

M4734

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

M473472280

FACILITY: FORD MOTOR CO AUTO TRANSMISSION NEW PRODUCT CENTER	SRN / ID: M4734
LOCATION: 35500 PLYMOUTH RD, LIVONIA	DISTRICT: Detroit
CITY: LIVONIA	COUNTY: WAYNE
CONTACT: Manny Kusi-Appiah , Environmental Compliance Engineer	ACTIVITY DATE: 12/05/2023
STAFF: Samuel Liveson	COMPLIANCE STATUS: Compliance
SUBJECT: Inspection of a major source.	
RESOLVED COMPLAINTS:	

Introduction

On Tuesday December 5, 2023, AQD staff Sebastian Kallumkal and I (Sam Liveson) conducted an announced, scheduled inspection of Ford Motor Company – Automatic Transmission New Product Center (Ford ATNPC), located at 35500 Plymouth Road in Livonia, Michigan.

The purpose of this inspection was to determine the facility's compliance with the federal Clean Air Act; Part 55, Air Pollution Control, of the Michigan Natural Resources and Environmental Protection Act, 1994 PA 451, as amended; the Michigan Air Pollution Control Rules (Rules); the conditions of Renewable Operating Permit (ROP) No. MI-ROP-M4734-2011; and the conditions of Permit to Install (PTI) Nos. 44-22, 32-18, and 68-12C. An additional purpose of the visit was to discuss the facility's draft ROP with Ford environmental staff.

Pre-Inspection Meeting and Facility Overview

Arrival

The inspection was announced to ensure Ford environmental staff were available to discuss the facility's draft ROP. Sebastian and I arrived at the facility at about 9:15 AM. Weather was drizzly and the temperature was 35 degrees Fahrenheit. At the facility, we met with Manny Appiah, Senior Environmental Compliance Engineer; and Rob Streight, Permit Manager. We had a pre-inspection meeting prior to walking through the facility.

General Facility Overview

Ford ATNPC develops, tests, and proves new automatic transmissions, and develops the machining and assembly process for new transmissions. The facility also studies transmissions in current vehicles.

To test automatic transmissions, each transmission may be connected to an internal combustion engine whose power is absorbed via a dynamometer. Emissions result from the combustion of gasoline and diesel fuel in the engine. The facility currently has 41 fuel-burning dynamometer test cells for transmission testing.

The facility is divided into several phases. Phase 1 includes machining equipment and labs. Phase 2 includes sixteen dynamometers used to test automatic transmissions that are permitted under PTI No. 44-22. The cells exhaust uncontrolled but may be equipped with a catalytic converter depending on the testing requirements. Phase 2 also includes the chassis rolls where fully assembled vehicles are tested for the purposes of vehicle certification required under Title II of the Clean Air Act. Phase 3 and 3A, permitted under PTI No. 68-12C, contain 20 and 5 dynamometers respectively for testing automatic transmissions. Phase 3 and 3A test cells are exhausted to one of three regenerative thermal oxidizers (RTOs).

Ford ATNPC is a Title V major source because the potential to emit (PTE) carbon monoxide and nitrogen oxides is each greater than 100 tons per year. Ford ATNPC is a synthetic minor, or "area", source of hazardous air pollutants (HAP). Note, HAP emissions from Ford ATNPC and Ford Motor Company - Livonia Transmission (State Registration Number A8645) are aggregated per the major source definition in the NESHAP regulations. The four aboveground storage tanks at the stationary source are subject to the area source National Emission Standards for Hazardous Air Pollutants (NESHAP) for Source Category: Gasoline Dispensing Facilities (40 CFR Part 63 Subpart CCCCC).

