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

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BEIGHIGGHI			
FACILITY: FCA US LLC WARREN TRUCK ASSEMBLY PLANT		SRN / ID: B2767	
LOCATION: 21500 Mound Road, WARREN		DISTRICT: Warren	
CITY: WARREN		COUNTY: MACOMB	
CONTACT: Laura Hall, Environmental Lead		ACTIVITY DATE: 06/21/2024	
STAFF: Iranna Konanahalli	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: MAJOR	
SUBJECT: FY 2024 scheduled ROP C	MS inspection of FCA US Warren Truck Assembly F	Plant (FCA WTAP), located at 21500 Mound	
Road, Warren, Michigan 48091-4840.			
RESOLVED COMPLAINTS:			

Warren Truck Assembly Plant (B2767)

a.k.a. Warren Dodge Truck Plant

FCA US, LLC

21500 Mound Road

Warren, Michigan 48091-4840

Contacts:

1. Laura Hall (Phone: 519-791-1921; Cell: 519-791-1321; E-mail: Laura.Hall@stellantis.com), P. Eng., Environment Lead

NAICS: North American Industry Classification System (NAICS) Code: 336112 Light Truck and Utility Vehicle Manufacturing. Vehicles made include light duty vans, pickup trucks, minivans, and sport utility vehicles.

CAA Sec. 114(a): FCA received CAA Sec. 114(a) letter dated May 15, 2018. FCA (Mathew Read, Office of General Counsel) responded to this request on July 10, 2018. Subsequently, FCA amended MAERS and benefited from revised MAERS in providing the needed 110% VOC offsets for Detroit Assembly Complex – Mack (DACM) and 110% VOC offsets for West Paint Shop (WPS for Jeep Wagoneer) of existing Warren Truck Assembly Plant. The permit issued also required modernization of East Paint Shop (EPS).

RO Permit Number: MI-ROP-B2767-2016, Effective December 6, 2016, Expired December 6, 2021. As the application was submitted in a timely manner, an application shield has been obtained. Timely ROP renewal application provided FCA with an application shield via May 17, 2021, letter to Andrew Ragalyi from EGLE-AQD. In addition, FCA WTAP submitted a MI-ROP-B2767-2016 ROP Renewal Amendment Application 01-2022.

Permit-to-Install: AQD issued a series of permits PTI Nos. 13-19, 13-19A & 13-19B. Most recent permit PTI No. 13-19B is yet to be revised to resolve non-compliance issues with it, especially PM10 / PM2.5 limits. PTI No. 13-19B is the latest valid permit and its special conditions (except utility plant) practically replaced the special conditions of MI-ROP-B2767-2016 that is being renewed as it expired in December 2021.

PTI No. 13-19: The function of this permit was to reduce allowed VOC emissions for a predominant purpose of generating VOC offsets (at 110% rate) especially for EU-SOLVENT-WIPE (1502.58 – 555 = 134.8 tpy offsets), EU-COLOR-1 (582.11 - 430.0 = 135.9 tpy offsets) EU-COLOR-2 (582.11 - 430.0 = 135.9 tpy offsets), EU-REPROCESS (93.74 - 40.0 = 10.45 tpy offsets) and EU-TUTONE (821.0 - 20.0 = 4.7 tpy offsets). Total offsets generated because of reduced VOC limits is 421.75 tons of VOC per year. The offsets generated (421.75 tpy VOC) were used to build brand new assembly plant in Detroit (PTI No. 14-19 N2155) known as FCA Mack Avenue (FCA Mack) or Detroit Assembly Complex-Mack (DACM / Mack,). The offsets are surplus (not used for another purpose), permanent, quantifiable, and federally enforceable via MI-ROP-B2767-2016 or Permit-to-Install (PTI). Offsets must also be generated (made permanent and federally enforceable) after the baseline date for Wayne County (82) (January 1, 2017).

PTI No. 13-19A: FCA US, LLC submitted a Permit to Install (PTI) application for a new automotive paint shop (West Paint Shop for Jeep Wagoneer) and modifications to the existing automotive assembly line (especially East Paint Shop for RAM 1500 Classic Truck) at the Warren Truck Assembly Plant (WTAP). The application was to modify ROP # MI-ROP-B2767-2016. As the area was under non-attainment for ozone, the application was evaluated as a major offset source and not PSD (Prevention of Significant Deterioration). The application was for installation of West Paint Shop (WPS) for premier Jeep Wagoneer also make modifications to the existing automotive assembly line known as East Paint Shop (EPS) for RAM 1500 Classic trucks.

An automotive assembly line consists of the following operations:

• The body shop, in which the basic uncoated vehicle body is assembled,

- The paint shop, in which the vehicle body is surface prepped and various coatings are applied to the uncoated vehicle body, and
- The general assembly area, in which the coated vehicle body undergoes the final steps before coming off the line as a saleable vehicle. These final steps include glass installation, filling the vehicle with the proper fluids, and any final repairs that may be necessary.
- In addition, there will be natural gas-fired hot water generators, air supply housing units, air handling units, and natural gas-fired emergency engines installed to support the project.

The existing body shop will feed into both the new (WPS-Jeep) and existing (EPS-Truck) paint shop, after which the automobiles from both paint shops will go into the existing general assembly area.

The paint shops have the following process flow:

- 1. Pretreatment (cleaning and phosphate)
- 2. E-Coat (Cathodic electrodeposition of water-based coatings where paint solids are electrically charged (positively charged) paint particles and the vehicle body is grounded).
- 3. Sealer Application (to prevent often electrolytic water infiltration to ward off corrosion)
- 4. Primer (Primer Surfacer or Guide Coat): while powder-coat at EPS (truck), solventbased liquid at WPS (Jeep)
- 5. Topcoat (Basecoat (BC) plus Clearcoat (CC))

At WPS-Jeep, solvent-based Primer Surfacer (Guide Coat), water-based Basecoat (BC) and solvent-based Clearcoat (CC) are used. The Primer Surfacer (PS) is being reformulated to accommodate elimination of baking / curing after PS / GC application such that wet (PS) on wet (BC) on wet (CC) can be done saving energy. Between[JZI] is coating flash-off areas (heated flash-off for water-based coatings). The new process is known as "4 wet" process.

With the existing assembly line (EPS) being modified, both the existing equipment associated with the assembly line is subject to NNSR for VOCs. After the NNSR review, including the LAER (Lowest Achievable Emission Rate) analysis the following changes were required for the existing assembly line (EPS) for 110% VOC offset purposes:

 Control equipment and updated VOC limits are required to meet LAER emission limits for the existing cleaning operations (updated tpy limit); E-Coat tank and oven (updated lb/gallon of applies coating solids, lb/GACS and tpy limits); and topcoat operations (updated lb/GACS and tpy limits). The FCA has elected to use new concentrators (Rotary Zeolite) and regenerative thermal oxidizers (RTO) for the control equipment. The existing thermal oxidizers (2) in the east paint shop will continue to control the oven portions of the coating processes. In lieu of installing control equipment on one of two topcoat processes (EU-COLOR-TWO) in EPS, the applicant has opted to accept enforceable conditions to permanently shut down that process (EU COLOR TWO). An identical **Color2** line that operated parallel **Color1** line has been confirmed to be shut down permanently and removed. High Bake Reprocess lines has been shut down permanently in-situ.

 VOC content and updated tpy limits were established for the existing powder primer, repair (final repair and spot repair), and sealer operations throughout the existing assembly line to meet the respective LAER limits. The VOC tpy limits were also updated for fluid fill operations because of the review.

Concerning paint shops (EPS-Truck & WPS-Jeep), the VOC control equipment is as follow:

- 1. Two Rotary Zeolite (not activated carbon) concentrators and one Regenerative Thermal Oxidizers (RTO with three ceramic packing columns) at WPS (Jeep)
- 2. Two Rotary Zeolite (not activated carbon) concentrators and one Regenerative Thermal Oxidizer (RTO with three ceramic packing columns) and two existing thermal oxidizers (2 TOs for ovens) at EPS (Truck). The control equipment installation and operation are mandatory after starting operation of WPS (Jeep).

Zeolite Concentrators are of ROTARY design with most pies on adsorption mode and at least one pie on desorption mode and at least one pie on cool-off mode. Adsorption Isotherm shows that lower temperatures of Zeolite favor adsorption. Zeolite can be designed to be hydrophobic.

The short-term emissions from the coating operations in the project were based on the maximum production rate of 25 jobs per hour (JPH) from the new west paint shop, 36 jobs per hour (JPH) from the existing east paint shop, and the maximum material usage rate for the vehicles.

FCA has agreed to meet the emission limit of 2.92 lbs VOC/GACS established by Kia Motors Georgia.

PTI No. 13-19B: FCA US, LLC submitted a Permit to Install (PTI) application for modifications to a new paint shop (WPS) and existing EPS at the Warren Truck Assembly Plant (Warren Truck or WTAP). Although ROP No. MI-ROP-B2767-2016 provides the company application shield in order to continue its operation, WTAP operates currently under PTI No. 13-19B

New West Paint Shop has the following process flow:

- 1. Pretreatment
- 2. E-Coat
- 3. Sealer Application
- 4. Primer (Primer Surfacer or Guide Coat): powder-coat at EPS and solvent-based liquid at WPS
- 5. Topcoat (solvent-based Basecoat (BC) at EPS & water-based BC at WPS plus, solvent-based Clearcoat (CC).

When a permit application for "4 wet" process is approved and implemented, WPS will use water-based primer surfacer. "4 wet" process will eliminate current bake oven after primer surfacer application.

In PTI Nos. 13-19 and 13-19A, requirements were established at the Warren Truck facility that created 658.75 tons of VOC offsets by reducing the allowed VOC emissions. FCA was using those reductions to offset the emissions increases associated with both the Mack Plant project and the West Paint Sho[project at the Warren Truck Assembly Plant.

The VOC reductions that will be achieved through the modernization project will provide enough offsets to accommodate both the Mack Plant and Warren Truck projects (especially WPS). Even though the proposed physical changes will be implemented in phases, at all times the appropriate amount of reductions/offsets must be realized in time to allow for any incremental phased increases. FCA must track emissions sources and maintain the appropriate records, on a monthly and 12-month rolling time period basis, to document the timing of reductions achieved as production is decreased and sources are removed/abated, while new productions are brought online.

The proposed new paint shop (WPS) and modifications to the existing paint shop (EPS) were subject to a LAER analysis for VOCs.

PTI No. 13-19C: AQD has prepared a draft permit with revisions to especially PM, PM10 & PM2.5 limits revisions. The revision also removes the special conditions that have been already achieved.

WPS 4-Wet Modification

As of August 2024, EGLE-AQD has prepared a draft permit for the modification of West Paint Shop (WPS-Jeep). The modified WPS is known as "4-Wet" operation. BC & CC together is known as "topcoat". Current solvent-based primer surfacer (guide-coat (GC)) will be replaced by water-based primer surfacer. Currently, the sequence of the coating process used in the west paint shop consists of liquid solvent-borne primer application (full vehicle and tu-tone); a primer curing oven; water-borne basecoat application; basecoat dehydration (a.k.a., "heated flash"); solvent-borne clearcoat application; and a final curing oven.

When the changes are made, west paint shop (WPS) will convert to the 4-Wet process. The changes / modifications impact primarily the primer application process. The current solvent-borne primer surfacer will be replaced with a waterborne primer surfacer; use of the tu-tone primer surfacer material will be discontinued, and the primer oven will no longer be used. The vehicle routing through the primer line will be adjusted, eliminating the primer observation zone.

The vehicle will be cleaned prior to coating using carbon dioxide gas [JZ2] in the former tu-tone booth. The change will continue to include volatile organic compound ("VOC") abatement of the liquid primer booth and the ambient flash zone, using the existing west Rotary Zeolite Concentrators (West CON) and west regenerative thermal oxidizer ("West RTO").

The conversion to 4-Wet process requires a formulation change of the coatings. There is no change to the topcoat (BC & CC) application equipment, nor the control scheme (west concentrators (2) and west RTO), nor the production rate. In summary, to reduce VOC emissions, solvent-borne primer surfacer will be replaced with a water -borne primer surfacer.

Auto Protocol: "Protocol for Determining the Daily Volatile Organic Compound Emission Rate of Automobile and Light Duty Truck Topcoat Operations", EPA-450/3-88-018 or as amended. FCA US (Chrysler) follows the protocol procedures for both NSPS MM (2M: prime coat, guide coat [aka primer surfacer] and topcoat operations installed / modified after October 5, 1979; the LAER permits were issued in 1984) and RACT Rule 336.1610. While NSPS MM calculations may use NSPS Table values for Transfer Efficiency (Table TE: substantially higher (90s) than those TE values achieved in practice anywhere(60s)), Rule 610 and LAER calculations must use tested TE values according to the Protocol. TE values have impact on LAER & NSPS emissions rates because the emissions rates are expressed in pounds (kilograms) per gallon (liter) of coatings solids applied or deposited; in other words, solids overspray is accounted for in this type of emissions rate unit.

Subject to (opt-out of control device requirements via use of HAP compliant coatings): Auto MACT, NESHAP / MACT 4I, 40 CFR, Part 63, Subpart IIII—National Emission Standards for Hazardous Air Pollutants: Surface Coating of Automobiles and Light-Duty Trucks (Federal Register / Vol. 69, No. 80 / Monday, April 26, 2004 / Rules and Regulations/ Final Rule). Because FCA opted to show compliance with Auto MACT by coatings formulations, the control devices are subject to CAM regulations due to VOC emission limits. This includes two (2) concentrators (Conc.) & one RTO at West Paint Shop (WPS) **and** two (2) concentrators & one RTO at East Paint Shop (EPS) and two Thermal Oxidizers (TO) at EPS; 4 Conc., 2 RTOs, 2 TOs in

all.

All concentrators (4) have Zeolite adsorbent packed in a rotary design equipment. Most pies are on adsorption mode (i.e. removing VOC from VOC laded exhaust air stream) and at least one pie is in desorption (VOC striping with hot air using natural gas fired hot air generator) mode and at least one pie is in cooling mode (because adsorption is essentially an exothermic (releasing heat) process and hence lower Zeolite bed temperature favors adsorption of VOC).

Subject to: Compliance Assurance Monitoring (CAM) (40 CFR Part 64) for VOC control devices (e.g., RTO, TO). Page 54900 Federal Register / Vol. 62, No. 204 / Wednesday, October 22, 1997 / Rules and Regulations / Final rule; Final rule revisions /Compliance Assurance Monitoring (CAM). CAM is a part of enhanced monitoring and compliance certification for ROP / Title V sources under the Clean Air Act.

Subject to Major Source Boiler MACT 5D (reconsidered [2011] MACT 5D: Annual Tune-up or Pentennial / Quinquennial (1/5Yr) Tune-up if boiler is equipped with oxygen trim system, one time Energy Assessment (EA) or ISO 50001): Major Source Boiler NESHAP / MACT 5D, 40 CFR Part 63, Subpart DDDDD, National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters, Page 7138, Federal Register / Vol. 78, No. 21 / Thursday, January 31, 2013 / Rules and Regulations / Final rule; notice of final action on reconsideration. All FCA Warren Truck's natural gas boilers, (Temp Boilers (2 portable) have been removed), are equipped with Oxygen Trim Systems. An Oxygen Trim System is a system of monitors that is used to maintain excess air (EA) at the desired level in a combustion device. A typical system consists of a flue gas analyzer for oxygen (O2) and / or carbon monoxide (CO) and a feedback signal to the combustion controller. In other words, an Oxygen Trim System is designed to continuously measure and maintain optimum air-to-fuel ratio in the combustion zone. If such system exists, annual tune-up is not required; however, pentennial / quinquennial (1/5Yr) tune-up is required. FCA does follow ISO 50001, Energy Management System for continuous improvement of energy performance, energy efficiency, energy consumption and for reduction of energy use, energy costs, greenhouse gas emissions (GHG), etc. If ISO 50001 is followed properly, one-time energy assessment (EA) is not required. Mr. Dan Omahen, Plant Manager, on March 30, 2016, submitted MACT 5D Notification of Compliance Status.

Subject to: NSPS Dc, New Source Performance Standards (NSPS) for Small Industrial -Commercial-Institutional Steam Generating Units (40 CFR, Part 60, Subpart Dc). Fuel oil is never used in the boilers. Only boilers installed after June 9, 1989, are subject to NSPS Dc.

NSPS Dc Revisions:

The NSPS Dc revisions simplified the natural gas usage recordkeeping. ROP and MiEnviro Annual Emissions Reporting recordkeeping on natural gas usage & emissions satisfies NSPS Dc.

Subject to: OLD NESHAP / MACT EEEE/ MACT 4E, 40 CFR Part 63, Subpart EEEE, National Emission Standards for Hazardous Air Pollutants: Organic Liquids Distribution (OLD)(Non-Gasoline); Page 5038 Federal Register / Vol. 69, No. 22 / Tuesday, February 3, 2004 / Rules and Regulations/ Final Rule; Page 42898 Federal Register / Vol. 71, No. 145 / Friday, July 28, 2006 / Rules and Regulations/ Final Rule -Amendments; notice of final action on reconsideration. 7,500 gallons / month > 5,000 gallons / month of purge solvent usage makes this facility subject to this NESHAP.

Subject to: Prevention of Significant Deterioration (PSD) (40 CFR 52.21) or Rule 336.1220 (during LAER review) / Rule 336.2902 (now) Major Offset Source depending upon attainment status. As a matter of fact, FCA WTAP gave necessary 110% offsets to Mack, West Paint Shop (WPS Jeep) and East Paint Shop (EPS Truck) brand new plant new paint shops (Jeep & Mack) or modifications (Truck).

Subject to: 40 CFR, Part 60, Subpart MM (NSPS MM or 2M)—Standards of Performance for Automobile and Light Duty Truck Surface Coating Operations (NSPS MM) (45 FR 85415, December 24, 1980). NSPS MM applies to an automobile/ light duty truck assembly plant constructed or modified after October 05,1979. Subject to: Rule 336.1610. The Rule 610 compliance calculations must be done pursuant to "Protocol for Determining the Daily Volatile Organic Compound Emission Rate of Automobile and Light Duty Truck Topcoat Operations", EPA-450/3-88-018 or as amended. FCA US does not perform NSPS MM calculations separately. Instead, the Auto Protocol calculations are used to satisfy NSPS MM as well as Rule 610 emission limits. The Auto Protocol calculations, more rigorous than NSPS MM, are required by the permit.

Not Subject to (cold-cleaners): NESHAP/ MACT T, area source National Emission Standards for Hazardous Air Pollutants: Halogenated Solvent Cleaning (40 CFR, Part 63, Subpart T; NESHAP/ MACT T); Correction; 29484 Federal Register / Vol. 60, No. 107 / Monday, June 5, 1995 / Rules and Regulations; amended National Air Emission Standards for Hazardous Air Pollutants: Halogenated Solvent Cleaning (40 CFR, Part 63, Subpart T); Final Rule; Page 25138 Federal Register / Vol. 72, No. 85 / Thursday, May 3, 2007 / Rules and Regulations. FCA does NOT use the MACT T listed halogenated HAP solvents (>5%w: methylene chloride (CAS No. 75-09-2), perchloroethylene (CAS No. 127-18-4), trichloroethylene (CAS No. 79-01-6), 1,1,1trichloroethane (CAS No. 71-55-6), carbon tetrachloride (CAS No. 56-23-5), and chloroform (CAS No. 67-66-3)) in the cold-cleaners.

SI RICE Engines subject to NSPS 4J: Emergency generator (each NG fired SI RICE engine in FGNGEMENG) is subject to (73 FR 3591, January 18, 2008, 76 FR 37972 June 28, 2011, 78 FR 6697 January 30, 2013): NSPS 4J, 40 CFR, Part 60, Subpart JJJJ—Standards of Performance for Stationary Spark Ignition Internal Combustion Engines (natural gas fired Spark Ignition). The provisions of NSPS 4J are applicable to owners and operators and manufacturers. Owners or operators of Emergency SI RICE are subject to this NSPS 4J if engine is manufactured after January 1, 2009, emergency engines greater than or equal to 500 brake horsepower (HP) and are located at major sources of hazardous air pollutant (HAP) emissions.

Subject to: Major Source NESHAP / RICE MACT 4Z, 40 CFR Parts 60 and 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines; New Source Performance Standards for Stationary Internal Combustion Engines (ICE), Page 6674 Federal Register / Vol. 78, No. 20 / Wednesday, January 30, 2013 / Rules and Regulations / Final Rule. This final rule is effective on April 1, 2013.

VNs: AQD issued four (4) Violation Notices (VNs) (dated November 1, 2021, May 13, 2022, September 20, 2022, and October 21, 2022) for failure to comply with Permit to Install (PTI) No. 13-19B as follows:

- November 1, 2021: FCA WTAP operated the West Paint Shop (WPS Jeep) primer painting process while emissions from the EUPRIMERWEST ambient flash zones were not ducted to the concentrator and Regenerative Thermal Oxidizer (RTO) in violation of EUPRIMERWEST, Condition IV.1, of PTI No. 13-19B. The ambient flash zone in EU-PRIMERWEST is a short section of the painting process located after the prime spray booth (and Tutone spray booth) before the vehicle body enters the oven. FCA WTAP directed VOC emissions from the ambient flash zone to the concentrator and then to the RTO and has operated the modified process since February 13, 2022.
- May 13, 2022: FCA WTAP exceeded the permitted emission limit for PM2.5 from the concentrator portion of FGRTOWEST based upon the April 19, 2022, stack test report. RTO- West Concentrator sampling yielded a PM2.5 emission rate of 0.36 pounds per hour ("pph"), which exceeds the corresponding 0.123 pph emission limit. The permit modification is pending.
- September 20, 2022: FCA WTAP exceeded the permitted emission limit for particulate matter equal to PM10 and PM2.5 from EUSPOTREPAIREAST. The VN is based upon June 16-17 & August 8-9, 2022, stack tests. FCA WTAP exceeded 0.026 pound-per-hour ("pph") emission limit for both PM10 and PM2.5 for EUSPOTREPAIREAST. The permit modification is pending.
- 4. **October 21, 2022**: FCA WTAP exceeded the permitted emission limit for PM10 and PM2.5 from the RTO portion of FGRTOEAST. The VN is based upon July 15, 2022, stack test. FCA WTAP exceeded 0.518 pphemission limit for both PM10 and PM2.5 FGRTOEAST. The permit modification is pending.

ACO AQD No. 2023-11: AQD resolved the above four (4) Violation Notices via AQD No. 2023-11 with a settlement amount of \$371,454.00. AQD is reviewing the permit application (APP-2022-0312) as a part of compliance plan. EGLE-AQD agreed to an extension of the processing period for the permit revision until March 31, 2024 (Extension #2), via letter dated July 19, 2023, to Chuck Padden, Plant Manager. FCA WTAP is still under schedule of compliance that includes obtaining a permit revision, conducting necessary / required stack tests, etc. Hence, FCA WTAP continues to be in non-compliance. PTI No. 13-19C is ready to be issuedwhere FCA WTAP agreed to obtain a permit to modify the PM2.5 emission limits for the concentrator portion of the west paint shop and the PM10 and PM2.5 emission limits from the spot repair process in the east paint shop. FCA also agreed to comply with the PM10 and PM2.5 emission limits from the RTO portion of the east paint shop (EPS). Furthermore, FCA agreed to conduct additional testing of these emission limits to confirm continued compliance.

Extension #3: Cindy Smith sent the letter to the plant manager on July 19, 2024. The plant manager has sought the extension.

Control Equipment

FCA WTAP operates several control equipment as follows:

- 1. Dry filters (at repair, sanding booths, etc.)
- 2. Downdraft water-wash system at each robotic paint spray booth
- 3. Four Rotary Zeolite concentrators (two east concentrators and two west concentrators)
- 4. Two Regenerative Thermal Oxidizers (one east RTO and one west RTO)
- 5. One thermal oxidizer at east paint shop (EPS)

Dry filters: Tri-Dim Filter Corporation inspects weekly all filters at FCA WTAP. As a random request, FCA WTAP submitted a May 2024 Tri-Dim report.

Downdraft water-wash system: FCA performs weekly booth assessment inspection for all robotic coating booths. The inspections are conducted to ensure that the downdraft water-wash system is working properly. Temperature (T) and humidity (H) are also part of the inspection. The downdraft water-wash system is a part of the paint finish process to produce uncontaminated high quality paint finish. Upon suspended solids separation, the water is recycled to the booths. The paint solids sludge upon dewatering via centrifuging is disposed of according to RCRA. As a random request, FCA WTAP submitted the May 2024 FCA WTAP booth assessment inspection reports.

Rotary Zeolite Concentrators (4 CONs): Four (4) Rotary Zeolite concentrators are present: two (2) for west paint shop (WPS Jeep Wagoneer) and two (2) for east paint shop (EPS RAM 1500 Classic Truck). The Rotary Zeolite concentrators adsorb (gassolid contact mass transfer operation where solute (pollutant) is in gas phase) VOC from the source to concentrate VOC and deliver to an RTO upon desorption / stripping using natural gas fired hot air generators to strip VOC. VOC laden air passes through a rotating wheel where the air pollutants are adsorbed onto a hydrophobic Zeolite media and then removed / stripped / desorbed from the Zeolite media and destroyed by RTO via practically complete combustion (DE > 95%). VOC laden air is subjected to filtration prior to feeding Rotary Zeolite Concentrator so that particulates do not damage the concentrator wheel Zeolite media. VOC air pollutants are adsorbed onto the hydrophobic Zeolite media. The concentrator wheel rotates at an approximate speed of 4-8 revolutions per hour, continuously passing a sector of the wheel with adsorbed air pollutant through a desorption mode for removal by a heated air stream.

