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DEPARTMENT OF ENVIRONMENTAL QUALITY  
AIR QUALITY DIVISION  
ACTIVITY REPORT: Scheduled Inspection

N092935261

FACILITY: Ford Motor Company - Flat Rock Assembly		SRN / ID: N0929
LOCATION: 1 INTERNATIONAL DR, FLAT ROCK		DISTRICT: Detroit
CITY: FLAT ROCK		COUNTY: WAYNE
CONTACT: Terence Filipiak, Environmental Manager		ACTIVITY DATE: 06/28/2016
STAFF: Jonathan Lamb	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: Scheduled Inspection, FY 2016		
RESOLVED COMPLAINTS:		

DATE OF INSPECTION: 6/28/2016

REASON FOR INSPECTION: Scheduled Inspection

INSPECTED BY: Jonathan Lamb, AQD-Detroit Office

PERSONNEL PRESENT: Terry Filipiak, Environmental Manager - Ford; John Lauch, Senior Environmental Engineer - Ford

CONTACT PHONE NUMBER: 734-782-7797 (Mr. Filipiak)

**BACKGROUND:**

Ford Flat Rock Assembly Plant (FRAP) is an automobile assembly plant. The facility previously operated as AutoAlliance International, a joint venture between Ford and Mazda, until Ford took over sole ownership and operation in September 2012. FRAP is a considered a major source for volatile organic compounds (VOCs) and hazardous air pollutants (HAPs) and is subject to Title V permitting requirements. The facility is also subject to review under the Prevention of Significant Deterioration regulations of 40 CFR 52.21 because at the time of New Source Review permitting the potential to emit of VOCs was greater than 100 tons per year.

The building area is nearly 3 million square feet and is located on 400 acres of land. The plant has the capability of stamping, assembling, and painting metal body parts; molding and painting plastic parts; and final assembly to produce a finished automobile. VOC controls, including three regenerative catalytic oxidizers (RCOs), were installed in 1997. Ford has built the Ford Mustang at this facility since 2004 and will begin production of the Lincoln Continental later this year, replacing the Ford Fusion, which ceased production at this facility in February 2016. The facility operates two shifts, 6:00 AM to 2:30 PM and 5:30 PM to 2:00 AM, and has around 2,800 employees.

**COMPLAINT/COMPLIANCE HISTORY:**

Since starting operations in 1987, this facility has had a history of recurring odor complaints, received mainly from the subdivisions directly east of the facility/I-75 in Brownstown Township. A detailed history of the past odor issues at this facility can be found in previous inspection reports.

From 2012 through 2014, only four odor complaints were received and none were verified by AQD. However, in early 2015 odor complaints in the area started increasing and continued through the first half of 2016; from February 2015 through June 2016, a total of 96 odor complaints were received. Based on investigations performed by AQD, the facility was issued Violation Notices on August 18, 2015, August 27, 2015, and January 19, 2016, for violations of Rule 901.

In addition to the usual complaints of paint or solvent odors, AQD also received complaints of ammonia or "cat urine-type" odors. FRAP and AQD meet several times in 2015 and 2016 to discuss the issue and FRAP performed odor studies to help identify and correct the odors. Based on their investigations and odor studies, Ford believed the "cat urine" to be the result of biological activity occurring in a paint sludge pit in the plastic coating operations. The facility took corrective actions, including cleaning the sludge pit and adding a chlorine dousing system to the pit to control the bacteria. These corrective actions have appeared to resolve the "cat urine" odors from the paint sludge pit, as complaints describing this type of odor have greatly decreased since the corrective actions were taken. Paint/solvent odors still seem to be an issue and AQD will continue to monitor the situation, though no odors in violation of Rule 901 have been verified since January 2016 and the number of complaints has been decreasing since earlier in the year.

FRAP has also had ongoing noncompliance issues with the operation of the RCO System. FRAP received Violation Notices on January 21, 2014, and June 17, 2014, after compliance testing of the RCO System failed to

demonstrate compliance with either the minimum VOC destruction efficiency of 95% or maximum VOC outlet concentration of 5 ppm allowed in its Renewable Operating Permit. The facility resolved this issue when compliance testing performed on May 18, 2015, was able to demonstrate compliance with the VOC destruction efficiency and VOC outlet concentration limits. In addition to annual compliance testing, the facility also performs Outlet Concentration Monitoring (OCM) to monitor the performance of the RCO System. The OCM testing is for performance monitoring only and is not used to demonstrate compliance.

#### **OUTSTANDING CONSENT ORDERS:**

There are no outstanding consent orders. Consent Agreement AQD No. 15-2008, issued on June 17, 2008, was terminated on August 23, 2012, with AQD Director approval.

#### **PROCESS DESCRIPTION/CONTROLS:**

The facility is split into two operations: automobile body coating and assembly ("Body"), and plastic coating ("Plastic"). Both operations run concurrently and are coordinated to produce a complete automobile on site.

##### **Body**

Exterior panels (doors, fenders, hoods, etc.) are stamped from steel coils by four hydraulic presses on site. Interior parts are delivered from outside suppliers. The panels are welded together in the body shop, creating the body of the vehicle.

The vehicles are run through a phosphate line, which cleans oil and dirt from the surface to allow better adhesion of the coatings. The vehicles are then rinsed and run through an uncontrolled drying oven (250 °F). The vehicles are then run through the e-coat tank using a "porpoise" motion, which dips the vehicle into the e-coat several times. The vehicles are again rinsed and run through a drying oven (250 °F), which is controlled by an RTO. Next, the vehicle passes through the uncontrolled Sealer Deck, where seams are sealed using both automated and manual (brush) applicators, before passing through a cure oven (350 °F) controlled by the RTO.

At this point, the primed vehicles are staged in the "gallery" before being sent through Topcoat Line A or Topcoat Line B, where primer (also called guidecoat) and topcoat (basecoat and clearcoat) are applied. Lines A and B are identical and run parallel with each other. A few years ago, the facility switched to a "3-wet coating system" for coating application: as vehicles pass through the booths, the vehicle bodies are coated with primer, then basecoat, and then clearcoat without any drying/curing stages between applications. Coatings are applied with robotic applicators, though some manual HVLP sprayers are also used. Lines A and B use a water curtain for particulate control and all emissions booth emissions are exhausted through the RCO System for control of VOC emissions. After the coatings are applied, the vehicles are run through a cure oven (350 °F), which is controlled by the RTO.

Once the vehicles pass through the cure oven, they are checked for surface defects. If the defects are "major", the vehicle is sent to the Tutone/Repair Booth (C Line), where the defects are repaired using manual paint cup guns, and then cured in an oven. The Repair Booth uses mesh filters to control particulate. After the repair process is finished, or if no defects are found, the vehicles are then sent to the Blackout Booth, where a water-based blackout is applied via automated sprayers to the wheel wells. This booth is exhausted to atmosphere. The facility no longer applies wax to vehicles at this facility. The coated vehicles then go to Final Assembly.

