B5642
MANICA

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

B564243450

FACILITY: RED SPOT WESTLAND INC		**SRN / ID:** B5642
LOCATION: 550 S EDWIN ST, WESTLAND		**DISTRICT:** Detroit
CITY: WESTLAND		**COUNTY:** WAYNE
CONTACT: Bob Zamensky , EHS/Maintenance Manager		**ACTIVITY DATE:** 02/28/2018
STAFF: Jonathan Lamb	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** SM OPT OUT
SUBJECT: Scheduled inspection, FY 2018		
RESOLVED COMPLAINTS:		

INSPECTED BY: Jonathan Lamb, MDEQ
PERSONNEL PRESENT: Bob Zamensky, EHS Manager; Kevin Conkright, Corporate Environmental Manager; John Sorovetz, Plant Manager
FACILITY PHONE NUMBER: (734) 729-7400
CONTACT PHONE NUMBER: Mr. Zamensky - (734) 729-2485; Mr. Conkright – (812) 428-9206
FACILITY FAX NUMBER: (734) 729-6140
FACILITY WEBSITE: www.redspot.com

FACILITY BACKGROUND:

Red Spot Westland, Inc. ("Red Spot") is a paint coatings manufacturer headquartered in Indiana and has operated this facility in Westland location since 1989. The building was built in 1972 and the entire property comprises around seven acres.

The facility currently operates one shift, 6:30 AM to 2:30 PM, Monday through Friday. There are approximately 27 employees on site.

COMPLAINT/COMPLIANCE HISTORY:

There has not been a history of complaints associated with this facility. The facility was found to be in substantial compliance during the past two full compliance evaluations performed on November 26, 2014, and March 17, 2010.

PROCESS DESCRIPTION AND EQUIPMENT:

Red Spot Westland manufactures coatings specifically for the coating of plastics, primarily for the automotive industry. The facility produces both pigmented and clear coatings, though most of the production is for clear coats. Approximately 80% of the coatings produced are water-borne, with the remaining 20% being solvent-borne. On average, the facility produces 20-30 different formulations of coatings per month.

The facility receives various raw materials which are used in the formulation and production of coatings, including pigments, solvents, resins, and additives (aluminum flakes, inhibitors, etc.). Raw materials which are received in containers (totes, drums, etc.) are stored in the raw material warehouse, while raw materials received via tanker are pumped directly from the tanker off-load area to bulk storage tanks located in the bulk storage room. There are three 24,000-gallon compartmentalized tanks in the bulk storage room; one 4-compartment tank for the storage of resins, and two 8-compartment tanks for the storage of solvents. The compartments range from 3,000-12,000 gallons each, and several of the compartments are currently not used. The tanks are controlled with conservation vents. Based on Material Data Safety Sheets, the materials stored in these tanks all have a vapor pressure less than 10 mmHg (<0.2 psi). Since the tanks are less than 40,000-gallon capacity and materials stored in the tanks have a vapor pressure under 1.5 psi, the tanks are exempt per R.284(2)(i).

There are two grinding mills, sized 20-liters and 5-liters, which use ceramic balls to pulverize pigments, which are in the form of a wet paste, which is then used to tint the coatings. The grinding mills are used infrequently, approximately one hour every six weeks.

All coatings are formulated to customer specifications. In the pre-batch area, coating components are pre-mixed prior to production. Resin from the bulk storage is pumped to a 6,500-gallon resin tank, which is metered into Process Vessel 5, a 3,500-gallon tank where the resin is cut with water to meet process specifications. A solid

flattening agent may be added to the resin in Process Vessel 5 via a hopper; the hopper is exhausted to a baghouse located outside the building to control particulate emissions when the flattening is added. The water-thinned resin is then pumped to one of three 7,500-gallon intermediate resin tanks, depending on dilution concentration. All storage tanks were installed prior to 1984.