- 1. SVBTHCONCEAST East CON Removal Efficiency: East CON RE = **98.2** percent. No minimum required RE.
- 2. Combined West Concentrators Removal Efficiency (RE) = **98.3** percent. The permit does NOT require minimum RE.

Regenerative Thermal Oxidizers: Two RTO regenerators are present in all with high heat capacity ceramic columns for heat recovery from exhaust gases and to preheat incoming VOC laden air. The stripped VOC from concentrators is fed to corresponding RTO. Curing Oven VOC is directly fed to corresponding RTO as exhaust from oven is already concentrated sufficiently with curing VOC.

- East RTO Destruction Efficiency (SVRTOEAST East RTO DE): East RTO DE = 97.1 > 95 percent.
- West RTO Destruction Efficiency (SVRTOWEST West RTO DE): West RTO DE = 98.6 > 95 percent.

Stack tests

December 7-10, 2021, EPS Transfer efficiency (TE) and Oven Capture Efficiency (OCE) testing (FGTOPCOATEAST, EU-COLOR-ONE)

RWDI USA LLC (RWDI # 2200991 Report dated February 8, 2022) of Rochester Hills MI 48309, in collaboration with JLB Industries, LLC (JLB), completed compliance source testing at the FCA US LLC (FCA) Warren Truck Assembly Plant (WTAP) East Paint Shop (EPS Truck) per Permit# 13-19B dated June 23, 2021, for Topcoat operations (FGTOPCOATEAST), for Color1 line (EU-COLOR-ONE). The testing was for paint solids transfer efficiency (TE) and Oven Capture Efficiency (OCE) of EPS Truck Topcoat operations (FGTOPCOATEAST: EU-COLOR-ONE). EPS (Truck) Color1. Test results are as follows:

Color1 Solids transfer efficiency (TE)

- 1. Basecoat (White Solid Basecoat): TE = 78.5 percent (%)
- 2. Basecoat (Black Metallic): TE = 75.3 percent (%)
- 3. Clearcoat: TE = 71.6 percent (%)

Color1 Oven Capture Efficiency (OCE)

- 1. Solid Basecoat (White): CE = 94.7 percent (%)
- 2. Metallic Basecoat (Black): CE = 93.4 percent (%)
- 3. Clearcoat: CE = 79.2 percent (%)

The desorption section of the concentrators' concentrated VOC are sent to an RTO (SVRTOEAST). Captured basecoat and clearcoat bake oven VOC emissions are directed to EU-COLOR-ONE Thermal Oxidizer (TO) for VOC abatement. Unlike West Paint Shop (WPS Jeep), EPS uses Thermal Oxidizer (TO) for curing oven emissions. Thermal Oxidizer supplies heat for curing ovens via heat exchangers. Besides, ovens are equipped with natural gas heaters for supplemental heat if necessary.

Test panels were used for CE. The test panels were placed on a test vehicle and processed with normal production spray programming.

PTI No. 13-19B does not require any limits for CE and TE. However, these values go into the VOC calculations especially pounds of VOC per gallon of applied coating solids.

September 13-17, 2021, WPS Transfer efficiency (TE) and Oven Capture Efficiency (OCE) testing Primer/Tutone operations (EUPRIMERWEST) and Topcoat operations (EUTOPCOATWEST).

RWDI USA LLC (RWDI # 2104810 Report dated February 8, 2022) of Rochester Hills MI 48309, in collaboration with JLB Industries, LLC (JLB), completed compliance source testing at the FCA US LLC (FCA) Warren Truck Assembly Plant (WTAP) West Paint Shop (WPS, Jeep) per Permit# 13-19B dated June 23, 2021, for the Primer/Tutone operations (EUPRIMERWEST solvent-based primer surfacer) and Topcoat operations (EUTOPCOATWEST water-based BC and solvent-based CC). The testing was for paint solids transfer efficiency (TE) and Oven Capture Efficiency (OCE) of WPS Jeep topcoat operations and primer surfacer. Testing results are as follows:

WPS (Jeep) Solids transfer efficiency (TE)

- 1. Grey Prime (Primer): TE = 73.8 percent (%)
- 2. Roof Prime (Tu-tone Primer): TE = 84.7 percent (%)
- 3. Tu-tone Monocoat (Tu-tone Coloring Primer): TE = 60.3 percent (%)

- 4. White Basecoat (Basecoat): TE = 71.1 percent (%)
- 5. Clearcoat TE = 76.3 percent (%)

WPS (Jeep) capture efficiency (CE).

- 1. Grey Prime (Primer): CE = 79.2 percent (%)
- 2. Roof Prime (Tu-tone Primer): CE = 88.8 percent (%) = 90% revised.
- 3. Tu-tone Monocoat (Tu-tone Coloring Primer): CE = 73.7 percent (%) = 70.6% revised.
- 4. White Basecoat (Basecoat): CE = 76.3 percent (%) = 70.6% revised.
- 5. Clearcoat CE = 80.3 percent (%)

PTI No. 13-19B does not require any limits for CE and TE. However, these values go into the VOC calculations especially pounds of VOC per gallon of applied coating solids.

September 27 & October 4-5, 2021, East RTO (SVRTOEAST Truck) VOC destruction efficiency (DE), E-coat smoke & oxides of nitrogen (NOx) emissions rate and East (Truck) concentrator removal efficiency (RE).

RWDI USA LLC (RWDI # 2003780 Report dated November 24, 2021) of Rochester Hills MI 48309, completed compliance source testing at the FCA US LLC (FCA) Warren Truck Assembly Plant (WTAP) East Paint Shop (EPS Truck) per Permit# 13-19B dated June 23, 2021. The testing was for Destruction efficiency (East RTO DE) for the regenerative thermal oxidizer (East RTO, SVRTOEAST) and East Concentrator Removal Efficiency (East CON RE). The testing included EUECOATEAST and FGTOPCOATEAST for EU-COLOR-ONE. The testing also included capture efficiency (CE) testing for the E-Coat Dip Tank and E-Coat Oven. Sampling was performed at SVRTOEAST Inlet for VOC and SVRTOEAST Outlet for VOC and NOx. Testing results are as follows:

- 1. Destruction Efficiency (SVRTOEAST East RTO DE): East RTO DE = 97.1.
- 2. East RTO Outlet NOx emission rate: 7.7 ppmv and 2.65 pounds per hour
- 3. E-coat smoke flow direction failed on October 4, 2021. A repeat test was conducted on October 5, 2021, which showed 100 percent capture based on inward smoke flow and negative 2,639 acfm at E-Coat Dip Tank Entrance & negative 2,593 acfm at E-Coat Dip Tank Entrance & negative 2,593 acfm at E-Coat Dip Tank Exit.

Permit No. 13-19B, FGTOPCOATEAST, IV.2 design/equipment parameter(s) requires that RTO shall provide minimum 95 percent destruction efficiency. East RTO DE = 97 > 95 percent. Color2 (EU COLOR-TWO) and Hi-bake Repair (EU REPROCESS) have been shut down as required.

December 09, 2021, Oven Exhaust Control Device (OECD) VOC loading test for EU-COLOR-ONE thermal oxidizer (TO).

RWDI USA LLC (RWDI # 2202302 Report dated February 7, 2022) of Rochester Hills MI 48309, completed compliance source testing at the FCA US LLC (FCA) Warren Truck Assembly Plant (WTAP) East Paint Shop (EPS Truck) Thermal Oxidizer (Oven TO) per Permit# 13-19B dated June 23, 2021. East Paint Shop (EPS) thermal oxidizer (TO) FGTOPCOATEAST, EU-COLOR-ONE was tested. Oven Exhaust Control Device (OECD) VOC loading test for EU-COLOR-ONE thermal oxidizer (TO). Testing results are as follows:

EU-COLOR-ONE Mass Inlet Loading = 7.5 pounds of THC per hour as propane

EU-COLOR-ONE Mass Inlet Loading = 7.3 pounds of NMOC per hour as propane

Thermal Oxidizer (TO) Temperature = 1304 °F.

The OECD VOC loading test is required by Permit No. 13-19B, FG-TOPCOAT, V.3. Color2 (EU COLOR-TWO) and Hi-bake Reprocess (EU REPROCESS) lines have been shut down as required by the permit.

January 18-19, 2022, FGBOILERS testing for NOx.

RWDI USA LLC (RWDI # 2201514 Report dated March 10, 2022) of Rochester Hills MI 48309, completed compliance source testing at the FCA US LLC (FCA) Warren Truck Assembly Plant (WTAP) FGBOILERS (EUBOILER3thru6) per Permit# 13-19B dated June 23, 2021, for nitrogen oxides (NOx). Mass emission rates of nitrogen oxides (NOx) (pounds per hour) from each boiler was tested. Testing results for NOx are as follows in ppm, pounds per hour, pounds per MM BTU:

- 1. EUBOILER3: NOx = 42.7 ppm = **5.2** < 5.43 pounds per hour = 0.066 pounds per MM BTU
- 2. EUBOILER4: NOx = 25.3 ppm = **2.1** < 6.61 pounds per hour = 0.040 pounds per MM BTU

https://intranet.egle.state.mi.us/maces/WebPages/ViewActivityReport.aspx?ActivityID=24... 9/30/2024

- 3. EUBOILER5: NOx = 50.6 ppm = **5.6** < 9.59 pounds per hour = 0.072 pounds per MM BTU
- EUBOILER6: NOx = 116.0 ppm = 15.2 < 27.86 pounds per hour = 0.161 pounds per MM BTU

Boiler Nos. 3, 4 and 5 are equipped with low NOx burners, Boiler No. 6 (with oxygen trim system) is a high efficiency boiler but not low NOx.

Quinquennial / pentennial (once in five years) NOx testing is required by Permit# 13-19B, FGBOILERS, V.1, testing/sampling.

As shown above, the tested emissions rates of NOx comply with the limits in the permit (Permit# 13-19B, FGBOILERS, I.2-5).

January 28, 2022, NSPS 4J natural-gas-fired Emergency Engine EUNGGEN1 (FGNGEMENG) VOC testing (737 HP engine work output & 550 kW power output).

RWDI USA LLC (RWDI # 2202540 Report dated March 25, 2022) of Rochester Hills MI 48309, completed compliance source testing at the FCA US LLC (FCA) Warren Truck Assembly Plant (WTAP) of NSPS 4J natural-gas-fired Emergency Engine (EUNGGEN1) per Permit# 13-19B dated June 23, 2021, for Volatile Organic Compounds (VOC). Testing results for VOC are as follows:

VOC (as propane) = 0.0007 << 0.50 g/HP

Quinquennial / pentennial (once in five years) testing is required by Permit# 13-19B, FGNGEMENG, V.2, testing/sampling for VOC.

As shown above, the tested emissions rates of VOC comply with the limits in the permit (Permit# 13-19B, FGNGEMENG, I.3)

February 14-21 and April 5-8, 2022, EUPRIMERWEST, EUTOPCOATWEST, EUSPOTREPAIRWEST, FGSPOTPRIMERWEST testing for PM, PM10 & PM2.5

RWDI USA LLC (RWDI # 2201244 Report dated April 22, 2022) of Rochester Hills MI 48309, completed compliance source testing at the FCA US LLC (FCA) Warren Truck Assembly Plant (WTAP), West Paint Shop (WPS) EUPRIMERWEST,

EUTOPCOATWEST, EUSPOTREPAIRWEST, FGSPOTPRIMERWEST per Permit# 13-19B dated June 23, 2021, for PM, PM10 & PM2.5 emissions rates E-Coat capture efficiency (West e-coat CE). Testing results for PM, PM10 & PM2.5 are as follows in pounds per 1,000 pounds of wet exhaust gas (Ibs/1,000 lbs) and pounds per hour (pph):

- EUPRIMERWEST Tu-Tone observation zone (SVPRMOBSWEST): PM = 0.0021 lbs/1,000 lbs < 0.0029, PM10 = 0.248 lb/hr > 0.143, & PM2.5 = 0.201 lb/hr > 0.143. Both PM10 & PM2.5 are not in compliance with the limits.
- EUTOPCOATWEST (SVBCOBSWEST) (Basecoat observation): PM = 0.0018 lbs/1,000 lbs < 0.0029, PM10 = 0.180 lb/hr > 0.103, & PM2.5 = 0.151 lb/hr > 0.103. Both PM10 & PM2.5 are not in compliance with the limits.
- 3. EUTOPCOATWEST (SVCCOBSWEST) (Clearcoat observation): PM = **0.0008** Ibs/1,000 lbs < 0.0029, PM10 = **0.041** lb/hr < 0.153, & PM2.5 = **0.005** lb/hr < 0.153
- EUSPOTREPAIRWEST (SVRPDRPCS) (Spot repair): EPA RM5 PM = 0.0003 Ibs/1,000 lbs (0.025 lb/hr) < 0.0029, EPA RM201A PM = 0.0004 lbs/1,000 lbs < 0.0029, PM10 = 0.022 lb/hr < 0.026, & PM2.5 = 0.011 lb/hr < 0.026.
- FGSPOTPRIMERWEST (SVSPOTPRMWEST1 (Stack 34)) (Spot primer): EPA RM5 PM = 0.0010 lbs/1,000 lbs (0.035 lb/hr), EPA RM201A PM = 0 0.0007 lbs/1,000 lbs < 0.0029, PM10 = 0.023 lb/hr < 0.026, & PM2.5 = 0.014 lb/hr < 0.026.

Quinquennial / pentennial (once in five years) PM, PM10 & PM2.5 testing is required by Permit# 13-19B, EUTOPCOATWEST, V.5, testing/sampling to verify PM, PM10, and PM2.5 emission rates from the observation zones. Other FG / EU require the tests as well.

Concerning EUPRIMERWEST Tu-Tone observation zone (SVPRMOBSWEST) and EUTOPCOATWEST (SVBCOBSWEST) (Basecoat observation), FCA WTAP is not in compliance with the limits for PM2.5 & PM10. However, the rest of the test results appear to be in compliance with the corresponding limits.

Concerning EUECOATWEST both E-Coat Dip Tank and E-Coat Oven showed Inward Flow both at entrance and exit and passed 100 percent capture criteria (Permit# 13-19B, EUTOPCOATWEST, V.2: at least once every five years (1/5Yr) from the last testing date thereafter unless the permittee documents annually that the most recent acceptable test remains valid and representative, the permittee shall verify the capture efficiency of the dip tank and oven portions of EUECOATWEST).

Week of May 16th week of June 13th, 2022, FGCONTROLS, FGTOPCOATEAST (SVBTHCONCEAST & SVRTOEAST) VOC removal efficiency (RE) by Concentrator (Con), Con NOx, PM/PM10/PM2.5 emissions rates, FGTOPCOATEAST (SVRTOEAST) PM/PM10/PM2.5 emissions rates testing

RWDI USA LLC (RWDI # 2003780 Report dated July 15, 2022) of Rochester Hills, MI 48309, completed compliance source testing at the FCA US LLC (FCA) Warren Truck Assembly Plant (WTAP), East Paint Shop (EPS), SVBTHCONCEAST (East Concentrator Removal Efficiency (East Con RE)), SVBTHCONCEAST (East Con NOx emissions) SVBTHCONCEAST (PM Emissions May 2022 Event (US EPA Method 5/202)), SVBTHCONCEAST (PM Emissions -June 2022 Event (US EPA Method 5/202)), SVBTHCONCEAST (PM Emissions -June 2022 Event (US EPA Method 5)), SVRTOEAST (PM Emissions) per Permit# 13-19B dated June 23, 2021, for PM, PM10 & PM2.5, NOx, East Concentrator Removal efficiency (RE) emissions rates / RE, East RTO PM. Testing results are as follows:

- 1. SVBTHCONCEAST East Concentrator Removal Efficiency: East Con RE = **98.2** percent. No minimum required RE.
- 2. SVBTHCONCEAST NOx Emissions at outlet: 0.18 ppmv = 0.06 pph << 6.39 (East Concentrators and East RTO portions of FGRTOEAST, combined)
- SVBTHCONCEAST East Con PM Emissions May 2022 Event (US EPA Method 5/202) PM/PM10/ PM2.5 Outlet = 0.0014 pounds per 1,000 pounds of wet exhaust < 0.0029; 0.285 pph > 0.148 pph PM10/PM2.5. Not in compliance with PTI# 13-19B, FGRTOEAST, I.5 (PM10 < 0.148 pph) & 6 (PM2.5 < 0.148 pph)
- SVBTHCONCEAST East Con PM Emissions -June 2022 Event (US EPA Method 5) PM/PM10/ PM2.5 Outlet = 0.0003 pounds per 1,000 pounds of wet exhaust = 0.065 pph << 0.148.
- SVRTOEAST East RTO PM Emissions PM/PM10/ PM2.5 Outlet = 0.0026 pounds per 1,000 pounds of wet exhaust < 0.0032; = 0.566 pph > 0.518. Not in compliance with PTI# 13-19B, FGRTOEAST, I.2 (PM10 < 0.518 pph) & 3 (PM2.5 < 0.518 pph).

The testing is required by Permit No. 13-19B, V.1(verify PM2.5, PM10, and PM emission rates of the concentrator and RTO portions of FGRTOEAST) & 2 (verify the

combined NOx emission rate from the east concentrator and the east RTO portion). The associated stacks are SVBTHCONCEAST & SVRTOEAST.

Permit No. 13-19B does not require a minimum Concentrator Removal Efficiency (Con RE or RE) but RE goes into the VOC emissions calculations. A minimum East RTO Destruction Efficiency of 95 percent (East RTO DE > 95%) is required by many parts of the permit, e.g., PTI No. 13-19B, FGTOPCOATEAST, IV.1.

In summary, FCA WTAP is not in compliance with the limits PTI# 13-19B, FGRTOEAST, I.2 (PM10 < 0.518 pph) & 3 (PM2.5 < 0.518 pph) and PTI# 13-19B, FGRTOEAST, I.5 (PM10 < 0.148 pph) & 6 (PM2.5 < 0.148 pph).

May 17-18, 2022, EU-COLOR-ONE Topcoat Oven Thermal Oxidizer (TO) testing for PM/PM1 0/PM2.5.

The results from the following sources would be included in subsequent reports:

- EUSPOTREPAIREAST PM emissions from SVDS_SPOTEAST observation zone
- The balance of the sources is in the FGFACILITY Flexible Group of EU-COLOR-ONE Basecoat Observation
- 1. PM/PM1 0/PM2.5 emissions from SVBC1 OBEAST1 of EU-COLOR-ONE Basecoat Observation
- 2. PM/PM1 0/PM2.5 emissions from SVBC1 OBEAST2 of EU-COLOR-ONE Basecoat Observation
- PM/PM1 0/PM2.5 emissions from SVBC1 OBEAST3 of EU-COLOR-ONE Clearcoat Observation 1 -PM/PM1 0/PM2.5 emissions from SVCC1 OBEAST1 o EU-COLOR-ONE Clearcoat Observation 2 -PM/PM1 0/PM2.5 emissions from SVCC1 OBEAST2

RWDI USA LLC (RWDI # 220I 515 Report dated July 15, 2022) of Rochester Hills MI 48309, completed compliance source testing at the FCA US LLC (FCA) Warren Truck Assembly Plant (WTAP), East Paint Shop (EPS), EU-COLOR-ONE Topcoat Oven Thermal Oxidizer (TO) for Particulate Matter (PM/PM10/PM2.5) on May 17 & 13, 2022. The Color1 oven emissions from the Color1 (EU-COLOR-ONE, SVEXC1INC) line are controlled using a thermal oxidizer (TO), which supplies heat to oven. Testing was performed using USEPA Methods (RM): 1, 2, 3, 4, 5, and 202. Testing (three (3) 240-minute runs) results are as follows:

1. TO Particulate Matter (PM/PM10/PM2.5) (pph) = 0.056

 TO Particulate Matter (PM/PM10/ PM2.5) (pounds per 1000 pounds of exhaust air (wet)) = 0.0014

June 20-21, 2022, Retest of February 14 and 21, 2022. Particulate matter for concentrator, tu-tone observation, and basecoat observation

RWDI USA LLC (RWDI # 2205370 Report dated August 17, 2022) of Rochester Hills MI 48309, completed compliance source testing at the FCA US LLC (FCA) Warren Truck Assembly Plant (WTAP), West Paint Shop (WPS), EUPRIMERWEST observation zone (SVPRMOBSWEST), EUTOPCOATWEST Basecoat observation zone (SVBCOBSWEST (Basecoat)), FGRTOWEST (SVBTHCONCWEST West concentrator exhaust) per Permit# 13-19B dated June 23, 2021, for PM, PM10 & PM2.5, emissions rates. Testing results are as follows:

- SVPRMOBSWEST (Tutone Observation): PM = 0.0018 pounds per 1000 pounds of wet gas < 0.0029. PM10 = 0.149 pph > 0.143 (Not in compliance.). PM2.5 = 0.056 pph < 0.143. EUPRIMERWEST.
- SVBCOBSWEST (Basecoat Observation): PM = 0.0016 pounds per 1000 pounds of wet gas < 0.0029. PM10 = 0.081 pph < 0.103. PM2.5 = 0.037 pph < 0.103. EUTOPCOATWEST.
- SVBTHCONCWEST (West Concentrator)): PM = 0.0001 pounds per 1000 pounds of wet gas < 0.0029. PM = 0.032 pph. FGRTOWEST. PM10 & PM2.5 results are not available in this test. See February 14 and 21, 2022

The testing is required by PTI No. 13-19B, EUPRIMERWEST, V.5 & EUTOPCOATWEST, V.5. FGRTOWEST, V.1.

August 8 and 9 (EUSPOTREPAIR EAST June test repeated), 2022 testing for PM/PM10/PM2.5.

RWDI USA LLC (RWDI # 2201515 Report dated August 14, 2022) of Rochester Hills MI 48309, completed compliance source testing at the FCA US LLC (FCA) Warren Truck Assembly Plant (WTAP), East Paint Shop (EPS), EU-COLOR-ONE Basecoat Observation 1 (SVBC1 OBEAST1), EU-COLOR-ONE Basecoat Observation 2 (SVBC1 OBEAST2), EU-COLOR-ONE Basecoat Observation 3 (SVBC1 OBEAST3), EU-COLOR-ONE ONE Clearcoat Observation 1 (SVCC10BEAST1), EU-COLOR-ONE Clearcoat

Observation 2 (SVCC10BEAST2) & EU-COLOR-ONE Topcoat Oven Thermal Oxidizer (SVEXC1INC) per Permit# 13-19B dated June 23, 2021, for PM, PM10 & PM2.5, emissions rates. The program was split, and this report does not include EU-COLOR-ONE Topcoat Oven Thermal Oxidizer - PM emissions from SVEXC1INC. SVEXC1INC was addressed in a separate report. On August 8 & 9, 2022, RWDI retested EUSPOTREPAIREAST to confirm the particulate levels for PM/PM10/PM2.5 Testing results are as follows:

- SVDS_SPOTEAST (East Spot Repair) (EUSPOTREPAIREAST) June Testing: PM (Method 201A) = 0.0017 pounds per 1000 pounds wet gas. PM10 = 0.135 pph; & PM2.5 = 0.067 pph. See below for lower values (August 2022 test).
- SVDS_SPOTEAST (Spot Repair) (EUSPOTREPAIREAST) August 2022 Testing: PM (Method 201A) = 0.0005 pounds per 1000 pounds wet gas < 0.0029. PM10 = 0.037 pph > 0.026 pph; PM2.5 =0.028 pph > 0.026 pph. Obviously, August values are lower than June values. These tested values are also not in compliance with the permit (PTI No. 13-19B, I.4&5)
- SVBC1OBEAST1 (Basecoat Observation 1) (FGTOPCOATEAST, EU-COLOR-ONE): PM (Method 201A) = 0.0003 pounds per 1000 pounds wet gas < 0.0029. PM10 = 0.019 pph < 0.218. PM2.5 = 0.016 pph < 0.218.
- SVBC10BEAST2 (Basecoat Observation 2) (FGTOPCOATEAST, EU-COLOR-ONE): PM (Method 201A) = 0.0021 pounds per 1000 pounds wet gas < 0.0029. PM10 = 0.114 pph < 0.218; PM2.5 = 0.066 pph < 0.218.
- SVBC10BEAST3 (Basecoat Observation 3) (FGTOPCOATEAST, EU-COLOR-ONE): PM (Method 201A) = 0.0024 pounds per 1000 pounds wet gas < 0.0029. PM10 = 0.174 pph < 0.218; PM2.5 = 0.075 pph < 0.218.
- SVCC10BEAST1 (Clearcoat Observation 1) (FGTOPCOATEAST, EU-COLOR-ONE): PM (Method 201A) = 0.0017 pounds per 1000 pounds wet gas < 0.0029. PM10 = 0.095 pph < 0.173; PM2.5 = 0.062 pph < 0.173.
- 7. SVCC10BEAST2 (Clearcoat Observation 2) (FGTOPCOATEAST, EU-COLOR-ONE): PM (Method 201A) = 0.0028 pounds per 1000 pounds wet gas < 0.0029; PM10 = 0.065 pph < 0.173; PM2.5 = 0.041 pph < 0.173.

