

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

N661170512

<b>FACILITY:</b> Depor Industries		<b>SRN / ID:</b> N6611
<b>LOCATION:</b> 14830 E 23 Mile Rd, SHELBY TWP		<b>DISTRICT:</b> Warren
<b>CITY:</b> SHELBY TWP		<b>COUNTY:</b> MACOMB
<b>CONTACT:</b> Ted Howard , Vice President & General Manager		<b>ACTIVITY DATE:</b> 01/12/2024
<b>STAFF:</b> Owen Pierce	<b>COMPLIANCE STATUS:</b> Compliance	<b>SOURCE CLASS:</b> SM OPT OUT
<b>SUBJECT:</b> FY24 Compliance Inspection		
<b>RESOLVED COMPLAINTS:</b>		

On January 12, 2024, I (Owen Pierce EGLE - Air Quality Division) performed a scheduled targeted inspection of Depor Industries located at 14380 23 Mile Road Shelby Township, Michigan. The purpose of the inspection was to determine the facility's compliance with the Federal Clean Air Act; and Article II, Part 55, Air Pollution Control of Natural Resources and Environmental Protection Act, 1994 Public Act 451 and the conditions of Permit to Install (PTI) No. 43-99H. Upon arrival, I met with Ted Howard, Vice President & General Manager, Jack Lynch, Production Manager, Ben Stevenson, Quality Manager, and Paul Zotter, Lab Manager, and conducted a pre-inspection meeting where I introduced myself, presented my credentials, and stated the purpose of the inspection.

During the pre-inspection meeting, Ted explained the facility's processes and equipment. Depor Industries coats small metal parts, including fasteners and brackets mainly for the automotive industry. On June 15, 2023 Depor Industries was approved for a new permit-to-install (PTI) No. 43-99H, which includes the removal of four emission units (EUPHOSPHATE, EUGRITBLAST, EUBOWLBLAST, and EURONCI2) and the addition of one dip spin coating line emission unit (EUDIPSPINSTC3). The facility is currently permitted to operate five dip spin coating lines that are controlled by a regenerative thermal oxidizer (RTO). Depor has a facility-wide opt-out permit for HAPs.

The facility has approximately 25 on-site employees and operates 24 hours a day, Monday through Friday in two - 12 hour shifts per day. According to Ted, there have been no recent process or equipment changes, and there are no cold cleaners or emergency generators at the facility. Non-permitted equipment at the facility includes one boiler, one sand blaster, and a zinc phosphate pre-treatment line. Following the pre-inspection meeting, Ted and Depor Staff lead me on a tour of the facility.

### Facility Walk-through Observations

Although the facility is permitted to operate five dip spin coating lines, only four lines (EUDUAL24, EUDIPSPINSTC1, EUDIPSPINSTC2, and EUDIPSPINSTC3) were observed in operation during the inspection. According to Ted, EURONCI is no longer in operation, and Ted showed me a few of the parts from EURONCI that remain disassembled at the facility. The dip spin lines in operation all have a similar layout and operate in essentially the same way. The parts are loaded into baskets and submerged into vats of coating material. The basket full of parts is then lifted out of the vat and spun to remove excess coating. The parts are dumped out of the basket and onto a conveyor that takes them through the in-line curing oven. Emissions from the four coating booths and in-line curing ovens are all controlled by the RTO. The zinc phosphate pre-treatment line observed on-site is a multi-stage process consisting of cleaning, rinsing, and phosphating parts to prevent rust and allow the coating to adhere better during the coating process. The sand blast equipment observed on-site is used to remove dried coating material from the baskets used in the coating process.

Paints and solvents were observed as being stored in closed containers in a storage room in a manner that minimizes the generation of fugitive emissions, as required by Special Condition (SC) III.3. All waste materials were observed as being stored in closed containers., as required by SC III.2.

During my inspection, I observed the RTO and noted that the chamber temperature was at 1,549°F. This aligns with the temperature records provided by the facility and demonstrates compliance with the SC IV.1 requirement to maintain the RTO temperature above 1,500°F. The RTO was observed as having a temperature monitoring device in the combustion chamber as required by SC IV.2.

Following observing the RTO, Ted showed me the magnahelic pressure drop monitors that were recently installed on each dip spin line. Each coating line had one pressure monitor installed on the paint booth and one monitor installed on the pre-cure oven which were observed as operating in a satisfactory manner and thus is in compliance with SC IV.3. Ted explained that pressure drop readings have just begun to be recorded on a regular basis four days prior to the inspection on January 8, 2023. I observed the pressure drop recordings for each pressure drop monitor and confirmed that pressure readings were being taken each day as required by SC VI.6.

### ***Sand Blast Equipment***

During the facility walk-through, I observed one fully enclosed sand blast unit used to clean coating baskets. The sand blast unit appears to be exempt from the requirement in R336.1201 to obtain a permit to install per R336.1281(2)(d).

### ***Boiler***

I observed one natural gas fired CB Package boiler during the walk-through. The boiler has a max heat input of 5.23 MMBTU and is exempt from Rule 336.1201 (Permit-to-Install) pursuant to rules 336.1282(2)(b)(i) (<< 50 MMBTU per hour heat input, natural gas only), and is not subject to New Source Performance Standards (NSPS) Subpart Dc (<< 10 MMBTU per hour heat input, natural gas only).