An RCO System is used to control emissions from the Body operations. The system is made up of three RCOs (RCO A, RCO B, and RCO C) and an RTO. Each RCO has its own stack, and the RTO exhausts through the stack of RCO C.

##### **Plastic**

The plastic coating line is coordinated with the body coating line (ie, parts made on the plastic side are for cars being built on the body side), though some after-market parts are also made on the plastic side.

Front and rear bumpers/fascias are manufactured on site using four plastic injection molding machines. Once assembled, the bumpers are washed, acid-etched, and then oven dried at 200 °F. The bumpers are then coated using a "3-wet" application of a prep coat (adhesion promoter), topcoat, and clearcoat. All coatings are solvent-based. The Adhesion Promoter, Topcoat, and Clearcoat Booths all exhaust uncontrolled through the Tall Stack. After the coatings are applied, the bumpers pass through a two curing ovens (285 °F), which are controlled with a recuperative incinerator, and then go to Final Assembly. Since the last inspection, the North Plastic Line has been idled.

During the inspection, I was notified that all plastic coating operations are scheduled to be idled in the near future, possibly by the end of 2016.

#### Final Assembly

This is where the vehicles are completed – bumpers attached to frames, seats and windshields installed, etc. The cars are fueled on-site and are able to be driven off the lot (if necessary).

#### **APPLICABLE RULES/PERMIT CONDITIONS:**

Ford Flat Rock Assembly is a Title V facility operating under Renewable Operating Permit (ROP) No. MI-ROP-N0929-2011a, originally issued on May 19, 2011, and revised on September 12, 2012.

FRAP is also subject to the following federal regulations:

EU-Ecoat, EU-Guidecoat, EU-Topcoat, and EU-Purge are subject to the Maximum Achievable Control Technology Standards for Surface Coating of Automobiles and Light-Duty Trucks promulgated in 40 CFR, Part 63, Subparts A and IIII.

EU-Plastic and EU-Plastic Purge & Clean is subject to the Maximum Achievable Control Technology Standards for Surface Coating of Plastic Parts and Products promulgated in 40 CFR, Part 63, Subparts A and PPPP.

EU-Guidecoat and EU-Topcoat are subject to the New Source Performance Standards for Automobile and Light Duty Truck Surface Coating Operations promulgated in 40 CFR, Part 60, Subparts A and MM.

EU-Tanks is subject to the Maximum Achievable Control Technology Standards for Organic Liquids Distribution (Non-Gasoline) promulgated in 40 CFR, Part 63, Subparts A and EEEE.

The monitoring conditions contained in the ROP are necessary to demonstrate compliance with all applicable requirements and are consistent with the "Procedure for Evaluating Periodic Monitoring Submittals."

EU-Ecoat, EU-Guidecoat, EU-Topcoat, at the stationary source is subject to the federal Compliance Assurance Monitoring (CAM) rule under 40 CFR, Part 64. This emission unit has a control device and potential pre-control emissions of Volatile Organic Compounds greater than the major source threshold level.

Various natural gas-fired boilers, all with a heat capacity below 11 MMBtu/hr and exempt from the permitting requirements of Rule 201 pursuant to Rules 278 and 282(b)(i), are subject to the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters promulgated in 40 CFR Part 63, Subpart DDDDD.

EU-Generators may be subject to National Emission Standards for Hazardous Stationary Reciprocating Internal Combustion Engines as promulgated in 40 CFR Part 63, Subpart ZZZZ.

Records from July 2014 through June 2016 were reviewed for the purpose of determining compliance. Some of these records can be found in the orange facility file.

#### ROP No. MI-ROP-N0929-2011a, applicable conditions:

##### **C. EMISSION UNIT CONDITIONS**

EU-Plastic Purge & Clean – Use of purge and cleaning solvents within the plastic parts coating operation (EU-Plastic).

##### **I. Emission Limits**

1. IN COMPLIANCE. VOC emissions from EU-Plastic Purge & Clean were below the permit limit of 118.2 tons per 12-month rolling time period. The highest 12-month rolling total VOC emissions during the compliance period was 27 tons in the 12-month rolling time period ending in October 2015; the 12-month rolling total VOC total in June 2016 was 24 tons.

##### **V. Testing/Sampling**

1. IN COMPLIANCE. VOC content, water content, and density of all solvents is calculated using manufacture's formulation data.

#### VI. Monitoring/Recordkeeping

1. IN COMPLIANCE. The facility maintains the following information on a monthly basis for EU-Plastic Purge & Clean:

- a. Gallons (with water) of each VOC-containing purge and clean-up solvent
- b. Gallons (with water) of each VOC-containing purge and clean-up solvent reclaimed.
- c. VOC content (with water) in pounds per gallon of each purge and clean-up solvent used.
- d. VOC mass emission calculations determining the monthly emission rate in the tons per calendar month, in accordance with the method outlined in Appendix 7.
- e. VOC mass emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month, in accordance with the method outlined in Appendix 7.

#### VII. Reporting

1. IN COMPLIANCE. Deviations are reported pursuant to GC 21 and 22 of Part A.
2. IN COMPLIANCE. Semiannual reports of monitoring and deviations are submitted by March 15 (for reporting period July 1 through December 31) and September 15 (for reporting period January 1 through June 30) each year, as required per GC 23 of Part A.
3. IN COMPLIANCE. Annual compliance certification is submitted by March 15 for the previous calendar year, as required per GC 19 and 20 of Part A.

#### EU-Stamping Shop – Stamping shop operations

#### VII. Reporting

1. IN COMPLIANCE. Deviations are reported pursuant to GC 21 and 22 of Part A.
2. IN COMPLIANCE. Semiannual reports of monitoring and deviations are submitted by March 15 (for reporting period July 1 through December 31) and September 15 (for reporting period January 1 through June 30) each year, as required per GC 23 of Part A.
3. IN COMPLIANCE. Annual compliance certification is submitted by March 15 for the previous calendar year, as required per GC 19 and 20 of Part A.

#### VIII. Stack/Vent Restrictions

1. IN COMPLIANCE. Exhaust gases from EU-Stamping Shop are not directly discharged to the ambient air. All stamping operations are exhausted inside the building.

#### EU-Phosphate – Pretreatment of the vehicle surface to prepare it for electrocoating.

#### VII. Reporting

1. IN COMPLIANCE. Deviations are reported pursuant to GC 21 and 22 of Part A.
2. IN COMPLIANCE. Semiannual reports of monitoring and deviations are submitted by March 15 (for reporting period July 1 through December 31) and September 15 (for reporting period January 1 through June 30) each year, as required per GC 23 of Part A.
3. IN COMPLIANCE. Annual compliance certification is submitted by March 15 for the previous calendar year, as required per GC 19 and 20 of Part A.