The testing is required by PTI No. 13-19B, EUSPOTREPAIREAST V.2 (verify PM, PM10, and PM2.5 emission rates from a representative station of EUSPOTREPAIREAST)

November 21 and 22, 2022 (repeat of May 2022 test) SVRTOEAST (SVRTOEAST FGRTOEAST East RTO exhaust) particulate matter compliance test

RWDI USA LLC (RWDI # 2201515 Report dated January 18, 2023) of Rochester Hills MI 48309, completed compliance source testing at the FCA US LLC (FCA) Warren Truck Assembly Plant (WTAP), East Paint Shop (EPS East RTO Classic Ram 1500 Truck) particulate emissions from the SVRTOEAST (East RTO exhaust) per Permit# 13-19B dated June 23, 2021, for PM, PM10 & PM2.5 as PM, emissions rates. *This testing was a repeat of the program completed in May of 2022.* Testing results (SVRTOEAST - PM Results) are as follows:

- Particulate Matter (PM/PM10/PM2.5): PM = 0.337 pph < 0.518 pph as well as for PM10 & PM2.5 (SVRTOEAST FGRTOEAST, I.2-3)
- 2. Particulate Matter (PM/PM10/ PM2.5): PM = 0.0015 pounds per 1000 pounds wet gas < 0.0032 (SVRTOEAST FGRTOEAST, I.1)

The testing is required by PTI No. 13-19B, SVRTOEAST FGRTOEAST, V.1: verify PM2.5, PM10, and PM emission rates of the concentrator and RTO portions of FGRTOEAST.

February 14, 2022, West RTO destruction efficiency (DE) West Concentrator Removal Efficiency (RE), PM/PM10/PM2.5 and oxides of nitrogen (NOx) test

RWDI USA LLC (RWDI # 2102459 Report dated April 19, 2022) of Rochester Hills MI 48309, completed compliance source testing at the FCA US LLC (FCA) Warren Truck Assembly Plant (WTAP), West Paint Shop (WPS Jeep), destruction efficiency for the regenerative thermal oxidizer (West RTO)(SVRTOWEST) serving the E-Coat Tank and curing oven (EUECOATWEST), Primer/Tutone curing oven (EUPRIMERWEST), and basecoat/clearcoat curing ovens (EUTOPCOATWEST) in addition to the desorption portion from the two (2) Concentrators (SVBTHCONCWEST). The testing included the removal efficiency (West Con RE) for two (2) Rotary Zeolite Concentrators servicing the Primer/Tutone booth (EUPRIMERWEST) and the basecoat/clearcoat booths (EUTOPCOATWEST). In addition to destruction efficiency of the West RTO and removal efficiencies of the West concentrators, particulate measurements were also completed on the RTO exhaust (outlet) for PM/PM10/PM2.5 and oxides of nitrogen (NOx) on the RTO (outlet) and the concentrators (clean air exhaust). The testing conducted per Permit# 13-19B dated June 23, 2021, for PM, PM10 & PM2.5 as PM, emissions rates, West RTI DE, West Con RE. Testing results (completed the week of February 14, 2022) are as follows:

- 1. West RTO Destruction Efficiency (DE) = 98.6 > 95 percent.
- 2. Combined West Concentrators Removal Efficiency (RE) = 98.3 percent
- 3. West RTO outlet Particulate (Tests 1-4) = 0.0016 grains per dscf < 0.0032 = 0.57 pph.
- West RTO outlet Particulate (Tests 1, 2 & 4) = 0.0014 grains per dscf < 0.0032 = 0.51 pph. The permit requires PM10 & PM2.5 < 0.518 pph. With small errors PM may alone satisfy PM10 & PM2.5 < 0.518 pph requirements.
- 5. West Concentrator Outlet Particulate (a surrogate for PM10 as well as PM2.5) =
 0.0006 grains per dscf < 0.0029 = 0.36 pph.
 0.36 pph > 0.123 pph PM10 & PM2.5.
 This shows noncompliance with 0.123 pph for PM10 & PM2.5.
- West RTO & Zeolite Combined Concentrators (2) NOx: West RTO Outlet = 4.37 ppmv = 1.31 pph & West Combined Concentrator Outlet = 0.05 ppmv = 0.11 pph; 1.31 + 0.11 = 1.42 < 3.29 pph limit.

The West RTO DE = 98.6 > 95 percent satisfies PTI No. 13-19B, EUTOPCOATWEST IV.1 design/equipment parameter(s): West RTO DE > 95%.

The purpose of the stack tests is to show compliance with Permit No. 13-19B, FGRTOWEST, I.1-7 limits for PM, PM10, PM2.5 & NOx and EUTOPCOATWEST, IV.1 design/equipment parameter(s): DE > 95 percent.

The testing is required by Permit No. 13-19B, EUTOPCOATWEST, V.3: the removal efficiency of the concentrator (West CON RE) and destruction efficiency (West RTO DE > 95%). The tests are also to verify compliance with Permit No. 13-19B, FGRTOWEST, V.1-2: PM2.5, PM10, and PM emission rates, combined NOx emission rate from the west concentrator and the west RTO portion of FGRTOWEST

Control Equipment Operating Temperatures:

Based upon the random date (May 2024) temperature charts, operating temperatures are as follows:

1. WTAP FIS EAST COLOR1 TO temp May 15, 2024, = 1300 °F

2. WTAP FIS EAST CONC temp May 15, 2024, = 390 °F

3. WTAP FIS EAST RTO temp May 15, 2024, = 1550 °F

4. WTAP FIS WEST CONC temp May 15, 2024, = 375 °F

5. WTAP FIS WEST RTO temp May 15, 2024, = 1500 °F

On June 21, 2024, I, Iranna Konanahalli, accompanied by Dr. Jill Cellini, new AQD Inspector, conducted level-2 FY 2024 scheduled ROP CMS inspection of FCA US Warren Truck Assembly Plant (FCA WTAP or WTAP), located at 21500 Mound Road, Warren, Michigan 48091-4840. The inspection was conducted to determine compliance with the Federal Clean Air Act; Article II, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451; Environment, Great Lakes and Energy, Air Quality Division (EGLE-AQD) administrative rules and the RO Permit Number MI-ROP-B2767-2016 / PTI No. 13-19B.

The permit will be modified (PTI No. 13-19B → PTI No. 13-19C) as required by Administrative Consent Order (ACO) AQD No. 2023-11 to resolve outstanding violations (4 VNs), especially of PM / PM10 / PM2.5. The revised permit will increase PM2.5 & PM10 limits to address the four (4) violations with attendant hours of operation limit of 8,050 hours per year on a 12-month rolling period.

Also, another application is with AQD-Permit to review process modification required to eliminate one bake oven process, for solvent-based primer surfacer, in the West

Paint Shop (Jeep). This modification is a part of energy savings program. The modification is known as "4 wet process" modification.

During the inspection, Laura Hall, P. Eng., Environment Lead, assisted me and Dr. Jill Cellini.

FCA US LLC Warren Truck Assembly Plant (FCA WTAP or WTAP) is located at the northeast corner of 8 Mile Road and Mound Road in the city of Warren, Macomb County, Michigan. It is located just of north of 8 Mile Road, Detroit (Environmental Justice (EJ) Community) border. The plant is in an industrial area close to FCA Stamping and GM powertrain plants (towards north on Mound Road between 8 Mile and 10 Mile Roads). The plant receives stamped parts from FCA Stamping via tunnel at 9 Mile Road. FCA stramping is considered adjacent and contiguous under the stationary source definition; and hence the FCA stamping plant is under ROP Program as well. The plant manufactures or assembles light-duty trucks and Jeeps. Prior to coating, the RAM 1500 Classic (East Paint Shop or EPS) and Jeep Wagoneer (brand new West Paint Shop or WPS) bodies are cleaned and pretreated to prepare vehicle bodies for painting: body cleaning and phosphate treatment. The principal emissions are volatile organic compounds (VOC), including hazardous air pollutants (HAP), from coating operations. Combustion emissions are also generated form bake ovens, boilers & hot water generators, RTOs, etc.

The assembly process begins with the framing of body by welding together various vehicle parts, such as doors, hoods, etc. After the body is framed, it then proceeds through a body cleaning and phosphate treatment step. An Electro Deposition Coating (E-Coat), a dip painting process, coats and primes the body surface in preparation for final paint finish. Powder coating is applied as primer surfacer and anti-chip at East Paint Shop (EPS truck). The powder coating anti-chip and powder coating primer surfacer are not a part of the RO permit (East Paint Shop). However, it is part of new Rule 201 permit. West Paint Shop (WPS for Jeep) uses solvent-based primer surfacer (primer or guide coat) as it is considered a premium vehicle (Jeep Wagoneer). WPS is converting to "4 wet process" painting technology upon approval of the permit saving energy.

PSD / LAER: WTAP, when the area is in attainment for ozone, is subject to Prevention of Significant Deterioration (PSD: top-down BACT technology with cost consideration) (40 CFR 52.21) regulations because the stationary source has the potential to emit volatile organic compounds greater than 250 tons per year. When in non-attainment for ozone, WTAP is subject to Major Off-set Source LAER (Lowest Achievable Emission Rate without cost consideration).

PTI No. 13-19B, Emission Units (EUs)

	Emission Unit Description	Installation	
Emission Unit ID	(Including Process Equipment & Control Device(s))	Date / Modification Date	Flexible Group ID
EUPRETREATWEST	A series of dip tanks and rinses for the surface treatment of automobiles.	02-22-2021	FGAUTOMACT, FGNGWEST, FGPSWEST/NEWEAST
EUECOATWEST	An electrodeposition (E- coat) coating process consisting of a series of dip tanks, rinses, a curing oven, a cooling tunnel, followed by a primer prep booth (light sanding) for repairs of surface blemishes. Emissions from the E- coat tanks are directed to the curing oven and then to the new west RTO for control.	02-22-2021	FGCONTROLS, FGAUTOMACT, FGRTOWEST, FGNGWEST, FGPSWEST/NEWEAST
EUPRIMERWEST	A prep tunnel, two (2) automatic primer booths, one for solvent borne main primer and one for solvent borne tutone coloring primer, a primer observation zone, an ambient flash-off area, a natural gas-fired primer curing oven, and a cooling tunnel, followed by two booths (color prep booth and heavy reprocess sand) for repair of surface blemishes.	02-22-2021	FGCONTROLS, FGAUTOMACT, FGRTOWEST, FGNGWEST, FGPSWEST/NEWEAST

The solvent borne main primer will be replaced by water-based primer when "4 wet" process is implemented.

EUTOPCOATWEST	An automatic topcoat 02-22-2021	FGCONTROLS,
	spray application	FGAUTOMACT,
	process consisting of a	FGRTOWEST,
	water borne basecoat	FGNGWEST,
	coating booth, a	FGPSWEST/NEWEAST
	basecoat observation	

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	Emission Unit Description	Installation	
Emission Unit ID	(Including Process Equipment & Control Device(s))	Date / Modification Date	Flexible Group ID
	zone, a basecoat ambient flash-off area, a basecoat heated flash-off area, a solvent borne clearcoat coating booth, a clearcoat observation zone, a clearcoat ambient flash-off area, and a natural gas-fired curing oven. Approximately 85% of the air from the spray zones is recirculated back into the process and 15% is exhausted to the concentrator and RTO.		
EUPURGECLEANWEST	Various cleaning solvents and purge solvents used in the west paint shop. VOC emissions from the solvent-based purge materials used within EUPRIMERWEST and the clearcoat booth portion of EUTOPCOATWEST are controlled by the west concentrator and west RTO except when collected in the purge collection system.	02-22-2021	FGCONTROLS, FGAUTOMACT, FGRTOWEST, FGPSWEST/NEWEAST
EUBODYWIPEWEST	Body wipes used throughout the west paint shop.	02-22-2021	FGAUTOMACT, FGPSWEST/NEWEAST
EUSPOTREPAIRWEST	Rapid reprocess repair booth after the west paint shop topcoat process.	02-22-2021	FGCONTROLS, FGAUTOMACT, FGPSWEST/NEWEAST
EUECOATEAST	Formerly EU-UNIPRIME. An electro-deposition (E- coat) coating process consisting of a series of dip tanks, rinses, a curing oven, and a	7/31/1984, 02-22-2021	FGCONTROLS, FGAUTOMACT, FGRTOEAST, FGNEWNGEAST, FGPSWEST/NEWEAST

	Emission Unit Description	Installation	
Emission Unit ID	(Including Process Equipment & Control Device(s))	Date / Modification Date	Flexible Group ID
	cooling tunnel. The curing oven is currently controlled by an existing RTO, which will be replaced by the new east RTO, which will control both the tank and curing oven portions of EUECOATEAST.		
EUPWDRPRMEAST	A powder anti-chip coating application process in the east paint shop which is electrostatically applied. The spray booth also includes the application of a colored powder basecoat for tutone applications. The powder spray application is controlled by a particulate filtration system which is vented inside the plant.	01/01/1996,	FGCONTROLS, FGAUTOMACT, FGPSWEST/NEWEAST
EUPURGECLEANEAST	Formerly EU-SOLVENT- WIPE. Emissions from purge solvent, solvent wipes, and body wipe cleaners throughout the body shop, east paint shop, and final assembly portion of the plant. After installation of the east concentrator and east RTO, VOC emissions from the solvent-based purge materials used within the basecoat and clearcoat booths are controlled except when collected in the purge collection system.	7/31/1984 / Date of PTI	FGCONTROLS, FGAUTOMACT, FGPSWEST/NEWEAST
EUSPOTREPAIREAST	Spot repair process in the east paint shop, prior to the topcoat application.	02-22-2021	FGAUTOMACT, FGCONTROLS, FGPSWEST/NEWEAST

	Emission Unit Description	Installation	
Emission Unit ID	(Including Process Equipment & Control Device(s))	Date / Modification Date	Flexible Group ID
EUSEALERS	Formerly EU- SEALERS&ADHESIVES. Various manual and robotic sealer and adhesive application stations/booths. Sealers and adhesives are applied at various decks in both west and east paint shops (some of which are cured in the sealer oven), the body shop, and the final assembly areas of the facility.	7/31/1984, / 06-23-2021	FGAUTOMACT, FGPSWEST/NEWEAST
EUFINALREPAIR	Formerly EU-FINAL- REPAIR: Final repair operations including a coating area. Prep booths or sanding booths are equipped with side-draft dry filter particulate control systems. Spray booths are equipped with downdraft dry filter particulate control system.	7/22/1996, / 06-23-2021	FGCONTROLS, FGPSWEST/NEWEAST, FGAUTOMACT
EUFLUIDFILL	Formerly EU-FLUID- FILL: Each vehicle will be filled with various fluids such as gasoline, antifreeze, transmission fluid, power steering fluid, and windshield washer fluid.	7/31/1984, Date of PTI	FGPSWEST/NEWEAST
EU-COLOR-ONE	Color1 line (one of two identical topcoat lines) consists of spray booths for applying topcoat to vehicle bodies and oven for curing. Downdraft Water Wash System for particulate control on the spray booths and Thermal Oxidizer for	07/31/1984, 06-23-2021	FGAUTOMACT, FGTOPCOATEAST, FGCONTROLS, FGRTOEAST, FGNEWNGEAST, FGPSWEST/NEWEAST

	Emission Unit Description	Installation	
Emission Unit ID	(Including Process Equipment & Control Device(s))	Date / Modification Date	Flexible Group ID
	VOC control on the bake oven. After installation of the control equipment, the spray booth portions will be controlled by the east concentrator and east RTO.		
EU-COLOR-TWO	Color2 line (one of two identical topcoat lines) consists of spray booths for applying topcoat to vehicle bodies and oven for curing. Downdraft Water Wash System for particulate control on the spray booths and Thermal Oxidizer for VOC control of the bake oven.	07/31/1984 REMOVED	FGAUTOMACT, FGTOPCOATEAST
EU-COLOR-TWO (Color2) starting West Paint Shop (& EU-REPROCESS (Hi-Bake re WPS Jeep) as required by the	epair) have been permit.	shut down prior to
EU-REPROCESS	Reprocess is high bake	07/31/1984	FGAUTOMACT, FGCONTROLS
(Hi-bake)	consists of spray booths for topcoat application to repair vehicle bodies and oven for curing. Water Wash System for	REMOVED	FGTOPCOATEAST

EU-BOILER3	152 million BTU heat 07/11/1998 input per hour (Babcox & Wilcox Boiler3, installed 7/11/98) natural gas only boiler equipped with low	FG-BOILERS, FG- BOILER-MACT5D
	boiler equipped with low NOx burners.	

particulate control on the booths

Thermal Oxidizer for VOC control of the bake

spray

oven.

and

EU-BOILER4

07/11/1998

	Emission Unit Description	Installation	
Emission Unit ID	(Including Process Equipment & Control Device(s))	Date / Modification Date	Flexible Group ID
	106 million BTU heat input per hour (Babcox & Wilcox Boiler4, installed 7/11/98) natural gas only boiler equipped with low NOx burners.		FG-BOILERS, FG- BOILER-MACT5D
EU-BOILER5	152 million BTU heat input per hour (Wickes Boiler5, installed 9/1/96) natural gas only boiler equipped with low NOx burners.	09/01/1996	FG-BOILERS, FG- BOILER-MACT5D
EU-BOILER6	192 million BTU heat input per hour (Riley Stoker Boiler6, installed 10/29/84) natural gas only boiler equipped with oxygen trim system but not low NOx burners.	10/29/1984	FG-BOILERS, FG- BOILER-MACT5D
EU-TRIMBOILER	A 37 million BTU heat input per hour (Cleaver Brooks) natural gas only boiler, equipped with low NOx burners.	08-06-2021	FGBOILERMACTHWG, FGPSWEST/NEWEAST
EUHWG1	Hot water generator with a maximum heat input rating of 5 MMBtu/hr. This unit is equipped with a low NOx burner.	02-22-2021	FGBOILERMACTHWG, FGNGWEST, FGPSWEST/NEWEAST
EUHWG2	Hot water generator with a maximum heat input rating of 5 MMBtu/hr. This unit is equipped with a low NOx burner.	02-22-2021	FGBOILERMACTHWG, FGNGWEST, FGPSWEST/NEWEAST
EUHWG3	Hot water generator with a maximum heat input rating of 5 MMBtu/hr. This unit is equipped with a low NOx burner.	02-22-2021	FGBOILERMACTHWG, FGNGWEST, FGPSWEST/NEWEAST

	Emission Unit Description	Installation	
Emission Unit ID	(Including Process Equipment & Control Device(s))	Date / Modification Date	Flexible Group ID
EUHWG4	Hot water generator with a maximum heat input rating of 5 MMBtu/hr. This unit is equipped with a low NOx burner.	02-22-2021	FGBOILERMACTHWG, FGNGWEST, FGPSWEST/NEWEAST
EUHWG5	Hot water generator with a maximum heat input rating of 5 MMBtu/hr. This unit is equipped with a low NOx burner.	02-22-2021	FGBOILERMACTHWG, FGNGWEST, FGPSWEST/NEWEAST
EUHWG6	Hot water generator with a maximum heat input rating of 5 MMBtu/hr. This unit is equipped with a low NOx burner.	02-22-2021	FGBOILERMACTHWG, FGNGWEST, FGPSWEST/NEWEAST
EUHWG7	Hot water generator with a maximum heat input rating of 5 MMBtu/hr. This unit is equipped with a low NOx burner.	02-22-2021	FGBOILERMACTHWG, FGNGWEST, FGPSWEST/NEWEAST
EUHWG8	Hot water generator with a maximum heat input rating of 5 MMBtu/hr. This unit is equipped with a low NOx burner.	02-22-2021	FGBOILERMACTHWG, FGNGWEST, FGPSWEST/NEWEAST
EUDSBCHWG	Hot water generator with a maximum heat input rating of 4 MMBtu/hr. This unit is equipped with a low NOx burner.	02-22-2021	FGBOILERMACTHWG, FGNGWEST, FGPSWEST/NEWEAST
EUDSSBHWG	Hot water generator with a maximum heat input rating of 4 MMBtu/hr. This unit is equipped with a low NOx burner.	02-22-2021	FGBOILERMACTHWG, FGNGWEST, FGPSWEST/NEWEAST
EUDSCCHWG	Hot water generator with a maximum heat input rating of 4 MMBtu/hr.	02-22-2021	FGBOILERMACTHWG, FGNGWEST, FGPSWEST/NEWEAST

	Emission Unit Description	Installation	
Emission Unit ID	(Including Process Equipment & Control Device(s))	Date / Modification Date	Flexible Group ID
	This unit is equipped with a low NOx burner.		
Note: TEMP boilers (2) tha	t operated for several years h	ave been remo	oved.
EU-UNLEADEDGAS1	TK1 25,000-gallon gasoline storage tank – above-ground storage tank with spill containment.	03/19/2013	FGTANKS
EUMETANK	8,000-gallon bulk storage tank for the storage of windshield washer fluid.	01/01/2014	FGTANKS
EUNEWNGASSEMBLY	Natural gas-fired air supply housing and space heating (51.0 MMBtu/hr capacity) in the assembly portion of the facility added as part of the west paint shop project.	02-22-2021	FGNGWEST, FGCONTROLS, FGPSWEST/NEWEAST
EUNEWNGPSEAST	Natural gas-fired air supply housing (8.3 MMBtu/hr capacity) installed in the east paint shop as part of the west paint shop project.	02-22-2021	FGNEWNGEAST, FGCONTROLS, FGPSWEST/NEWEAST
EUDIESELTANK1	8,000-gallon storage tank for the storage of diesel fuel.	01/01/2014	FGTANKS
EUANTIFREEZETANK	10,000-gallon storage tank for the storage of antifreeze.	01/01/2014	FGTANKS
EUBRAKEFLUIDTANK	8,000-gallon storage tank for the storage of brake fluid.	01/01/2014	FGTANKS
EUAUTOTRANS	8,000-gallon storage tank for the storage of	01/01/2014	FGTANKS

	Emission Unit Description	Installation	
Emission Unit ID	(Including Process Equipment & Control Device(s))	Date / Modification Date	Flexible Group ID
	automatic transmission fluid.		
EUDIESELEXTANK	5,000-gallon storage tank for the storage of diesel exhaust fluid.	01/01/2014	FGTANKS
EUGASTANK2	1,000-gallon storage tank for the storage of gasoline.	01/01/2014	FGTANKS
EUDIESELTANK2	1,000-gallon storage tank for the storage of diesel fuel.	01/01/2014	FGTANKS
EUPURSOLVTANK	8,000-gallon storage tank for the storage of purge solvent.	01/01/2014	FGTANKS
EUDIESELTANK3	1,000-gallon storage tank for the storage of diesel fuel.	01/01/2014	FGTANKS
EUNGEMENG1	An 850-HP natural gas- fired emergency engine.	02-22-2021	FGNGEMENG, FGPSWEST/NEWEAST
EUSPOTPRIMEWEST1	A spot prime repair process in the west paint shop. This process is after the E-coat process and prior to primer application.	02-22-2021	FGAUTOMACT, FGCONTROLS, FGSPOTPRIMEWEST, FGPSWEST/NEWEAST
EUSPOTPRIMEWEST2	A spot prime repair process in the west paint shop. This process is after primer application and prior to topcoat application.	02-22-2021	FGAUTOMACT, FGCONTROLS, FGSPOTPRIMEWEST, FGPSWEST/NEWEAST

PTI No. 13-19B, Flexible Groups (FGs)

Associated

EUSPOTPRIMEWEST1, EUSPOTPRIMEWEST2

Flexible Group ID	Flexible Group Description	Emission Unit IDs
FGTOPCOATEAST	Formerly FG-TOPCOAT: Two topcoat lines (EU-COLOR-ONE & EU-COLOR-TWO) and one high bake-repair operation (EU -REPROCESS), which is a part of the topcoat system. Each topcoat line consists of spray booths for applying topcoat to vehicle bodies and oven for curing. Reprocess is high bake-repair operation that consists of spray booths for topcoat application to repair vehicle bodies and oven for curing. While Color1 (36 JPH) and Color2 (36 JPH) lines are identical topcoat lines (72 JPH), reprocess line is shorter and slower.	EU-COLOR-ONE, EU-COLOR- TWO, EU-REPROCESS

EU-COLOR-TWO: Color2 line has been dismantled and removed as required by the permit.

FGCONTROLS	Concentrators and RTOs used	EUECOATWEST,
	for control of VOC emissions	EUPRIMERWEST,
	as applicable from the paint	EUTOPCOATWEST,
	spray booths, flash-off areas,	EUPURGECLEANWEST,
	and curing ovens. Waterwash	EUSPOTREPAIRWEST,
	or dry filter particulate control	EUECOATEAST,
	on paint spray booths and	EUPWDRPRMEAST, EU-
	sanding/repair booths and as	COLOR-ONE, EU-
	pre-filtration to VOC control	REPROCESS,
	devices.	EUPURGECLEANEAST,
		EUSPOTREPAIREAST,
		EUFINALREPAIR,
		EUNEWNGASSEMBLY,
		EUNEWNGPSEAST,

In all, two (2) Regenerative Thermal Oxidizers (2 RTOs) and four (4) Rotary Zeolite Concentrators (4 CONs) are present: one West RTO & one East RTO and two West CONs & two East CONs.

