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

B177164163

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| **FACILITY:** FORD MOTOR COMPANY-VAN DYKE PLANT | | **SRN / ID:** B1771 |
| **LOCATION:** 41111 VAN DYKE, STERLING HTS | | **DISTRICT:** Warren |
| **CITY:** STERLING HTS | | **COUNTY:** MACOMB |
| **CONTACT:** Lori Brinkman , Plant Environmental Engineer | | **ACTIVITY DATE:** 07/21/2022 |
| **STAFF:** Noshin Khan | **COMPLIANCE STATUS:** Compliance | **SOURCE CLASS:** SM OPT OUT |
| **SUBJECT:** level 2 scheduled inspection | | |
| **RESOLVED COMPLAINTS:** | | |

On July 21, 2022, I (Noshin Khan, EGLE-Air Quality Division), performed a scheduled, announced inspection of Ford Motor Company – Van Dyke Plant, located at 41111 Van Dyke Road, Sterling Heights, Michigan 48314. I was accompanied by Iranna Konanahalli, EGLE-AQD. The purpose of the inspection was to determine the facility's compliance with the requirements of the federal Clean Air Act; Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451), the administrative rules, and the conditions of Permit to Install (PTI) No. 280-96A.

Upon arrival, Iranna and I met with Lori Brinkman, Plant Environmental Engineer, for a pre-inspection meeting where she updated us on the facility's operations. The plant manufactures automotive transmission components and began production of electric vehicle motors (e-motors) in 2021. Lori noted that the facility is phasing out production of transmissions and plans to produce primarily e-motors in the future. The following are updates to the facility's emission units:

EUBOILER1:
Boiler #1 was dismantled on March 14, 2014 and is unable to be used again (gas supply is cut and locked).

EUSLUDGECOOK:
The facility sludge cooking tank was disabled in October 2019 with the elimination of the steam system to the waste treatment plant.

EUTANKS:
Tanks #7-#10 ("four oil/coolant storage tanks" in the emission unit description in PTI 280-96A) are no longer used for coolant storage. #9 holds treated oily wastewater for off-site shipment/treatment. #7 is empty. #8 and #10 are empty but can be used for overflow, if necessary. Tanks #1-#3 receive and hold untreated process wastewater from the facility.

Lori walked us through production floor, where a few transmission production lines are still in operation. We also observed e-motor production. Both processes involve metal machining exempt per R 336.1285(l)(vi)(B). As part of the e-motor production process, ovens press plastic over magnetic components for rotors. A polymer powder paint with no VOC content is applied to stators. Hybrid transmissions and e-transmissions are also assembled in the facility. Lori noted that no gas heaters are used in these processes.

Next, Lori took us to the facility powerhouse, where Dave Szerlag, Senior Process Coach, showed us the capped and locked valves on Boiler 1. Dave noted that daily visual emissions checks for Boiler 3 are performed, per FGFACILITY S.C. I.8. According to a note in the facility's records, any visible

emissions and consequent corrective actions are recorded, and work orders are issued. The records did not list any instances of the emissions opacity limit being exceeded. Boiler 3, fueled with natural gas and rated at 41 MMBTU/hr, is used for facility space heating and its use consequently varies by season. 66.3% of the facility's total natural gas usage for 2021 was for the months of January, February, and December. Boiler 3 is subject to NSPS (40 CFR 60) Subpart Dc. The facility appears to be in compliance with this regulation based on facility records that show maintained monthly natural gas usage records.

Bill Brown, Waste Water Treatment Operator, met us at the facility Waste Treatment Plant (WTP). Bill explained that 24 hours a day, the three process waste collection tanks (#1-#3 of EUTANKS) are directed to the packed-bed fume scrubber (EUFUMESCRUBBER) at the WTP. I observed that the tanks were covered in compliance with FGFACILITY S.C. III.4. When Bill walked us through the fume scrubber process, I observed an operating flow gauge and a meter indicating a pH of 9.32 at the time of inspection, in compliance with FGFACILITY S.C. III.2. Bill noted that a daily check of the flow rate is performed. Wastewater is treated with a coagulant that separates oil to be skimmed off and collected, and remaining water is directed to the sewage system. During our walkthrough of the WTP, I did not observe any visible emissions, indicating compliance with FGFACILITY S.C. I.10.