#### VIII. Stack/Vent Restrictions

- 1, 2, and 3. IN COMPLIANCE. According to facility documentation, stacks SV345, SV390, and SV392 meet permit specifications.

#### EU-Ecoat – Electrocoating of vehicle bodies

#### IV. Design/Equipment Parameters

1. IN COMPLIANCE. Cure oven portion of EU-Ecoat is operated with the regenerative thermal oxidizer installed, maintained, and operated in a satisfactory manner. This includes maintaining of a minimum VOC destruction efficiency of 95% or an average outlet VOC concentration of less than or equal to 5 ppm (as propane) for the RCO Control System.

#### V. Testing/Sampling

1. IN COMPLIANCE. VOC content, water content, and density of the resin, pigment, and additives, as added to the Electrocoat tank is determined from manufacturer's formulation data.

#### VII. Reporting

1. IN COMPLIANCE. Deviations are reported pursuant to GC 21 and 22 of Part A.
2. IN COMPLIANCE. Semiannual reports of monitoring and deviations are submitted by March 15 (for reporting period July 1 through December 31) and September 15 (for reporting period January 1 through June 30) each year, as required per GC 23 of Part A.
3. IN COMPLIANCE. Annual compliance certification is submitted by March 15 for the previous calendar year, as required per GC 19 and 20 of Part A.

#### VIII. Stack/Vent Restrictions

- 1, 2, and 3. IN COMPLIANCE. According to facility documentation, stacks SV355, SV389, and SV103 meet permit specifications.

EU-NGB Adhesives & Sealers – Sealer and adhesive materials used in the body construction processes.

#### V. Testing/Sampling

1. IN COMPLIANCE. VOC content of each sealer and adhesive, as applied, is determined using manufacturer's formulation data.

#### VII. Reporting

1. IN COMPLIANCE. Deviations are reported pursuant to GC 21 and 22 of Part A.
2. IN COMPLIANCE. Semiannual reports of monitoring and deviations are submitted by March 15 (for reporting period July 1 through December 31) and September 15 (for reporting period January 1 through June 30) each year, as required per GC 23 of Part A.
3. IN COMPLIANCE. Annual compliance certification is submitted by March 15 for the previous calendar year, as required per GC 19 and 20 of Part A.

EU-Deadeners – Sound deadener material sprayed into body cavity areas of the vehicle.

#### V. Testing/Sampling

1. IN COMPLIANCE. VOC content of each sound dampening material, as applied, is determined using manufacturer's formulation data.

#### VII. Reporting

1. IN COMPLIANCE. Deviations are reported pursuant to GC 21 and 22 of Part A.
2. IN COMPLIANCE. Semiannual reports of monitoring and deviations are submitted by March 15 (for reporting period July 1 through December 31) and September 15 (for reporting period January 1 through June 30) each year, as required per GC 23 of Part A.
3. IN COMPLIANCE. Annual compliance certification is submitted by March 15 for the previous calendar year, as required per GC 19 and 20 of Part A.

EU-Glass Install – Adhesives, primers, sealers, and solvents used for windshield and rear window installation.

#### V. Testing/Sampling

1. IN COMPLIANCE. VOC content of each glass adhesive material, as applied, is determined using manufacturer's formulation data.

#### VII. Reporting

1. IN COMPLIANCE. Deviations are reported pursuant to GC 21 and 22 of Part A.
2. IN COMPLIANCE. Semiannual reports of monitoring and deviations are submitted by March 15 (for reporting period July 1 through December 31) and September 15 (for reporting period January 1 through June 30) each year, as required per GC 23 of Part A.
3. IN COMPLIANCE. Annual compliance certification is submitted by March 15 for the previous calendar year, as required per GC 19 and 20 of Part A.

#### VIII. Stack/Vent Restrictions

- 1, 2, 3, and 4. IN COMPLIANCE. According to facility documentation, stacks SV601, SV602, SV603, and SV604 meet permit specifications.

EU-Guidecoat – Application of guidecoat coating, including anti-chip primer, undercoating, and black-out.

#### IV. Design/Equipment Parameters

1. IN COMPLIANCE. EU-Guidecoat is operated with the RCO Control System installed, maintained, and

operated in a satisfactory manner. This includes maintaining of a minimum VOC destruction efficiency of 95% or an average outlet VOC concentration of less than or equal to 5 ppm (as propane) for the RCO Control System.

2. IN COMPLIANCE. Water wash particulate controls for the spray booths of EU-Guidecoat are installed, maintained, and operated in a satisfactory manner, , including the monitoring and recordkeeping requirements of FG-Facility, SC VI.2.

#### V. Testing/Sampling

1. IN COMPLIANCE. VOC content of all coatings and materials used is determined using federal Reference Test Method 24 and formulation data.

#### VII. Reporting

1. IN COMPLIANCE. Deviations are reported pursuant to GC 21 and 22 of Part A.

2. IN COMPLIANCE. Semiannual reports of monitoring and deviations are submitted by March 15 (for reporting period July 1 through December 31) and September 15 (for reporting period January 1 through June 30) each year, as required per GC 23 of Part A.

3. IN COMPLIANCE. Annual compliance certification is submitted by March 15 for the previous calendar year, as required per GC 19 and 20 of Part A.

#### VIII. Stack/Vent Restrictions

1 through 10: IN COMPLIANCE. According to facility documentation, stacks SV304, SV305, SV306, SV307, SV308, SV309, SV313, SV101, SV102, and SV103 meet permit specifications.

#### IX. Other Requirements

1. IN COMPLIANCE. Facility certifies compliance that the applicable provisions of 40 CFR Part 60, Subpart MM are met.

#### EU-Topcoat – Application of topcoat coating, including tutone/repair.

1. IN COMPLIANCE. EU-Topcoat is operated with the RCO Control System installed, maintained, and operated in a satisfactory manner. This includes maintaining either a minimum VOC destruction efficiency of 95% or an average outlet VOC concentration of less than or equal to 5 ppm (as propane) for the RCO Control System. Testing to demonstrate compliance with the VOC emission rate and destruction efficiency of the RCO System was most recently performed on March 30, 2016, which showed an average VOC outlet concentration of 5 ppm, which demonstrates compliance with the requirements this condition.

2. IN COMPLIANCE. Water wash particulate controls for the spray booths of EU-Topcoat are installed, maintained, and operated in a satisfactory manner, including the monitoring and recordkeeping requirements of FG-Facility, SC VI.2.

#### V. Testing/Sampling

1. IN COMPLIANCE. VOC content of all coatings and materials used is determined using federal Reference Test Method 24 and formulation data.

#### VII. Reporting

1. IN COMPLIANCE. Deviations are reported pursuant to GC 21 and 22 of Part A.

2. IN COMPLIANCE. Semiannual reports of monitoring and deviations are submitted by March 15 (for reporting period July 1 through December 31) and September 15 (for reporting period January 1 through June 30) each year, as required per GC 23 of Part A.