Resins are manufactured in Tanks Nos. 1, 2, and 4, which comprise a closed-loop tank system (included in EUCTG02). Tank Nos. 1, 2, and 4 are each 1,395 gallons; note: there is not a Tank No. 3. Within these tanks, resins are blended with colorants, additives, catalysts, and solvents to produce coatings. The tanks are controlled by a pressure-regulated nitrogen blanket and conservation vents, which feed any vapors collected back into the process. There is a 549-gallon emergency expansion tank located outside the building in case the reactions in the closed-loop tanks get out of control. There are also closed-top mixing tanks in EUCTG02, ranging from 150 to 3,000 gallons for water-borne coatings and 150 to 1,265 gallons for solvent-borne coatings. EUCTG02 also covers ancillary process equipment, including agitators, condensers, heat exchangers, pumps, and small (<50 gallons each) tanks for catalyst, inhibitors, and additives. It takes approximately 8 to 12 hours to produce each batch of coating. Except for Tanks 1, 2, and 4, all emissions from the process tanks are uncontrolled and exhausted within the general in-plant environment.

There is an additional 500-gallon reactor tank and ancillary equipment (EURESIN) used in the production of water-borne resins; this process is uncontrolled and exhausted within the general in-plant environment. There is a 58-gallon reactor tank (EU-Solvent58) used in the small-batch production of solvent-borne resin; this is a covered tank which operated in a closed-loop system controlled by conversation vents which feed any vapors back into the process.

Small batch blending is also performed in open-top totes and drums, ranging from 10 to 850 gallons, using large stand mixers; these mixers are primarily used for solvent-borne coatings and are permitted as EUCTG01. All emissions from EUCTG01 are released into the general in-plant environment; there are no controls, though the totes and drums are covered with large "shower caps" during blending to prevent contaminants from getting in the coating and provide some de minimis control.

Final product is packaged (usually in 55-gallon drums or 5-gallon pails) and stored the finished good warehouse until shipped off to customers.

There is a vessel washing area consisting of one tank washer and two tote washers, which mechanically clean the drums and totes with a solvent using brushes; the drums and totes are covered during cleaning except for an opening to allow the brushes to reach inside. Solvent is collected in two 500-gallon conical-bottom vertical settling tanks; sludge is collected from the bottom of the tanks and the solvent is reused. This process is considered ancillary equipment associated with EUCTG01 and EUCTG02.

A Quality Control Lab is used to test the coatings to assure they meet customer specifications. The lab has three hand-spray booths and two automated spray booths which are controlled with a hood and dry filters and small drying ovens; filters in the booths are changed as necessary. Testing is performed about one hour per day, with less than a gallon of coating used for each test; facility estimates a total of less than 15 gallons of coating used per month in the QB Lab. This process is exempt per R.287(2)(c).

There was a soil vapor extraction unit, permitted under PTI No. 244-95, on the property outside of the building, but this unit is no longer in operation.

APPLICABLE RULES/ PERMIT CONDITIONS:

The facility operates under two permits: Permit to Install (PTI) No. 449-99B and PTI No. 62-14.

PTI No. 449-99B was issued September 17, 2012, to allow the facility to install a water-borne resin production process to the existing equipment previously permitted under PTI No. 449-99A. This permit limits hazardous air pollutants (HAPs) below major source thresholds, allowing the facility to opt out of Title V permitting requirements.

PTI No. 62-14 was issued June 25, 2014, for a solvent-borne resin manufacturing process utilizing equipment covered in PTI No. 449-99B under EURESIN plus the installation of a new process tank (EU-Solvent58).

Wayne County Permits C-8973 through C-8975, issued May 14, 1992, covered closed-loop tanks 1, 2, and 4; this equipment is now covered by PTI No. 449-99B, though there is no record of C-8973 through C-8975 being

voided. These permits will be voided upon completion of this report.

Production records and emission calculations for the time period January 2016 through February 2018 were reviewed in determining compliance during this inspection. Copies of these records can be found in the facility file.

