

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

P110264644

FACILITY: EPS-PCB - Plant 13		SRN / ID: P1102
LOCATION: 53160 North Main Street, MATTAWAN		DISTRICT: Kalamazoo
CITY: MATTAWAN		COUNTY: VAN BUREN
CONTACT: Chris Hurst, EHS Manager		ACTIVITY DATE: 08/30/2022
STAFF: Rachel Benaway	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: On-site inspection to verify compliance with all state and federal air use regulations.		
RESOLVED COMPLAINTS:		

On 8/30/2022, AQD staff (Rachel Benaway) completed an unannounced air quality inspection of EPS-PBC DBA Plant 13 (P1102), located in Mattawan, MI. The purpose of this inspection was to verify that EPS-PCB dba Plant 13 is in compliance with their Permit to Install (PTI) #150-20 and all state and federal air use regulations. EPS-PCB dba Plant 13 is considered a minor source of volatile organic compounds (VOCs). Chris Hurst is the Environmental Health and Safety Manager for the facility, responsible for submitting requested records, and was present for the on-site inspection. Personal protection equipment required for plant entry includes safety glasses and ear plugs.

EPS-PCB dba Plant 13 is located within the Western Diversified Plastics (WDP) facility. WDP creates custom engineered plastic and electromechanical components (circuit boards) for the automobile industry. EPS-PCB dba Plant 13 applies a coating to the circuit boards to protect the solder joints and electrical components from moisture intrusion. Overall, WDP operates 3 shifts per day, 5 days a week, and employs approximately 750 people.

Within the greater industrial park of WDP, there is another coating line that operates utilizing a Rule 287(2)(c) exemption. That line was contained in Plant 6B and then moved to Plant 11 in November of 2021. Records were submitted demonstrating the coating usage for this line, now located in Plant 11, is below 200 gallons per month. PTI #150-20, a general permit for two coating lines, was issued in November of 2020 and only applies to the coating operations that occur in Plant 13. This inspection focused solely on activities and equipment located within this particular plant, which does not include any boilers, cold cleaners, or emergency generators that may exist in the greater WDP facility.

#	Equipment at Facility
2	Coating Lines consisting of conformal coating applicators and infrared ovens
	Tamura Reflow and Wave Solder System (Exempt Rule 285(2)(i))
	Regenerative Thermal Oxidizer (RTO)

During the pre-inspection interview, the facility reported that installation and initial operation of the RTO was completed in July of 2021. Also reported were tentative plans to install a third line, however this line will likely utilize exemptions as it will not conduct coating activities.

The following is a list of special conditions listed in PTI #150-20 for each flexible group of which staff was able to make a compliance determination.

FG-COATING

Description: One or more coating lines and all associated purge and clean-up operations, where each coating line is a single series in a coating process and is comprised of one or more coating applicators, any associated flash-off areas, drying areas, and ovens where one or more surface coatings are applied and subsequently dried or cured.

Line 1 is the original line and consists of 4 conformal coating applicators and 3 infrared ovens. Line 2 is used sparingly and consists of 2 conformal coating applicators and 1 oven.

Each unit along each line is connected to the exhaust system for the RTO. If negative pressure is not detected along the lines, the machines shut down. A plant-wide visual alarm system is activated if the RTO becomes inactive at which point the lines will exhaust externally. All monitor downtime is tracked.

Coating material containers are stored in cabinets behind the line where they can be conveniently accessed for manual loading into the units along the line. Coating material is typically delivered once a week. Waste material is stored in closed containers until transport to the environmental containment center in Plant 5. A third-party company collects and disposes of hazardous waste materials. All coating material usage is inventoried in logbooks located within the coating cabinets.

PTI #150-20

SC	Condition	COMPLIANT?
I.1	VOC emission limit: 2,000 lb/month for each coating line plus all purge and clean-up operations	Yes
I.2	VOC emission limit: 10 tpy based on a 12-month rolling time period for each coating line plus all purge and clean-up operations	Yes
III.1	-Capture all purge/cleanup solvents and waste coatings	Yes
	-Store materials in closed containers	Yes
	-Dispose materials in acceptable manner	Yes
IV.1	Equip and maintain flow coat applicators	Yes
IV.2	Shall not operate any spray application unless particulate control is installed, maintained, operated	N/A*
IV.3	Thermal oxidizer or catalytic oxidizer may be installed. Satisfactory operation requires an overall minimum 76% reduction of VOC emissions to the atmosphere. (RTO = 98% destruction efficiency) a)Thermal oxidizer must maintain minimum combustion chamber temp 1400degF or 3-hr average of 1400degF, and min retention time 0.5sec	Yes
IV.4	Install temperature monitoring device for the thermal oxidizer and record temperature continuously	Yes**
V.1	Method 24 testing may be required upon request	Yes
		N/A***

*The conformal coating equipment uses flow coat applicators that do not require fabric filters to operate (SC IV.1).