3. IN COMPLIANCE. Annual compliance certification is submitted by March 15 for the previous calendar year, as required per GC 19 and 20 of Part A.

#### VIII. Stack/Vent Restrictions

1 through 13: IN COMPLIANCE. According to facility documentation, stacks SV321, SV322, SV331, SV332, SV335, SV336, SV337, SV338, SV339, SV344, SV101, SV102, and SV103 meet permit specifications.

EU-Final Repair – Miscellaneous body coating processes, including final repair, transit coating, and spot repair. Spot repair is considered minor paint repairs not conducted in booth.

#### IV. Design/Equipment Parameters

1. IN COMPLIANCE. Dry filter particulate controls are installed, maintained, and operated in a satisfactory manner, including the monitoring and recordkeeping requirements of FG-Facility, SC VI.2.

#### V. Testing/Sampling

1. IN COMPLIANCE. VOC content, water content, and density of any coating, as applied and as received, is determined using manufacturer's formulation data.

#### VII. Reporting

1. IN COMPLIANCE. Deviations are reported pursuant to GC 21 and 22 of Part A.

2. IN COMPLIANCE. Semiannual reports of monitoring and deviations are submitted by March 15 (for reporting period July 1 through December 31) and September 15 (for reporting period January 1 through June 30) each year, as required per GC 23 of Part A.

3. IN COMPLIANCE. Annual compliance certification is submitted by March 15 for the previous calendar year, as required per GC 19 and 20 of Part A.

#### VIII. Stack/Vent Restrictions

1, 2, 3, and 4. IN COMPLIANCE. According to facility documentation, stacks SV399, SV400, SV403, and SV404 meet permit specifications.

EU-Blackout/Wax – Application of black out and/or wax coatings.

#### IV. Design/Equipment Parameters

1. IN COMPLIANCE. Dry filter particulate controls are installed, maintained, and operated in a satisfactory manner, including the monitoring and recordkeeping requirements of FG-Facility, SC VI.2.

#### V. Testing/Sampling

1. IN COMPLIANCE. VOC content of all coatings and materials used is determined using federal Reference Test Method 24 and formulation data.

#### VII. Reporting

1. IN COMPLIANCE. Deviations are reported pursuant to GC 21 and 22 of Part A.

2. IN COMPLIANCE. Semiannual reports of monitoring and deviations are submitted by March 15 (for reporting period July 1 through December 31) and September 15 (for reporting period January 1 through June 30) each year, as required per GC 23 of Part A.

3. IN COMPLIANCE. Annual compliance certification is submitted by March 15 for the previous calendar year, as required per GC 19 and 20 of Part A.

#### VIII. Stack/Vent Restrictions

1 and 2. IN COMPLIANCE. According to facility documentation, stacks SV341 and SV342 meet permit specifications.

EU-Undercoat – Application of undercoat coating

#### IV. Design/Equipment Parameters

1. IN COMPLIANCE. Dry filter particulate controls are installed, maintained, and operated in a satisfactory manner, including the monitoring and recordkeeping requirements of FG-Facility, SC VI.2.

#### V. Testing/Sampling

1. IN COMPLIANCE. VOC content of all coatings and materials used is determined using federal Reference Test Method 24 and formulation data.

#### VII. Reporting

1. IN COMPLIANCE. Deviations are reported pursuant to GC 21 and 22 of Part A.

2. IN COMPLIANCE. Semiannual reports of monitoring and deviations are submitted by March 15 (for reporting period July 1 through December 31) and September 15 (for reporting period January 1 through June 30) each year, as required per GC 23 of Part A.

3. IN COMPLIANCE. Annual compliance certification is submitted by March 15 for the previous calendar year, as required per GC 19 and 20 of Part A.

#### VIII. Stack/Vent Restrictions

1, 2, and 3. IN COMPLIANCE. According to facility documentation, stacks SV301, SV302, and SV303 meet permit specifications.

EU-Assembly Purge & Clean – Use of purge solvents with the automobile coating and assembly processes.

#### V. Testing/Sampling

1. IN COMPLIANCE. VOC content, water content, and density of any solvent, as applied and as received, is determined using manufacturer's formulation data.

#### VII. Reporting

1. IN COMPLIANCE. Deviations are reported pursuant to GC 21 and 22 of Part A.

2. IN COMPLIANCE. Semiannual reports of monitoring and deviations are submitted by March 15 (for reporting period July 1 through December 31) and September 15 (for reporting period January 1 through June 30) each year, as required per GC 23 of Part A.

3. IN COMPLIANCE. Annual compliance certification is submitted by March 15 for the previous calendar year, as required per GC 19 and 20 of Part A.

EU-Tanks – Various above ground and underground storage tanks used to store fluids, fuels, and solvents.

#### VII. Reporting

1. IN COMPLIANCE. Deviations are reported pursuant to GC 21 and 22 of Part A.

2. IN COMPLIANCE. Semiannual reports of monitoring and deviations are submitted by March 15 (for reporting period July 1 through December 31) and September 15 (for reporting period January 1 through June 30) each year, as required per GC 23 of Part A.

3. IN COMPLIANCE. Annual compliance certification is submitted by March 15 for the previous calendar year, as required per GC 19 and 20 of Part A.

EU-Fluid Fill – Vehicle fluid and fuel fill operations.

#### III. Process/Operational Restrictions

1. IN COMPLIANCE. Facility uses a vapor recovery system when fueling vehicles.

#### VII. Reporting

1. IN COMPLIANCE. Deviations are reported pursuant to GC 21 and 22 of Part A.

2. IN COMPLIANCE. Semiannual reports of monitoring and deviations are submitted by March 15 (for reporting period July 1 through December 31) and September 15 (for reporting period January 1 through June 30) each year, as required per GC 23 of Part A.

3. IN COMPLIANCE. Annual compliance certification is submitted by March 15 for the previous calendar year, as required per GC 19 and 20 of Part A.

EU-Start Up/Roll Test – After each new vehicle is completely assembled and the fluids are added, it is started and allowed to idle in the vehicle start-up area of the final assembly line. After start up, each vehicle is driven onto a roll test dynamometer where a series of accelerations and deceleration tests are performed.

#### VII. Reporting

1. IN COMPLIANCE. Deviations are reported pursuant to GC 21 and 22 of Part A.

2. IN COMPLIANCE. Semiannual reports of monitoring and deviations are submitted by March 15 (for reporting period July 1 through December 31) and September 15 (for reporting period January 1 through June 30) each year, as required per GC 23 of Part A.

3. IN COMPLIANCE. Annual compliance certification is submitted by March 15 for the previous calendar year, as required per GC 19 and 20 of Part A.

#### VIII. Stack/Vent Restrictions

1, 2, 3, and 4. IN COMPLIANCE. According to facility documentation, stacks SV610, SV611, SV612, and SV613 meet permit specifications.