FGSPOTPRIMEWEST

Two spot prime processes in EUSPOTPRIMEWEST1, the west paint shop. One that EUSPOTPRIMEWEST2

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Flexible Group ID	Flexible Group Description	Emission Unit IDs
	is placed after the E-coat process and prior to the primer application process, and one that is located after the primer process and prior to topcoat application.	
FGRTOWEST	This flexible group covers NOx, PM, PM10, and PM2.5 emissions from the west paint shop concentrator and west RTO.	EUECOATWEST, EUPRIMERWEST, EUTOPCOATWEST, EUPURGECLEANWEST
FGRTOEAST	This flexible group covers NOx, PM, PM10, and PM2.5 emissions from the east paint shop concentrator and RTO associated with EUECOATEAST, EUPURGECLEANEAST, and the refurbished spray booth portion of EU-COLOR-ONE	EUECOATEAST, EU-COLOR- ONE, EU-PURGECLEANEAST
FGBOILERS	Four (4) natural gas fired boilers to produce steam and heat located in the powerhouse. Boiler Nos. 3, 4 and 5 are equipped with low NOx burners, Boiler No. 6 (with oxygen trim system) is a high efficiency boiler but not low NOx.	EUBOILER3, EUBOILER4, EUBOILER5, EUBOILER6
FGAUTOMACT	Each new, reconstructed, or existing affected source as defined in Title 40 of the Code of Federal Regulations (CFR), Part 63.3082, that is located at a facility which applies topcoat to new automobile or new light duty truck bodies or body parts for new automobiles or new light duty trucks; AND/OR in which you choose to include, pursuant to 40 CFR 63.3082(c), any coating operations which apply coatings to new other motor vehicle bodies or body parts for new other motor	EUPRETREATWEST, EUECOATWEST, EUPRIMERWEST, EUTOPCOATWEST, EUBODYWIPEWEST, EUBODYWIPEWEST, EUSPOTREPAIRWEST, EUPWDRPRMEAST, EUPWDRPRMEAST, EUSPOTREPAIREAST, EUSEALERS, EU-COLOR- ONE, EU-COLOR-TWO, EU- REPROCESS, EUSPOTPRIMEWEST1, EUSPOTPRIMEWEST2

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Associated

Flexible Group ID **Flexible Group Description Emission Unit IDs** vehicles; parts intended for use in new automobiles, new light duty trucks or new other motor vehicles; or aftermarket repair or replacement parts for automobiles, light duty trucks or other motor vehicles; and that is a major source, is located at a major source, or is part of a major source of emissions of hazardous air pollutants (HAPs) except as provided in 63.3081(c). This includes equipment covered permits, by other grandfathered equipment, and exempt equipment.

FCA WTAP uses only MACT 4I compliant coatings without benefit of the permit required VOC control equipment.

FGBOILERMACTHWG	This FG is for the eleven hot water generators and the Trim Boiler associated with the installation of the west paint shop and modernization of the east paint shop. Gas 1 Fuel Subcategory requirements for new Boilers/Process Heaters at major sources of Hazardous Air Pollutants per 40 CFR Part 63, Subpart DDDDD. These new boilers or process heaters must comply the applicable provisions of this subpart upon startup.	EUHWG1, EUHWG2, EUHWG3, EUHWG4, EUHWG5, EUHWG6, EUHWG7, EUHWG8, EUDSBCHWG, EUDSSBHWG, EUDSCCHWG, EU- TRIMBOILER
FGNGWEST	All natural-gas-fired equipment associated with the installation of west paint shop portion of the Warren Truck Assembly Plant, except the emergency generator, including ten hot water generators, air supply houses, space heaters, heated flash, cure ovens, the carbon concentrator, and the RTO. In addition, this FG includes new air supply houses and space heating in the assembly area.	EUPRETREATWEST, EUECOATWEST, EUPRIMERWEST, EUTOPCOATWEST, EUNEWNGASSEMBLY, EUHWG1, EUHWG2, EUHWG3, EUHWG4, EUHWG5, EUHWG6, EUHWG7, EUHWG8

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		Associated
Flexible Group ID	Flexible Group Description	Emission Unit IDs
FGNEWNGEAST	All natural-gas-fired equipment (new) associated with the refurbishment of east paint shop portion of the Warren Truck Assembly Plant, including hot water generators, air supply houses, space heaters, cure ovens, the carbon concentrator, and the RTO.	EUECOATEAST, EU-COLOR- ONE, EUDSBCHWG, EUDSSBHWG, EUDSCCHWG, EUNEWNGPSEAST
FGTANKS	Any existing (placed into operation before 7/1/79), new (placed into operation on or after 7/1/79) or modified storage tank, including those that are exempt from the requirements of R 336.1201 pursuant to R 336.1284.	EU-UNLEADEDGAS1, EUMETANK, EUDIESELTANK1, EUANTIFREEZETANK, EUBRAKEFLUIDTANK, EUAUTOTRANS, EUDIESELEXTANK, EUGASTANK2, EUDIESELTANK2, EUPURSOLVTANK, EUDIESELTANK3
FG-OLDMACT	FG-OLDMACT: The affected source is each new, reconstructed, or existing Organic Liquid Distribution (OLD) (non-gasoline) operation that is located at, or is part of a major source of hazardous air pollutant (HAP) emissions. The affected source is comprised of storage tanks, transfer racks, equipment leak components associated with storage tanks, transfer racks and pipelines, transport vehicles, and all containers while loading or unloading at transfer racks subject to this subpart. Equipment that is part of an affected source under another NESHAP is excluded from the affected source. (40 CFR 63.2338(c))	EUMETANK

These conditions specifically cover existing (construction pre dates April 2, 2002) liquid storage tanks which hold more than 5,000 gallons but

		Associated
Flexible Group ID	Flexible Group Description	Emission Unit IDs
	less than 50,000 gallons and/or new liquid storage tanks which hold more than 5,000 gallons but less than 10,000 gallons of methanol/windshield washer fill solvents that are dispensed to newly assembled vehicles.	
FGNGEMENG	Emergency engines subject to 40 CFR Part 60 Subpart JJJJ, Standards of Performance for Stationary Spark Ignition Internal Combustion Engines. New/Reconstructed emergency engines greater than 500 HP constructed on or after January 1, 2009.	EUNGGEN1
FGPSWEST/NEWEAST	All process equipment associated with the installation of the west paint shop and modernization of the east paint shop, body shop, and final assembly.	EUPRETREATWEST, EUECOATWEST, EUPRIMERWEST, EUTOPCOATWEST, EUDURGECLEANWEST, EUBODYWIPEWEST, EUSPOTREPAIRWEST, EUECOATEAST, EUPWDRPRMEAST, EUPWDRPRMEAST, EUPURGECLEANEAST, EUSPOTREPAIREAST, EUSPOTREPAIREAST, EUFLUIDFILL, EU-COLOR- ONE, EU-REPROCESS, EUSPOTPRIMEWEST1, EUSPOTPRIMEWEST2, EUHWG1, EUHWG2, EUHWG3, EUHWG4, EUHWG5, EUHWG4, EUHWG5, EUHWG6, EUHWG7, EUHWG8, EUDSBCHWG, EUDSSCHWG, EUNEWNGASSEMBLY, EUNEWNGPSEAST,

FCA WTAP is under continuous monitoring for compliance with the PTI No. 13-19B and ACO AQD No. 2023-11.

The following must be noted (July 2024) about East Paint Shop (EPS):

- 1. Color2: Shutdown and removed.
- 2. TuTone: Shutdown and removed.
- 3. Blackout: Removed. The space is used for inspection of painted trucks.
- 4. Reprocess: The paint line is still present but does not run. The process equipment for painting has been removed. It has been rendered inoperable.

East Paint Shop (RAM 1500 Classic Truck): E-coat + Powder Primer Surfacer (bake) + BC (solvent-based) + CC (solvent-based) with wet-on-wet application (both solvent-based) then BC & CC bake together.

West Paint Shop (Jeep Wagoneer): E-coat + Solvent-based Primer Surfacer (PS bake) + BC water based + CC (solvent-based: wet on wet application then BC & CC bake together).

Unlike previous primer surfacer at West Paint Shop (WPS), which was solvent-based, new primer surfacer will be water-based upon the permit approval. No curing after WPS primer surfacer but only after Clearcoat (CC). Unlike East Paint Shop (EPS), which has solvent-based Basecoat (BC), WPS BC continues to be water-based BC.

Air Recirculation Unit (ARC): VOC laden air from the booths keeps recirculating with primary and secondary filter systems. Intake fresh air is filtered as well to remove contaminants in ambient air. The intake air makes up for pure (particulates) air which is controlled using four Rotary Zeolite concentrators (2 WPS + 2 EPS). The stripped / desorbed VOC emissions from four (4) rotary Zeolite concentrators are fed to two (2) corresponding RTOs (1 WPS + 1 EPS). Hot air (dedicated natural gas fired hot air generator) is used for regenerating or stripping the Zeolite concentrators. About 10-20% recirculating air is purged and delivered to Rotary Zeolite Concentrators.

PTI No. 13-19B, EUPRETREATWEST

EUPRETREATWEST (FGAUTOMACT, FGPSWEST/NEWEAST): A series of dip tanks and rinses for the surface treatment of automobiles.

The materials in the process contain neither HAP nor VOC. (PTI No. 13-19B, EUPRETREATWEST, II,1: Neither VOC nor HAPs in the materials)

Exhaust gases are released via SVENTRYAIRSEAL, SVSTAGE2B, SVSTAGE5 & SVSTAGE9.

PTI No. 13-19B, EUECOATWEST

EUECOATWEST (FGCONTROLS, FGAUTOMACT, FGNGWEST, FGPSWEST/NEWEAST): An electrodeposition (E-coat) coating process consisting of a series of dip tanks, rinses, a curing oven, a cooling tunnel, followed by a primer prep booth (light sanding) for repairs of surface blemishes. Emissions from the E coat tanks are directed to the curing oven and then to the new west RTO for control.

Control Equipment:

- 1. The west RTO for VOC control from the tank and oven.
- 2. Dry filters for particulate control from the prep booth.

PTI No. 13-19B, EUECOATWEST, I.1-2

Pollutant	Limit	Time Period / Operating Scenario	Equipment	CY 2023
1. VOC	0.04	Monthly Average	EUECOATWEST	0.010
	lb/GACS			
2. VOC	1.1	12-month rolling time period as determined at the end of each calendar month		0.109
	tpy			
Note: This is an electrodeposition coating process using water-based coatings.				

PTI No. 13-19B, EUECOATWEST,III.1

All waste coatings and VOC containing materials are captured and stored in closed containers.

PTI No. 13-19B, EUECOATWEST, IV.1-2

E-coat (electrodeposition) tank and curing oven portions of EUECOATWEST VOC emissions are captured and delivered to West RTO (Jeep) which is installed, maintained, and operated in a satisfactory manner, especially the required West RTO combustion temperature.

See above for West RTO temperature charts (1500 °F).

West RTO DE = 98.6 > 95 percent.

The dry filter systems for particulate controls are installed, maintained, and operated in a satisfactory manner.

FCA WTAP operates properly dry filter particulate controls via weekly inspection and replacement if necessary. Tri-Dim inspects the filters weekly and UAW labor replaces the filters if necessary. See Tri-Dim monthly reports.

PTI No. 13-19B, EUECOATWEST,V.1-3

The VOC content, water content and density of the resin, pigment, and additives, as added to the EUECOATWEST tank is determined based upon Formulation Data.

The capture efficiency (CE) of the dip tank and oven portions of EUECOATWEST, by testing, was determined to be 100 percent based upon smoke test.

RWDI # 2201244 Report dated April 22, 2022: Concerning EUECOATWEST both E-Coat Dip Tank and E-Coat Oven showed Inward Flow both at entrance and exit and passed 100 percent capture criteria

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FCA WTAP verified the west destruction efficiency (West RTO DE =98.6 > 95 percent) of the west RTO in EUECOATWEST by testing. = 98.6 > 95 percent satisfies PTI No. 13-19B, EUTOPCOATWEST IV.1 design/equipment parameter(s): West DE > 95%.

RWDI # 2102459 Report dated April 19, 2022:

 West RTO Destruction Efficiency (DE) = 98.6 > 95 percent. Inlet NMOC (Desorb and Oven Combined) (as propane) = 80.8 ppmv = 25.3 pph & Outlet NMOC (as propane) = 1.3 ppmv = 0.4 pph.

PTI No. 13-19B, EUECOATWEST, VI.1-5

The coating usage & composition (based on PPG formulation) records are kept, and the required calculations are performed using MS Excel.

The particulate control system checks are performed periodically (once per week) by Tri-Dim as stated above.

West RTO: the combustion chamber temperature is monitored and recorded on a continuous basis during operation of the West e-coat process. See above for temperature charts (1500 °F).

PTI No. 13-19B, EUECOATWEST,IX1-2

FCA WTAP complies with NESHAP / MACT 4I via coating formulation.

In addition, FCA WTAP complies with NSPS MM via Auto Protocol calculations as the NSPS limits are subsumed in 0.04 pounds of VOC per gallon of applied coating solids (GACS). Tested TE is incorporated into the Auto Protocol Calculations in lieu of NSPS MM Table TE values. Rule 336.1610 is subsumed as well.

PTI No. 13-19B, EUPRIMERWEST

EUPRIMERWEST (FGCONTROLS, FGAUTOMACT, FGNGWEST,

FGPSWEST/NEWEAST): A prep tunnel, two (2) automatic primer booths, one for solvent borne main primer and one for solvent borne tutone coloring primer, a primer observation zone, an ambient flash-off area, a natural gas-fired primer curing oven, and a cooling tunnel, followed by two booths (color prep booth and heavy reprocess sand) for repair of surface blemishes.

POLLUTION CONTROL EQUIPMENT

Dry filter particulate controls on the prep booth and reprocess heavy sand booth where the air is recirculated and not exhausted into the outside ambient air. The coating booth overspray is controlled by a downdraft water-wash system particulate control system. A portion of the primer coating booth exhaust will be filtered and recirculated to the booth air make-up system. The primer coating booth and flash-off area emissions are exhausted through a bank of particulate filters prior to venting to the west Rotary Zeolite concentrators (2) and the west RTO to ward off media contamination. Oven emissions are exhausted through a bank of filters and then to the west RTO. Emissions from the observation zone are controlled by a particulate control system and exhausted to the ambient air.

VOC emissions from the booth air system purge (10-20%) are ducted to two west Rotary Zeolite concentrators. The purge air system prevents VOC exceeding 25% LEL. Curing bake oven VOC emissions are directly ducted to one west RTO. Stripped (desorbed) VOC emissions from the west concentrators (2) are ducted to west RTO as well.

PTI No. 13-19B, EUPRIMERWEST, I.1-5

Pollutant	Limit	Time Period / Operating Scenario	Equipment	CY2023	
1. VOC	2.92 Ib/GACS	Calendar Day Averaging	EUPRIMERWEST	1.6	
2. VOC	21.4 tpy	12-month rolling time period as determined at the	EUPRIMERWEST	6.8	

			end of each calendar month			
3.	РМ	0.0029 ^a pound per 1,000 pounds of wet exhaust gas	Hourly	EUPRIMERWEST (observation zone)	0.0021	
4.	PM10	0.143 pph	Hourly	EUPRIMERWEST (observation zone)	0.248 > 0.143 ≤ 0.372	
5.	PM2.5	0.143 pph	Hourly	EUPRIMERWEST (observation zone)	0.201 > 0.143 ≤ 0.201	
EUPRIMERWEST Tu-Tone observation zone (SVPRMOBSWEST): PM = 0.0021 lbs/1,000 lbs < 0.0029, PM10 = 0.248 lb/hr > 0.143 & PM2.5 = 0.201 lb/hr > 0.143. Both PM10 & PM2.5 are not in compliance with the limits. Both limits are revised in the new revised permit (PTI No. 13-19C) to be issued soon.						
a _{Cal}	culated o	n a wet gas basis				

PTI No. 13-19B, EUPRIMERWEST, IV.1-5 Design/Equipment Parameter(s)

While operating the coating booth, ambient flash, or curing oven portions of EUPRIMERWEST, FCA WTAP operates the West Rotary Zeolite concentrators (2) and west RTO portions of FGCONTROLS properly as required by the permit.

FCA WTAP operates properly the water-wash systems (the primer spray booth, flashoff area, and observation zone portions), pre-concentrator/oxidizer particulate control systems (spray booth, flash-off area, and curing oven portions) and respective dry filter particulate control systems (primer prep booth, and heavy sand booth portions) as required by the permit.

Downdraft water-wash (which is all paint spray processes for paint overspray particulate control) is an essential part of the paint process for uncontaminated high quality finish. Pre-concentrator/oxidizer particulate control systems are necessary to protect the VOC control equipment: both concentrators (2 in WPS & 2 in EPS) and RTOs (1 in WPS & 1 in EPS).

FCA performs weekly booth assessment inspection for all coating booths. Please above for booth inspection report. See above for Tri-Dim inspection report for dry filter inspection.

PTI No. 13-19B, EUPRIMERWEST, V.1-5 Testing

Formulation VOC data is used for VOC emission calculation purposes.

See above for September 13-17, 2021, WPS Transfer efficiency (TE) and Oven Capture Efficiency (OCE) testing Primer/Tutone operations (EUPRIMERWEST) and Topcoat operations (EUTOPCOATWEST). RWDI USA LLC (RWDI # 2104810 Report dated February 8, 2022).

See the above table for PM, PM10, and PM2.5 emission rates from the observation zone portion of EUPRIMERWEST. The Violation Notice (VN) has been issued for non-compliance with the limits. The permit will be revised as required by ACO and the PM10 & PM2.5 limits have been revised.

PTI No. 13-19B, EUPRIMERWEST, VI.1-6 Monitoring/Recordkeeping

FCA WTAP completes all the required monthly calculations. FCA keeps PPG paint / materials formulation data. FCA WTAP verifies, monitors and records the condition of each particulate control system through weekly visual inspections.

FCA performs weekly booth assessment inspection for all coating booths. Please see above for booth inspection report. See above for Tri-Dim inspection report for dry filter inspection.

FCA WTA plots RTO operating temperature graph (1500 °F). See above for temperature charts. West RTO DE = 98.6 > 95 percent. Combined West Concentrators Removal Efficiency (RE) = 98.3 percent

RTO & CONC temperature monitoring devices are calibrated periodically.

FCA WTAP performs the required calculations based upon PPG formulation data and paint and solvent usage. FCA WTAP prepares periodic reports.

The emissions are discharged via SVPRMOBSWEST, SVBTHCONCWEST & SVRTOWEST. However, the exhaust gases from the prep booth and the reprocess heavy sand booth portions of EUPRIMERWEST are not directly discharged to outside ambient air.

PTI No. 13-19B, EUPRIMERWEST, IX1-2

FCA WTAP complies with NESHAP / MACT 4I via coating formulation.

In addition, FCA WTAP complies with NSPS MM via Auto Protocol calculation as the NSPS limits are subsumed in 2.92 pounds of VOC per gallon of applied coating solids (GACS). Tested TE is incorporated into the Auto Protocol Calculations in lieu of NSPS MM Table TE values. Rule 336.1610 is subsumed as well.

The exhaust gases are discharged via SVPRMOBSWEST, SVBTHCONCWEST & SVRTOWEST

PTI No. 13-19B, EUTOPCOATWEST

EUTOPCOATWEST (FGCONTROLS, FGAUTOMACT, FGNGWEST,

FGPSWEST/NEWEAST): An automatic topcoat spray application process consisting of a water-borne basecoat (BC) coating booth, a basecoat observation zone, a basecoat ambient flash-off area, a basecoat heated flash-off area, a solvent borne clearcoat (CC) coating booth, a clearcoat observation zone, a clearcoat ambient flash -off area, and a natural gas-fired curing oven. Approximately 85% of the air from the spray zones is recirculated back into the process and 15% is exhausted to the Rotary Zeolite Concentrators (2).

A system of filters is present to remove particulate matter from the recirculating booth air to ward off cross contamination. Powder coated primer surfacer is baked before BC/CC application. Wet-on-wet application of water-based BC and solventbased CC. Heated BC flash-off evaporates excess water from the BC surface.

POLLUTION CONTROL EQUIPMENT

Booth overspray particulate matter is controlled by a water-wash particulate control system. A portion of the basecoat and clearcoat exhaust air is filtered and recirculated to the booth air make up system. The coating booth and flash-off area emissions are exhausted through a bank of particulate filters prior to venting to the West Rotary Zeolite concentrators (2) and the west RTO. Oven emissions are exhausted through a bank of particulate filters and then to the RTO. Solvent-based robots (clearcoat) purge stream capture and recover coatings and cleaning solvents in a purge collection system. Emissions from the observation zones are controlled by a particulate control system and exhausted to atmosphere.

The filtration systems protect both Rotary Zeolite concentrators and the west RTOs from suspended solid contaminants in the exhaust air.

VOC emissions from the booth air system purge (10-20%) are ducted to two west Rotary Zeolite concentrators. The purge air system prevents VOC exceeding 25% LEL to ward off protentional explosion and keeps the property insurable. Bake oven VOC emissions (are not part of the recirculation) are directly ducted to one west RTO upon filtration as the curing oven exhaust is concentrated sufficiently. Stripped (desorbed) VOC emissions from the west concentrators (2) are of course ducted to west RTO as well. Filtration systems are installed to ensure perfect paint finish, protect Zeolite and RTO. The water-wash particulate control system is an essentially part of the paint process to ensure uncontaminated top product finish / quality.

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	СҮ2023
1. VOC	3.53 Ib/GACS	Calendar Day Averaging	EUTOPCOATWEST	1.7
2. VOC	75.3 tpy	12-month rolling time period as determined at the end of each calendar month	EUTOPCOATWEST	25.3

PTI No. 13-19B, EUTOPCOATWEST,I.1-8

3. PM	0.0029 pound per 1,000 pounds of wet exhaust gas ^a	Hourly	EUTOPCOATWEST (base coat observation zone)	0.0018	
4. PM	0.0029 pound per 1,000 pounds of wet exhaust gas ^a	Hourly	EUTOPCOATWEST (clear coat observation zone)	0.0008	
5. PM10	0.103 pph	Hourly	EUTOPCOATWEST (base coat observation zone)	0.180 > 0.103	
6. PM10	0.153 pph	Hourly	EUTOPCOATWEST (clear coat observation zone)	0.041	
7. PM2.5	0.103 pph	Hourly	EUTOPCOATWEST (base coat observation zone)	0.151 > 0.103	
8. PM2.5	0.153 pph	Hourly	EUTOPCOATWEST (clear coat observation zone)	0.005	
a Calculated on a wet gas basis					
1.					

PTI No. 13-19B, EUTOPCOATWEST, IV.1-2 Design/Equipment Parameter(s)

While operating the coating booth, ambient flash, or curing oven portions of EUTOPCOATWEST, FCA WTAP operates the west Rotary Zeolite concentrators (2) (desorption inlet air at 375 °F) and west RTO (1500 °F) portions of FGCONTROLS properly as required by the permit.

FCA WTAP operates the water-wash systems (the spray booth, flash-off area, and observation zone portions of EUTOPCOATWEST), pre-concentrator/oxidizer particulate control systems (spray booth, flash-off areas, observation zone, and curing oven portions of EUTOPCOATWEST) properly as required by the permit.

Downdraft water-wash (which is present for all paint spray processes for paint overspray particulate control) is an essential part of the paint process for uncontaminated high quality paint finish. Pre-concentrator/oxidizer particulate control systems are necessary to protect the VOC control equipment from suspended solids in ehaust: both concentrators (2 in WPS & 2 in EPS) and RTOs (1 in WPS & 1 in EPS).

FCA WTAP performs weekly booth assessment inspection for all coating booths. Please see above for booth inspection report. Tri-Dim inspects the filters weekly; and UAW labor replaces the filters if necessary. See above for Tri-Dim inspection report for dry filter inspection.

On a weekly basis the booths are inspected for proper operation including downdraft water particulate (paint overspray) control system, humidity temperature by FCA WTAP staff. FCA WTAP performs weekly booth assessment inspection and Tri-Dim performs weekly filter inspection.

FCA WTA plots both east and west RTO operating temperature graph (1500 °F). Concentrators are stripped / desorbed at 375 °F.

West RTO Destruction Efficiency (DE) = 98.6 > 95 percent. Combined West Concentrators Removal Efficiency (RE) = 98.3 percent. No minimum RE required but RE contributes towards overall control efficiency and it goes into the VOC calculations.

PTI No. 13-19B, EUTOPCOATWEST, V.1-5 Testing

Formulation VOC data is used for VOC emission calculation purposes.

September 13-17, 2021, WPS Transfer efficiency (TE) and Oven Capture Efficiency (OCE) testing Primer/Tutone operations (EUPRIMERWEST) and Topcoat operations (EUTOPCOATWEST). RWDI USA LLC (RWDI # 2104810 Report dated February 8, 2022). See above for the details (RWDI # 2104810 Report dated February 8, 2022).

PTI No. 13-19B does not require any limits for CE and TE. However, these values go into the VOC calculations especially pounds of VOC per gallon of applied coating solids.

West RTO Destruction Efficiency (DE) = 98.6 > 95 percent.

