

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

B275768188

<b>FACILITY:</b> FCA US LLC WARREN STAMPING PLANT		<b>SRN / ID:</b> B2757
<b>LOCATION:</b> 22800 MOUND RD., WARREN		<b>DISTRICT:</b> Warren
<b>CITY:</b> WARREN		<b>COUNTY:</b> MACOMB
<b>CONTACT:</b> Audrey Joslin , Environmental Specialist		<b>ACTIVITY DATE:</b> 02/14/2023
<b>STAFF:</b> Noshin Khan	<b>COMPLIANCE STATUS:</b> Compliance	<b>SOURCE CLASS:</b> MAJOR
<b>SUBJECT:</b> scheduled, on-site inspection		
<b>RESOLVED COMPLAINTS:</b>		

On Tuesday, February 14, 2023, I, Noshin Khan, Michigan Department of Environment, Great Lakes, and Energy-Air Quality Division (EGLE-AQD) staff, performed a scheduled, on-site inspection of FCA (Stellantis) Warren Stamping Plant located at 22800 Mound Road, Warren, Michigan 48091 (SRN: B2757). Iranna Konanahalli, EGLE-AQD, joined me for the inspection. The purpose of the inspection was to determine the facility's compliance status with the requirements of the federal Clean Air Act; Article II, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 Public Act 451, as amended (Act 451); the AQD administrative rules, and the conditions of Renewable Operating Permit (ROP) Number MI-ROP-B2757-2019.

Iranna and I arrived at the facility at 10AM and met with Audrey Joslin, Environmental Specialist; Nichole Poster, Environmental Health & Safety Manager; and Jennifer Calnen, Consultant at GZA GeoEnvironmental. Before our facility walkthrough, we discussed the facility's operations. According to Audrey, Warren Stamping has 12 stamping lines and produces parts including doors and lift gates for a variety of vehicles. These parts are shipped to multiple FCA assembly plants including Warren Truck, Jefferson North, and plants in Mexico and Canada. She said that the facility's operating hours are 24 hours a day, 7 days a week, although this can vary on Sundays; the facility has approximately 1200 employees. I asked if the facility had any emergency generators or parts washers, and Audrey said that there are no emergency generators and all parts washers are aqueous based and consequently exempt from permitting requirements per Rule 281(2)(k).

Audrey and Jennifer then led us on a walkthrough of the production floor. We observed parts storage and robotic parts assembly. We stopped at an adhesive application line, where Audrey explained that adhesive is pumped into lines from 55-gallon drums, and robots apply drops of adhesive as required by the type of part. She said that the adhesive is not heated. This process is included in EUADHES-STATIONS and FG-RULE 290 in the facility's ROP. The adhesives application process is exempt per Rule 290, and compliance with this rule is covered in the Compliance Evaluation section of this report.

Audrey then showed us the facility's maintenance paint booth, used to paint in-house equipment and structures per the description for EUMAINTPT-DCK in the facility's ROP. Per Audrey, this booth has not been used in about two years, and there are currently no plans for use. The booth was not in use during the inspection. We observed missing filters, and Audrey said that in the case of the booth being operated again the filters would be replaced. She also noted that production supervisors are aware that the booth shouldn't be used at this time. The operation of this booth is exempt per Rule 287(2)(c), which applies to surface coating lines meeting the following conditions:

- (i) The coating use rate is not more than 200 gallons, as applied, minus water, per month.
- (ii) Any exhaust system that serves only coating spray equipment is supplied with a dry filter control or water wash control which is installed, maintained, and operated in accordance with the manufacturer's specifications, or the owner or operator develops a plan which provides to the extent practicable for the maintenance and operation of the equipment in a manner consistent with good air pollution control practices for minimizing emissions.
- (iii) Monthly coating use records are maintained on file for the most recent 2-year period and are made available to the department upon request.

These requirements are included under FG-RULE 287(2)(c) in the ROP and are reviewed in the Compliance Evaluation section of this report.