EU-Natural Gas – Natural gas burning associated with the automotive assembly and painting operations, excluding plastic parts coating operations. The equipment includes process boilers, space heaters, process ovens, and miscellaneous support equipment installed under this permit.

#### VII. Reporting

1. IN COMPLIANCE. Deviations are reported pursuant to GC 21 and 22 of Part A.

2. IN COMPLIANCE. Semiannual reports of monitoring and deviations are submitted by March 15 (for reporting period July 1 through December 31) and September 15 (for reporting period January 1 through June 30) each year, as required per GC 23 of Part A.

3. IN COMPLIANCE. Annual compliance certification is submitted by March 15 for the previous calendar year, as



required per GC 19 and 20 of Part A.

#### EU-Plastic – Coating of plastic parts

##### **I. Emission Limits**

1. IN COMPLIANCE. EU-Plastic did not exceed the permit limit of 515.8 lbs/hour based on a monthly average. Highest monthly average during the compliance period was 162 lbs/hour for the month of April 2016. Monthly average for June 2016 was 64 lbs/hour.
2. IN COMPLIANCE. EU-Plastic did not exceed the permit limit of 700.78 tons per 12-month rolling time period. Highest 12-month rolling total VOCs was 247 tons for the 12-month rolling time period ending in June 2016.
3. IN COMPLIANCE. Facility demonstrates compliance with the PM limit by demonstrating compliance with the monitoring requirements for the water wash system, as required in EU-Plastic VI.3.
4. IN COMPLIANCE. Facility demonstrates compliance with the PM limit by demonstrating compliance with the monitoring requirements for the water wash system, as required in EU-Plastic VI.3

##### **II. Material Limits**

1. IN COMPLIANCE. VOC content of coatings used in EU-Plastic do not exceed the VOC content limits as referenced in Rule 632, Table 66 for automotive parts. The coatings are subject to the 4.3 lb/gallon VOC limit for high-bake, basecoat, and the 4.0 lb/gallon limit for high-bake, clearcoat. Based on manufacturer formulation data, no coatings used in either basecoat or clearcoat exceed their respective allowable limits. No primer is used in EU-Plastic, and there is no touch-up/repair performed in EU-Plastic.

##### **IV. Design/Equipment Parameters**

1. IN COMPLIANCE. Mechanical collector for plastic crushing operations in EU-Plastic is installed and operated in a satisfactory manner.
2. IN COMPLIANCE. Water wash for coating spray booths are installed and operated in a satisfactory manner.
3. IN COMPLIANCE. Thermal oxidizers of the ovens in EU-Plastic are operated at a minimum temperature of 1400 F (or average temperature of 1400 F over 3-hour average) and minimum retention time of 0.5 seconds.

##### **V. Testing/Sampling**

1. IN COMPLIANCE. VOC content, water content, and density of all coatings and materials, as received and as applied, is determined using manufacturer's formulation data.

##### **VI. Monitoring/Recordkeeping**

1. IN COMPLIANCE. Each thermal oxidizer is equipped with a temperature monitoring device, with temperature alarms and continuous temperature recording device. Alarms are set to go off if temperatures fall below 1400 F.
2. IN COMPLIANCE. The facility maintains the following information on a monthly basis for EU-Plastic:
  - a. Gallons (with water) of each coating used.
  - b. VOC content (minus water) of each coating, as applied.
  - c. If any coating is used on a given day that does not meet the limit specified in SC II.1 for its category, VOC emission calculations determining the daily volume-weighted average VOC content of all coatings in that category, as applied, shall be conducted for that day.
  - d. VOC mass emission calculations determining the monthly emission rate in the tons per calendar month.
  - e. VOC mass emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month.
3. IN COMPLIANCE. Water wash system is visually inspected on a weekly basis, and records are maintained of all inspections and maintenance.

##### **VII. Reporting**

1. IN COMPLIANCE. Deviations are reported pursuant to GC 21 and 22 of Part A.
2. IN COMPLIANCE. Semiannual reports of monitoring and deviations are submitted by March 15 (for reporting period July 1 through December 31) and September 15 (for reporting period January 1 through June 30) each year, as required per GC 23 of Part A.
3. IN COMPLIANCE. Annual compliance certification is submitted by March 15 for the previous calendar year, as required per GC 19 and 20 of Part A.
4. IN COMPLIANCE. Facility submits material usage data to AQD on a quarterly basis.

##### **VIII. Stack/Vent Restrictions**

- 1 through 5. IN COMPLIANCE. According to facility documentation, stacks SV510, SV516, SV519, SV526, and SVTALL meet permit specifications.

EU-Bulbcrusher – one 55-gallon drum-top fluorescent light bulb crusher, controlled by a bag filter followed in series by a HEPA filter and an activated carbon filter.

## II. Material Limits

1. IN COMPLIANCE. Facility did not crush more than 150 eight-foot equivalent fluorescent light bulbs in EU-Bulbcrusher in any calendar day during the compliance period. Records were submitted on a monthly, not daily basis, but the most eight-foot equivalent bulbs crushed in any month during the compliance period was 94 bulbs in the month of January 2015.
2. IN COMPLIANCE. Facility did not crush more than the equivalent of 3000 eight-foot fluorescent light bulbs in EU-Bulbcrusher per 12-month rolling time period. The highest 12-month total during the compliance period was 972 eight-foot equivalent bulbs in the 12-month rolling time period ending in January 2015.

## III. Process/Operational Restrictions

1. IN COMPLIANCE. EU-Bulbcrusher is installed, operated, and maintained to minimize emissions to the ambient air, following the Recommended Best Management Practices for Drum-top Crushers and Recommended Best Management Practices for Lamp Handling & Storage, as specified in Appendices 1 and 2.
2. IN COMPLIANCE. EU-Bulbcrusher is maintained and operated according to manufacturer's specifications and procedures.
3. IN COMPLIANCE. EU-Bulbcrusher is located a minimum 50 feet from the property line, 300 feet from any existing places of residence or private or public assembly, 500 feet from a school, apartment building, or institutional occupancy, and 1000 feet from a hospital or nursing home.
4. IN COMPLIANCE. Facility minimized the time to change out the 55-drum portion of EU-Bulbcrusher. Drum change outs are performed according to manufacturer procedures.
5. IN COMPLIANCE. Facility replaces the carbon filter approximately once per year. Based on records, the filter was replaced on the following dates: August 15, 2014, May 5, 2015, and February 2, 2016.
6. IN COMPLIANCE. Broken glass and metal pieces collected in the drum is properly handled, transported, and disposed of in accordance with State and federal regulations. Once filled, the drums are sent to US Ecology for disposal.

## IV. Design/Equipment Parameters

1. IN COMPLIANCE. EU-Bulbcrusher is properly installed with a bag filter followed by a HEPA filter and activated carbon filter.
2. IN COMPLIANCE. During the crushing demonstration performed during the inspection, the drum appeared to be undented with a tight-fitting seal at the top, with no visible cracks or damage to the filter unit.
3. IN COMPLIANCE. Feed chute is covered when bulb crusher is not in use.