Discussions with staff indicate that the engines used at this facility for testing transmissions are not subject to the National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines in 40 CFR Part 63, Subpart ZZZZ, the Standards of Performance for Stationary Compression Ignition Internal Combustion Engines in 40 CFR Part 60, Subpart IIII, and the Standards of Performance for Stationary Spark Ignition Internal Combustion Engines in 40 CFR Part 60, Subpart JJJJ because these engines are not considered “stationary engines” and are “non-road” engines. The explanation included that due to the variety of different tests that are performed along with the different model and model years of engine and transmission systems that are manufactured, the engine and transmission assembly must be moved in and out of the test cells to accommodate the testing; outside the test cells, the engines and transmissions are mounted on portable dollies or skids to allow for movement in and out of the test cell; at the completion of the tests, the engine and transmission are removed from the test cell for evaluation and disassembly. Therefore, given the nature of the testing, with only model year engines associated with the model year transmission being tested and the duration of the testing performed, no engine or engine type is used in the test cells for one year or more.

Compliance Background

The facility has not received a violation notice or consent order since at least December of 2008, nor have complaints been received regarding the facility since at least that time.

Facility Walkthrough and Compliance Status

Phase 2 Dynamometers for Automatic Transmission Testing (PTI No. 44-22, FG-PHASE2)

Phase 2 dynamometers exhaust to ambient air uncontrolled. During testing of automatic transmissions in Phase 2, engines may be controlled by a catalytic converter, but it is not required.

We visited test cell T2 (EU-TestCell_T2). We were able to walk into the cell because the engine and dynamometer were not running at the time of the inspection. I observed a nameplate date of 2008 and absorption capacity of 600 kilowatts, which is consistent with PTI 44-22’s description of EU-TestCell_T2. Testing being conducted is key life test, which staff explained is about 30 days of testing. I observed that the engine being tested was on a pallet. I also observed the fuel cabinet along the wall, which is consistent with explanations from staff that each cell has a fuel meter.

PTI 44-22, FG-PHASE2 Special Conditions and Compliance Status

Below is a summary of each special condition from Flexible Group FG-PHASE2 from PTI 44-22, and an explanation of the facility’s compliance status.

SC I.1, V.1: Emission limit of 1.74 lb CO per gallon of gasoline, evaluated via stack testing within 180 days of permit issuance.

COMPLIANCE. Ford ATNPC conducted stack testing on October 11, 2022, which is 180 days after PTI 44-22 was issued (April 14, 2022). Four test cells were operating during stack testing. The average CO emission rate was 0.50 lb CO per gallon of gasoline.

SC I.2 – I.6, VI.1, VI.3: 12-month rolling emission limits for VOC, formaldehyde, benzene, acetaldehyde, and 1,3-butadiene. Keep records based on emission factors in Appendix A.

COMPLIANCE. Ford provided 12-month rolling emissions calculations from December 2022 through November 2023. Records indicate that emissions calculations are based upon the emission factors in PTI 44-22 Appendix A. Below is a table providing the facility’s emission limit for that pollutant; the maximum 12-month rolling emissions calculated; and the month and year in which the maximum emissions occurred. No emission limits were exceeded.

Pollutant	Emission Limit	Maximum emissions	Month of Maximum
VOC	24.2 tpy	11.92 tpy	April 2023
Formaldehyde	953 lb/yr	462.5 lb/yr	April 2023
Benzene	1,714 lb/yr	931.4 lb/yr	April 2023
Acetaldehyde	6,698 lb/yr	3,245.3 lb/yr	April 2023
1,3-butadiene	576 lb/yr	279.2 lb/yr	April 2023

SC II.1, II.2, II.3, VI.1, VI.2: 12-month rolling material limits for gasoline and diesel.**Keep records of gasoline and diesel usage. Only burn gasoline and diesel.**

COMPLIANCE. Ford provided 12-month rolling material usage records from December 2022 through November 2023. Below is a table providing the facility's material limit for the fuel; the maximum 12-month rolling usage calculated; and the month and year in which the maximum usage occurred. Fuel usage limits were not exceeded. According to staff and records, only gasoline and diesel fuels were combusted in dynamometer operations.