### **PTI No. 43-99H Compliance Evaluation**

The facility was issued PTI No. 43-99H for five dip spin coating lines, controlled by a RTO. Recordkeeping requirements were provided during the inspection. Depor Industries is required to maintain records of monthly gallons of material used, VOC content and VOC mass emissions of materials used, and temperature data records of the combustion chamber of the RTO. Depor Industries is also required to maintain records of facility-wide HAPs emissions. The facility provided all of the required records in an excel spreadsheet from January 2021 through December 2023.

### ***FGVOCS***

SC I.1 sets the VOC emission limit at 35 tons per year (tpy) based on a 12-month rolling time period as determined at the end of each calendar month. In order to demonstrate compliance with this emission limit, SC VI.4 states that the permittee shall keep records on a monthly basis of the gallons of each material used, the VOC content of each material as applied, VOC emissions calculations per month, and 12-month rolling VOC emissions calculations as determined at the end of each month. The highest 12-month rolling emission calculated from January 2021 - December 2023 was 7.59 tpy as recorded at the end of August 2023. I spot checked the calculations to make sure that they are being calculated correctly. Results from the 2019 VOC Capture and Destruction Efficiency test indicate that the average total VOC Destruction Efficiency was reported as 99.6% and the average total VOC Capture Efficiency was reported as 93.6%. This equates to an overall control efficiency (OCE) of 93.2%. Depor utilizes a lower OCE of approximately 92.2% as a conservative factor to show compliance with VOC and HAP emission limits.

SC III.1 states that the permittee shall not operate FGVOCS unless a malfunction abatement plan (MAP) as described in Rule 911(2), for the thermal oxidizer, is implemented and maintained. During the inspection Ted provided me with a copy of the MAP for the RTO at the facility. Based on my observations made during the inspection, Depor seems to be following the MAP.

SC V.1 explains that the permittee shall determine the VOC content, water content, and density of any coating as applied and as received, using federal Reference Test Method 24; or upon prior approval by the AQD District Supervisor, the permittee may determine the VOC content from manufacturer's formulation data. Depor uses formulation data in calculating emissions however, random sampling and Method 24 VOC analysis are conducted to verify and compare formulation data. Magni (coating manufacturer) used to report VOC content based on Method 24 analysis in the Material Safety Data Sheets (SDS). In an effort to be more conservative, Depor uses the VOC content reported in the SDS

when calculating VOC emissions because they are higher than the EPA Method 24 VOC analysis results.

SC V.2 states that within 180 days after commencement of trial operations of EUDIPSPINSTC3, the permittee shall verify capture efficiency of FGVOCS and destruction efficiency of the regenerative thermal oxidizer, by testing at the owner's expense, in accordance with Department requirements. According to Ted, the trial run for EUDIPSPINSTC3 commenced on November 7, 2023 which is approximately 63 days between the trial run and the inspection date. Ted explained that he is in the process of getting an alternative testing method approved by the District Supervisor (DS) in order to verify the capture efficiency of FGVOCS and destruction efficiency of the RTO. Depor is in compliance with this condition.

SC VI.2 details that the permittee shall continuously monitor and record the temperature in the combustion chamber of the RTO during operation of FGVOCS. Temperature records were provided for me to review on-site during the inspection. Records from January 2021 - December 2023 indicate that the RTO is regularly maintained at a temperature of approximately 1550<sup>0</sup> F while the coating lines are operating, which is in compliance with the requirement to maintain the RTO temperature above 1,500<sup>0</sup> F as required in SC IV.1. The drops in RTO temperature observed during the review of the data, correspond to weekends when the facility was not operating and occasional power outages that may have occurred.

SC VI.3 explains that the permittee shall maintain a current listing from the manufacturer of the chemical composition of each material, including the weight percent of each component. Depor keeps the Material Safety Data Sheets (SDS) of each material that they use. During the inspection I was able to review a couple of the SDS sheets that they have on file. Depor is in compliance with this condition.

SC VI.5 requires that the permittee keep records of all maintenance activities. According to Ted, the facility (including all coating operations) was shut down from December 18, 2023 - January 2, 2024 while repairs were made to a portion of the RTO. AQD was informed of the maintenance activities via email correspondence from Ted prior to the operational shut down.

I observed the RTO stack, and the stack appears to meet the stack restrictions listed in SC VIII.1.

### ***FGFACILITY***

SC I.1-2 set the Individual and Aggregate HAPs limits for the facility. The Individual HAP limit is 8.9 tpy based on a 12-month rolling time period, and the Aggregate HAP limit is 22.4 tpy based on a 12-month rolling time period. From January 2021 through December 2023, I reviewed the 12-month rolling HAP emissions. The maximum individual 12-month rolling HAP emission was N-Butanol at 0.187 tpy occurring in August 2023. The maximum aggregate 12-month rolling HAP emission was 0.568 tpy occurring in August 2023.

### **Conclusion**

Based on the observations made during the inspection, and an analysis of the requested records, Depor Industries is in compliance with the conditions and requirements of PTI No. 43-99H.

NAME Owen Pierce

DATE 2/1/2024

SUPERVISOR K. Kelly