## V. Testing/Sampling

1. NOT APPLICABLE. Facility replaces the carbon filter on an annual basis, so testing is not required. However, AQD performed testing during the inspection and found the emissions from EU-Bulbcrushing to be within acceptable limits. The results of this testing can be found in the orange facility file.

## VI. Monitoring/Recordkeeping

1. IN COMPLIANCE. Facility maintains records of the number and size of bulbs crushed on a daily, monthly, and 12-month rolling time period basis.
2. IN COMPLIANCE. Facility maintains records of when the carbon filter is replaced.
3. IN COMPLIANCE. Facility maintains disposal records of the waste drums.
4. IN COMPLIANCE. Facility maintains and records ambient temperature during bulb crushing.

## VII. Reporting

1. IN COMPLIANCE. Deviations are reported pursuant to GC 21 and 22 of Part A.
2. IN COMPLIANCE. Semiannual reports of monitoring and deviations are submitted by March 15 (for reporting period July 1 through December 31) and September 15 (for reporting period January 1 through June 30) each year, as required per GC 23 of Part A.
3. IN COMPLIANCE. Annual compliance certification is submitted by March 15 for the previous calendar year, as required per GC 19 and 20 of Part A.

## VIII. Stack/Vent Restrictions

1. IN COMPLIANCE. EU-Bulbcrusher is located inside the maintenance building, and emissions are exhausted within the building.

## D. FLEXIBLE GROUP CONDITIONS

FG-Facility – This flexible group covers equipment used for automotive assembly and painting operations, excluding plastic parts coating operations.

Associated Emission Unit IDs: All emission units (including EU-Phosphate, EU-Ecoat, EU-NGB Adhesives & Sealers, EU-Deadeners, EU-Glass Install, EU-Guidecoat, EU-Topcoat, EU-Final Repair, EU-Blackout/Wax, EU-Undercoat, EU-Assembly Purge & Clean, EU-Tanks, EU-Fluid Fill, EU-Start-Up/Roll Test, EU-Natural Gas) and flexible groups associated with the automotive assembly and painting operations, including all clean-up and purge activities associated with automotive painting and assembly operations, storage tanks, and paint sludge handling and disposal operations.

#### I. Emission Limits

Pollutant	Limit	Highest Reported Emissions	Status
1. VOC	732.0 tons per 12-month rolling time period	293.5 tons for 12-month period ending Oct. 2015; 12-month rolling total VOC emissions were 278.1 tons for 12-month rolling time period ending June 2016.	IN COMPLIANCE
2. VOC	4.8 pounds per job, monthly average based on 12-month rolling time period.	3.6 pounds per job, monthly average, for 12-month rolling time period ending February 2015; Monthly average was 2.9 pounds per job for 12-month rolling time period ending June 2016.	IN COMPLIANCE
3. PM-10	73.0 tons per 12-month rolling time period	22.1 tons for 12-month rolling time period ending Oct. 2015; 12-month rolling total PM-10 emissions were 19.8 tons for 12-month rolling time period ending June 2016.	IN COMPLIANCE
4. PM-2.5	73.0 tons per 12-month rolling time period	22.1 tons for 12-month rolling time period ending Oct. 2015; 12-month rolling PM-2.5 emissions were 19.8 tons for 12-month rolling time period ending June 2016.	IN COMPLIANCE
5. NOx	102.4 tons per 12-month rolling time period	68.0 tons for 12-month rolling time period ending June 2016.	IN COMPLIANCE

#### II. Material Limits

1. IN COMPLIANCE. Natural gas usage was below the permit limit of 1995 MM cubic feet per 12-month rolling time period. Highest total natural gas usage was 1,330 MM cubic feet for the 12-month rolling time period ending June 2016.

#### IV. Design/Equipment Parameters

1. IN COMPLIANCE. Each spray coating booth and scuff booth operation is equipped with either water wash or dry filters to control particulate emissions.

#### V. Testing/Sampling

1. IN COMPLIANCE. The most recent testing to verify booth and oven capture efficiency of the Prime (Guidecoat), Basecoat, and Clearcoat Systems was performed the week of October 28, 2013, following the implementation of the "3-Wet" coating system. Results showed the following capture efficiencies: Prime Booth - 81.8 %; Prime Oven - 10.4%; Basecoat Booth - 82.5%; Basecoat Oven – 10.0%; Clearcoat Booth – 38.9%; Clearcoat Oven – 42.4%.

2. IN COMPLIANCE. Testing to demonstrate compliance with the VOC emission rate and destruction efficiency

of the RCO System was most recently performed on May 18, 2015, which showed an average VOC outlet concentration of 4 ppm and a destruction efficiency of 95%; both parameters demonstrate compliance with the requirements of EU-Topcoat, IV.1.

3. IN COMPLIANCE. The most recent testing to verify transfer efficiency of the Prime (Guidecoat), Basecoat, and Clearcoat Systems was performed the week of October 28, 2013, following the implementation of the "3-Wet" coating system. Testing was performed on Mustang and Fusion vehicles, and the transfer efficiency of all three booths was reported as a single transfer efficiency. Results showed "3-Wet-Mustang" with a transfer efficiency of 77.1% and "3-Wet-Fusion" with a transfer efficiency of 73.7%.

4. IN COMPLIANCE. With AQD approval, Ford performed testing from October 4 through October 26, 2011, to determine both particulate matter (PM) and condensable particulate matter (CPM) emission rates. The scope of the test plan included plant-specific testing as well as representative sources across three Ford facilities – FRAP/AAI, Dearborn Truck Plant, and Michigan Assembly Plant, to allow the facilities to demonstrate compliance with their PM, PM-10 and PM-2.5 emission limits without having to test each individual source at each facility. Specific to this condition, testing on a Guidecoat Manual (Prime Manual) booth and Clearcoat Robot booth was conducted at FRAP on October 12-13, 2011; testing on a Guidecoat Robot (Prime Robot) booth was conducted at Michigan Assembly on October 25-26, 2011; and testing on a Basecoat Manual and Basecoat Robot booth was performed at Dearborn Truck on October 4-5, 2011. These tests demonstrate compliance with this testing condition; full results of PM/CPM emission rate testing performed under the scope of this test plan can be found in the orange facility file.

#### VI. Monitoring/Recordkeeping

1. IN COMPLIANCE. The following records/calculations for FG-Facility are maintained:

- a. Identification, VOC content, and usage of each material used in FG-Facility;
- b. Number of jobs per calendar month;
- c. Calculations showing the monthly and 12-month rolling time period VOC emission rates. Calculations include the capture and control efficiency of each control device used;
- d. Calculations showing the average monthly VOC emission rate on a pound per job basis per 12-month rolling time period;
- e. Calculations showing the PM-10 mass emission rate in tons on a monthly and 12-month rolling time period basis;
- f. Records of total natural gas used on a monthly and 12-month rolling time period basis;
- g. Calculations showing the mass emission rate of NOx in tons on a monthly and 12-month rolling time period basis;
- h. Hours of operation on a monthly and 12-month rolling time period basis.

