

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

B652873117

FACILITY: ADAC Automotive Muskegon Plants		SRN / ID: B6528
LOCATION: 2050 Port City Blvd and, MUSKEGON		DISTRICT: Grand Rapids
CITY: MUSKEGON		COUNTY: MUSKEGON
CONTACT: Brandon Doom , EHS Manager		ACTIVITY DATE: 06/27/2024
STAFF: Scott Evans	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: On site inspection for FY24		
RESOLVED COMPLAINTS:		

Introduction

On June 27, 2024, State of Michigan Department of Environment, Great Lakes, and Energy Air Quality Division (AQD) staff member Scott Evans conducted an on-site inspection of the ADAC Automotive Inc. facility located in two buildings at 1801 Keating Ave. and 2050 Port City Blvd in Muskegon, Michigan, to assess compliance with air quality rules and regulations. This facility is a coating facility that paints plastic automotive parts such as mirror casings and door handles using three coating lines. This facility is a synthetic minor source for both hazardous air pollutants (HAPs) and volatile organic compounds (VOCs) and has one active permit to install (PTI): PTI No. 2-12.

Upon arrival at the facility, a brief inspection of the facility exterior was conducted. No odors or visible emissions were noticed. After entering the facility, a meeting was conducted with EHS Manager Brandon Doom to discuss the purpose of the day's visit. An inspection of the facility interior was then conducted to assess compliance with permit requirements and all other air quality rules and regulations.

PTI No. 2-12

This permit contains requirements for three emission units (EU) and one flexible group (FG) as outlined below:

- EU-FLATRACKLINE
- EU-COELINE
- EU-AUTOLINE
- FG-FACILITY

EU-FLATRACKLINE

This emission unit is an automotive plastic parts coating line. The coating line consists of prime-coat booth, prime-coat cure oven, two base-coat booths, MICA-coat booth, two clear-coat booths, and top-coat cure oven. The VOC emissions from this line are controlled by Non-Fugitive Enclosure (NFE) and a Regenerative Thermal Oxidizer (K-RTO). Particulate matter is controlled by a water wash system. This coating line is located at 1801 Keating Avenue.

This unit has two emissions limits as listed in the table below:

Pollutant	Limit	Time Period / Operating Scenario	Highest Recorded	Compliant?
1. VOCs	29.8 tpy	12-month rolling time period as determined at the end of each calendar month	~5.1 tpy April 1, 2024	Yes
2. VOCs	7.5 pph	Test Protocol*	See Below	Yes

Compliance with the above tpy limit was determined through a review of records provided by the facility. These records are discussed in more detail below. Compliance with the pph limit was determined through proper maintenance and operation of the above-described control equipment, which has been tested and found compliant in the past under normal and proper operating conditions. Operations are discussed in more detail below.

This unit is subject to five operational restrictions. The first three state that the facility shall recover and reclaim, recycle, or dispose of a minimum of 90 percent by weight of all purge and cleanup solvents used, shall capture all waste coatings, purge, and cleanup solvents in closed storage containers, and dispose of spent filters to minimize emission release. During the inspection this was discussed, and coating, solvent, and filter waste collection and storage was observed. Waste is collected from water curtain controls by skimming waste materials off of the captured water. The wastes are then contained in sealed containers until disposal. Records provided demonstrate compliance with 90% recovery requirements. The facility expressed that all waste solvents are disposed of using contracted waste disposal companies as needed. This is compliant with the requirements.

One requirement states that all VOC and HAP containing materials shall be handled to minimize release of fugitive emissions. Throughout the inspection, various methods of control were observed including operation of control equipment, proper storage in sealed containers and rooms, capture of materials, and proper disposal. All observations contribute to confirmation that the facility is compliant with this requirement.

The final operational requirement is that a malfunction abatement plan (MAP) must be submitted to the AQD and followed by the facility any time the emission unit is operated. An appropriate MAP has historically been submitted to the AQD and remains on file. During the inspection it could be seen that the facility is compliant as the MAP is retained at the facility and followed appropriately to minimize risk of emission release.

This emission unit has five equipment parameters. Four of these requirements require that the above-described control equipment be installed, maintained, and operated properly during operation of the coating line. During the inspection, all equipment was observed. The NFE was observed and properly operating during the inspection as demonstrated by flow of air moving into the NFE station when sealed doors were open for inspection. The RTO was observed and was in proper operation during the inspection as demonstrated by the temperature gage, which read 1585°F, demonstrating compliance with the at or above 1450°F requirement. Records of temperature monitoring demonstrate continued compliance of the unit. The water wash could be clearly seen with water flowing to capture particulate matter as intended.