Combined West Concentrators Removal Efficiency (RE) = 98.3 percent

February 14, 2022, West RTO destruction efficiency (DE) West Concentrator Removal Efficiency (RE), PM/PM10/PM2.5 and oxides of nitrogen (NOx) test (RWDI # 2102459 Report dated April 19, 2022)

- West RTO Destruction Efficiency (West RTO DE) = 98.6 > 95 percent. (Inlet NMOC (Desorb and Oven Combined) (as propane) = 80.8 ppmv = 25.3 pph & Outlet NMOC (as propane) = 1.3 ppmv = 0.4 pph.
- Combined West Concentrators Removal Efficiency (West CON RE) = 98.3 percent (Inlet NMOC ((as propane) = 66.01 ppmv & Outlet NMOC (as propane) = 1.19 ppmv. The permit does NOT require minimum RE.

West RTO is operated at 1500 °F to provide West RTO DE = 98.6 > 95 percent. VOC are desorbed / stripped at 375 °F from West Concentrators using hot air. Each concentrator is equipped with a natural-gas-fired hot air generator for VOC stripping / desorption purpose.

See above for CE and TE: September 13-17, 2021, WPS Transfer efficiency (TE) and Oven Capture Efficiency (OCE) testing Primer/Tutone operations (EUPRIMERWEST) and Topcoat operations (EUTOPCOATWEST).

PM, PM10, and PM2.5 emission rates from the observation zone portion of EUTOPCOATWEST are tabulated above.

PTI No. 13-19B, EUTOPCOATWEST, VI.1-6 Monitoring/Recordkeeping

FCA WTAP completes all the required monthly calculations. FCA WTAP keeps PPG paint / materials formulation data. FCA WTAP verifies, monitors and records the condition of each particulate control system through weekly visual inspections Tri-Dim inspects filter systems and FCA WTAP inspects booth condition.

FCA WTA plots West RTO operating temperature graph (1500 °F).

West RTO is operated at 1500 °F. VOC are desorbed / stripped at 375 °F from West Concentrators.

RTO & CONC temperature monitoring devices are calibrated periodically

FCA WTAP performs the required calculations based upon PPG formulation data and paint and solvent usage. FCA WTAP prepares the required periodic reports. Hardcopy quarterly reports of VOC emissions are submitted.

PTI No. 13-19B, EUTOPCOATWEST, VIII.

The emissions are discharged via SVBCOBSWEST (BC Observation Zone), SVCCOBSWEST (CC Observation Zone), SVBTHCONCWEST & SVRTOWEST

PTI No. 13-19B, EUTOPCOATWEST, IX.1-2

FCA WTAP complies with NESHAP / MACT 4I via coating formulation. At any rate, VOC and HAPs are controlled to satisfy the permit.

In addition, FCA WTAP complies with NSPS MM via Auto Protocol calculation as the NSPS limits are subsumed in 3.53 pounds of VOC per gallon of applied coating solids (GACS). Tested TE is incorporated into the Auto Protocol Calculations in lieu of NSPS MM Table TE values.

PTI No. 13-19B, EUPURGECLEANWEST

EUPURGECLEANWEST (FGCONTROLS, FGAUTOMACT, FGPSWEST/NEWEAST):

Various cleaning solvents and purge solvents used in the west paint shop (Jeep Wagoneer). VOC emissions from the solvent-based purge materials used within EUPRIMERWEST and the clearcoat booth portion of EUTOPCOATWEST are controlled by the west Rotary Zeolite concentrators and west RTO except when collected in the purge collection system.

POLLUTION CONTROL EQUIPMENT

Solvent-Based robots (EUPRIMERWEST (solvent-based primer surfacer unlike east paint shop where power coat primer surfacer is used) and the clearcoat (always solvent-based CC) portion of EUTOPCOATWEST) will capture and recover coatings and cleaning solvents in a purge collection system. Water borne basecoat purge is not controlled as it is unnecessary. Primer and clearcoat purge solvents not captured in the collection system will be controlled by the west Rotary Zeolite concentrator and west RTO.

PTI No. 13-19B, EUPURGECLEANWEST,I.1

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	CY2023	
1. VOC	69.3 tpy	12-month rolling time period as determined at the end of each calendar month	EUPURGECLEANWEST	9.4	

Captured purge cleaning solvents and paint solids are sent out for recycling solvents upon separation of waste paint solids. Purge cleaning of robotic guns is necessary between the color change. Usually, every vehicle that arrives next for painting is of different color resulting in frequent purge cleaning. Booth cleaning solvents (at both WPS & EPS) are captured by control devices consisting of rotary Zeolite concentrators and regenerative thermal oxidizer (RTO).

PTI No. 13-19B, EUPURGECLEANWEST, III.1

FCA WTAP captures all waste coatings and VOC-containing materials in purge capture system. The materials are properly handled in a closed containers and disposed of via solvent recycling company such as Gage Products Company.

PTI No. 13-19B, EUPURGECLEANWEST, VI.1-5

FCA WTAP performs the required VOC calculations using PPG formulation data. West RTO temperature is monitored and graphed. The coating usage and corresponding VOC calculations are performed for EUPURGECLEANWEST, EUPRIMERWEST and EUTOPCOATWEST

WTAP FIS WEST CONC temp = 375 °F. The VOC stripping / desorption temperature for West concentrators is 375 °F.

West CON RE (combined) = 98.3

WTAP FIS WEST RTO temp = 1500 °F. The West RTO combustion zone temperature is 1500 °F. West RTO Destruction Efficiency (West RTO DE) = 98.6 > 95 percent.

The emissions are discharged via SVBTHCONCWEST (Rotary Zeolite concentrators), SVRTOWEST (West RTO)

PTI No. 13-19B, EUBODYWIPEWEST

EUBODYWIPEWEST (FGAUTOMACT, FGPSWEST/NEWEAST): Body wipes used throughout the west paint shop.

No pollution control equipment for VOC emissions. These are wide-area VOC emissions.

PTI No. 13-19B, EUBODYWIPEWEST,I.1

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	CY 2023	
1. VOC	17.1 tpy	12-month rolling time period as determined at the end of each calendar month	EUBODYWIPEWEST	11	

FCA WTAP uses wet wipes (predominantly containing water and isopropyl alcohol (IPA)) copiously throughout the painting process to wipe clean the surfaces of vehicles especially after sanding. FCA WTAP counts the number of the wipe boxes used and the computes VOC emissions based upon VOC content of each box.

PTI No. 13-19B, EUBODYWIPEWEST,II.1 Operational Restriction

All waste coatings and VOC containing materials are captured and stored in closed containers and disposed of according to RCRA for solvent recovery at an off-site facility upon solids separation.

PTI No. 13-19B, EUBODYWIPEWEST, VI.1-3 Monitoring / Recordkeeping

The amount of body wipes (number of boxes and VOC content of each box) used records are kept and VOC calculations are performed. The wiping emissions are released to in-plant environment.

PTI No. 13-19B, EUSPOTREPAIRWEST

EUSPOTREPAIRWEST (FGCONTROLS, FGAUTOMACT, FGPSWEST/NEWEAST): A rapid reprocess repair booth after the west paint shop topcoat process.

Pollution control equipment

Dry filter particulate controls: the emissions are exhausted to the outside atmosphere.

PTI No. 13-19B, EUSPOTREPAIRWEST, I.1-5

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	
1. VOC	4.8		EUSPOTREPAIRWEST	3.7

	pounds /gallon (minus water), as applied	Daily volume weighted average		
2. VOC	0.5 tpy	12-month rolling time period as determined at the end of each calendar month	EUSPOTREPAIRWEST	0.30
з. PM	0.0029 pounds per 1,000 pounds of wet exhaust gas ^a	Hourly	EUSPOTREPAIRWEST	0.0010 (RM5) 0.0007 (RM201A)
4. PM10	0.026 pph	Hourly	EUSPOTREPAIRWEST	0.023
5. PM2.5	0.026 pph	Hourly	EUSPOTREPAIRWEST	0.014
a Calculated on a	wet gas basis			
1.				

PTI No. 13-19B, EUSPOTREPAIRWEST, III.1 process / operational restriction(s)

FCA WTAP captures all waste coatings and VOC-containing materials and stores them in closed containers. FCA WTAP disposes of waste materials in accordance with RCRA.

PTI No. 13-19B, EUSPOTREPAIRWEST, V Testing

In lieu of US EPA Reference Test Method 24 (RM 24), FCA WTAP uses PPG formulation information for coatings content. FCA WTAP keeps records of coatings content and usage.

Using US EPA Reference Test Methods of 40 CFR Part 60, Appendix A, FCA WTAP conducted stack tests for PM, PM10, PM2.5. See above for the test results.

PTI No. 13-19B, EUSPOTREPAIRWEST, VI,1-4 monitoring / recordkeeping

Using PPG formulation data, the materials usage, FCA WTAP performs the required calculations.

FCA WTAP operates properly dry filter particulate controls via weekly inspection and replacement if necessary. Tri-Dim inspects the filters weekly and UAW labor replaces the filters if necessary based upon Tri-Dim weekly inspection. See Tri-Dim monthly reports.

PTI No. 13-19B, EUSPOTREPAIRWEST, VIII.

The emissions are discharged via SVRPDRPCS

PTI No. 13-19B, EUSPOTREPAIRWEST, IX.1

FCA WTAP complies with NESHAP / MACT 4I via coating formulation.

PTI No. 13-19B, EUECOATEAST

EUECOATEAST (FGCONTROLS, FGAUTOMACT, FGNEWNGEAST, FGPSWEST/NEWEAST): Formerly EU-UNIPRIME. An electrodeposition (E-coat) coating process consisting of a series of dip tanks, rinses, a curing oven, and a cooling tunnel. The curing oven was previously controlled by an existing RTO, which has been replaced by the new east RTO. New east RTO controls both the east e-coat tank and associated curing oven portions of EUECOATEAST.

https://intranet.egle.state.mi.us/maces/WebPages/ViewActivityReport.aspx?ActivityID=24... 9/30/2024

E-coat VOC emissions from the oven are directly fed to East RTO.

Pollution control equipment

The east RTO controls VOC emissions from both e-coat tank and curing oven portions after installation of new east RTO.

PTI No. 13-19B, EUECOATEAST, I.1-7

Pollutant	Limit	Time Period / Operating Scenario	Equipment	
1. VOC	14.5 pph ^{β,C}		EUECOATEAST (dip tank)	NA
2. VOC	31.23 tpy ^c		EUECOATEAST (dip tank)	NA
3. VOC	8.2 pph ^{β,C}		EUECOATEAST (oven)	NA
4. VOC	17.66 tpy ^c		EUECOATEAST (oven)	NA
5. VOC	1.34 Ib/GACS ^C		EUECOATEAST (oven)	NA
6. VOC	0.04 ^β Ib/GACS ^B	Monthly Average	EUECOATEAST (dip tank and oven)	0.02
7. VOC	2.01 ^β tpy ^B	12-month rolling time period as determined at the end of each calendar month	EUECOATEAST (dip tank and oven)	0.06

^β Base applica	d upon monthly values using methods acceptable to the AQD. Currently, only SC I.6 & 1.7 are able.					
^β Curr	^β Currently, only VOC limits in PTI No. 13-19B, EUECOATEAST, I.6-7; EU-COLOR-ONE, I.12;					
EUPUR	EUPURGECLEANEAST, I.5 are applicable because Warren Truck West Paint Shop has (Jeep) started					
operati	operating. Coler2 has been shut down as required.					
Septer	mber 27 & October 4-5, 2021, East RTO (SVRTOEAST Truck) VOC destruction					
efficie	ncy (DE) & oxides of nitrogen (NOx) emissions rate and East (Truck) concentrator					
remov	ral efficiency (RE). (RWDI # 2003780 Report dated November 24, 2021)					
1. 2. 3.	Destruction Efficiency (SVRTOEAST East RTO DE): East RTO DE = 97.1 percent based upon mass emission rate (pounds per hour) of 46.47 pounds per hour at East RTO Inlet and 1.35 pounds per hour at Outlet. East RTO Outlet NOx emission rate: 7.7 ppmv and 2.65 pounds per hour E-coat smoke flow direction failed on October 4, 2021. A repeat test was conducted on October 5, 2021, which showed 100 percent capture based on inward smoke flow and negative 2,639 acfm at E-Coat Dip Tank Entrance & negative 2,593 acfm at E-Coat Dip Tank Exit.					

PTI No. 13-19B, EUECOATEAST, III.1 process / operational restriction(s)

FCA WTAP captures all waste coatings and VOC-containing materials and stores them in closed containers. FCA WTAP disposes of waste materials in accordance with RCRA.

PTI No. 13-19B, EUECOATEAST, IV.1-2 design/equipment parameter(s)

An existing RTO for the e-coat bake ovens has been replaced by new east RTO.

FCA WTAP operates the east RTO properly (97.1 > 95 percent destruction efficiency (DE)) for the electrodeposition tank and curing oven portions of EUECOATEAST.

East RTO DE = 97.1 percent based upon mass emission rate (pounds per hour)

Based upon temperature graph east RTO operates at 1550 °F.

PTI No. 13-19B, EUECOATEAST, V.1-3 Testing

In lieu of US EPA Reference Test Method 24 (RM 24), FCA WTAP uses PPG formulation information for coatings content. FCA WTAP keeps records of coatings content and usage for EUECOATEAST.

FCA WTAP performed capture efficiency (CE) test of the dip tank and oven portions of EUECOATEAST are 100 percent based upon smoke and velocity tests.

E-coat smoke flow direction failed on October 4, 2021. A repeat test was conducted on October 5, 2021, which showed 100 percent capture based on inward smoke flow and negative 2,639 acfm at E-Coat Dip Tank Entrance & negative 2,593 acfm at E-Coat Dip Tank Exit.

FCA WTAP performed destruction efficiency (DE) test of the east RTO on September & October 2021. See the above table.

September 27 & October 4-5, 2021, East RTO (SVRTOEAST Truck) VOC destruction efficiency (DE) & oxides of nitrogen (NOx) emissions rate and East (Truck) concentrator removal efficiency (RE). See the above table.

PTI No. 13-19B, EUECOATEAST, V.1-4: monitoring/recordkeeping

Using PPG formulation data, the materials / coatings usage, FCA WTAP performs the required calculations.

FCA WTAP monitors and records the combustion chamber temperature of east RTO on a continuous basis using calibrated thermocouples.

Based upon the temperature graph, East RTO operates at 1550 °F. Thermocouples are replaced or calibrated.

FCA WTAP maintains mostly PPG chemical composition of each material.

East RTO DE = 97.1 > 95 percent.

EAST CONC temperature = 390 °F

PTI No. 13-19B, EUECOATEAST, VIII.

The emissions are discharged via SVRTOEAST

PTI No. 13-19B, EUECOATEAST, IX.1-2

FCA WTAP complies with NESHAP / MACT 4I via coating formulation.

In addition, FCA WTAP complies with NSPS MM via Auto Protocol calculation as the NSPS limits are subsumed in 0.04 pounds of VOC per gallon of applied coating solids (GACS). Tested TE is incorporated into the Auto Protocol Calculations in lieu of NSPS MM Table TE values.

PTI No. 13-19B, EUPWDRPRMEAST

EUPWDRPRMEAST (FGCONTROLS, FGAUTOMACT, FGPSWEST/NEWEAST): A powder anti-chip coating application process in the east paint shop (truck) which is electrostatically applied. The spray booth also includes the application of a colored powder basecoat for tu-tone applications. The powder spray application is controlled by a particulate filtration system which is vented inside the plant.

The particulate collection system is part of the powder coat process to achieve nearly 100 percent capture efficiency of powder coating. The exhaust is not vented to outside ambient air.

The captured powder is recycled back into the powder coating booth. While truck's visible areas get virgin powder application, the rest get non-virgin (recycled) powder application.

Pollution control equipment

Dry filter particulate controls on the powder application booth.

There is no exhaust to outside ambient air from powder side. However, oven emissions are exhausted to outside ambient air.

The powder coating application is an electrostatic application where powder is charged, and the vehicle body is grounded. The particles are electrostatically attracted to the vehicle body until firmly attached to the body upon curing / baking.

The VOC emission limits are low (limits: 0.05 lb/GACS and 3.5 tpy & actual: 1.02 tpy in CY2023). VOC emissions are due to only baking / curing process due to polymerization of powder coating. I did not detect any visible emissions during the inspection. The dry filter particulate control systems are installed, maintained, and operated properly

The oven emissions are discharged via SVDSANTIOVEN1 & SVDSANTIOVEN2

PTI No. 13-19B, EUPURGECLEANEAST

EUPURGECLEANEAST (FGAUTOMACT, FGPSWEST/NEWEAST): Formerly EU-SOLVENT-WIPE. Emissions from purge solvent, solvent wipes, and body wipe cleaners throughout the body shop, east paint shop, and final assembly portions of the plant. After installation of the East Rotary Zeolite Concentrator (East CON) and east RTO, VOC emissions from the solvent-based purge materials used within the basecoat and clearcoat booths are controlled except when collected in the purge collection system.

Two (2) East Rotary Zeolite Concentrators (East CON) and East RTO are installed and operating as West Paint Shop (WPS Jeep) started operating. The permit states that West Paint Shop (WPS) shall not be operated unless East Paint Shop (EPS Truck) VOC add-on control systems (East CON & East RTO combo) are installed and operated properly for EPS booth and oven VOC emissions.

Pollution control equipment

After installation of the East Rotary Zeolite concentrators (2 East CON) and East RTO, VOC emissions from the solvent-based purge materials used within the

basecoat (BC) and clearcoat (CC) booths are controlled except when collected in the purge collection system.

The collected purge solvents and solids are sent out to third parties for recycling solvents upon separation of solids.

PTI No. 13-19B, EUPURGECLEANEAST, I.1-5

Pollutant	Limit	Time Period / Operating Scenario	Equipment	
1. VOC	488.6 ^{β,D} pph	Per hour operated in a calendar month	EUPURGECLEANEAST	NA
2. VOC	1502.58 ^D tpy	12-month rolling time period as determined at the end of each calendar month	EUPURGECLEANEAST	NA
3. VOC	440.0 ^{β,C} pph	Per hour operated in a calendar month	EUPURGECLEANEAST	NA
4. VOC	555.0 ^C tpy	12-month rolling time period as determined at the end of each calendar month	EUPURGECLEANEAST	NA
5. VOC	245.1 ^E tpy	12-month rolling time period as determined at the end of each calendar month	EUPURGECLEANEAST	24.79 << 245

 $^{\beta}$ Based upon monthly values using methods acceptable to the AQD.

^C This emission limit shall become applicable based on the requirements in SC IX.1, unless the requirements in FGPSWEST/NEWEAST SC IX.2 are met, and SC I.5 is applicable.

^D These emission limits are applicable until the requirements in SC IX.1 are met and SCs I.3 and I.4 become applicable, unless the requirements in FGPSWEST/NEWEAST SC IX.2 are met and SC I.5 is applicable.

^E This emission limit shall become applicable when the requirements in FGPSWEST/NEWEAST SC IX.2 are met.

E Currently, onl	y VOC limits in	PTI No. 13-19B, EUECOAT	EAST, I.6-7; EU-COLOR-O	NE, I.12 are applicable.		
EUPURGECLEANEAST, I.5 is applicable because Warren Truck West Paint Shop (Jeep Wagoneer) has started operating. Othe VOC limits (EUPURGECLEANEAST, I.1-4) are obviously not applicable. Coler2 has been shut down as required by the permit. Besides, the automotive assembly line associated with PTI #14- 19A for FCA USA LLC, Detroit Assembly Complex Mack (N2155) started operating. The emissions reductions are required from 1502.58 to 555 (when Mack started operating) to 245 (when WTAP Jeep and Mack simultaneously achieved operational status) tons of VOC per year.(PTI No. 13-19B, EUPURGECLEANEAST, I.5: 245.1 tons of VOC per year)						

PTI No. 13-19B, EUPURGECLEANEAST, III.1 process / operational restriction(s)

FCA WTAP captures all waste coatings and VOC-containing materials and stores them in closed containers. FCA WTAP disposes of waste materials in accordance with RCRA.

PTI No. 13-19B, EUPURGECLEANEAST, IV.1 design/equipment parameter(s)

FCA WTAP started operating West Paint Shop (Jeep Wagoneer). FCA WTAP operates properly East Rotary Zeolite concentrators (2 East CON) and East RTO (1) portions of FGCONTROLS.

FCA WTAP maintains a minimum desorption hot air inlet temperature at 390 °F at East concentrators.

FCA WTAP operates east RTO at, or above, combustion chamber temperature of 1550 °F based upon East RTO destruction efficiency (East RTO DE = 97.1 > 95 percent) stack test.

Based upon the temperature charts, East RTO operates at 1550 °F and desorption (2 East CON) temperature is 390 °F at inlet.

PTI No. 13-19B, EUPURGECLEANEAST, VI.1-6 monitoring / recordkeeping

As FCA WTAP started operating West Paint Shop (Jeep), all VOC emissions reductions are applicable and FCA WTAP is required to operate both East Zeolite Rotary concentrators (2 East CON) and west Zeolite Rotary concentrators (2 West CON) and corresponding east RTO (1) and west RTO (1).

While concentrators control paint booth VOC, RTOs control curing oven emissions and stripped / desorbed (2 East CON & 2 West CON) VOC. Upon adsorption of VOC in the concentrators (adsorption pies of Rotary Zeolite Concentrators), exhaust gases are released to outside ambient air.

Using PPG formulation data, the materials usage, FCA WTAP performs the required calculations.

FCA WTAP monitors and records desorption temperatures of east concentrators (2) and the combustion chamber temperature of east RTO on a continuous basis using calibrated thermocouples. The temperature graphs are drawn. Based upon the temperature charts, East RTO operates at 1550 °F and desorption (2 East CON) temperature is 390 °F at inlet.

Coatings / materials usage and PPG formulation information records are kept.

PTI No. 13-19B, EUPURGECLEANEAST, VIII.

The emissions are discharged via SVBTHCONCEAST (east concentrators) & SVRTOEAST(east RTO)

PTI No. 13-19B, EUSPOTREPAIREAST

EUSPOTREPAIREAST (FGAUTOMACT, FGCONTROLS, FGPSWEST/NEWEAST): Spot repair process in the east paint shop, prior to the topcoat application.

Pollution control equipment

Dry filter particulate controls on the spot repair process, which is then exhausted to the outside atmosphere.

https://intranet.egle.state.mi.us/maces/WebPages/ViewActivityReport.aspx?ActivityID=24... 9/30/2024

PTI No. 13-19B, EUSPOTREPAIREAST, I.

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	CY2023	
1. VOC	4.8 Ibs VOC per gallon (minus water), as applied	Calendar Month Average	EUSPOTREPAIREAST	0	
2. VOC	0.5 tpy	12-month rolling time period as determined at the end of each calendar month	EUSPOTREPAIREAST	0.02	
з. PM	0.0029 Ibs per 1,000 lbs of wet exhaust gas ^a	Hourly	EUSPOTREPAIREAST	0.0017 (June 2022) 0.0005 (Aug 2022) Both < 0.0029	
4. PM10	0.026 pph	Hourly	EUSPOTREPAIREAST	0.135 (June 2022) 0.037 pph (Aug 2022)	
5. PM2.5	0.026 pph	Hourly	EUSPOTREPAIREAST	0.067(June 2022) 0.028 (Aug 2022)	
^a Calculated on a wet gas basis					
1.					

PTI No. 13-19B, EUSPOTREPAIREAST, III.1 Process/operational restriction(s)

FCA WTAP captures all waste coatings and VOC-containing materials and stores them in closed containers. FCA WTAP disposes of waste materials in accordance with RCRA.

PTI No. 13-19B, EUSPOTREPAIREAST, IV.1 Design/equipment parameter(s)

FCA WTAP operates properly dry filter particulate controls via weekly inspection and replacement if necessary. Tri-Dim inspects the filters weekly and UAW labor replaces the filters if necessary. See Tri-Dim monthly reports.

PTI No. 13-19B, EUSPOTREPAIREAST,V.1 Testing

In lieu of US EPA Reference Test Method 24 (RM24), FCA WTAP uses PPG formulation data.

FCA WTAP conducted performance tests to verify PM, PM10, and PM2.5 emission rates. See above table for the test results and the permit revision.

PTI No. 13-19B, EUSPOTREPAIREAST, VI.1-4 Monitoring/recordkeeping

Using PPG formulation data, the materials usage, FCA WTAP performs the required calculations.

FCA WTAP performs weekly visual inspections of the filter systems (Tri-Dim).

PTI No. 13-19B, EUSPOTREPAIREAST, VIII

The emissions are discharged vial SVDS_SPOTEAST

PTI No. 13-19B, EUSEALERS

EUSEALERS (FGAUTOMACT, FGPSWEST/NEWEAST): Formerly EU-

SEALERS&ADHESIVES. Various manual and robotic sealers and adhesive (including glass bonding) application stations/booths. Sealers and adhesives are applied at various decks in both west and east paint shops (some of which are cured in the sealer oven), the body shop, and the final assembly areas of the facility.

No control equipment.

PTI No. 13-19B, EUSEALERS, I.1-4

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	CY2023	
1. VOC	0.25 Ibs VOC per gallon (minus water), as applied	Calendar Month Average	EUSEALERS	0.05	
2. VOC	26.8 tpy	12-month rolling time period as determined at the end of each calendar month	EUSEALERS	1.24	
3. VOC	11.1 tpy	12-month rolling time period as determined at the end of each calendar month	Sealers and adhesives used in the west Paint Shop portion of EUSEALERS	7	
 During the inspection, I did not detect any visible emissions from SVSLROVENEAST 					
It may be noted that the sealers hardy contains VOC, consistent with the previous tests for sealers VOC content at FCA WTAP.					