Fuel	Material Limit	Maximum usage	Month of Maximum
Gasoline	300,000 gal/yr	145,308 gal/yr	April 2023
Diesel	80,000 gal/yr	47,616 gal/yr	May 2023

SC III.1, VI.4: Do not perform wide-open-throttle (WOT) engine testing; keep records of types of engine testing performed.

COMPLIANCE. Staff explained that test cells are run to test automatic transmission performance rather than for testing engines in WOT conditions. During the inspection, staff explained cell T2 was conducting long-term key life testing. I did not request records of the type of engine testing performed during this inspection.

SC IV.1: Install, calibrate, maintain, and operate devices to monitor the total gasoline and diesel usage for FG-PHASE2.

COMPLIANCE. Staff explained that fuel usage is monitored via a fuel meter on each test cell. I observed the fuel "cabinet" along the wall of test cell T2 (EU-TestCell_T2). The cabinet houses the piping coming from the ground into the test cell. Usage records are kept by the fuel management system. Flow meters are calibrated. I did not request calibration records during this inspection.

SC VIII.1-4: Stack dimensions; exhaust unobstructed vertically.

NOT EVALUATED. I did not observe the Phase 2 stacks during the inspection.

Phase 3 Dynamometers for Automatic Transmission Testing (PTI No. 68-12C, FG-PHASE3)

Phase 3 consists of 20 dynamometers which exhaust to one of three regenerative thermal oxidizers (RTOs) accessible on the facility roof.

PTI 68-12C was issued on August 4, 2022 for an upgrade to two existing dynamometers I-12 and I-13 from medium torque to high torque test cells to accommodate testing of electric driven transmissions systems while maintaining the ability to continue testing existing internal combustion engines in those cells. Each of these dynamometers has an absorption capacity of 845 HP.

General Condition 2 in PTI 68-12C requires that construction commence within 18 months of permit issuance, or the PTI becomes void. During the inspection, I observed that construction was occurring on test cells I-12 and I-13.

We visited test cell I-16, which was actively running during the inspection. When dynamometers are actively running, staff cannot enter the test cell room, but can observe the dynamometer through a window and observe test operating parameters on screens located outside of each test cell. Staff explained that custom key life testing was occurring for warranty purposes. This test will cycle the engine from idle to a higher RPM such as 5000. At 11:07 AM I observed an RPM of 1879. Premium fuel was being used during the test.

We visited test cell B4. I observed the fuel cabinet, and observed an absorption capacity of 380 HP. The test cell was setup to test a battery electric vehicle transmission, so there was no exhaust to ambient air. I observed where exhaust piping would connect and flow to the RTOs when engines were running on fuel.

On February 1, 2024, Manny provided more information about each of the 20 dynamometer test cells in EU-PHASE3. Below are the test cell name, type, absorption capacity, and installation year. All test cells can run on regular, premium, or diesel fuel.

Test Cell	Absorption Capacity (HP)	Year of Install
E3	460	2000
B4	380	1996
B5	380	1996
E4	460	2000
F3	270	1996
F4	270	1996
I12	N/A	2022/2023
I13	N/A	2022/2023
I11	509	2015
I14	1000	2006
I15	1000	2006
I16	1000	2006
I18	1000	2006
I7	240	1996
I8	240	1996
I9	240	1996
I19	240	1996
I20	240	1996
I10	240	1996
I17	240	2007

PTI 68-12C, FG-PHASE3 Special Conditions and Compliance Status

Below is a summary of each special condition from Flexible Group FG-PHASE3 from PTI 68-12C, and an explanation of the facility's compliance status.

SC I.1, I.5, I.7, VI.1, and VI.5: Prorated daily emission limits of 2073.6 lbs NOx/day; 461.1 lbs SO2/day; and 207.36 lbs VOC/day. Keep monthly emissions calculations based upon the monthly emissions divided by the number of days operated during the calendar month.

