE:**

##### **I. EMISSION LIMITS**

1. IN COMPLIANCE. VOC emissions did not exceed 15.4 tons per 12-month rolling time period during the compliance period. The highest 12-month rolling total VOC emissions were 10.98 tons in the 12-month rolling time period ending April 2018. The 12-month rolling total VOC emissions were 10.87 tons in the 12-month rolling time period ending July 2018.

##### **II. MATERIAL LIMITS**

1. IN COMPLIANCE. No coating used in EUPTANDCOATLINE exceeded 0.30 lb/gal (minus water), as applied. The facility uses only one water-based coating (TechKote WA2951 FE) with a VOC content of 0.283 lb/gal.

##### **III. PROCESS/OPERATIONAL RESTRICTIONS**

1. IN COMPLIANCE. All waste materials, including waste sludges, are collected and stored in closed containers while on site. The facility is considered a large-quantity waste generator and disposes of waste sludges at a hazardous waste disposal facility.
2. IN COMPLIANCE. Filters are replaced at least once per shift, or more often, if necessary. Spent filters are stored in closed roll-off boxes until sent to landfill for disposal.
3. IN COMPLIANCE. Facility keeps all VOC-containing coatings in closed containers. Coating are received in 275-gallon totes and remain stored in the totes until application. The facility does not use cleaning solvents or thinners, and the coating used does not contain HAPs.

#### IV. DESIGN/EQUIPMENT PARAMETERS

1. IN COMPLIANCE. Exhaust filters are properly installed and maintained in the spray booths during coating application. The filters appeared to be properly installed during my visual inspection of the paint booths, and I saw no evidence of paint overspray outside the building.
2. IN COMPLIANCE. Coating Booths 1 and 2 of EUPTANDCOATLINE are equipped with automatic HVLP electrostatic applicators.
3. IN COMPLIANCE. Coating Booths 3 and 4 of EUPTANDCOATLINE are equipped with automatic conventional applicators and HPLV manual applicators.

#### V. TESTING/SAMPLING

1. IN COMPLIANCE. VOC content, water content, and density of the coating is determined based on manufacturer's formulation data. A paint specialist at Crown Group went through the formulation data and calculated the actual VOC content of WA2951 FE of 0.283 lb/gallon (minus water).

#### VI. MONITORING/RECORDKEEPING

1. IN COMPLIANCE. All required calculations are maintained in a format acceptable to AQD. These records were provided to AQD staff during the inspection.
2. IN COMPLIANCE. MSDS for the coating is maintained on site and was provided to AQD staff during the inspection.
3. IN COMPLIANCE. The facility maintains the following information for EUPTANDCOATLINE on a monthly basis:
  - a) Gallons (minus water and with water) of each coating used.
  - b) VOC content (minus water) of each coating, as applied.
  - c) VOC mass emission calculations determining the monthly emission rate in tons per calendar month.
  - d) VOC mass emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month.

#### VIII. STACK/VENT RESTRICTIONS

1 through 13. IN COMPLIANCE. Based on facility documentation, each of the stacks listed in this condition meet the diameter and height requirements in this condition. I did not go on the roof to verify all of the stacks, but several stacks are visible from the ground and appear to meet the requirements.

FGFACILITY: All process equipment source-wide including equipment covered by other permits, grandfathered equipment, and exempt equipment.

#### I. EMISSION LIMITS

1. IN COMPLIANCE. No individual HAP exceeds 8.9 tons per 12-month rolling time period. The facility uses a coating which does not contain HAPs and does not use any HAP-containing thinners or cleaning solvents.
2. IN COMPLIANCE. Aggregate HAP emissions do not exceed 22.4 tons per 12-month rolling time period. The facility uses a coating which does not contain HAPs and does not use any HAP-containing thinners or cleaning solvents.

#### V. TESTING/SAMPLING

1. IN COMPLIANCE. HAP content of the coating is determined using manufacturer's formulation data; based on this data, the coating does not contain HAPs.