Next, Audrey showed us a station where highlight fluid is applied to parts to check for flaws. This process is included under EUHIGHLIGHT in the ROP. She explained that fluid is applied to a rag and swiped over the part under a light to expose flaws, and parts with issues then undergo troubleshooting. These highlighter stations are positioned at the end of each press line. I observed that the used rags are stored in closed containers, and Audrey said that the rags are later disposed of in a mix box with other adhesive waste, and the combined waste goes to a sanitary landfill.

We then visited the carpentry shop (EUCARP-SHOP in the ROP), which was not in use during the inspection. Audrey said that 1 carpenter manages the whole area. We observed a dust collection system equipped with two collection bins. Bag filters were in place and appeared to be in good operating condition. Audrey said that all machines in the area exhaust to this collection system, and the waste is profiled to go to non-hazardous waste.

Lastly, Audrey showed us one of the aqueous based parts washers. It appeared to be approximately 2 ft x 4 ft in size, and Audrey said this was one of the larger ones on site. She said that all parts washers are aqueous based and have lids. Audrey later provided an SDS for the cleaner, called Armakleen 4 in 1 Cleaner. The composition information indicates that the total VOC concentration is under 5% in weight, so the parts washers meet the definition for aqueous based parts washers per Rule 101(q).

The facility also has a blank wash process in the basement. Here, blanks go through an unheated spray bath to remove any dirt or oil. We were unable to observe this process because of construction happening in the area. The facility also claims the Rule 290 exemption for this process and compliance with the requirements are discussed below.

## Compliance Evaluation

### **EUCARP-SHOP**

#### Emission Limits

Per Special Condition (S.C.) I.1, the facility has a PM emission limit of 0.10 lb/1000 lbs exhaust gas. Rather than testing or monitoring to comply with this limit, recordkeeping condition VI.1 is used to evaluate compliance with this condition. This condition states that the permittee shall inspect and maintain the integrity of the dry filters on a quarterly basis and keep a record of inspection and maintenance activities.

I requested all records for the period from May 2021 through January 2023. In compliance with S.C. VI.1, Audrey provided dry filter inspection and maintenance records. This sheet indicates dates of inspection for each quarter for 2021 and 2022. The records indicate that the filters haven't required maintenance activities and have been operating sufficiently.

### **EUHIGHLIGHT**

#### Emission Limits

Per S.C. I.1, the facility has a VOC emission limit of 5.62 tons per year (tpy), based on a 12-month rolling time period as determined at the end of each month.

In compliance with recordkeeping conditions VI.2 and VI.3, Audrey provided monthly and 12-month rolling highlight fluid use and emissions calculations for May 2021 through January 2023. These records also indicate the VOC content of the highlighter fluid (6.70 lb/gal), in accordance with S.C. VI.1. The emissions calculations show that the highest 12-month rolling VOC emissions were 1.14 tons in as calculated in December 2022, which is below the permitted limit. The highest monthly use and emissions were 55 gallons and 0.2 tons, respectively, in April, November, and December 2022.

### **FG-RULE 290**

The facility claims the Rule 290 exemption for its blankwash and adhesives application processes.

In accordance with recordkeeping requirements for this flexible group, the facility provided descriptions for each of these processes, records indicating potential air pollutants each process emits, and provided monthly usage and emissions calculations.

According to the description provided by Audrey, blankwash is used to clean and lubricate metal panels as they enter the draw press to aid in flow within the die. Blankwash also aids in reduction in rips and tears in the final stamped product. This process emits VOCs uncontrolled into the general in-plant environment. Audrey provided a copy of correspondence with the supplier of the blankwash, in which they say that the VOC content of the material is determined using EPA Method 24. The facility receives a blankwash concentrate from the supplier (DuBois Chemicals) which is diluted to a 10% concentration in water prior to application, according to Audrey. As applied, the VOC content is 24.6 g/L. The emission calculations provided by Audrey show that the highest monthly VOC emissions from May 2021 through January 2023 were 192.5 lbs, monthly from July 2021 through October 2021. This is below the 1000 lb monthly limit specified by Rule 290. The highest 12-month rolling VOC emissions were 1703.6 lbs as calculated in June 2022. According to Audrey, the blankwash process commenced prior to December 20, 2016, so S.C. III.2 requiring an air cleaning device does not apply.