COMPLIANCE. Ford provided monthly emissions calculations from December 2022 through November 2023. Records indicate that emissions calculations are based upon emission factors from stack testing. The facility records the number of dynamometer operating days for each month. The maximum reported lb/day emissions were 69.83 lbs NOx/day in January 2023; 0.41 lbs SO2/day in March 2023; and 0.24 lbs VOC/day in January 2023.

SC I.2, I.6, I.8, I.10, I.12, I.13, VI.1, and VI.4: 12-month rolling emission limits for NOx, SO2, VOC, CO, PM10, and PM2.5. Keep records of emissions calculations based on provided emission factors or most-recent stack test.

COMPLIANCE. Ford provided 12-month rolling emissions calculations from December 2022 through November 2023. Records indicate that emissions calculations are based upon emission factors from stack testing. Below is a table providing the facility's emission limit for that pollutant; the maximum 12-month rolling emissions calculated; and the month and year in which the maximum emissions occurred. No emission limits were exceeded.

Pollutant	Emission Limit	Maximum emissions	Month of Maximum
NOx	51.1 tpy	12.17 tpy	December 2022
SO2	9.1 tpy	0.05 tpy	Each month
VOC	5.1 tpy	0.04 tpy	Each month December 2022 to August 2023
CO	111.8 tpy	1.60 tpy	December 2022
PM10	9.9 tpy	0.96 tpy	December 2022
PM2.5	9.9 tpy	1.29 tpy	December 2022

SC II.1, II.2, II.3, VI.1, VI.4, and VI.5: Fuel usage is limited to 11,520 gallons per day; 567,500 gallons per 12-month rolling time period; and of that limit, diesel usage shall not exceed 415,000 gallons per 12-month rolling time period. Keep monthly and 12-month rolling usage records, as well as daily records based upon the monthly fuel use divided by the number of days operated.

COMPLIANCE. Ford provided 12-month rolling emissions calculations from December 2022 through November 2023. The facility records the number of dynamometer operating days for each month. Below is a table providing the facility's fuel use; the maximum usage calculated by the facility; and the month and year in which the maximum usage occurred. No emission limits were exceeded.

Material	Use Limit	Maximum usage	Month of maximum
Fuel	11,520 gal/day	452 gal/day	March 2023
Fuel	567,000 gal/yr	135,225 gal/yr	December 2022
Diesel	415,000 gal/yr	29,542 gal/yr	December 2022

SC I.3, I.9, I.11, and V.1: Hourly emission limits of NOx, VOC, and CO, evaluated via stack testing once every 5 years.

COMPLIANCE. Gasoline stack testing took place on December 6, 2022, while diesel testing took place on January 12, 2023. Diesel testing was in January because the day of gasoline testing, Ford's test engineering team had no engine in the test cells reflecting typical testing activities for diesel testing. During the stack test, RTO 1 was running, and process data indicates the average oxidizer temperature was 1523 degrees F for gasoline testing, and 1526 degrees F for diesel testing. The below table provides the hourly emission limits compared to the stack test results for both diesel and gas. Emission limits were not exceeded.

Pollutant	Emission Limit	Gasoline emission rate	Diesel emission rate
NOx	86.4 pph	2.15 pph	2.44 pph
VOC	8.64 pph	0.0075 pph	0.0080 pph
CO	189.12 pph	0.62 pph	0.044 pph

SC I.4, IV.3, V.2, and VI.3: Emission limit for natural gas based on stack testing; install a device to monitor natural gas usage; conduct stack testing within 180 days of commencement of operating natural gas fueled engines; monitor and record natural gas usage.

NOT EVALUATED. These natural gas conditions relate to using natural gas in engines rather than to natural gas usage in RTOs. Staff explained that only gasoline and diesel were combusted for dynamometer operations. Because trial operations of operating natural gas fueled engines has not commenced, stack testing is not required per SC V.2. I did not evaluate the engine natural gas meter or usage records because no natural gas-fueled engines have been tested at Ford-ATNPC.

SC II.4, II.5: Burn only gasoline, alcohol/gasoline fuel blend, diesel, kerosene, hydrogen, LPG (or propane), and natural gas. Do not use leaded gasoline in FG-PHASE3.