PTI No. 449-99B, Special Conditions:

FGCOATING: Coating and resin manufacturing. Associated Emission Units: EUCTG01, EUCTG02, and EURESIN

I. Emission Limits:

Pollutant	Permit Limit	Highest Actual	Compliance Status
1. VOC	38 tons per 12-month rolling time period for EUCTG01 and EURESIN combined	4.0 tons in the 12-month rolling time period ending October 2018; 2.5 tons in the 12-month time period ending February 2018	COMPLIANCE
2. PM	0.01 lb per 1,000 lbs of exhaust gas for FGCOATING	NOT EVALUATED	NOT EVALUATED. Testing has not been requested by AQD
3. PM10	0.9 pounds per hour for FGCOATING	NOT EVALUATED	NOT EVALUATED. Testing has not been required by AQD
4. Styrene	68 pounds per month for EURESIN	14.2 pounds in May 2017; 2.7 pounds in February 2018	COMPLIANCE

II. Material Limits:
1. IN COMPLIANCE. The 12-month rolling coating and resin material usage for EUCTG01 and EURESIN are below the limits to maintain compliance with the 76,000 pound VOC limit, as calculated based on usage rates and VOC content of each coating and resin. Highest 12-month rolling total was 8,015 pounds of VOC for EUCTG01 and EURESIN combined for the 12-month rolling time period ending October 2017, based on a total coating and resin usage of 192,423 gallons during that time period.
2. IN COMPLIANCE. The 12-month rolling coating and resin material usage for FGCOATING is below the limit to maintain compliance with the 110,000 pound VOC limit, as calculated based on usage rates and VOC content of each coating and resin. Highest 12-month rolling total was 12,001 pounds of VOC for FGCOATING for the 12-month rolling time period ending October 2017, based on a total coating and resin usage of 567,194 gallons during that time period.

III. Process/Operational Restrictions:
1. IN COMPLIANCE. Applicable requirements of Rule 630 met by keeping the drums and totes covered during material mixing and cleaning.

IV. Design/Equipment Parameters:
1. IN COMPLIANCE. Baghouse is installed, maintained, and operated in a satisfactory manner.

VI. Monitoring/Recordkeeping:
1. IN COMPLIANCE. All required calculations are completed and maintained in a format acceptable to AQD, as required. These records were provided to the AQD at the time of inspection.
2. IN COMPLIANCE. The following records are maintained:
   a. Volume of each coating and resin, on a monthly basis.
   b. VOC emission rate on a 12-month rolling basis.
   c . Methods used to calculate VOC emission rates.
3. IN COMPLIANCE. Styrene emission rates are calculated on a monthly basis in a format acceptable to AQD, as required.

VIII. Stack/Vent Restrictions:
1 through 11. NOT EVALUATED. I was not able to see all the stacks from ground level and did not go on the roof, but it is assumed that the stacks meet permit specifications based on facility records.

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

I. Emission Limits:

Pollutant	Permit Limit	Highest Actual	Compliance Status
1. VOC	25 pounds per hour, based on monthly production records prorated to a daily average.	6.13 pounds per hour for March 2017; hourly average for February 2018 was 3.44 pounds per hour.	COMPLIANCE
2. VOC	55 tons per 12-month rolling time period	6.1 tons in the 12-month rolling time period ending October 2018; 4.3 tons in the 12-month time period ending February 2018.	COMPLIANCE
3. Each individual HAP	<9.0 tons per 12-month rolling time period	1.8 tons total HAPs in the 12-month rolling time period ending December 2017; 1.3 tons total HAPs in 12-month rolling time period ending February 2018. [Note: facility only reported total HAPs, which was sufficient to demonstrate compliance]	COMPLIANCE
4. Aggregate HAPs	<22.0 tons per 12-month rolling time period	1.8 tons total HAPs in the 12-month rolling time period ending December 2017; 1.3 tons total HAPs in 12-month rolling time period ending February 2018.	COMPLIANCE