PTI No. 13-19B, EUSEALERS, III.1 Process/operational restriction(s)

FCA WTAP captures all waste materials and VOC-containing materials and stores them in closed containers. FCA WTAP disposes of waste materials in accordance with RCRA.

PTI No. 13-19B, EUSEALERS, V Testing

FCA WTAP uses formulation information for sealers or adhesives

PTI No. 13-19B, EUSEALERS, VI MONITORING/RECORDKEEPING

Using formulation data, the materials (sealers and adhesives) usage, FCA WTAP performs the required calculations.

The East Paint Shop (EPS) sealers and adhesive emissions are discharged via SVSLROVENEAST (east sealer oven) to outside ambient air.

The West Paint Shop (WPS) sealers and adhesive emissions are NOT discharged to outside ambient air.

PTI No. 13-19B, EUFINALREPAIR

EUFINALREPAIR (FGAUTOMACT, FGPSWEST/NEWEAST): Formerly EU-FINAL-REPAIR: Final repair operations including a coating area. The PREP BOOTHS or SANDING BOOTHS are equipped with side-draft dry filter particulate control systems. The spray booths are equipped with downdraft dry filter particulate control system. The emissions are exhausted to the general in-plant environment.

No discharge to outside ambient air. Hence, the filters must be maintained and operated properly for employees' health, safety and comfort.

Pollution control equipment

Side-draft dry filter particulate controls on sanding booths. Downdraft dry filter particulate control systems on spray booths.

PTI No. 13-19B, EUFINALREPAIR, I.1-2

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	
1. VOC	4.8 Ib/gal (minus water), as applied	Daily volume weighted average	EUFINALREPAIR	0
2. VOC	1.2 tpy	12-month rolling time period as determined at the end of each calendar month	EUFINALREPAIR	0.03

PTI No. 13-19B, EUFINALREPAIR, III.1 process/operational restriction(s)

FCA WTAP captures all waste coatings and VOC-containing materials and stores them in closed containers. FCA WTAP disposes of waste materials in accordance with RCRA.

PTI No. 13-19B, EUFINALREPAIR, IV.1 design/equipment parameter(s)

FCA WTAP operates properly dry filter particulate controls (side-draft for sanding or prep booths and downdraft for spray booths) via weekly inspection and replacement if necessary.

Tri-Dim inspects the filters weekly and UAW replaces if necessary. Tri-Dim submits the monthly inspection reports.

https://intranet.egle.state.mi.us/maces/WebPages/ViewActivityReport.aspx?ActivityID=24... 9/30/2024

PTI No. 13-19B, EUFINALREPAIR, V.1 Testing

FCA WTAP uses supplier (PPG) formulation information for the purpose of coating contents and calculations.

PTI No. 13-19B, EUFINALREPAIR, VI.1 monitoring / recordkeeping

Using PPG / supplier formulation data, the materials / coatings usage, FCA WTAP performs the required calculations.

FCA WTA performs weekly inspection of side-draft dry filters for prep or sanding booths and downdraft dry filters for spray booths replacement if necessary. See above for the Tri-Dim inspection reports.

PTI No. 13-19B, EUFINALREPAIR, VIII stack/vent restriction(s)

The exhaust gases from EUFINALREPAIR are not directly discharged to the outside ambient air.

PTI No. 13-19B, EUFLUIDFILL

EUFLUIDFILL (FGPSWEST/NEWEAST): Formerly EU-FLUID-FILL: Each vehicle will be filled with various fluids such as gasoline, antifreeze, transmission fluid, power steering fluid, and windshield washer fluid.

PTI No. 13-19B, EUFLUIDFILL, I.1

Pollutant	Limit	Time Period / Operating Scenario	Equipment	
voc	2.7 tpy	12-month rolling period as determined at the end of each calendar month	EUFLUIDFILL	2.3

PTI No. 13-19B, EUFLUIDFILL, III.1 process/operational restriction(s)

After about 2006 Model Year, Onboard Re-fueling Vapor Recovery (ORVR – an activated carbon-filled canister) system is required by federal law (CAA Mobile Sources or CARB) for all vehicles.

PTI No. 13-19B, EUFLUIDFILL, IV. design/equipment parameter(s)

When fuel deliveries are made, FCA WTAP ensures that vapor balance systems are connected properly. The tanks are equipped with a permanent submerged fill pipe to prevent evaporative losses due to splash loading.

PTI No. 13-19B, EUFLUIDFILL, VI. monitoring/recordkeeping

Using the materials / gasoline loading and usage data, FCA WTAP performs the required calculations.

PTI No. 13-19B, EUTRIMBOILER, DESIGN/EQUIPMENT PARAMETER(S)

EUTRIMBOILER (FGBOILERMACTHWG, FGPSWEST/NEWEAST): A 37 million BTU heat input per hour (Cleaver Brooks) natural gas only boiler, equipped with low NOx burners.

Pollution control equipment

Low NOx burner

PTI No. 13-19B, EUTRIMBOILER, II. material limit(s)

The boiler can burn only natural gas and nothing else. Only pipeline quality natural gas is used.

https://intranet.egle.state.mi.us/maces/WebPages/ViewActivityReport.aspx?ActivityID=24... 9/30/2024
PTI No. 13-19B, EUTRIMBOILER, IV.1-2 design/equipment parameter(s)

The boiler's design capacity is 37 MM BTU per hour on a fuel / natural gas heat input basis. It is equipped with low NOx burners that are operated according to the manufacturer's recommendations.

PTI No. 13-19B, EUTRIMBOILER, VI. monitoring/recordkeeping

Using natural gas usage, FCA WTAP performs the required calculations. Also, complies with NSPS Dc standards by keeping such records and submitting MiEnviro Annual Emissions Report. All combustion products emissions are discharged via SVTRMBOIL.

PTI No. 13-19B, EUTRIMBOILER, VIII.1

The combustion products emissions are discharged via SVTRMBOIL

PTI No. 13-19B, EUTRIMBOILER, IX.1

FCA WTAP complies with NSPS Dc via keeping natural gas usage / burning records and submitting annual MiEnviro emissions reports.

PTI No. 13-19B, FLEXIBLE GROUPS (FGs)

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FGTOPCOATEAST	Formerly FG-TOPCOAT: Two topcoat lines (EU-COLOR-ONE & EU- COLOR-TWO) and one high bake- repair operation (EU-REPROCESS), which is a part of the topcoat system. Each topcoat line consists	EU-COLOR-ONE, EU- COLOR-TWO, EU- REPROCESS

	of spray booths for applying topcoat to vehicle bodies and oven for curing. Reprocess is high bake-repair operation that consists of spray booths for topcoat application to repair vehicle bodies and oven for curing. While Color1 (36 JPH) and Color2 (36 JPH) lines are identical topcoat lines (72 JPH), reprocess line is shorter and slower.	
EU COLOR-TWO and EU RE Bake Reprocess has been s therein.	EPROCESS: While Color2 has been disn shut down in-situ and rendered inoperat	nantled and removed, High ble by removing equipment
FGCONTROLS	Concentrators (4) and RTOs(2) used for control of VOC emissions as applicable from the paint spray booths, flash-off areas, and curing ovens. Water-wash or dry filter particulate control on paint spray booths and sanding/repair booths and as pre-filtration to VOC control devices.	EUECOATWEST, EUPRIMERWEST, EUTOPCOATWEST, EUPURGECLEANWEST, EUSPOTREPAIRWEST, EUECOATEAST, EUPWDRPRMEAST, EU COLOR-ONE, EU REPROCESS, EUPURGECLEANEAST, EUSPOTREPAIREAST, EUFINALREPAIR, EUNEWNGASSEMBLY, EUNEWNGPSEAST, EUSPOTPRIMEWEST1, EUSPOTPRIMEWEST2
FGCONTROLS: Two west R Zeolite concentrators and o RTOs for VOC / HAP contro production at West Paint SI NESHAP / MACT 4I complia	otary Zeolite concentrators and one we ne east RTO. In all, four (4) Rotary Zeol I are present. The VOC controls as state nop (Jeep). It may be noted that while VC nce is demonstrated using MACT 4I HA	st RTO and two east Rotary ite concentrators and two (2) ed are effective upon starting DC controls are used, P compliant coatings.
FGSPOTPRIMEWEST	Two spot prime processes in the west paint shop. One that is placed after the E-coat process and prior to the primer application process, and one that is located after the primer process and prior to topcoat application.	EUSPOTPRIMEWEST1, EUSPOTPRIMEWEST2
FGRTOWEST	This flexible group covers NOx, PM, PM10, and PM2.5 emissions from the west paint shop concentrators (2) and west RTO (1).	EUECOATWEST, EUPRIMERWEST, EUTOPCOATWEST, EUPURGECLEANWEST

	from the east paint shop concentrators (2) and RTO (1) associated with EUECOATEAST, EUPURGECLEANEAST, and the refurbished spray booth portion of EU COLOR-ONE	EUECOATEAST, EU COLOR-ONE, EU PURGECLEANEAST
FGBOILERS	Four (4) natural gas fired boilers to produce steam and heat located in the powerhouse. Boiler Nos. 3, 4 and 5 are equipped with low NOx burners, Boiler No. 6 (with oxygen trim system) is a high efficiency boiler but not low NOx.	EUBOILER3, EUBOILER4, EUBOILER5, EUBOILER6
FGBOILERS: These are exist	ng boilers installed decades ago (<u>1980s - 1990s)</u>
FGAUTOMACT	Each new, reconstructed, or existing affected source as defined in Title 40 of the Code of Federal Regulations (CFR), Part 63.3082, that is located at a facility which applies topcoat to new automobile or new light duty truck bodies or body parts for new automobiles or new light duty trucks; AND/OR in which you choose to include, pursuant to 40 CFR 63.3082(c), any coating operations which apply coatings to new other motor vehicle bodies or body parts for new other motor vehicles; parts intended for use in new automobiles, new light duty trucks or new other motor vehicles; or aftermarket repair or replacement parts for automobiles, light duty trucks or other motor vehicles; and that is a major source, is located at a major source, or is part of a major source of emissions of hazardous air pollutants (HAPs) except as provided in 63.3081(c). This includes equipment covered by other nermits, grandfathered	EUPRETREATWEST, EUECOATWEST, EUPRIMERWEST, EUTOPCOATWEST, EUPURGECLEANWEST, EUBODYWIPEWEST, EUSPOTREPAIRWEST, EUECOATEAST, EUPWDRPRMEAST, EUPURGECLEANEAST, EUSPOTREPAIREAST, EUSEALERS, EU COLOR ONE, EU COLOR-TWO, EU REPROCESS, EUSPOTPRIMEWEST1, EUSPOTPRIMEWEST2

FGAUTOMACT & REPROCESS: This reprocess coating line, which is shorter than the rest (like Color1, an identical Color2 that has been shut down and removed), has been shut down permanently in-situ and rendered inoperable by removing essential equipment. The vehicles now are reprocessed in regular main paint line (e.g., Color1). Color2, which was parallel and identical to Color1, has been removed. Like other Big 3 Automakers, FCA has chosen to comply with NESHAP / Auto MACT 4I (40 CFR, Part 63, Subpart IIII—National Emission Standards for Hazardous Air Pollutants: Surface Coating of Automobiles and Light-Duty Trucks) via MACT 4I HAP compliant coatings. Previously (before generating necessary VOC offsets for WPS and Mack), two identical and parallel coating lines, namely Color1 and Color2, operated simultaneously.

FGBOILERMACTHWG	This FG is for the eleven hot water generators (HWG) and the Trim Boiler associated with the installation of the west paint shop and modernization of the east paint shop. Gas 1 Fuel Subcategory requirements for new Boilers/Process Heaters at major sources of Hazardous Air Pollutants per 40 CFR Part 63, Subpart DDDDD. These new boilers or process heaters must comply the applicable provisions of this subpart upon startup.	EUHWG1, EUHWG2, EUHWG3, EUHWG4, EUHWG5, EUHWG6, EUHWG7, EUHWG8, EUDSBCHWG, EUDSSBHWG, EUDSCCHWG, EU TRIMBOILER
FGBOILERMACTHWG: Gas	1 = Pipeline Quality Natural Gas	
FGNGWEST	All natural-gas-fired equipment associated with the installation of west paint shop portion of the Warren Truck Assembly Plant, except the emergency generator, including ten hot water generators, air supply houses, space heaters, heated flash, cure ovens, the carbon / Zeolite concentrators (2), and the RTO (1). In addition, this FG includes new air supply houses and space heating in the assembly area.	EUPRETREATWEST, EUECOATWEST, EUPRIMERWEST, EUTOPCOATWEST, EUNEWNGASSEMBLY, EUHWG1, EUHWG2, EUHWG3, EUHWG4, EUHWG5, EUHWG6, EUHWG7, EUHWG8
FGNEWNGEAST	All natural new gas-fired equipment associated with the refurbishment of east paint shop portion of the Warren Truck Assembly Plant, including hot water generators, air supply houses, space heaters, cure ovens, the carbon concentrators (2), and the RTO (1).	EUECOATEAST, EU COLOR-ONE, EUDSBCHWG, EUDSSBHWG, EUDSCCHWG, EUNEWNGPSEAST

FGTANKS	Any existing (placed into operation before 7/1/79), new (placed into operation on or after 7/1/79) or modified storage tank, including those that are exempt from the requirements of R 336.1201 pursuant to R 336.1284.	EU–UNLEADEDGAS1, EUMETANK, EUDIESELTANK1, EUANTIFREEZETANK, EUBRAKEFLUIDTANK, EUAUTOTRANS, EUDIESELEXTANK, EUGASTANK2, EUDIESELTANK2, EUPURSOLVTANK, EUDIESELTANK3
FG-OLDMACT	FG-OLDMACT: The affected source is each new, reconstructed, or existing Organic Liquid Distribution (OLD) (non- gasoline) operation that is located at, or is part of a major source of hazardous air pollutant (HAP) emissions. The affected source is comprised of storage tanks, transfer racks, equipment leak components associated with storage tanks, transfer racks and pipelines, transport vehicles, and all containers while loading or unloading at transfer racks subject to this subpart. Equipment that is part of an affected source under another NESHAP is excluded from the affected source. (40 CFR 63.2338 (c))	EUMETANK
	These conditions specifically cover existing (construction predates April 2, 2002) liquid storage tanks which hold more than 5,000 gallons but less than 50,000 gallons and/or new liquid storage tanks which hold more than 5,000 gallons but less than 10,000 gallons of methanol/windshield washer fill solvents that are dispensed to newly assembled vehicles.	
FGNGEMENG	Emergency engines subject to 40 CFR Part 60	EUNGGEN1

FGPSWEST/NEWEASTAll process equipment associated with the installation of the west paint shop and modernization of the east paint shop, body shop, and final assembly.EUPRETREATWEST, EUPCOATWEST, EUPORCATWEST, EUPORGECLEANWEST, EUBODYWIPEWEST, EUBODYWIPEWEST, EUSPOTREPAIREAST, EUSPOTREPAIREAST, EUSPOTREPAIREAST, EUSPOTREPAIREAST, EUSPOTREPAIREAST, EUSPOTREPAIREAST, EUSPOTPRIMEWEST1, EUSPOTPRIMEWEST2, EUHWG3, EUHWG3, EUHWG4, EUHWG5, EUHWG6, EUHWG7, EUHWG6, EUDSSCHWG, EUDSSCHWG, EUDSSCHWG, EUNEWNGASSEMBLY, EUNEWNGPSEAST, EUNEWNGASSEMBLYA		Subpart JJJJ, Standards of Performance for Stationary Spark Ignition Internal Combustion Engines. New/Reconstructed emergency engines greater than 500 HP constructed on or after January 1, 2009.	
	FGPSWEST/NEWEAST	All process equipment associated with the installation of the west paint shop and modernization of the east paint shop, body shop, and final assembly.	EUPRETREATWEST, EUECOATWEST, EUPRIMERWEST, EUTOPCOATWEST, EUPURGECLEANWEST, EUBODYWIPEWEST, EUSPOTREPAIRWEST, EUECOATEAST, EUPWDRPRMEAST, EUPWDRPRMEAST, EUPURGECLEANEAST, EUSPOTREPAIREAST, EUSPOTREPAIREAST, EUFLUIDFILL, EU COLOR ONE, EU REPROCESS, EUSPOTPRIMEWEST2, EUHWG1, EUHWG2, EUHWG3, EUHWG4, EUHWG5, EUHWG6, EUHWG7, EUHWG8, EUDSSCHWG, EUDSSCHWG, EUDSSCHWG, EUNEWNGASSEMBLY, EUNEWNGPSEAST, EUNGGEN1, EU TRIMBOILER

West Paint Shop (WPS Jeep Wagoneer) has been operating & producing salable vehicles and East Paint Shop (EPS RAM 1500 Classic Truck) has been modernized as required by the permit by installing aknd operating properly east Rotary Zeolite concentrators (2 east CONs) and east RTO (1). Now all booth VOC emissions (EPS & WPS) are controlled as well. Detroit Assembly Complex – Mack (N2155) has started operating & producing salable vehicles that required FCA WTAP to reduce VOC emissions to provide 110 percent VOC offsets to MACK. Besides, WTAP provided 110 percent VOC offsets to build WPS (Jeep Wagoneer) paint shop. Hence, EPS modernization.

PTI No. 13-19B, FGTOPCOATEAST

FGTOPCOATEAST (EU-COLOR-ONE, EU COLOR-TWO, EU REPROCESS): Formerly FG-TOPCOAT: Two topcoat lines (EU-COLOR-ONE & EU-COLOR-TWO) and one high bake-repair operation (EU-REPROCESS), which is a part of the topcoat system. Each topcoat line consists of spray booths for applying topcoat to vehicle bodies and oven for curing. Reprocess is high bake repair operation that consists of spray booths for topcoat application to repair vehicle bodies and oven for curing. While Color1 (36 JPH) and Color2 (36 JPH) lines are identical topcoat lines (72 JPH), reprocess hi-bake repair line is shorter and slower.

As required by the permit, while one high bake-repair operation (EU-REPROCESS) is permanently shut down in-situ (the vehicles still run through and most repair booth equipment has been removed rendering shorter reprocess paint line inoperable), Color2 (EU-COLOR-TWO) topcoat line has been dismantled and removed permanently. EU-REPROCESS is inoperable via removal of essential equipment.

Pollution control equipment

Downdraft water-wash system for the spray booths of EU COLOR ONE. A thermal oxidizer for bake oven of EU COLOR-ONE. The east concentrator and east RTO control the spray booth portions of EU-COLOR-ONE after installation.

PTI No. 13-19B, FGTOPCOATEAST, I.1-22

Pollutant	Limit	Time Period / Operating Scenario	Equipment	CY 2023
1. VOC	1.47 ^θ kg per liter of applied coating solids (12.3 lb/GACS)	Calendar month average	FGTOPCOATEAST	2.56 Ib/GACS Applicable
2. VOC	270.2 ^{β,D} pph	Per hour operated in a calendar month	Spray booths of EU COLOR-ONE	D. Not applicable

3. VOC	582.11 ^D tpy	12-month rolling time period as determined at the end of each calendar month	Spray booths of each topcoat line (EU-COLOR-ONE, EU-COLOR-TWO)	D. Not applicable
4. VOC	6.8 ^β pph	Per hour operated in a calendar month	Bake Ovens of each topcoat line (EU-COLOR-ONE, EU-COLOR-TWO)	Not applicable
5. VOC	15.67 tpy	12-month rolling time period as determined at the end of each calendar month	Bake Ovens of each topcoat line (EU-COLOR-ONE, EU-COLOR-TWO)	Not applicable
6. VOC	89.9 ^{β,D} pph	Per hour operated in a calendar month	High Bake Repair spray booths (EU-REPROCESS)	EU-REPROCESS shutdown
7. VOC	193.74 ^D tpy	12-month rolling time period as determined at the end of each calendar month	High Bake Repair spray booths (EU-REPROCESS)	EU-REPROCESS shutdown
8. VOC	2.3 ^β pph	Per hour operated in a calendar month	High Bake Repair bake oven (EU-REPROCESS)	EU-REPROCESS shutdown
9. VOC	5.22 tpy	12-month rolling time period as determined at the end of each calendar month	High Bake Repair bake oven (EU-REPROCESS)	EU-REPROCESS shutdown
10. VOC	45.0 ^{β,C} pph	Per hour operated in a calendar month	High Bake Repair spray booths (EU-REPROCESS)	EU-REPROCESS shutdown
11. VOC	40.0 ^c tpy	12-month rolling time period as determined at the end of each calendar month	High Bake Repair spray booths (EU-REPROCESS)	EU-REPROCESS shutdown

12. VOC	193.0 ^C tpy	12-month rolling time period as determined at the end of each calendar month	Spray booths of EU COLOR-ONE	Non-applicable
13. VOC	270.2 ^{β,E} pph	Per hour operated in a calendar month	Spray booths of EU COLOR-TWO	COLOR-TWO removed
14. VOC	430.0 ^F tpy	12-month rolling time period as determined at the end of each calendar month	Spray booths of EU COLOR-TWO	COLOR-TWO removed
Special Condit REPROCESS. startup of Mac simultaneously FWO) & 6-7 (fo	ions (SCs) in PTI I.12 for EU-COLOI k (PTI #14-19A for y PTI No. 13-19B, r EU-REPROCESS	No. 13-19B, FGT R-ONE. I.14 for E FCA USA, LLC, FGTOPCOATEAS S) became non-a	OPCOATEAST, I.10-1 U-COLOR-TWO) beca Detroit Assembly Co ST, I.3 (for EU-COLOF pplicable. Mack start	4 (I.10 & I.11 for EU- ame applicable upon mplex Mack (N2155)) and R-ONE and EU-COLOR- ed operating.
15. VOC	3.53 ^{ө,н} Ib/GACS	Calendar month average	EU-COLOR-ONE (spray booths and oven)	2.85 Ib/GACS YH Applicable
16. VOC	201.6 ^H tpy	12-month rolling time period as determined at the end of each calendar month	EU-COLOR-ONE (spray booths and oven)	77.9 YH Applicable
17. PM	0.0029 ^{G,I} Ibs per 1,000 Ibs of exhaust gas	Hourly	EU-COLOR-ONE (base coat observation zone)	BC Obs1 0.0003 BC Obs2 0.0021 BC Obs3 0.0024 Y Applicable
18. PM	0.0029 ^{G,I} Ibs per 1,000 Ibs of exhaust gas	Hourly	EU-COLOR-ONE (clear coat observation zone)	CC Obs1 0.0017 CC Obs2 0.0028

				Y Applicable	
19. PM10	0.218 ¹ pph	Hourly	EU-COLOR-ONE (base coat observation zone)	BC Obs1 0.019 BC Obs2 0.114 BC Obs3 0.174	
		-			
20. PM10	0.173 ¹ pph	Hourly	EU-COLOR-ONE (clear coat observation zone)	CC Obs1 0.095 CC Obs2 0.065	
			I		
21. PM2.5	0.218 ¹ pph	Hourly	EU-COLOR-ONE (base coat observation zone)	BC Obs1 0.016 BC Obs2 0.066 BC Obs3 0.075	
		-			
22. PM2.5	0.173 ^I pph	Hourly	EU-COLOR-ONE (clear coat observation zone)	CC Obs1 0.062 CC Obs2 0.041	
Note: All PM10 & PM2.5 revisions are applicable upon issuance of new permit PTI No. 13- 19C. Coler2 (EU COLOR-TWO) and high bake reprocess repair (EU-REPROCESS) have been shut down.					
^θ Per the EPA Pro ^β Based upon mo ^C This emission I	otocol (VI(4) & onthly values u limit shall beco	(5)) using metho ome applical	ds acceptable to AQD. ble based on the require	ments in SC IX.2.	

^DThis emission limit shall be applicable until the requirements in SC IX.3 are met and SCs I.10, I.11, I.12, I.14 become applicable.

^EThis emission limit shall be applicable until the permanent shut down of EU-COLOR-TWO as required by SC IX.5.

^FThis emission limit shall become applicable based on the requirements in SC IX.2 and shall be applicable until the permanent shut down of EU-COLOR-TWO as required by SC IX.5.

^GCalculated on a wet gas basis.

^HThis emission limit shall be applicable upon startup of any emission unit in the West Paint Shop.

This emission limit shall be applicable upon startup of the refurbished EU-COLOR-ONE after control equipment has been installed.

Color1 (EU-COLOR-ONE) is operated only when East Concentrators (2) and East RTO are operating properly. Color1 was temporarily shut down to install control equipment (East Concentrators (2) and East RTO (1).