COMPLIANCE. Records indicate only gasoline and diesel were combusted in the dynamometer operations from December 2022 through November 2023, and no leaded gas was used - only unleaded gasoline. Provided fuel supplier certifications do not indicate that leaded fuel is used.

SC III.1: Implement and maintain a malfunction abatement plan (MAP) for the RTOs.

COMPLIANCE. Ford ATNPC provided an updated copy of the MAP dated December 11, 2023. The updated plan indicates that Al Dyling supervises the comprehensive abatement equipment maintenance program. Tom Masacek, the previous supervisor, has retired.

The MAP indicates that each of the three RTOs has the capacity to control emissions from all engine driven test cells simultaneously. The two adjacent RTOs are in standby mode in the event the primary RTO malfunctions. The facility does not operate the engine driven test cells unless a minimum RTO chamber temperature of 1400 degrees Fahrenheit is maintained. Interlocks are in place to safety terminate all test cell operations in the event of an RTO system-wide malfunction or exhaust system failure.

SC IV.1, IV.2, VI.2, VI.6, and VI.8: Do not operate banks 5, 6, or 7 unless RTO is installed, maintained, and operated in a satisfactory manner. Maintain a minimum RTO temperature of 1400 degrees Fahrenheit and a minimum retention time of 0.5 seconds; monitor and record RTO combustion temperature; keep a demonstration of the minimum retention time.

COMPLIANCE. There is a main header of exhaust leading to the RTOs, and the banks are the exhaust ventilation wings off of that main header. Ford considers that banks 5, 6, and 7 encompass Phase 3 test cells. The ventilation system for banks 5, 6, and 7 exhaust to the RTOs.

During the inspection, staff explained that RTO #3 was operating, and RTO #1 was in standby. RTO #2 was down for repair. Per the MAP, RTOs undergo daily visual inspections and repairs by plant staff, and quarterly inspections. During the inspection, staff explained that Griffin is contracted quarterly. The last quarterly maintenance occurred in September of 2023. Ford ATNPC provided a record of the September 2023 maintenance.

We walked across the facility roof on walking areas which appeared safe, and observed the RTOs and control panels. I observed that for RTO 1 and 3, the temperatures in each tower were above 1517 degrees F. Staff provided that the RTO chamber set points are 1,523 degrees F.

Each RTO has three chambers, or towers. The facility provided a writeup explaining the operation. It appears that a "typical" RTO with two chambers where flow reverses risks losing contaminated air to atmosphere before reaching a high combustion temperature and affecting destruction efficiency. In the 3-tower RTOs at Ford ATNPC, the inlet chamber doesn't immediately become outlet, but instead there is an intermediate "purge" tower where this air reaches the combustion chamber temperature before becoming the "outlet" tower. From talking with staff and listening to the RTO, it appears the three towers or chambers rotate every 30 seconds.

Following the August 2022 inspection, Ford provided hand-written calculations from Durr dated 12/2/2005 demonstrating that the minimum retention time is 1.143 seconds at 1400 °F.

The facility provided a record of the combustion chamber temperature for the week of October 30th through November 3, 2023 for all 3 RTOs. Temperature is consistently above 1400 degrees F, and did not fall below 1515 degrees F.

SC IV.4: Install, calibrate, maintain, and operate RTO thermocouples.

COMPLIANCE. Griffin performed thermocouple replacement during the September 2022 quarterly RTO assessment. Replacement of the thermocouples was planned for during the September 2023 Griffin assessment but was delayed due to difficulties receiving replacement thermocouples. Thermocouple replacement was completed on January 19, 2024. As a future preventive action, the facility will stock up on new replacement thermocouples onsite and monitor the inventory to ensure timely replacement.

SC VI.7: Determine sulfur content in each fuel using an ASTM-approved method or fuel supplier certification.