Per the description provided by Audrey, two types of adhesives—single part and two-part—are generally used in the assembly of stamped parts, as observed during the inspection. VOCs are emitted from this process uncontrolled into the general in-plant environment. The records Audrey provided list each adhesive, its VOC content, usage, and VOC emissions for each month from May 2021 through January 2023. The highest monthly VOC emissions were 102 lbs in June 2021, which is below the 1000 lb monthly limit specified by Rule 290. The total VOC emissions for the adhesives process for the 2021 and 2022 calendar years, respectively, were 611.57 lbs and 632.74 lbs.

In compliance with recordkeeping requirements, the facility maintains a list of toxic air contaminants (TACs) that are components in the blankwash and adhesives. This list also indicates the initial threshold screening level (ITSL) and initial risk screening level (IRSL) for applicable chemicals, potential emissions of each TAC, and whether each chemical is carcinogenic or non-carcinogenic.

The records indicate that three TACs that are components in either the blankwash or adhesive 'EF2479C EFTEC' have an ITSL of 0.1 ug/m<sup>3</sup>. Because the ITSL is between 0.04 and 2 ug/m<sup>3</sup>, these TACs are subject to an uncontrolled emissions limit of 20 lb/month per Rule 290(2)(a)(ii)(A). Two of the TACs are associated with the adhesive, which is solid, and the records indicate that these components are non-volatile and/or solid.

The third TAC is sulfonic acid petroleum salt and composes up to 30% of the blank wash concentrate by weight. During a follow up call with Audrey and Jennifer, they explained that the salt is for bacterial control. Since the blankwash is applied as a spray and this agitation could result in aerosolization and emissions of the salt, I requested more information about the nature of the salt to verify if potential emissions are below 20 lb/month. Audrey consulted with process engineers at the facility regarding the exact application method for the blank wash and with technical staff at DuBois Chemicals regarding the properties of the salt, and provided the following information:

The blank wash process is conducted in an enclosed washer. The blank wash is sprayed on metal from about 4 inches away at 10-15 psi, which is a gentle spray not much more forceful than a drip application. According to the lab chemist and quality manager for DuBois Chemicals, the salt does not volatilize at ambient conditions and has a molecular weight of 476.2 amu. The salt is polar and adheres to the surface of the metal, and this adherence is the purpose of the salt within the blankwash. Based on Audrey's conversation with the chemist, a conservative estimate would be that 1% of the material would be aerosolized as it is applied.

Based on the above discussion and calculations for potential salt emissions prepared by AQD staff (based on the blankwash usage and concentrate material information provided by the facility) the emissions for the petroleum acid salt are below 20 lb/month and the facility is in compliance with the requirements of Rule 290.

**FG-RULE 287(2)(c)**

The facility claims the Rule 287(2)(c) exemption for its maintenance paint deck. This exemption sets a coating usage limit of 200 gallons per month (minus water as applied). Audrey provided the paint booth usage log, which indicates that no painting has occurred from April 2021 through December 2022 for reasons including the painter being laid off and/or no painting jobs being required. As discussed during the inspection, the facility is aware of the requirement to replace missing filters if the paint deck is used in the future. The facility is in compliance with the requirements of this exemption.

**Reporting**

The facility has submitted semiannual and annual certifications, as required by the ROP, for reporting of deviations. The facility reported no deviations for 2022.

Based on my observations during the inspection and the records reviewed, the facility is in compliance with the above rules and regulations.

NAME Nashim KhanDATE 08/30/2023SUPERVISOR K. Kelly