**At the time of inspection, the RTO displayed a burner temperature of 1,552degF with a 3-hour average temperature of 1,550degF (SC IV.3).

***The facility requested use of manufacturer's formulation data in lieu of Method 24 testing in February of 2020 pursuant to conditions of their void PTI #206-19. Their request was granted contingent upon submittal of Method 24 testing results that confirm the validity of the manufacturer's data. Satisfactory Method 24 test results were received in September of 2020. The facility is approved to use manufacturer's data for compliance demonstrations (SC V.1).

Monitoring/Recordkeeping:

SC	Condition	COMPLIANT?
VI.1	Monitor temperature in combustion chamber of the thermal oxidizer and record on a continuous basis during operation of FG-COATING	Yes
VI.3	Keep monthly records: a. Purchase orders and invoices for coatings, reducers, purge/clean-up solvents b. VOC content (lb/gallon) of each coating, reducer, purge/clean-up solvents c. Gallons of each coating, reducer, purge/clean-up used and reclaimed d. VOC mass emission calculations determining monthly emission rate for each coating line, in lbs per calendar month, using method in Appendix B e. VOC mass emission calculations determining annual emission rate for each coating line in tons per 12-month rolling time using method in Appendix B	Yes Yes Yes * *
VI.4	Maintain current listing from the manufacturer of the chemical composition of each coating, including the weight percent of each component (may consist of Material Safety Data Sheets)	Yes
VI.5	Keep records of the date, duration and description of any malfunction of the thermal oxidizer, any maintenance performed, any replacement of catalyst and any testing results thermal or catalytic oxidizer	Yes
VI.6	Keep operating temperature records for the thermal oxidizer thermal oxidizer	Yes

*While the submitted records contain no breakdown of what each line is emitting, records clearly demonstrate that the entire facility is able to comply with the 2,000 lb/month and the 10 tpy VOC emission limits that actually pertain to each coating line separately. Staff instructed the facility to adjust recordkeeping to show the usage and emissions data per line from now on.

The facility submitted purchase orders from Chase Corporation, for the coatings used at the facility from May 2020 through July 2022 (SC VI.3(a)). Material safety data sheets were submitted for the Humiseal 1B51NSLU_905_PB35, the Humiseal Thinner 905, and the Tamura lead-free solder paste (SC VI.4). A record review was completed on a one-year span (July 2021 to July 2022) of the facility's report that details the VOC content of the coating used (SC VI.3(b)), amount of coating used (SC VI.3(c)), and VOC emissions. The facility is not tracking the VOC emissions per coating line as specified in SC VI.3(d) and (e) but instead totaled all VOCs emitted together per month.

The highest emissions reported occurred in July of 2021 at 1,135.40 lbs of VOCs. Over the year of records reviewed, the facility emitted an average of 158 lbs of VOC per month.

The submitted records demonstrate that the facility is tracking all RTO downtime and factoring the uncontrolled emissions into their calculations (SC VI.5). The facility is monitoring and recording temperature data from the RTO (SC VI.6).

FG-COATING appears to be in compliance with all permit conditions and requirements at this time.

FG-SOURCE

Description: All coating lines and all associated purge and clean-up operations at the stationary source. This includes any coating line covered by this or any other general permit or any permit to install issued pursuant to Rule 201, and any coating line exempt from the requirement to obtain a permit to install pursuant to Rule 287 and/or Rule 290.

PTI #150-20

SC	Condition	COMPLIANT?
I.1	VOC emission limit: 30 tpy based on 12-month rolling time for FG-SOURCE	Yes

Monitoring/Recordkeeping:

SC	Condition	COMPLIANT?
VI.1	Keep VOC mass emission calculations on a monthly basis for FG-SOURCE determining annual emission rate in tons per 12-month rolling time, for all coating lines and associated purge and clean-up operations at the source	Yes

Within the year of records reviewed, the highest 12-month rolling VOC emission was 8.82 tons in July of 2021. The lowest 12-month rolling VOC emission reported was less than half a ton of VOCs in July of 2022.

FG-SOURCE appears to be in compliance with all permit conditions and requirements at this time.

The facility appears to be in compliance with all state and federal air use regulations at this time.

NAME Rachel Senaway

DATE 9/21/22

SUPERVISOR R.L 9/21/22