COMPLIANCE. Fuel supplier certifications were provided for regular gasoline (dated 10/2/23), premium gasoline (dated 9/15/23), and diesel (dated 1/11/23). The footnotes of emissions calculations indicate that diesel SOx emissions are based upon certificates of analysis, and gasoline SOx emissions are based on fuel standards of 80 ppm sulfur. Provided gasoline certificates indicate sulfur content below 80 ppm sulfur.

SC VIII.1-3: RTO stack parameters; exhaust unobstructed vertically.

COMPLIANCE. From the facility roof, I observed the three cylindrical RTO stacks that exhaust unobstructed vertically. Stack dimensions appear to be similar to those in the facility permit based on visual observations.

Phase 3A Dynamometers for Automatic Transmission Testing (PTI No. 68-12C, FG-PHASE3A)

Phase 3A houses five dynamometers which are in the same building as the Phase 3 dynamometers, but Phase 3A dynamometers were installed at a later date. Dynamometers in Phase 3A are controlled by the same three RTOs that also control Phase 3 dynamometers. Phase 3A dynamometers M3 and M4 are at located the end of Bank 6, and the other Phase 3A test cells are located in Bank 8.

We visited test cell TC1 in Phase 3A. Because it was not operating, we were able to enter the room. The test cell was setup for testing of a battery electric vehicle. I observed a fuel cabinet for when the cell is used with fuel. The dynamometer label indicated an absorption power of 500 kW, which converts to 670 HP.

On February 1, 2024, Manny provided more information about each of the 5 dynamometer test cells in EU-PHASE3A. Below are the test cell name, type, absorption capacity, and installation year. All test cells can run on regular, premium, or diesel fuel.

Test Cells:	Absorption Capacity (HP)	Year of Install
M3	804	2016
M4	670	2016
TC1	670	2019
TC2	804	2019
TC3	804	2019

PTI 68-12C, FG-PHASE3A Special Conditions and Compliance Status

Below is a summary of each special condition from Flexible Group FG-PHASE3A from PTI 68-12C, and an explanation of the facility's compliance status.

SC I.1, I.2, VI.1, and VI.3: Emission limits of NOx and CO per 12-month rolling time period based on monthly records. Keep records of emissions calculations based on provided emission factors or most-recent stack test.

COMPLIANCE. Ford provided 12-month rolling emissions calculations from December 2022 through November 2023. The emissions calculations are based upon emission factors from stack testing. Below is a table providing the facility's emission limit for that pollutant; the maximum 12-month rolling emissions calculated; and the month and year in which the maximum emissions occurred. No emission limits were exceeded.

Pollutant	Emission Limit	Maximum emissions	Month of Maximum
NOx	35.5 tpy	0.51 tpy	May, June, July 2023
CO	58.1 tpy	0.11 tpy	November 2023

SC II.1, II.2, II.3, VI.1, and VI.3: Fuel usage is limited to 4,752 gallons per day; 295,000 gallons per 12-month rolling time period; and of that limit, diesel usage shall not

exceed 120,000 gallons per 12-month rolling time period. Keep monthly and 12-month rolling usage records, as well as daily records based upon the monthly fuel use divided by the number of days operated.

COMPLIANCE. Ford provided 12-month rolling emissions calculations from December 2022 through November 2023. The facility records the number of dynamometer operating days for each month. Below is a table providing the facility's fuel use; the maximum usage calculated by the facility; and the month and year in which the maximum usage occurred. No emission limits were exceeded.

Material	Use Limit	Maximum usage	Month of maximum
Fuel	4,752 gal/day	105 gal/day	February 2023
Fuel	295,000 gal/yr	7,008 gal/yr	November 2023
Diesel	120,000 gal/yr	384 gal/yr	December 2022

SC II.4, II.5: Burn only gasoline, alcohol/gasoline fuel blend (up to 100% ethanol), diesel, kerosene, hydrogen, LPG (or propane), and natural gas; do not use leaded gasoline in FG-PHASE3A.