East RTO Destruction Efficiency (SVRTOEAST East RTO DE): East RTO DE = 97.1 > 95 percent

RWDI USA LLC (RWDI # 2201515 Report dated August 14, 2022)

- SVBC10BEAST1 (Basecoat Observation 1) (FGTOPCOATEAST, EU-COLOR-ONE): PM (Method 201A) = 0.0003 pounds per 1000 pounds wet gas < 0.0029. PM10 = 0.019 pph < 0.218. PM2.5 = 0.016 pph < 0.218.
- SVBC10BEAST2 (Basecoat Observation 2) (FGTOPCOATEAST, EU-COLOR-ONE): PM (Method 201A) = 0.0021 pounds per 1000 pounds wet gas < 0.0029. PM10 = 0.114 pph; < 0.218 PM2.5 = 0.066 pph < 0.218.
- SVBC10BEAST3 (Basecoat Observation 3) (FGTOPCOATEAST, EU-COLOR-ONE): PM (Method 201A) = 0.0024 pounds per 1000 pounds wet gas < 0.0029. PM10 = 0.174 pph < 0.218; PM2.5 = 0.075 pph < 0.218.
- SVCC10BEAST1 (Clearcoat Observation 1) (FGT0PC0ATEAST, EU-COLOR-ONE): PM (Method 201A) = 0.0017 pounds per 1000 pounds wet gas < 0.0029. PM10 = 0.095 pph < 0.173; PM2.5 = 0.062 pph < 0.173.
- SVCC10BEAST2 (Clearcoat Observation 2) (FGTOPCOATEAST, EU-COLOR-ONE): PM (Method 201A) = 0.0028 pounds per 1000 pounds wet gas < 0.0029; PM10 = 0.065 pph < 0.173; PM2.5 = 0.041 pph < 0.173.

PTI No. 13-19B, FGTOPCOATEAST, IV.1-3 design/equipment parameter(s)

FCA WTAP operates properly bake oven portions of FGTOPCOATEAST

corresponding thermal oxidizers (2 TOs: only east paint shop or EPS has thermal oxidizers for bake oven portions only and heat from thermal oxidizers is retuned to each corresponding oven for curing the paint). Proper operation includes operating TOs at or above Destruction Efficiency (DE) tested temperature that provided minimum of 95 percent destruction efficiency (DE > 95%).

Based upon temperature charts, East RTO operates at 1550 °F and desorption (2) temperature is 390 °F at inlet.

East RTO DE = 97.1 > 95 percent.

West RTO DE = 98.6 > 95 percent.

FCA WTAP operates properly water wash system of FGTOPCOATEAST via weekly inspections. Besides, water wash system is an integral part of the paint process to ensure top-notch paint finish.

FCA WTAP operates properly dry filter particulate controls via weekly inspection and replacement if necessary. Tri-Dim inspects the filters weekly; and UAW labor replaces the filters if necessary. See Tri-Dim monthly reports.

The booths are inspected for proper operation including downdraft water particulate (paint overspray) control system, humidity temperature by FCA WTAP staff

Detroit Assembly Complex Mack (PTI #14-19A for FCA USA, LLC, DACM or Mack N2155) has been operating for a couple of years requiring FCA WTAP to achieve first phase of VOC emissions reduction. As required by the permit, east concentrators (2) and east RTO portions of FGCONTROLS have been operating properly at minimum desorption gas inlet temperature of concentrators and minimum RTO combustion chamber temperature based upon the stack tests. The installation and operation of EPS VOC controls is mandated to by the permit as a part of second phase emissions reductions upon starting production at WPS (Jeep).

PTI No. 13-19B, FGTOPCOATEAST, V.1-6 testing/sampling

In lieu of US EPA Reference Test Method 24 (RM24), FCA WTAP uses PPG formulation data.

FCA WTAP conducted performance tests to verify Transfer Efficiency (TE) rates of each topcoat line.

FCA WTAP conducted performance tests to verify Oven Exhaust Control Device (OECD / booth/oven split) VOC Loading rates of Color1 (EU-COLOR-ONE) Topcoat line. Currently, only one topcoat line, Color1 (EU-COLOR-ONE), has been operational.

See above for OECD test report (RWDI # 2202302 Report dated February 7, 2022)

FCA WTAP conducted performance tests to verify Destruction Efficiency (DE) of the Thermal Oxidizer for an associated oven of Color1 (EU-COLOR-ONE) Topcoat line.

FCA WTAP conducted performance tests to verify the capture efficiency (CE) of the spray booth, flash-off area, observation zone, and oven portions of Color1 (EU-COLOR-ONE) to the east concentrators (2) and east RTO.

Color1 Oven Capture Efficiency (OCE) (RWDI # 2200991 Report dated February 8, 2022)

- 1. Solid Basecoat (White): CE = 94.7 percent (%)
- 2. Metallic Basecoat (Black): CE = 93.4 percent (%)
- 3. Clearcoat: CE = 79.2 percent (%)

FCA WTAP conducted performance tests to verify the removal efficiency (RE) of the east concentrators and destruction efficiency (DE) of the east RTO in the spray booth portion of EU-COLOR-ONE.

East CON RE (RWDI # 2003780 Report dated July 15, 2022)

1. SVBTHCONCEAST - Removal Efficiency: East CON RE = **98.2** percent. No minimum required RE.

East RTO DE (RWDI # 2003780 Report dated November 24, 2021)

1. Destruction Efficiency (SVRTOEAST East RTO DE): East RTO DE = 97.1

PTI No. 13-19B, FGTOPCOATEAST, VI.1-13 monitoring/recordkeeping

Using PPG / supplier formulation information, coatings / materials usage, vehicles production information, TE, Concentrator RE, RTO DE, booth oven split, FCA WTAP performs the required calculations.

FCA WTAP operates properly water wash system of FGTOPCOATEAST via weekly inspections. Besides, water wash system is an integral part of the paint process to ensure top-notch paint finish. Such inspections records are kept.

Booths are inspected for proper operation including downdraft water particulate (paint overspray) control system, humidity temperature by FCA WTAP staff.

FCA WTAP monitors and records desorption temperatures of east concentrators (2) and the combustion chamber temperature of east RTO for east Color1

Based upon the temperature graphs the temperatures are as follows:

1. WTAP FIS EAST COLOR1 TO temp = 1300 °F

- 2. WTAP FIS EAST CONC temp, = 390 °F
- 3. WTAP FIS EAST RTO temp = 1550 °F
- 4. WTAP FIS WEST CONC temp = 375 °F
- 5. WTAP FIS WEST RTO temp = 1500 °F

FCA WTAP operates properly and records temperature, on a continuous basis, of east RTO, Thermal Oxidizer (TO1 for Color1 oven), concentrators' desorption inlet.

PTI No. 13-19B, FGTOPCOATEAST, VII.1-5 reporting

FCA WTAP submits regularly quarterly summary emissions data.

Submitted notifications:

- 1. Start of production at Mack (PTI #14-19A for FCA USA, LLC, Detroit Assembly Complex Mack N2155).
- 2. Commencing operation of control equipment: East Concentrators (2), east RTO for Color1 (EU-COLOR-ONE).
- 3. Permanent shutdown of Color2 (EU-COLOR-TWO)

AQD received Startup Notification (West Paint Shop or WPS Jeep Wagoneer) dated February 26, 2021, regarding west paint shop operations, hot water generators and an emergency engine at the Warren Truck Assembly Plant ("WTAP"). As background, FCA commenced construction of the affected facility in September 2019. FCA has now completed the startup of the west paint shop's Electrocoat, Primer, and Topcoat processes as of February 17, 2021. The paint shop coating equipment installation and commissioning occurred on a phased-in schedule, with all processes operating to produce a complete vehicle as of February 22, 2021. Initial Notification of a New Affected Source for NESHAP — Subpart 5D (FG-BoilerMACTHWG). FCA made notification of the starting of production of saleable vehicles at the west paint shop, as of February 22, 2021 (FG-PSWest/NewEast). The emergency generator engine has been installed (FG-NGEMENG)

AQD received Startup Notification (FCA DACM N2155) dated December 11, 2020 (PTI 13-19A, EU PURGECLEANEAST, EU-TUTONE, and FG-TOPCOATEAST) regarding starting production at FCA DACM Detroit Assembly Complex-Mack ("Mack") (PTI-#14-19A N2155). Vehicle production through the automotive assembly line at the Mack facility commenced on or about November 19, 2020.

AQD received Permanent Shutdown Notification (FCA WTAP EPS Color2) dated October 26, 2021, regarding permanently shutting down EUCOLOR-TWO (Color2).

Permanent shutdown of EU-COLOR-TWO occurred on or before September 30, 2021 (PTI 13-19B; FGTOPCOATEAST). While Color2 has been shut down and removed, EU -REPROCESS has been shut down in-situ by rendering it inoperable by removing equipment within it.

In summary:

- 1. Start of operation for the West line (new line: West Paint Shop for Jeep Wagoneer), **Feb. 22, 2021**
- Start of operation of control equipment on EU-COLOR-ONE (existing topcoat line still in operation), July 6, 2021. Booth control system (two east concentrators and one RTO) is installed and operating.
- 3. Shutdown of EU-COLOR-TWO on or before Sept 30, 2021

PTI No. 13-19B, FGTOPCOATEAST, IX.1-5 reporting

Rule 336.1610 (14.9 lb/GACS based upon tested TE values and Auto Protocol), NSPS MM ((12.3 lb/GACS based upon NSPS MM Table TE values) 40 CFR, Part 60, Subpart MM Standards of Performance for Automobile and Truck Surface Coating Operations) have been subsumed into 3.53 lb/GACS limit (based upon Auto Protocol, PTI No. 13-19B, FGTOPCOATEAST, I.15).

PTI No. 13-19B, FGCONTROLS

FGCONTROLS (EUECOATWEST, EUPRIMERWEST, EUTOPCOATWEST, EUPURGECLEANWEST, EUSPOTREPAIRWEST, EUECOATEAST, EUPWDRPRMEAST, EU-COLOR-ONE, EU-REPROCESS, EUPURGECLEANEAST, EUSPOTREPAIREAST, EUFINALREPAIR, EUNEWNGASSEMBLY, EUNEWNGPSEAST, EUSPOTPRIMEWEST1, EUSPOTPRIMEWEST2): Concentrators (two East Concentrators and two West Concentrators) and RTOs (one East RTO and one West RTO) used for control of VOC emissions as applicable from the paint spray booths, flash-off areas, and curing ovens. Water-wash or dry filter particulate control on paint spray booths and sanding/repair booths and as pre-filtration to VOC control devices.

Pollution control equipment

The west concentrators (2) and west RTO (1) used for control of VOC emissions from EUPRIMERWEST spray booth and flash-off areas, EUTOPCOATWEST spray booth and flash-off areas, and solvent borne purge materials from west primer and west clearcoat booths not captured in the purge collection system. The west RTO only used for control of VOC emissions from the EUECOATWEST tank and curing oven, EUPRIMERWEST curing oven, and EUTOPCOATWEST curing oven. The east

concentrators (2) and east RTO (1) used for control of VOC emissions from EU-COLOR-ONE spray booth and flash-off areas. The east RTO only used for control of VOC emissions from EUECOATEAST tank and curing oven. A thermal oxidizer (TO1 for Color1) used for control of VOC emissions from the EU-COLOR-ONE cure oven. A thermal oxidizer used for control of VOC emissions from the cure oven of EU-REPROCESS. Water-wash particulate control systems on all paint spray booths and observation zones. Dry filter particulate control systems on all sanding and repair booths and all flash-off areas. Dry filter particulate control systems on all curing ovens in the E-coat, primer, and topcoat operations.

Note: High Bake Repair Reprocess (EU REPROCESS) and Color2 (EU COLOR-TWO) have been shut down prior to startup of West Paint Shop (WPS). TO1's heat is transferred to the corresponding Color1 curing oven. Color2 and corresponding TO2 are not operating.

PTI No. 13-19B, FGCONTROLS, III.1

FCA WTAP submitted a malfunction abatement plan (MAP 2021) and has been operating according to MAP.

This 2021 Malfunction Abatement Plan (MAP) was developed in accordance with Permit to Install #13-19B for the regenerative thermal oxidizers (one East RTO (Truck) & one West RTO (Jeep)), thermal oxidizers (TO for bake oven emissions for EPS (Truck), concentrators(one East CON (Truck) & one West CON (Jeep)), downdraft water-wash systems (for robotic paint spray booths) and dry particulate control devices (misc. repair booths and sanding booths) used to control emissions from the spray booths, flash areas, curing ovens (baking paint) and sanding/repair areas at FCA's Warren Truck Assembly Plant (WTAP). The purpose of the malfunction and abatement plan (MAP) is to prevent, detect and correct malfunctions or equipment failures that may result in volatile organic compound (VOC) or particulate matter (PM) emissions exceeding any applicable emission limitation.

MAP includes:

- 1. The preventive maintenance program for the pollution control equipment;
- 2. The operating variables that are monitored to detect a malfunction; and
- 3. A description of corrective maintenance procedures and/or operational changes to be made in the event of a malfunction

West Paint Shop (WPS Jeep Wagoneer) includes:

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- 1. Electrocoat (e-coat) Tank and Oven: RTO
- 2. Primer Prep & heavy repair Booths: Dry Filters
- 3. Primer Spray booth: Water Wash System, Concentrator and RTO
- 4. Primer Oven: Dry Filters and RTO
- 5. Topcoat Booth: Water Wash System, Concentrator and RTO
- 6. Topcoat Oven: Dry Filters and RTO
- 7. Topcoat Observation: Zone Dry Filters
- 8. Purge clean: Concentrator and RTO
- 9. Spot Repair Booth: Dry Filters
- 10. Spot Prime Booth: Dry Filters

East Paint Shop (EPS RAM 1500 Classic Truck)

- 1. Electrocoat Tank and Oven: RTO
- 2. Powder Anti-chip application: Dry Filter
- 3. Purge clean: Concentrator and RTO*
- 4. Spot Repair: Dry Filter
- 5. Final Repair: Dry Filters
- 6. Topcoat Color 1: booth Downdraft Water wash system, Concentrator* and RTO*
- 7. Topcoat Color 2 (shutdown and removed): booth Water wash system
- 8. Topcoat Oven (Color1 only): Thermal Oxidizer (TO1)
- 9. Spot Repair Booth: Dry Filters
- 10. Reprocess booth (shutdown in place and rendered inoperable) Water wash system
- 11. Reprocess oven (shutdown in-situ and rendered inoperable): Thermal Oxidizer (TO)
- 12. Spot Prime Booth: Dry Filters

PTI No. 13-19B, FGCONTROLS, VI.1-7 monitoring/recordkeeping

FCA WTAP monitors and records continuously combustion temperatures in FGCONTROLS (Color1 TO1 (curing oven portion only), East RTO and West RTO) and Rotary Zeolite Adsorbers' inlet & outlet temperatures in FGCONTROLS (4 in all: 2 East Concentrators and 2 West Concentrators)

FCA WTAP operates properly water wash system of FGTOPCOATEAST via weekly inspections. Besides, water wash system is an integral part of the paint process to ensure top-notch paint finish. Such inspections records are kept.

Booths are inspected for proper operation including downdraft water particulate (paint overspray) control system, humidity temperature by FCA WTAP staff. The booth inspection is known as booth assessment.

FCA WTAP monitors and records desorption temperatures of east concentrators (2) and the combustion chamber temperature of east RTO, east Color1 Thermal Oxidizer (TO1: only for oven portion of Color1, Color2 and high bake Reprocess have been shut down) on a continuous basis using calibrated thermocouples. The temperature graphs are drawn

Based upon the temperature graphs the temperatures are as follows:

- 1. WTAP FIS EAST COLOR1 TO temp = 1300 °F
- 2. WTAP FIS EAST CONC temp, = 390 °F
- 3. WTAP FIS EAST RTO temp = 1550 °F
- 4. WTAP FIS WEST CONC temp = 375 °F
- 5. WTAP FIS WEST RTO temp = 1500 °F

FCA WTAP operates properly and records temperature, on a continuous basis, of east RTO, Thermal Oxidizer (TO1 for Color1 oven), concentrators' desorption inlet.

FCA WTAP keeps records of maintenance and repair activities for FGCONTROLS

Temperature measurement devices (thermocouples) are calibrated or replaced if necessary. Each device / thermocouple is calibrated to provide an accuracy of the greater of +/- 5 percent of the temperature being measured expressed in degrees Celsius or +/- 2.5 °C.

PTI No. 13-19B, FGSPOTPRIMEWEST

FGSPOTPRIMEWEST (EUSPOTPRIMEWEST1, EUSPOTPRIMEWEST2): Two spot prime processes in the west paint shop (WPS). One that is placed after the E-coat process and prior to the primer application process, and one that is located after the primer process and prior to topcoat application.

Pollution control equipment

Dry filter particulate controls on the west spot prime booths 1 and 2 are exhausted to outside ambient atmosphere.

These two spot prime processes are in West Paint Shop (WPS).

PTI No. 13-19B, FGSPOTPRIMEWEST, I.1-6

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	CY 2023
1. VOC	1.0 ton per month	Calendar Month	Each emission unit in FGSPOTPRIMEWEST	<< 0.03
2. VOC	1.36 tpy	12-month rolling time period as determined at the end of each calendar month	FGSPOTREPAIRWEST	0.03
3. PM	0.0029 Ibs per 1,000 Ibs of wet exhaust gas ^a	Hourly	FGSPOTREPAIRWEST	0.0003 (SVRPDRPCS) (Spot repair)
4. PM	0.0029 Ibs per 1,000 Ibs of wet exhaust gas ^a	Hourly	Each emission unit in FGSPOTPRIMEWEST	EPA RM201A PM = 0.0007 SVSPOTPRMWEST1 (Stack 34)) (Spot primer)

5. PM10	0.026 pph	Hourly	Each emission unit in FGSPOTPRIMEWEST	0.022 (SVRPDRPCS) (Spot repair)
6. PM2.5	0.026 pph	Hourly	Each emission unit in FGSPOTPRIMEWEST	0.023 (SVSPOTPRMWEST1 (Stack 34)) (Spot primer)
^a Calculated or	n a wet gas bas	sis		
1.				

PTI No. 13-19B, FGSPOTPRIMEWEST, III.1 process/operational restriction(s)

FCA WTAP captures all waste coatings and VOC-containing materials in spot prime processes of the west paint shop. The materials are properly handled in a closed containers and disposed of according to RCRA.

PTI No. 13-19B, FGSPOTPRIMEWEST, IV.1 design/equipment parameter(s)

FCA WATAP operates properly each dry filter particulate control system of FGSPOTPRIMEWEST via weekly visual inspections.

FCA WTAP operates properly dry filter particulate controls via weekly inspection and replacement if necessary. Tri-Dim inspects the filters weekly and UAW labor replaces the filters if necessary. See Tri-Dim monthly reports.

PTI No. 13-19B, FGSPOTPRIMEWEST, V.1-2 testing/sampling

In lieu of US EPA Reference Test Method 24 (RM24), FCA WTAP uses PPG / supplier formulation data.

FCA WTAP conducted the performance tests to verify PM, PM10, and PM2.5 emission rates from a representative emission unit in FGSPOTPRIMEWEST. See the above table.

PTI No. 13-19B, FGSPOTPRIMEWEST, VI, 1-4.monitoring/recordkeeping

Using PPG / supplier formulation information, materials / coatings usage (VOC), emission factors (PM/PM10/PM2.5), etc. FCA WTAP performs the required calculations.

FCA WTAP operates properly dry filter particulate controls via weekly inspection and replacement if necessary. Tri-Dim inspects the filters weekly and UAW labor replaces the filters if necessary. See Tri-Dim monthly reports.

PTI No. 13-19B, FGSPOTPRIMEWEST, VIII

The exhaust gases are discharged via SVSPOTPRMWEST1 and SVSPOTPRMWEST2

PTI No. 13-19B, FGRTOWEST

FGRTOWEST (EUECOATWEST, EUPRIMERWEST, EUTOPCOATWEST, EUPURGECLEANWEST): This flexible group covers NOx, PM, PM10, and PM2.5 emissions from the west paint shop Rotary Zeolite concentrators (2 West CONs) and west RTO (1).

Pollution control equipment

EUPRIMERWEST coating booth overspray is controlled by a water-wash particulate control system. A portion of the EUPRIMERWEST coating booth exhaust will be filtered and recirculated to the booth air make-up system. EUPRIMERWEST coating booth and flash-off area emissions are exhausted through a bank of particulate filters, the west concentrators (2), and the west RTO. EUPRIMERWEST oven emissions are exhausted through a bank of filters and directly to the west RTO. EUTOPCOATWEST booth and flash-off exhausts are routed through a bank of particulate filters, the west concentrator, and the west RTO. EUTOPCOATWEST oven emissions are exhausted directly to the west RTO. Dry filter particulate control

systems on all direct-fire air supply housing (ASH), air handling units (AHU), and curing ovens in EUECOATWEST, EUPRIMERWEST, and EUTOPCOATWEST.

PTI No. 13-19B, FGRTOWEST, I.1-7

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	
1. PM	0.0032 ^a Ibs per 1,000 lbs of wet exhaust gas	Hourly	RTO portion of FGRTOWEST	0.0014 0.51 pph (PM)
2. PM10	0.518 pph	Hourly	RTO portion of FGRTOWEST	0.51 pph (PM)
з. PM2.5	0.518 pph	Hourly	RTO portion of FGRTOWEST	0.51 pph (РМ)
4. PM	0.0029ª Ibs per 1,000 lbs of wet exhaust gas	Hourly	Concentrator portion of FGRTOWEST	0.0001
5. PM10	0.123 pph	Hourly	Concentrator portion of FGRTOWEST	0.032 (PM)
6. PM2.5	0.123 pph	Hourly	Concentrator portion of FGRTOWEST	0.032 (PM)
7. NOx	3.29 pph	Hourly	Concentrator and RTO portions of	West RTO Outlet = 4.37 ppmv

		FGRTOWEST, combined	= 1.31 pph West Combined Concentrator Outlet = 0.05 ppmv = 0.11 pph < 3.29 pph 1.31 + 0.11 = 1.42 < 3.29 pph
^a Calculated on	a wet gas basis		
1.			
1. 2.			

PTI No. 13-19B, FGRTOWEST, V.1-2 testing/sampling

FCA WTAP conducted performance tests to verify PM2.5, PM10, and PM emission rates of the concentrator and RTO portions of FGRTOWEST. See above table.

FCA WTAP conducted performance tests to verify NOx emission rates of Concentrator and RTO portions of FGRTOWEST, combined. See above table.

The West RTO DE = 98.6 > 95 percent satisfies PTI No. 13-19B, EUTOPCOATWEST IV.1 design/equipment parameter(s): West RTO DE = 98.6 > 95%. No minimum RE requirements.

Combined West Concentrators Removal Efficiency (West CON Combined RE) = 98.3 percent

PTI No. 13-19B, FGRTOWEST, VII

The emissions are discharged via SVRTOWEST & SVBTHCONCWEST

PTI No. 13-19B, FGRTOEAST

FGRTOEAST (EUECOATEAST, EU-COLOR-ONE, EU-PURGECLEANEAST): This flexible group covers NOx, PM, PM10, and PM2.5 emissions from the east paint shop concentrator and RTO associated with EUECOATEAST, EUPURGECLEANEAST, and the refurbished spray booth portion of EU COLOR-ONE.

High bake reprocess repair line and Color2 (parallel and identical to Color1) are permanently shut down.

Pollution control equipment

EU-COLOR-ONE coating booth overspray is controlled by a waterwash particulate control system. A portion of the EU-COLOR-ONE coating booth exhaust is filtered and recirculated to the booth air make-up system. EU COLOR-ONE coating booth and flash-off area emissions are exhausted through a bank of particulate filters, the east concentrator, and the east RTO. Dry filter particulate control systems on all direct-fire air supply housing (ASH) and air handling units (AHU) in EUECOATEAST and EU-COLOR-ONE.

PTI No. 13-19B, FGRTOEAST, I.1-7

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	CY2023
1. PM	0.0032 ^a Ibs per 1,000 lbs of wet exhaust gas	Hourly	RTO portion of FGRTOEAST	0.0026

2.	PM10	0.700 pph	Hourly	RTO portion of FGRTOEAST	0.566
3.	PM2.5	0.518 pph	Hourly	RTO portion of FGRTOEAST	0.566 > 0.518 pph
4.	РМ	0.0029 ^a Ibs per 1,000 lbs of wet exhaust gas	Hourly	Concentrator portion of FGRTOEAST	0.0014
5.	PM10	0.420 pph	Hourly	Concentrator portion of FGRTOEAST	0.285 pph
6.	PM2.5	0.148 pph	Hourly	Concentrator and RTO portions of FGRTOEAST, combined	0.566
7.	NOx	6.39 pph	Hourly	Concentrator and RTO portions of FGRTOEAST, combined	7.7 ppmv 2.65 pph
^a Calc	ulated on	a wet gas basis	1		

PTI No. 13-19B, FGRTOEAST, V.1-2 Testing

FCA WTAP conducted performance tests to verify PM2.5, PM10, and PM emission rates of the concentrator and RTO portions of FGRTOEAST.

FCA WTAP conducted performance tests to verify NOx emission rates of Concentrator and RTO portions of FGRTOEAST, combined.

See above for PM2.5, PM10 & NOx test results.

PTI No. 13-19B, FGRTOEAST, VII

The emissions are discharged via SVRTOEAST & SVBTHCONCEAST

PTI No. 13-19B, FGBOILERS

FGBOILERS: Four (4) natural gas fired boilers to produce steam and heat located in the powerhouse. Boiler Nos. 3, 4 and 5 are equipped with low NOx burners, Boiler No. 6 (with oxygen trim system) is a high efficiency boiler but not low NOx.

