

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: On-site Inspection

B886064469

FACILITY: tesa Plant Sparta, LLC		SRN / ID: B8860
LOCATION: 324 S Union ST., SPARTA		DISTRICT: Grand Rapids
CITY: SPARTA		COUNTY: KENT
CONTACT: Al Tramper , Plant Engineer		ACTIVITY DATE: 08/18/2022
STAFF: Michael Cox	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Scheduled Unannounced Inspection		
RESOLVED COMPLAINTS:		

Air Quality Division (AQD) staff Michael Cox (MTC) arrived at tesa Plant Sparta, LLC (tesa Plant) located at 324 South Union Street, Sparta, Michigan at approximately 2:30pm on August 18, 2022, to complete a scheduled unannounced inspection. Prior to entering the facility, offsite odors and emission observations were completed. No odors or visible emissions were observed.

Facility Description

tesa Plant Sparta, LLC is a global manufacturing facility of pressure sensitive adhesive tape and is in operation with one Opt-Out Permit to Install (PTI) No. 12-05A. tesa Plant is a synthetic minor source for hazardous air pollutants (HAPs) and is subject to New Source Performance Standards (NSPS) Subparts RR – Standards of Performance for Pressure Sensitive Tape and Label Surface Coating Operations.

Compliance Evaluation

Upon arrival, AQD staff MTC initially met with Mr. Al Tramper, Senior Plant Engineer, and Ms. Alycia Provenzo, Environmental Health and Safety Coordinator who provided a walkthrough of the facility and answered site specific questions. Records following the inspection were provided by Mr. Tramper.

PTI-12-05A:

EU-WB-Coat-Ln

This emission unit is for the waterborne coating Line: The pressure sensitive tape is coated with waterborne adhesive and dried in a natural gas fired oven. Also, the process is equipped with adhesive tanks and an adhesive mixing area.

This emission unit is subject to a VOC emission limit of 45 tons per year (tpy) per a 12-month rolling time period. Records of VOC emissions from

EU-WB-Coat-Ln were requested and reviewed for the time period of January 2021 through July 2022. The highest 12-consecutive month VOC emission occurred during the 12-month period ending in June 2021, when 15.83 tons of VOC was emitted.

tesa Plant no longer utilizes materials containing Ethylene Oxide (CAS No. 75-21-8). This limit was placed into the permit if the material (Optiflo H7500-VF) was to be used. After a review of the records, it appears that Ethylene Oxide containing materials have not been used over the last several years. VOCs are also limited to an instantaneous limit of 0.3 lbs/gal (minus water) as applied. Mixture recipes were provided and reviewed for the time period of January 2021 through July 2022. The highest VOC content minus water as applied was noted to be 0.258 lbs/gal, which is within the permitted limit.

During the inspection, the water borne coating line was observed in operation. tesa Plant has two base adhesive materials that are utilized for this coating line. The adhesives are stored in four 30,000 kg size tanks. The adhesives are pumped into one of two mixing stations where select components are added to make each desired adhesive material. The material is then pumped to the coating line and applied to a fleece lining. Once applied to the lining it goes through sixteen dryers, of which fifteen of the dryers are used for drying and one dryer is used for cooling. Waste materials are stored and shipped off site for removal. Waste containers were noted to be properly sealed. From the observations made it appears that tesa Plant is properly recovering and disposing of all applicable materials used for this coating line. Exhaust cleaners were noted to be installed and functioning on EU-WB-Coat-Ln. Roller applicators were also observed being used for the coating line.

Per SC.V.1 the facility shall use Test Method 24 to determine the VOC content for all coating materials used for this emission unit. On June 1, 2022, tesa Plant was approved by the Grand Rapids District Office to use Manufacturer's Formulation Data in lieu of Test Method 24 results to determine VOC content. Manufacturer's Formulation Data was requested and reviewed for the coating materials used. The records provided show that the facility is adequately determining the VOC contents of coating materials used.

After a review of records provided by the facility it was determined that the facility is adequately keeping track of usage rates for all materials used, VOC contents (minus water and with water) of each material used, and VOC

emissions on a monthly and 12-month rolling total basis. The facility is also complying with the provisions of NSPS Subpart RR.

One stack is listed in association with this emission unit and was observed during the inspection. The stack appears to be consistent with Opt-Out PTI No.12-05A.

EUCOATER2591

This emission unit is for the solvent-based coating line, which includes the mixing room, and film coating line with coating stations for primer, release coating and adhesive. The coating line is also equipped with a non-fugitive enclosure (NFE), with thermal oxidizer control. Additionally, the PM from the granular portion is controlled by a baghouse.

This emission unit is subject to a VOC emission limit of 25 tons per year (tpy) per a 12-month rolling time period. Records of VOC emissions from EUCOATER2591 were requested and reviewed for the time period of January 2021 through July 2022. The highest 12-consecutive month VOC emission occurred during the 12-month period ending in January 2022, when 6.12 tons of VOC was emitted. The coating line shall meet one of the following requirements:

- a. Emission limit of 0.20 kg VOC/kg of coating solids applied as calculated on a weighted average basis for one calendar month.
Or
- b. Demonstrate a 90 percent overall VOC emission reduction as calculated over a calendar month or the percent overall VOC emission reduction specified in subsection 60.443(b) of 40 CFR Part 60 subpart RR. The facility is demonstrating compliance by meeting the 0.20 kg VOC/kg solids emission limit. Since January 2021, the controlled kg VOC/kg solid emitted are 0.01 kg VOC/kg solids, which is well within the permitted limit. The particulate matter emission limit for EUCOATER2591 is limited to 0.1 lbs per 1000 lbs of exhaust gasses per test protocol. The baghouse serving this emission unit was observed and was not operating during the inspection.