2. IN COMPLIANCE. Facility performs weekly inspections of each guidecoat, basecoat, and clearcoat spray booth, and monthly inspections of each final repair spray booth and scuff booth. Records of these inspections are maintained on file at the facility.

3. IN COMPLIANCE. Facility maintains records of any modifications made, when applicable.

#### VII. Reporting

1. IN COMPLIANCE. Deviations are reported pursuant to GC 21 and 22 of Part A.

2. IN COMPLIANCE. Semiannual reports of monitoring and deviations are submitted by March 15 (for reporting period July 1 through December 31) and September 15 (for reporting period January 1 through June 30) each year, as required per GC 23 of Part A.

3. IN COMPLIANCE. Annual compliance certification is submitted by March 15 for the previous calendar year, as required per GC 19 and 20 of Part A.

4. IN COMPLIANCE. Facility submits quarterly reports for each emission unit and flexible group included in this permit of the actual VOC, PM-10, and NOx emission rates for each limit included in the permit.

5. IN COMPLIANCE. Facility notifies AQD in writing of projects authorized by FG-Facility, SC IX.3 and 4.

Notification was received by AQD on March 16, 2015, regarding the installation of a Wax Application System.

#### IX. Other Requirements

1. IN COMPLIANCE. There have been no changes to operations subject to R.201 since the revised Title V permit was issued on September 12, 2012.

2. IN COMPLIANCE. The facility is in compliance with the VOC limits in FG-Facility, SC 1 and 2, which demonstrates compliance with the requirements of 40 CFR Part 60, Subpart MM and R.336.1610.

3 and 4. IN COMPLIANCE. The facility has not installed or modified equipment or operations which would require an increase in the emission limits listed in FG-Facility I.1 through 5, result in a meaningful change in the nature or quantity of TACs, or be a major source of HAPs.

5. NOT APPLICABLE. No changes to the emission limits in FG-Facility, SC 1 through 5, due to changes in

federal regulations or changes to the State Implementation Plan have been required.

6. NOT APPLICABLE. Facility has not requested the termination of the flexible emission limit provisions of the permit.

FG-Controls – Three regenerative catalytic oxidizers and one regenerative thermal oxidizer used for control of VOC emissions from the electrocoat system, the paint spray booths, and curing ovens.

Associated Emission Unit IDs: EU-Ecoat, EU-Guidecoat, EU-Topcoat

### III. Process/Operational Restrictions

1. IN COMPLIANCE. The facility is in compliance with the following conditions:

- a. A malfunction abatement plan (MAP) for FG-Controls is implemented and maintained in accordance with Appendix 3.
- b. An operation and maintenance plan (O&M Plan) for FG-Coating is implemented and maintained in accordance with Appendix 3.
- c. An outlet concentration monitoring plan (OCM Plan) has been developed, maintained, and implemented, in accordance with Appendix 3, to monitor the performance of the control systems. Results of testing performed in accordance with the OCM Plan are reported to AQD and can be found in the orange facility file.

### VI. Monitoring/Recordkeeping

1. IN COMPLIANCE. The three regenerative catalytic oxidizer beds are equipped with a device to monitor and record the temperature of the beds on a continuous (at least once every 15 minutes) basis during operation of EU-Ecoat, EU-Guidecoat, and EU-Topcoat.
2. IN COMPLIANCE. Records of the temperature monitoring of the three regenerative catalytic oxidizer beds are maintained.
3. IN COMPLIANCE. The regenerative thermal oxidizer is equipped with a device to monitor and record the temperature of the combustion chamber on a continuous (at least once every 15 minutes) basis during operation of EU-Ecoat, EU-Guidecoat, and EU-Topcoat.
4. IN COMPLIANCE. Records of the temperature monitoring of the regenerative thermal oxidizer are maintained.
5. IN COMPLIANCE. Facility performs annual verification thermocouples as part of the MAP for the FG-Controls.
6. IN COMPLIANCE. Bypass monitoring has been performed. Alarms are set for any valve which is bypassed, and the facility records the date, time, and duration of all emissions through bypass valves.
7. IN COMPLIANCE. Compliance with FG-Controls SC 1 and 3 demonstrates compliance with the thermal/catalytic oxidizer monitoring requirement specified in 40 CFR 60.394 and 40 CFR 60.395.

### VII. Reporting

1. IN COMPLIANCE. Deviations are reported pursuant to GC 21 and 22 of Part A.
2. IN COMPLIANCE. Semiannual reports of monitoring and deviations are submitted by March 15 (for reporting period July 1 through December 31) and September 15 (for reporting period January 1 through June 30) each year, as required per GC 23 of Part A.
3. IN COMPLIANCE. Annual compliance certification is submitted by March 15 for the previous calendar year, as required per GC 19 and 20 of Part A.

### IX. Other Requirements

1. IN COMPLIANCE. Facility reports any excursions of Compliance Assurance Monitoring (CAM) in accordance with 40 CFR 64.6(c)(2).
2. IN COMPLIANCE. Facility complies with applicable requirements of 40 CFR Part 64.

FG-Auto MACT – Emission units subject to 40 CFR 63, Subpart IIII – National Emission Standards for Hazardous Air Pollutants: Surface Coating of Automobiles and Light-Duty Trucks.

Associated Emission Unit IDs: EU-Ecoat, EU-NGB Adhesives & Sealers, EU-Deadeners, EU-Glass Install, EU-Guidecoat, EU-Topcoat, EU-Final Repair, EU-Blackout/Wax, EU-Undercoat, and EU-Final Assembly Purge & Clean

### I. Emission Limits

1. NOT APPLICABLE. E-Coat materials do not contain reportable HAPs, so facility uses the limit in FG-Auto MACT, 1.2 to demonstrate compliance.
- 2 through 4. IN COMPLIANCE. Records were not reviewed to verify compliance with the organic HAP emission limits for FG-Auto MACT; however, the facility has reported no deviations to Auto MACT requirements during this compliance period, so these conditions are determined to be in compliance at this time. A more thorough

evaluation of the organic HAP emission rates will be performed as part of the next full compliance evaluation.

5. IN COMPLIANCE. Facility chooses to comply with the limit in FG-Auto MACT, I.2 because the e-coat materials do not contain reportable HAPs.