COMPLIANCE. Records indicate the facility uses gasoline, blends with ethanol, and diesel fuels. Staff explained no leaded gas was used - only unleaded gasoline. Provided fuel supplier certifications do not indicate that leaded fuel is used.

SC III.1, IV.1, IV.2, IV.3, VI.2, VI.4, VI.6, VIII.1-3: Implement and maintain a MAP for the RTOs; RTO design, operation, monitoring, recordkeeping, and stack requirements.

COMPLIANCE. Phase 3A cells are controlled by the same RTOs as Phase 3. Please see the discussion of special conditions III.1, IV.1, IV.2, VI.2, VI.6, VI.8, IV.4, and VIII.1-3 from FG-PHASE3 in PTI 68-12C.

SC VI.5: Determine sulfur content in each fuel using an ASTM-approved method or fuel supplier certification.

COMPLIANCE. Please see the discussion of special conditions VI.7 from FG-PHASE3 in PTI 68-12C.

Source-Wide Conditions (PTI No. 32-18, FGFACILITY)

Ford ATNPC is a synthetic minor source of HAP. Note, HAP emissions from Ford ATNPC and Ford Motor Company - Livonia Transmission (State Registration Number A8645) are aggregated per the major source definition in the NESHAP regulations. In Ford ATNPC's renewal ROP issued September 28, 2006 (MI-ROP-M4734-2006), the facility chose to incorporate HAP opt-out limits to avoid potential applicability of major source National Emissions Standards for Hazardous Air Pollutants (NESHAP). The HAP opt-out limits were obtained prior to the first compliance date for the NESHAP for Industrial Boilers and Process Heaters (40 CFR Part 63 Subpart DDDDD), the NESHAP for Surface Coating of Miscellaneous Metal Parts (40 CFR Part 63 Subpart MMMM), and the NESHAP for Engine Test Cells (40 CFR Part 63 Subpart PPPP). On May 2, 2018, the facility was issued PTI No. 32-18 for HAP opt-out limits that replace the limits issued as part of MI-ROP-M4734-2006.

PTI No. 32-18, FGFACILITY Special Conditions and Compliance Status

Below is a summary of each special condition from PTI No. 32-18 Flexible Group FGFACILITY, and an explanation of the facility's compliance status.

SC I.1, I.2, VI.1, VI.2: Emission limits of each HAP and aggregate HAPs. Keep monthly records of gallons or pounds of each HAP material used; HAP content in pounds of each HAP material used; and fuel usage and equipment-specific emission factors for each fuel. Keep records of HAP emission calculations.

COMPLIANCE. Ford provided records of 12-month rolling HAP emissions calculations from December 2022 through November 2023 for both Ford ATNPC (M4734) and Ford Livonia Transmission (A8645) facilities combined as requested. The maximum emissions and the month of maximum are provided below. These emission limits were not exceeded.

Pollutant	Limit	Maximum emissions	Month of maximum
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Individual HAP	Less than 8.9 tpy	1.62 tpy of acetaldehyde	May and August 2023
Aggregate HAPs	Less than 22.4 tpy	5.55 tpy	April and May 2023

SC V.1: Determine HAP content of material using formulation data. Upon request of the AQD District Supervisor, verify the HAP formulation data using EPA Test Method 311.

COMPLIANCE. The facility maintains the HAP content from manufacturer's formulation data or SDS. At this time the AQD has not requested EPA Test Method 311 analysis.

Fuel Storage Tanks (ROP MI-ROP-M4734-2011, FG-GASOLINE DISPENSING >10,000 AND <100,000/MONTH)

are four aboveground storage tanks (AST), each with a 16,000 gallon capacity. Three are subdivided into 10,000 and 6,000 gallon containers. Manny provided the below storage tank information.

Storage Tank	Compartment #	Capacity (gallons)
AST 1	Fuel # 1	16,000
AST 2	Fuel # 2	10,000
	Fuel # 3	6,000
AST 3	Fuel #4	10,000
	Fuel # 5	6,000
AST 4	Fuel #6	10,000
	Fuel #7	6,000

Each container appears to be subject to 40 CFR Part 63 Subpart CCCCCC: National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities. I did not evaluate compliance with this NESHAP. AQD does not have delegated authority for this NESHAP.