Finally, Lori showed us the facility's maintenance paint booth, which appears to be exempt from permit to install requirements per R 287(2)(c). The facility's records indicate that the facility's coating use rate is less than 200 gallons per month in accordance with this rule. In the booth, Iranna and I observed filters intact that seem to be operating correctly, in compliance with FGFACILITY S.C. III.5. Lori said the filters are changed as needed and the booth primarily utilizes water-based solvents for parts washing. We did not see the stack for the paint booth during our inspection and cannot verify compliance with FGFACILITY S.C. 9.

The facility operates 10 reciprocating internal combustion engines (RICE): 3 diesel fired fire pumps rated at 385 HP, each, and purchased 06/01/1995; 1 emergency diesel generator rated at 172 HP; and 6 natural gas emergency generators rated at HPs of 86, 139, 139, 139, 192, and 202. These engines are exempt from permit to install requirements per R 285(2)(g) since all are rated below 10 MMBTU/hr.

Engine inventory records provided by the facility indicate that the 3 diesel fire pumps are subject to RICE MACT. The emergency diesel generator is subject to RICE MACT. The 6 natural gas emergency generators are subject to RICE MACT and/or SI NSPS. The facility's records show that maintenance is performed on these engines annually. The facility's compliance with MACT regulations was not evaluated since the AQD has not accepted delegation to implement or enforce the rule for this area source. Natural gas generators #785 (192 HP and model year 2016), #786 (139 HP and model year 2010), and #787A (202 HP and model year 2014) are subject to spark ignition NSPS. The facility appears to be in compliance with this rule as facility records indicate that the generators were operated less than 50 non-emergency hours in calendar year 2021 and the generators are maintained according to manufacturer O&M manuals. Lori confirmed that the generators are certified to meet emission limits in accordance with NSPS subpart JJJJ, and provided copies of these certifications.

Per PTI No. 280-96A, FGPOWERHOUSE Special Condition (S.C.) II, the facility has a natural gas material limit of 960 million cubic feet (MMCF) per year. According to the emissions and usage

records provided by Lori, from January 2021 to June 2022, the highest 12-month rolling natural gas usage for FGPOWERHOUSE was 36.626 MMCF in February 2021, which is below the permitted limit.

Per FGFACILITY S.C. I.1 and I.2, the facility has a NOx emission limit of 19 tons/month and 99 tons/year. According to facility records, from January 2021 to May 2022, the highest monthly NOx emission was 0.981 tons in January 2022 which is below the limit of 19 tons. The highest 12-month rolling NOx emission during this period was 4.519 tons in May 2022, which is lower than the 99 tons/year limit.

Per FGFACILITY S.C. I.3-5, the facility has single HAP emission limits of 2.5 tons/month and 9.7 tons/year, and an emission limit of 24 tons/year for aggregated HAPs. According to facility records, from January 2021 to June 2022, the highest aggregate monthly HAPs emission was 0.104 tons, which is below the single and aggregate HAP permitted limits.

Per FGFACILITY S.C. I.6 and I.7, the facility has VOC emission limits of 11 tons/month and 99 tons/year. According to facility records, form January 2021 to June 2022, the highest monthly VOC emission was 1.49 tons in January 2022, which is below the 11-ton limit. The highest 12-month rolling total VOC emissions was 12.66 tons in June 2022, which is below the 99-ton limit.

Per FGFACILITY S.C. II, the facility has a natural gas material limit of 1,019 MMCF per year. According to facility records, from January 2021 to June 2022, the highest 12-month rolling natural gas usage for FGFACILITY was 66.807 MMCF in June 2022, which is below the permitted limit.

Based on the on-site inspection and records review, the facility appears to be in compliance with the above rules and permit conditions.

NAME Nadia Khan DATE 09/29/2022 SUPERVISOR K. Kelly