Emission Units (EUs):

- 1. EU-BOILER3: **152** million BTU heat input per hour (Babcox & Wilcox Boiler3, installed 7/11/98) natural gas only boiler equipped with low NOx burners.
- 2. EU-BOILER4: **106** million BTU heat input per hour (Babcox & Wilcox Boiler4, installed 7/11/98) natural gas only boiler equipped with low NOx burners.
- 3. EU-BOILER5: **152** million BTU heat input per hour (Wickes Boiler5, installed 9/1/96) natural gas only boiler equipped with low NOx burners.
- 4. EU-BOILER6: **192** million BTU heat input per hour (Riley Stoker Boiler6, installed 10/29/84) natural gas only boiler equipped with oxygen trim system but not low NOx burners.

Pollution control equipment

Boiler Nos. 3, 4 and 5 are equipped with low NOx burners, Boiler No. 6 (with oxygen trim system) is a high efficiency boiler but not low NOx.

PTI No. 13-19B, FGBOILERS, I.1-5

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	CY 2023	
1. NOx	119.0 tpy	12-month rolling time period as determined at the end of each calendar month	FGBOILERS	Deemed to be in compliance because NG usage is significantly less than its usage limit	
2. NOx ^A	5.43 pph	Hourly	EU-BOILER3	0.066	
3. NOx ^A	6.61 pph	Hourly	EU-BOILER4	0. 040	
4. NOX ^A	9.59 pph	Hourly	EU-BOILER5	0.072	
5. NOx ^A	27.86 pph	Hourly	EU-BOILER6 High efficiency but not low NOx	0.161	
A This emission limit becomes applicable upon startup of the west paint shop (WPS). WPS (Jeep) has been operating for a couple of years.					

PTI No. 13-19B, FGBOILERS, II.1

Material	Limit	Time Period/	Equipment
		Operating	

		Scenario				
1. Natural Gas	1,305	12-month rolling time period as determined at	FGBOILERS	EUBOILER3 = 46.64		
(NG)	Million (MM)	the end of each calendar month		EUBOILER4 = 88.49		
	standard cubic feet per year			EUBOILER5 = 43.94		
				EUBOILER6 = 124.17		
				Total = 303.24 << 1,305		
				MM SCF		
There seems to be an error in reporting natural gas usage (MiEnviro SLEIS 2023). If so, FCA WTAP was advised to correct it.						
A If FCA WTAP meets annual NG usage limit, it deemed to have met PTI No. 13-19B, FGBOILERS, I.1 NOx limit of 119.0 tpy unless there is an issue with the NOx emission factor.						

PTI No. 13-19B, FGBOILERS, III.1 process/operational restriction(s)

FCA WTAP uses / burns exclusively pipeline quality sweet natural gas in the boilers (FGBOILERS)

PTI No. 13-19B, FGBOILERS, V.1 testing/sampling

FCA WTAP conducted performance tests to verify NOx emission rates from each boiler in FGBOILERS by testing.

See the above table for the test results (RWDI # 2201514 Report dated March 10, 2022)

PTI No. 13-19B, FGBOILERS, VI.1-2 monitoring/recordkeeping

FCA WTAP monitors and records, the monthly natural gas usage. Also, it performs the required maintenance.

PTI No. 13-19B, FGBOILERS, VIII.

The emissions are discharged via SVPH-C-08-B-03, SVPH-C-11-B-04, SVPH-C-13-B-05, SVPH-C-15-B-06

PTI No. 13-19B, FGAUTOMACT

FGAUTOMACT (EUPRETREATWEST, EUECOATWEST, EUPRIMERWEST, EUTOPCOATWEST, EUPURGECLEANWEST, EUBODYWIPEWEST, EUSPOTREPAIRWEST, EUECOATEAST, EUPWDRPRMEAST, EUPURGECLEANEAST, EUSPOTREPAIREAST, EUSEALERS, EUFINALREPAIR, EU COLOR-ONE, EU-COLOR-TWO, EU-REPROCESS, EUSPOTPRIMEWEST1, EUSPOTPRIMEWEST2): Each new, reconstructed, or existing affected source as defined in Title 40 of the Code of Federal Regulations (CFR), Part 63.3082, that is located at a facility which applies topcoat to new automobile or new light duty truck bodies or body parts for new automobiles or new light duty trucks; AND/OR in which you choose to include, pursuant to 40 CFR 63.3082(c), any coating operations which apply coatings to new other motor vehicle bodies or body parts for new other motor vehicles; parts intended for use in new automobiles, new light duty trucks or new other motor vehicles; or aftermarket repair or replacement parts for automobiles, light duty trucks or other motor vehicles; and that is a major source, is located at a major source, or is part of a major source of emissions of hazardous air pollutants (HAPs) except as provided in 63.3081(c). This includes equipment covered by other permits, grandfathered equipment, and exempt equipment.

While Color2 (EU-COLOR-TWO) has been removed, High Bake Repair Reprocess (EU -REPROCESS) has been permanently shut down in place and rendered inoperable by removing vital equipment.

Like other Big3 automakers, FCA WTAP has chosen to comply with Auto NEHSAP / MACT 4I (40 CFR, Part 63, Subpart IIII—National Emission Standards for Hazardous Air Pollutants: Surface Coating of Automobiles and Light-Duty Trucks) via compliant coatings. i.e., it does not need a benefit of add-on control devices to show compliance with Auto MACT 4I.

PTI No. 13-19B, FGAUTOMACT, I, 1-4

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	
1. Organic HAP	0.30 Ib per GACS	Calendar Month	New/Reconstructed– FGAUTOMACT with EUECOATWEST and EUECOATEAST	
2. Organic HAP*	0.5 Ib per GACS	Calendar Month	New/Reconstructed– FGAUTOMACT	
з. Organic HAP	0.01 Ib per Ib of coating	Calendar Month	New/Reconstructed– SEALERS & ADHESIVES	
4. Organic HAP	0.01 Ib per Ib of coating	Calendar Month	New/Reconstructed– Deadener Materials	

• **FGAUTOMACT** includes Primer, Topcoat, Final Repair, Glass Bonding Primer, and Glass Bonding Adhesive operations plus all coatings and thinners, except for deadener materials and adhesive and sealers not part of glass bonding systems.

• FGAUTOMACT WITH EUECOATWEST and EUECOATEAST also includes all Electrocoat operations in addition to all of the operations of FGAUTOMACT.

SEALERS & ADHESIVES include only adhesives and sealers that are not part of glass bonding systems.

* Permittee may choose to comply with this limit if the requirements of Condition No. I.5 is met.

FCA certifies that FCA WTAP is compliance with Auto MACT 4I via formulation. It may be noted that FCA WTAP operates booth and oven control systems (Concentrators plus RTOs) show compliance with VOC limits. The operation of the add-on controls is mandatory according to the permit.

FCA WTAP has developed and implemented a work practice plan (WPP) to minimize the organic HAP emissions from the storage, mixing and conveying of coatings, thinners, and cleaning materials used in, and waste materials generated by all coating operations for which an emission limit has been established under Special Conditions I.1 through I.4.

PTI No. 13-19B, FGBOILERMACTHWG

FGBOILERMACTHWG: This FG is for the 11 hot water generators and the Trim Boiler associated with the installation of the west paint shop and modernization of the east paint shop. Gas 1 Fuel Subcategory requirements for new Boilers/Process Heaters at major sources of Hazardous Air Pollutants per 40 CFR Part 63, Subpart DDDDD. These new boilers or process heaters must comply with the applicable provisions of this subpart upon startup.

Emission Units:

Less than 5 MMBtu/hr	NA
Equal to or greater than 5 MMBtu/hr and less than 10 MMBtu/hr	EUHWG1, EUHWG2, EUHWG3, EUHWG4, EUHWG5, EUHWG6, EUHWG7, EUHWG8, EUDSBCHWG, EUDSSBHWG, EUDSCCHWG
Equal to or greater than 10 MMBtu/hr	EU-TRIMBOILER

Pollution control equipment

None.

PTI No. 13-19B, FGBOILERMACTHWG, II

FCA WTAP burns exclusively pipeline quality natural gas.

PTI No. 13-19B, FGBOILERMACTHWG, III process/operational restriction(s)

FCA WTAP burns exclusively pipeline quality natural gas in the 11 hot water generators and the Trim Boiler of design capacity 5-10 MM BTU per hour.

PTI No. 13-19B, FGNGWEST

FGNGWEST (EUPRETREATWEST, EUECOATWEST, EUPRIMERWEST, EUTOPCOATWEST, EUNEWNGASSEMBLY, EUHWG1, EUHWG2, EUHWG3, EUHWG4, EUHWG5, EUHWG6, EUHWG7, EUHWG8): All natural gas-fired equipment associated with the installation of west paint shop portion of the Warren Truck Assembly Plant, except the emergency generators, including eight hot water generators, air supply houses, space heaters, heated flash, cure ovens, the carbon concentrator, and the RTO. In addition, this FG includes new air supply houses and space heating in the assembly area.

Pollution control equipment

Low NOx burners on all equipment; RTO for VOC control of spray booths and curing ovens in EUECOAT, EUPRIMER, and EUTOPCOAT; dry filter particulate controls on direct-fired natural gas equipment.

FCA WTAP burns exclusively pipeline quality natural gas using Low NOx burners in all combustion equipment in FGNGWEST.

FCA WTAP operates properly via weekly inspections the respective dry filter particulate control systems corresponding to air handling units, any air supply houses, and any curing ovens in EUECOATWEST, EUPRIMERWEST, and EUTOPCOATWEST in FGNGWEST.

Tri-Dim inspects the filters weekly and UAW labor replaces the filters if necessary. See Tri-Dim monthly reports.

The direct-fired units are used in all air supply houses, air handling units, and E-coat, primer, and topcoat curing oven(s) in FGNGWEST.

FCA WTA performs emissions (especially VOC & NOx) calculations using emissions factors.

PTI No. 13-19B, FGNEWNGEAST

FGNEWNGEAST (EUECOATEAST, EU-COLOR-ONE, EUDSBCHWG, EUDSSBHWG, EUDSCCHWG, EUNEWNGPSEAST): All natural new gas-fired equipment associated with the refurbishment of east paint shop portion of the Warren Truck Assembly Plant, except the new trim boiler, including hot water generators, air supply houses, cure ovens, the Zeolite (not activated carbon) concentrator (2), and the RTO.

Color2 (EU-COLOR-TWO) has been dismantled and removed

Pollution control equipment

Low NOx burners on all combustion equipment. The east concentrator and east RTO for VOC control of spray booths and curing ovens in EUECOATEAST and EU-COLOR -ONE. Dry filter particulate controls on direct-fired natural gas equipment.

FCA WTAP burns exclusively pipeline quality natural gas using Low NOx burners in all combustion equipment in FGNEWNGEAST.

FCA WTAP operates properly via weekly inspections the respective dry filter particulate control systems corresponding to the air handling housing in the Basecoat and Clearcoat portions of EU COLOR ONE (equal to 34.5 MMBTU/hr) and EUNEWNGPSEAST.

Tri-Dim inspects the filters weekly and UAW labor replaces the filters if necessary. See Tri-Dim monthly reports.

The direct-fired units are used in air supply houses, air handling units, and E-coat, primer, topcoat, and sealer curing oven(s) in FGNEWNGEAST.

FCA WTA performs emissions (especially VOC & NOx) calculations using emissions factors.

PTI No. 13-19B, FGTANKS

FGTANKS (EU–UNLEADEDGAS1, EUMETANK, EUDIESELTANK1, EUANTIFREEZETANK, EUBRAKEFLUIDTANK, EUAUTOTRANS, EUDIESELEXTANK, EUGASTANK2, EUDIESELTANK2, EUPURSOLVTANK, EUDIESELTANK3):

Each tank (storage capacity greater than 2,000 gallons (7.57 cubic meters or 7,571 liters)) is equipped with a permanent submerged fill pipe to prevent splash loading.

A list of tanks as in PTI No. 13-19B, FGTANKS, VI.2, is maintained.

PTI No. 13-19B, FG-OLDMACT

FG-OLDMACT (EUMETANK): The affected source is each new, reconstructed, or existing Organic Liquid Distribution (OLD) (non-gasoline) operation that is located at, or is part of a major source of hazardous air pollutant (HAP) emissions. The affected source is comprised of storage tanks, transfer racks, equipment leak components associated with storage tanks, transfer racks and pipelines, transport vehicles, and all containers while loading or unloading at transfer racks subject to this subpart. Equipment that is part of an affected source under another NESHAP is excluded from the affected source. (40 CFR 63.2338(c))

These conditions specifically cover existing (construction predates April 2, 2002) liquid storage tanks which hold more than 5,000 gallons but less than 50,000 gallons, and/or new liquid storage tanks which hold more than 5,000 gallons but less than 10,000 gallons of methanol/windshield washer fill solvents that are dispensed to newly assembled vehicles.

The tank is subject to NESHAP / OLD MACT 4E) 40 CFR 63, Subpart EEEE—National Emission Standards for Hazardous Air Pollutants: Organic Liquids Distribution (Non-Gasoline))

FCA WTAP submits annual compliance certification (NESHAP / OLD MACT 4E) and submitted Initial Notification of Compliance Status.

PTI No. 13-19B, FGNGEMENG

FGNGEMENG: Emergency engines subject to 40 CFR Part 60 Subpart JJJJ, Standards of Performance for Stationary Spark Ignition Internal Combustion Engines. New/Reconstructed emergency engines greater than 500 HP constructed on or after January 1, 2009.

The engines are subject to NSPS 4J and NESHAP / MACT 4Z

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	
1. NOx	2.0 g/HP-hr Or 160 ppmvd at 15% O2	Hourly	Each EU in FGNGEMENG	
2. CO	4.0 g/HP-hr OR 540 ppmvd at 15% O2	Hourly	Each EU in FGNGEMENG	
3. VOC	0.50 ^{C,D} g/HP-hr	Hourly	Each EU in FGNGEMENG	VOC (as propane) = 0.0007 << 0.50 g/HP
January 28, 2022, NSPS 4J natural-gas-fired Emergency Engine (FGNGEMENG) testing (737 HP engine work output & 550 kW power output). (RWDI # 2202540 Report dated March 25, 2022). Testing results for VOC are as follows:

1. VOC (as propane) = 0.0007 << 0.50 g/HP

FCA WTAP claims that the engine is certified by US EPA (see below for US EPA Cert.). In that case CO & NO x testing is not required. However, VOC testing is required (PTI No. 13-19B, FGNGEMENG, V.2

Cummins, Inc. Engine Certificate No. KCEXB38.0AAA-013 Effective 12/18/2018 & Expiration 12/31/2019. Fuel: NG / LPG / Propane

Cummins Model: C550N6 Mfg: March 2020 S/L #223533 Power: 550 kW Fuel: NG Max 7,126,400 BTU (7.1 MM BTU) per Hour. KVA PF = 0.8

C For compliance purposes, this limit includes formaldehyde for Nonattainment New Source Review, but does not include formaldehyde for the NSPS.

^D This emission limit has subsumed the emission limit required in 40 CFR 60 Subpart JJJJ, Table 1.

PTI No. 13-19B, FGNGEMENG, II.1

FCA WTAP burns only pipeline quality natural gas in SI RICE Engines (FGNGEMENG)

PTI No. 13-19B, FGNGEMENG, III.1-6 process/operational restriction(s)

FCA WTAP operats SI RICE Engines on emergency basis only (i.e. hours operation < 500 hours per year). The engines principally operate for testing purposes.

The engine is operated predominantly for testing purposes.

PTI No. 13-19B, FGNGEMENG, II.1-3 design/equipment parameter

SI RICE 4-stroke rich-burn engines are equipped with non-resettable hours meter to track the operating hours.

PTI No. 13-19B, FGNGEMENG, V.1-3 testing

Testing is required only if engine is non-certified.

The engine is US EPA certified.

The emissions are discharged via SVNGGEN1

PTI No. 13-19B, FGNGEMENG, FGPSWEST/NEWEAST

FGPSWEST/NEWEAST (EUPRETREATWEST, EUECOATWEST, EUPRIMERWEST, EUTOPCOATWEST, EUPURGECLEANWEST, EUBODYWIPEWEST, EUSPOTREPAIRWEST, EUECOATEAST, EUPWDRPRMEAST, EUPURGECLEANEAST, EUSEALERS, EUSPOTREPAIREAST, EUFINALREPAIR, EUFLUIDFILL, EU COLOR ONE, EU REPROCESS, EUSPOTPRIMEWEST1, EUSPOTPRIMEWEST2, EUHWG1, EUHWG2, EUHWG3, EUHWG4, EUHWG5, EUHWG6, EUHWG7, EUHWG8, EUDSBCHWG, EUDSSBHWG, EUDSSCHWG, EUNEWNGASSEMBLY, EUNEWNGPSEAST, EUNGGEN1, EU-TRIMBOILER): All process equipment associated with the installation of the west paint shop and modernization of the east paint shop, body shop, and final assembly.

PTI No. 13-19B, FGNGEMENG, VII.1-3

FCA WTAP submitted the required notifications. The engine is US EPA Certified.

PTI No. 13-19B, FGNGEMENG, VIII

The emissions are discharged via SVNGGEN1

PTI No. 13-19B, FGPSWEST/NEWEAST

All process equipment associated with the installation of the west paint shop and modernization of the east paint shop, body shop, and final assembly.

EUPRETREATWEST, EUECOATWEST, EUPRIMERWEST, EUTOPCOATWEST, EUPURGECLEANWEST, EUBODYWIPEWEST, EUSPOTREPAIRWEST, EUECOATEAST, EUPWDRPRMEAST, EUPURGECLEANEAST, EUSEALERS, EUSPOTREPAIREAST, EUFINALREPAIR, EUFLUIDFILL, EU-COLOR-ONE, EU-REPROCESS, EUSPOTPRIMEWEST1, EUSPOTPRIMEWEST2, EUHWG1, EUHWG2, EUHWG3, EUHWG4, EUHWG5, EUHWG6, EUHWG7, EUHWG8, EUDSBCHWG, EUDSSBHWG, EUDSSCHWG, EUNEWNGASSEMBLY, EUNEWNGPSEAST, EUNGGEN1, EU-TRIMBOILER

As stated above FCA WTAP sent the notification pertaining to starting production of saleable vehicles in the west paint shop portion of FGPSWEST/NEWEAST

The following emission limits in EUECOATEAST, EU-COLOR-ONE, and EUPURGECLEANEAST have become applicable upon startup of any emission unit associated with the Warren Truck West Paint Shop (including but not limited to: EUPRETREATWEST, EUECOATWEST, sealers applied in the West Paint Shop portion of EUSEALERS, EUPRIMERWEST, EUTOPCOATWEST, EUPURGECLEANWEST, EUBODYWIPEWEST, EUSPOTREPAIRWEST, EUSPOTPRIMEWEST1, EUSPOTPRIMEWEST2, EUNEWNGASSEMBLY, EUHWG1, EUHWG2, EUHWG3, EUHWG4, EUHWG5, EUHWG6, EUHWG7, EUHWG8). (R 336.2908)

- a. SC I.7 for EUECOATEAST.
- b. SC I.12 for EU-COLOR-ONE.
- c. SC I.5 for EUPURGECLEANEAST.

Warren Truck West Paint Shop (Jeep) started production operations. Hence the following emissions limits are applicable:

- a. PTI No. 13-19B, EUECOATEAST, I.7: 2.01 tons VOC per year (12-month rolling)
- b. PTI No. 13-19B, FGTOPCOATEAST (EU-COLOR-ONE), I.12: 193.0 tons VOC per year (12-month rolling) for Spray booths of EU COLOR-ONE. Color2 (EU COLOR-TWO) and High Bake Repair (EU-REPROCESS) have been permanently shut down upon startup of the West Paint Shop (WPS Jeep)
- c. PTI No. 13-19B, EUPURGECLEANEAST, I.5: 245.1 tons VOC per year (12-month rolling)

https://intranet.egle.state.mi.us/maces/WebPages/ViewActivityReport.aspx?ActivityID=24... 9/30/2024

PTI No. 13-19B, FGPSWEST/NEWEAST, VII. REPORTING

Notifications

- AQD received Startup Notification (West Paint Shop or WPS Jeep Wagoneer) dated February 26, 2021, regarding west paint shop operations, hot water generators and an emergency engine at the Warren Truck Assembly Plant ("WTAP"). As background, FCA commenced construction of the affected facility in September 2019. FCA has now completed the startup of the west paint shop's Electrocoat, Primer, and Topcoat processes as of February 17, 2021. The paint shop coating equipment installation and commissioning occurred on a phased-in schedule, with all processes operating to produce a complete vehicle as of February 22, 2021. Initial Notification of a New Affected Source for NESHAP — Subpart 5D (FG-BoilerMACTHWG). FCA made notification of the starting of production of saleable vehicles at the west paint shop, as of February 22, 2021 (FG-PSWest/NewEast). The emergency generator engine has been installed (FG-NGEMENG)
- AQD received Startup Notification (FCA DACM N2155) dated December 11, 2020 (PTI 13-19A, EU PURGECLEANEAST, EU-TUTONE, and FG-TOPCOATEAST) regarding starting production at FCA DACM Detroit Assembly Complex-Mack ("Mack") (PTI-#14-19A N2155). Vehicle production through the automotive assembly line at the Mack facility commenced on or about November 19, 2020.
- 3. AQD received **Permanent Shutdown Notification (FCA WTAP EPS Color2)** dated

October 26, 2021, regarding permanently shutting down EUCOLOR-TWO (Color2).

Permanent shutdown of EU-COLOR-TWO occurred on or before September 30, 2021 (PTI 13-19B; FGTOPCOATEAST). While Color2 has been shut down and removed, EU-REPROCESS has been shut down in-situ by rendering it inoperable by removing equipment within it.

In summary:

- 1. Start of operation for the West line (new line: West Paint Shop for Jeep Wagoneer), **Feb. 22, 2021**
- Start of operation of control equipment on EU-COLOR-ONE (existing topcoat line still in operation), July 6, 2021. Booth control system (two east concentrators and one RTO) is installed and operating.

3. Shutdown of EU-COLOR-TWO on or before Sept 30, 2021

Standards of Performance for New Stationary Sources, 40 CFR 60.7.

§ 60.7 Notification and record keeping.

NSPS MM emissions standards have been subsumed into the LAER Permit limits in the respective emission units (EUs) and flexible groups (FGs).

Subpart MM—Standards of Performance for Automobile and Light Duty Truck Surface Coating Operations for which Construction, Modification or Reconstruction Commenced After October 5, 1979, and On or Before May 18, 2022

PTI No. 13-19B, FGFACILITY CONDITIONS

FGFACILITY CONDITIONS: The following conditions apply source-wide to all process equipment including equipment covered by other permits, grand-fathered equipment, and exempt equipment.

Pollution control equipment

The west concentrator and west RTO used for control of VOC emissions from EUPRIMERWEST spray booth and flash-off areas, EUTOPCOATWEST spray booth and flash-off areas, and solvent borne purge materials from west primer and west clearcoat booths not captured in the purge collection system. The west RTO only used for control of VOC emissions from the EUECOATWEST tank and curing oven, EUPRIMERWEST curing oven, and EUTOPCOATWEST curing oven. The east concentrator and east RTO used for control of VOC emissions from EU-COLOR-ONE spray booth and flash-off areas. The east RTO only used for control of VOC emissions from EUECOATWEST tank and curing oven. A thermal oxidizer used for control of VOC emissions from the EU-COLOR-ONE cure oven. A thermal oxidizer used for control of VOC emissions from the cure oven of EU-REPROCESS. Waterwash particulate control systems on all paint spray booths and observation zones. Dry filter particulate control systems on all sanding and repair booths and all flashoff areas. Dry filter particulate control systems on all air supply housing (ASH), air handling units (AHU), space heating units, and all curing ovens in the E-coat, primer, and topcoat operations.

Note: EU REPROCESS & EU-COLOR-ONE are permanently shut down.

PTI No. 13-19B, FGFACILITY CONDITIONS, I.1-5

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	CY 2023
1. NOX	150.65 tpy	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	39.17
2. CO	161.7 tpy	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	20.06
3. PM	29.96 tpy	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	14.16
4. PM10	20.55 tpy	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	9.45
5. PM2.5	18.05 tpy	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	9.05
The above annual (12-month rolling) limits will not be changed upon issuance of PTI No. 13-19C.				

PTI No. 13-19B, FGFACILITY CONDITIONS, II.1 (NG < 3,850.0 MM SCF per year)

FCA WTAP uses exclusively pipeline quality natural gas and usage does NOT exceed 3,850.0 MM SCF per year. Actual usage in CY 2023 = 1, 276.73 << 3,850.0 MM SCF per year.

PTI No. 13-19B, FGFACILITY CONDITIONS, V.1-2 Testing

FCA WTAP performed the required testing for PM, PM10, and PM2.5 and NOx as required by respective EUs / FGs.

PTI No. 13-19B, FGFACILITY CONDITIONS, VI.1-2 monitoring/recordkeeping

FCA WTAP performs the required calculations of NOx, CO PM, PM10, and PM2.5 from the combustion of natural gas and representative units using natural gas usage / combustion and corresponding emission factors.

CONCLUSION

FCA (Chrysler) is in non-compliance and is under a schedule of compliance per ACO AQD No. 2023-11 (settlement amount of \$371,454.00). PTI No. 13-19B to be revised per ACO. PTI No. 13-19C is almost ready to be issued. ROP renewal is on hold until the permit is revised.

NAME Stlenanchalt.

DATE _____

Joyce SUPERVISOR