Tanks do not appear to be subject to 40 CFR Part 60 Subpart Kb: Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984, because tank capacity is less than 75 cubic meters (19,812.9 gallons) per 40 CFR 60.110b(a).

Cold Cleaner (ROP MI-ROP-M4734-2011, FG-COLDCLEANERS)

We visited the cold cleaner on site.

ROP MI-ROP-M4734-2011, FG-COLDCLEANERS Special Conditions and Compliance Status

Below is a summary of each special condition from Flexible Group FG-COLDCLEANERS from MI-ROP-M4734-2011, and an explanation of the facility's compliance status.

SC II.1: Don't use cleaning solvents containing more than 5 percent of methylene chloride, perchloroethylene, trichloroethylene, 1,1,1-trichloroethane, carbon tetrachloride, chloroform, or any combination thereof.

COMPLIANCE. On January 8, 2024, Manny provided the SDS for the parts washer solution. The solution does not contain the above solvents.

SC III.1, III.2, IV.1-5: Drain cleaned parts; maintain parts washer; have air/vapor interface less than 10 square feet or exhaust to the in-plant environment; have a draining device; have a closed cover; vapor pressure requirements.

COMPLIANCE. During the inspection, when observing the cold cleaner on site, I observed that the lid was closed, and the surface area appeared to be less than 10 square feet. The cold cleaner appears to exhaust to the in-plant environment. The cold cleaner does not appear to be heated.

SC VI.1-4: Monitor temperature if solvent is heated; maintain information on file such as model number, date of installation, air/vapor interface, and Reid vapor pressure of

solvents used; post operating procedures; waste solvent stored in closed containers unless a safety hazard.

COMPLIANCE. I observed that operating procedures were posted conspicuously. I did not request the information on file.

Maintenance Paint Booth (ROP MI-ROP-M4734-2011, FGRULE 287(c))

We visited the maintenance paint booth on site. It was not operating. The paint booth appears to be cross draft, with filters on the sides of the booth. Aerosol cans or cup guns are used as applicators.

ROP MI-ROP-M4734-2011, FGRULE 287(c) Special Conditions and Compliance Status

Below is a summary of each special condition from Flexible Group FGRULE 287(c) from MI-ROP-M4734-2011, and an explanation of the facility's compliance status.

SC II.1, VI.1.a: Coating usage limited to 200 gallons a month; keep records.

COMPLIANCE. Coating usage is tracked monthly. Ford provided paint use records for December 2022 through November 2023. Records indicate that no qualified painting activities occurred during these months.

SC IV.1, VI.1.b: Equip exhaust with proper particulate control system; document filter replacements.

NOT EVALUATED. There appears to be a particulate control system in place with a magnehelic gauge. I did not evaluate whether proper filters were in place because the booth was not in use. I did not request records of filter replacements.

Equipment exempt from obtaining a PTI per Rule 290 (ROP MI-ROP-M4734-2011, FGRULE 290)

The facility does not appear to operate equipment exempt from obtaining a PTI per Rule 290.

Machining equipment (Rule 285(2)(l)(vi)(B))

Staff explained that smog hogs are on some machines. Talking with staff and from observing the machining area, machining equipment does not appear to exhaust to ambient air. Equipment appears to be exempt from obtaining a Permit to Install per Rule 285(2)(l)(vi)(B) for machining equipment with emissions only released into the general in-plant environment.

Conclusion

Based on the AQD inspection and records review, the facility appears to comply with the federal Clean Air Act, Michigan NREPA, the Michigan Air Pollution Control Rules, ROP No. MI-ROP-M4734-2011, and PTIs 44-22, 32-18, and 68-12C.

NAME



DATE

6/25/24

SUPERVISOR

JK