The fifth parameter requires that High-Volume Low-Pressure (HVLP) applicators be installed and used for application of spray coatings. This was discussed and it could be observed that appropriate nozzles were installed and used within the coating line, demonstrating compliance with the requirement.

This unit has three testing requirements. The first requires that VOC content of used materials determined using either Method 24 testing procedures or manufacturers formulation data if

approved by the AQD. The facility has previously requested permission to use manufacturer data and been approved. This is still the method in use and, at this time, this is acceptable.

The facility was required, within 180 days of startup, to test destruction efficiency of the RTO and capture efficiency of the NFE. This was completed as required. Following these initial tests, the facility is required to conduct quarterly, or semiannually with the approval of the AQD, smoke tests to verify the functionality of the NFE. The facility has since requested and been approved for semi-annual testing frequency. The most recent test was submitted on December 27, 2023, and demonstrated proper function of the NFE. The next test was scheduled to be conducted within the next few weeks at the time of the inspection as required of testing frequency.

This unit has five record-keeping requirements. The first requires that all required calculations in a format acceptable to the AQD District Supervisor by the 15th day of the calendar month, for the previous calendar month. Records were provided in a timely manner, demonstrating compliance with this requirement.

The second requirement state that RTO temperatures must be monitored at least once every 15 minutes. During the inspection, the continuous monitor for the unit could be observed and read. This monitor was used to confirm compliance with the above temperature requirement.

The third requirement states that a listing of chemical compositions of all used materials be maintained at the facility. This list was observed on site and appeared to contain information for all used materials. With compliance demonstrated on site, copies of these records were not requested.

The fourth requirement states that the following VOC data be maintained on a monthly basis:

- Gallons of each material used.
- VOC content of each material used.
- Monthly VOC emissions.
- 12-month rolling annual VOC emissions.

These records were provided in accordance with the requirements and were used to demonstrate compliance with the emissions limits as discussed above.

This unit had one reporting requirement, which required that the AQD be informed when the equipment was installed. This was completed as required when the equipment had been installed during the original permitting process.

This unit has one associated stack. This stack was observed during the inspection, though it was not measured directly for safety reasons. The stack appeared to be compliant with height and width parameters during the inspection.

The unit has one additional requirement that states that the emission unit shall be labeled in a way that is approved by the AQD. Proper labelling of the unit was observed on site and is acceptable.

EU-COELINE

This unit is A plastic parts coating line consisting of an uncontrolled parts loading and unloading tunnel, an uncontrolled 5 stage parts washer with dry-off oven and dry-off tunnel; and two primecoating booths with flash-off, a prime cure oven, three basecoat booths with flash-off, three clearcoat booths with flash-off, associated tunnels, and a final cure oven all controlled by a Regenerative Thermal Oxidizer (PC-RTO) for VOC emissions control. This coating line is located at 2050 Port City Blvd.

This unit has the following emissions limits:

Pollutant	Limit	Time Period / Operating Scenario	Highest Recorded	Compliant?
1. VOCs	40.1 tpy	12-month rolling time period as determined at the end of each calendar month	~6.2 tpy February 1, 2024	Yes
2. VOCs	400.8 lb/day	calendar day	See Below	Yes

The above compliance determinations were made through analysis of provided records, which are discussed in more detail below. For daily VOC emissions, records were not reviewed in detail due to the volume of data inherent in daily VOC emissions. However, a quick calculation shows that the average VOC emission per day based on the highest annual emission rate would be approximately 34 lbs. per day, which is less than 10% of the permitted limit. Additionally, a sampling of reviewed daily emission logs shows that daily VOC emissions were well below the permitted level. This evidence is sufficient to determine that the facility is within compliance of the daily VOC emissions limit.

This unit has four operational restrictions. The first states that all waste materials and shall be captured and stored in closed containers before being disposed of in an acceptable manner. During the inspection it was observed that all waste materials were properly captured in fabric filters and stored in sealed bags until disposal. It was discussed that waste materials are collected and removed from the facility by a contracted waste management company.

The second requirement says that all spent filters shall be disposed of in a way that minimizes release of air contaminants. It was observed during the inspection that used filters are appropriately bagged in an air-tight manner before being sent to waste disposal.

The third requirement states that all VOC and HAP containing material should be handled to minimize release of emissions. During the inspection it could be seen that all materials and wastes were stored in air-tight containers when not in use, demonstrating proper compliance with the requirement.

The fourth requirement states that an appropriate MAP be submitted to the AQD in order to operate the unit. The facility has previously provided an approved MAP and it is currently on file with the AQD. During the inspection it could be seen that the facility was adhering to the MAP as necessary during daily operations.