IV. Design/Equipment Parameters:

1. IN COMPLIANCE. One tank, EU-SOLVENT58, has been installed since the issuance of PTI No. 449-99B. This tank is equipped with a cover that meets the specifications of this condition, and the container is kept closed at all times except when operator access is necessary.
2. IN COMPLIANCE. One tank, EU-SOLVENT58, has been installed since the issuance of PTI No. 449-99B. This tank is equipped with a cover that achieves VOC emission control comparable to the totes which are included in EUCTG02.

VI. Monitoring/Recordkeeping:

1. IN COMPLIANCE. All required calculations are completed and maintained in a format acceptable to AQD, as required. These records were provided to the AQD at the time of inspection.
2. IN COMPLIANCE. The facility monitors the daily average VOC pound per hour emission rate calculated from monthly production records, prorated to a daily rate.
3. IN COMPLIANCE. Facility maintains the following records in a format acceptable to AQD:
   a. Hours of operation on a monthly basis.
   b. Hours of operation on a daily basis.
   c. VOC emission rate in pounds per hour.
   d. Monthly and 12-month rolling VOC and HAP emission rates.
   e. Formulations of each product, including VOC and HAP content.
   f. Volume of each product produced on a monthly basis.
   g. Volume of each product produced on a daily basis.
   h. Methods used for calculations.
   i. List of all equipment installations and modifications made to FGCOATING.

PTI No. 62-14, Applicable Special Conditions:

FG-SolvtResinMfg: Solvent-borne resin manufacturing activities in EU-Solvent58. Ancillary equipment from EURESIN may be used to support processing. Raw materials will be charged from the containers in which the facility receives them. Associated Emission Unit: EU-Solvent58.

I. Emission Limits:
1. IN COMPLIANCE. VOC emissions for FG-SolvtResinMfg did not exceed the permit limit of 1.0 tons per 12-month rolling time period. The highest 12-month rolling total VOC emissions during the compliance period was 145 pounds in March 2016; 12-month rolling total for February 2018 was 26 pounds.

II. Material Limits:
1. IN COMPLIANCE. The facility did not exceed the permit limit of 4,800 gallons of material processed in FG-SolvtResinMfg per 12-month rolling time period. Highest 12-month total material processed during the compliance period was 160 gallons in the 12-month period ending January 2017; 12-month rolling total material processed was 56 gallons in February 2018.

III. Process/Operational Restrictions:
1. IN COMPLIANCE. Applicable requirements of Rule 630 met by keeping the drums and totes covered during material mixing and cleaning.

IV. Design/Equipment Parameters:
1. IN COMPLIANCE. All emissions from reaction and heat-up operations in EU-Solvent58 are vented to a condenser and condensed vapors returned to the process.
2. IN COMPLIANCE. Reactor tank is equipped with a device to monitor and record the temperature in the reactor.

VI. Monitoring/Recordkeeping:
1. IN COMPLIANCE. VOC emission rate from EU-Solvent58 is calculated and recorded on a monthly and 12-month rolling time period basis. All calculations were provided to AQD during the inspection.
2a and b. IN COMPLIANCE. Maximum reaction temperature and durations of gas sweep/purge are recorded for every batch produced in FG-SolvtResinMfg.
3. IN COMPLIANCE. The amount of material processed in FG-SolvtResinMfg is monitored and recorded on a monthly and 12-month rolling time period basis, as required.

FINAL COMPLIANCE DETERMINATION:

At the time of inspection, Red Spot Westland was determined to be in substantial compliance with PTI No. 449-99B, PTI No. 62-14, and other applicable State and federal rules and regulations.

PTI No. 244-95 for the soil vapor extraction unit will be voided since this process is no longer in operation.

NAME _____ DATE 9-18-18 SUPERVISOR JK