At the time of the inspection, the RTO and NFE for the coating line were observed in operation. The RTO was operating at 1609°F, which is above the permitted limit of 1375°F. Mr. Trampler stated during the inspection that the RTO setpoint is 1500°F. The RTO is equipped with an interlock system and will automatically shut off if the temperature drops below 1400°F. The interlock system will also disable all coating and mixing processes. The RTO process fan operates between 42-54 hertz and if the fan speed drops below 40 hertz, the coating and mixing processes will no longer be operational. Temperature records for the RTO were requested and reviewed. Based on the records reviewed, the facility is adequately keeping track of temperature records for the RTO and temperature is being maintained above the required 1375°F. The most recent testing of the RTO was completed on October 4, 2005, with the RTO demonstrating a 99% destruction efficiency. The most recent NFE test was completed by the facility on August 9, 2022. During the testing, the facility demonstrated that the NFE was operating in a satisfactory manner with a negative pressure at all observed natural draft openings.

The facility is in operation under a Preventative Maintenance Plan (PMP) for the RTO. Inspection reports for the RTO were requested and provided. It appears that the facility is adequately following the PMP and maintaining the RTO.

The granular portion of the solvent coating process was observed. During this step, the solid components are grinded and prepared prior to mixing with the liquid components. Emissions from grinding are controlled by the pulse jet baghouse onsite. This part of the process was not in operation during the site visit. An inspection of the baghouse is done annually to identify if replacement bags are needed. No significant amount of particulate matter was observed in the area.

Eight storage tanks were observed containing three different types of finish adhesives. The mixing area for the solvent-based coating line was observed during the inspection. Two mixing stations as well as several mixing and holding tanks were observed. During the inspection two 8,000-gallon storage tanks that are part of EUCOATER2591 were observed. One tank contained recovered solvents and the other tank consisted of two compartments (5,400 gallon / 2,600 gallon) containing fresh heptane and fresh toluene, respectively.

The solvent-based coating line was then observed in operation. One 80 horsepower boiler that is used for the solvent process and was installed in 1996 was observed. The boiler utilizes natural gas and is used to indirectly heat the dry coatings. The boiler appears to be exempt from Rule 201 permitting per Rule 282(2)(b)(i). The coating line also has two condensers that were identified on the coating line. Following application, the product proceeds through six dryers.

In 2011, tesa Plant was approved by the Grand Rapids District Office to use Manufacturer's Formulation Data in lieu of Test Method 24 results to determine VOC content. Manufacturer's Formulation Data was requested and reviewed for the coating materials used. The records provided show that the facility is adequately determining the VOC contents of coating materials used.

After a review of records provided by the facility it was determined that the facility is adequately keeping track of usage rates for all materials used, VOC contents (minus water and with water) of each material used, and VOC emissions on a monthly and 12-month rolling total basis. The facility is also complying with the provisions of NSPS Subpart RR.

Two stacks are listed in association with this emission unit and were observed during the inspection. The stacks appeared to be consistent with Opt-Out PTI No.12-05A.

FG-Facility

tesa Plant is subject to facility wide individual HAP limit of 9.0 tpy and an aggregate HAP limit of 22.5 tpy. Records of HAP emissions from FG-Facility were requested and reviewed for the time period of January 2021 through July 2022. The highest 12-consecutive month individual HAP emission occurred during the 12-month period ending in July 2021, when 2.80 tons of Ethylene glycol was emitted. The highest 12-consecutive month aggregate HAP emission occurred during the 12-month period ending in July 2022,

when 4.49 tons of aggregate HAP was emitted. The facility stated that the water-based coating materials contain no HAPs. Manufacturers Formulation Data sheets and SDS were requested and reviewed. It was concluded that all water-based coating materials used appear to not contain any HAPs. The facility verifies HAP contents of materials used regularly to identify if the HAP contents change. The facility appears to be keeping track of all usages, reclaimed materials, HAP contents, and HAP emission totals as required.

Additional Observations

- During the inspection, several slitter machines were observed following the water based and solvent-based coating line. All machines observed appear to be exempt per Rule 285(2)(l)(vi)(B).
- Several parts washers were observed within the NFE of the solvent-based coating line. The parts washers were less than 10 square feet and appeared to be exempt per Rule 281(2)(h).
- One 1,500-gallon liquid nitrogen tank was observed on site that appears to be exempt per Rule 284(2)(j).

Conclusion

Based on the review of the records provided and the facility walk through, tesa Plant Sparta, LLC appears to be in compliance with Opt-Out PTI No. 12-05A and NSPS Subpart RR.

NAME Michael T. Cox

DATE 9/8/2022

SUPERVISOR HH