This unit has three design parameters. The first states that the booth portions can only operate if appropriate filters are installed and operated. During the inspection, filters could be seen as properly installed in the booths. The facility expressed that filters are replaced daily as necessitated by the volume of product output.

The second states that HVLP applicators must be installed on all spray booth equipment. This was discussed and observed during the inspection and all nozzles appeared to be equipped with appropriate applicators.

The third states that the coating operations may only proceed if the RTO is installed and properly operational. During the inspection the RTO was observed to be running at 1540°F, which is compliant with the requirement of at or above 1450°F. Temperature records demonstrated continued compliance of the equipment.

This unit has one testing requirement, which states that the facility must determine VOC content of all used materials through Method 24 testing unless it has been approved by the AQD that the facility may use manufacturer formulation data. The facility has historically requested and been approved to use manufacturer formulation data. This method remains applicable and acceptable.

This unit has five recordkeeping requirements. The first requires that all records be available by the 15th day of each calendar month for the previous calendar month. The facility was able to provide documents upon request, demonstrating compliance with the requirement.

The second states that a temperature recording device that measures the RTO combustion chamber temperature at least once every 15 minutes shall be installed. This was observed and used to make the above temperature compliance determination.

The third requirement states that the facility must maintain a current listing of used materials with their chemical compositions. This list was observed on site and appeared compliant with the requirement.

The fourth states that the following VOC data must be maintained monthly:

- Daily amount of each coating used and the chemical composition of each.
- Daily VOC emissions.
- Monthly VOC emissions.
- 12-month rolling annual VOC emissions.

These records were provided by the facility and used to make the above compliance determinations with the emissions limits.

This unit has nine associated stacks. These stacks were not measured directly for safety, but all appeared to be compliant with height and width requirements.

EU-AUTOLINE

This equipment is no longer located at the facility. When the FLATRACK line was installed, it was in replacement of the AUTOLINE. As such, there is no equipment and there are no records to review.

FG-FACILITY

This flexible group covers all process equipment source-wide including equipment covered by other permits, grandfathered equipment, and exempt equipment.

This group has the following three emission limits:

Pollutant	Limit	Time Period / Operating Scenario	Highest Recorded	Compliance
1. Each Individual HAP	Less than 9.0 tpy	12-month rolling time period as determined at the end of each calendar month	All less than 1 tpy	Yes
2. Aggregate HAPs	Less than 22.5 tpy	12-month rolling time period as determined at the end of each calendar month	~0.65 tpy December 1, 2023	Yes
3. VOCs	Less than 89.0 tpy	12-month rolling time period as determined at the end of each calendar month	~11.8 tpy April 1, 2024	Yes

The above compliance determinations were made using provided records, which are further discussed below.

This group has two testing requirements. The first states that HAP content of materials shall be determined using manufacturer formulation data. Provided records demonstrated compliance with this requirement.

The second states that the facility must determine VOC content of all used materials through Method 24 testing unless it has been approved by the AQD that the facility may use manufacturer formulation data. The facility has historically requested and been approved to use manufacturer formulation data. This method remains applicable and acceptable.

This group has three recordkeeping requirements. The first requires that all records be available by the 15th day of each calendar month for the previous calendar month. The facility was able to provide documents upon request, demonstrating compliance with the requirement.

The second and third requirements state that the following information must be kept monthly for both VOCs and HAPs:

- Amount of material used.
- Amount of material reclaimed.
- HAP or VOC content of each material.
- Monthly emissions.
- 12-month rolling annual emissions.

These records were provided and used to make the above compliance determinations for emissions limits.

Exempt Equipment

This facility has multiple injection molding processes totaling approximately 60 lines within all facility buildings. This equipment appears to be exempt from air permitting requirements under Rule 286(2)(b).

It is worth noting that this facility is located within the ozone non-attainment region that is subject to tightened regulations on VOC emissions. The facility has been involved in discussions and meetings with the AQD to help facilities prepare for and properly adjust to the tightened regulations. Based on analyses conducted by the facility, the rule changes do not appear to impact their operations. ADAC is subject to Rule 632 for emissions of VOCs from existing automobile, truck, and business machine plastic part coating lines. The facility is meeting the pounds of VOCs emitted per gallon of coating (minus water) as applied as required by the rule. Records of this analysis are maintained by the facility and could be reviewed for confirmation. The facility has been advised on where to find information regarding the new rules and that they should continue to monitor operations closely to ensure that they are in compliance.

Conclusion

At the conclusion of the inspection, the facility appeared to be compliant with all permit requirements and all other applicable air quality rules and regulations.

NAME Scott EvansDATE 8/15/2024SUPERVISOR HH