### III. Process/Operational Restrictions

1. IN COMPLIANCE. Facility has developed and implements a work practice plan to minimize 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 FG-Auto MACT SC 1 through 4, consistent with the requirements of 40 CFR 63.3094.
2. IN COMPLIANCE. The RCO System is used as add-on controls for HAP emission reductions. The RCO System is inspected and maintained in accordance with the preventative maintenance/malfunction abatement plan, and the thermal oxidizer and three catalytic oxidizers are operated at the required temperatures. Temperatures are monitored and recorded on a continuous basis.
3. IN COMPLIANCE. Facility has developed and implements a startup, shutdown, and malfunction plan (SSM Plan) in accordance with 40 CFR 63.6(e)(3).
4. IN COMPLIANCE. Facility operates and maintains FG-Auto MACT in accordance with the provisions in 40 CFR 63(e)(1)(i).
5. IN COMPLIANCE. Facility maintains a log detailing the operation and maintenance of any emission capture system, control device, or continuous parameter monitor used to demonstrate compliance with emission limits set in FG-Auto MACT, I.1 through 4.

### V. Testing/Sampling

1. IN COMPLIANCE. Facility has performed the applicable performance tests and compliance demonstrations prior to the compliance dates, in accordance with 40 CFR 63, Subpart IIII. This includes transfer efficiency testing, testing of the add-on controls, and demonstrating continuous compliance with the HAP limits.
2. IN COMPLIANCE. Facility submitted a request to AQD, dated January 20, 2011, to waive the testing requirement to verify transfer efficiency of the Guidecoat (Prime) System and provided a demonstration that the transfer efficiency testing performed on the Guidecoat (Prime) System on October 30, 2006, which demonstrated a transfer efficiency of 83%, was still valid. This waiver request was approved by AQD on March 10, 2011. Since that time, the transfer efficiency of the Prime System was tested the week of October 28, 2013, following the implementation of the "3-Wet" coating system.
3. IN COMPLIANCE. Mass fraction of each organic HAP for each material used is calculated in accordance with the procedures established under 40 CFR 63.3151(a)(1) through (5).

### VI. Monitoring/Recordkeeping

1. IN COMPLIANCE. Facility maintains required records and calculations in an acceptable format.
2. IN COMPLIANCE. An initial compliance demonstration was conducted from April 1 through May 31, 2007, in accordance with 40 CFR Part 63, Subpart IIII. Notification of Compliance was received by AQD on June 29, 2007.
3. IN COMPLIANCE. Continuous Parameter Monitor System (CPMS) is installed, operated, and maintained in accordance with the requirements of 40 CFR 63.3168(a). The control system has bypass valves, which are monitored and operated in accordance with 40 CFR 63.3168(b). Facility reports the duration and location of all bypass valve openings in its deviation reports.
4. IN COMPLIANCE. Facility maintains the records required by 40 CFR 63.3130 in an acceptable format.
5. IN COMPLIANCE. Facility maintains the required records and calculations, as listed in a. through i. of this condition, as required by 40 CFR 63.3130.
6. IN COMPLIANCE. Facility demonstrates continuous compliance with the operating limits listed in Table 1 of 40 CFR 63, Subpart IIII for the three catalytic oxidizers and thermal oxidizer in accordance with the compliance demonstration methods listed in this condition; this includes monitoring and recording temperature data, operating the oxidizers at the required temperatures, and following the preventative maintenance/malfunction abatement plan.
7. IN COMPLIANCE. All bypass valves for the control system are monitored and any openings trigger alarms. Facility maintains records of the time, location, and duration of all bypass openings, which are reported as deviations. Information as to the method of monitoring for the bypass valves was not obtained during this inspection but will be obtained prior to the next full compliance evaluation.

### VII. Reporting

1. IN COMPLIANCE. Deviations are reported pursuant to GC 21 and 22 of Part A.
2. IN COMPLIANCE. Semiannual reports of monitoring and deviations are submitted by March 15 (for reporting period July 1 through December 31) and September 15 (for reporting period January 1 through June 30) each year, as required per GC 23 of Part A.

3. IN COMPLIANCE. Annual compliance certification is submitted by March 15 for the previous calendar year, as required per GC 19 and 20 of Part A.
4. IN COMPLIANCE. Semiannual compliance reports for 40 CFR Part 63, Subpart IIII are submitted by March 15 (for reporting period July 1 through December 31) and September 15 (for reporting period January 1 through June 30) each year, as required per 40 CFR 63.3120(a).
5. IN COMPLIANCE. An initial compliance demonstration was conducted from April 1 through May 31, 2007, in accordance with 40 CFR Part 63, Subpart IIII. Notification of Compliance was received by AQD on June 29, 2007.
6. IN COMPLIANCE. The results of all performance tests on the RCO Control System are reported to AQD.
7. IN COMPLIANCE. Any startups, shutdowns, or malfunctions of the emission control device are recorded and, if applicable, an SSM report is submitted to AQD with the semiannual reports. During this compliance period, no SSM reports were submitted.

#### IX. Other Requirements

1. IN COMPLIANCE. Based on the information reviewed during this inspection and the semiannual compliance certification reports submitted by FRAP certifying compliance with Subpart IIII, the facility appears to be in compliance with the applicable provisions of 40 CFR Part 63, Subpart IIII – National Emission Standards for Hazardous Air Pollutants: Surface Coating of Automobiles and Light Duty Trucks.

FG-Old Facility – Existing (constructed prior to 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. Associated Emission Unit ID – EU-Tanks.

#### III. Process/Operational Controls

1. IN COMPLIANCE. All tanks in FG-Old Facility are considered existing tanks, installed prior to April 2, 2002, and have not been reconstructed. Facility provided initial Notification of Compliance and maintains the required information, including tank capacity and vapor material of the material stored in the tanks, in accordance with 40 CFR 63.2343(b).
2. NOT APPLICABLE. There are no new or reconstructed tanks in FG-Old Facility, so this condition does not apply.

#### VI. Monitoring/Recordkeeping

1. IN COMPLIANCE. Facility maintains records of the vapor pressure of the contents of the tanks. The tanks are used to store wiper fluid with a vapor pressure less than 4.0 psia.

#### VII. Reporting

1. IN COMPLIANCE. Deviations are reported pursuant to GC 21 and 22 of Part A.
2. IN COMPLIANCE. Semiannual reports of monitoring and deviations are submitted by March 15 (for reporting period July 1 through December 31) and September 15 (for reporting period January 1 through June 30) each year, as required per GC 23 of Part A.
3. IN COMPLIANCE. Annual compliance certification is submitted by March 15 for the previous calendar year, as required per GC 19 and 20 of Part A.
- 4 and 5. IN COMPLIANCE. Facility provided initial Notification of Compliance; the vapor pressure of the material stored in the tanks is less than 4.0 psia, so this flexible group is not subject to the emission control and monitoring requirements in Subpart EEEE. Facility retains a record of the vapor pressure of the contents of the tanks to demonstrate compliance.

#### IX. Other Requirements

1. IN COMPLIANCE. Based on semiannual compliance certification reports submitted by FRAP certifying compliance with ROP No. MI-ROP-N0929-2011a, the facility appears to be in compliance with the applicable provisions of 40 CFR Part 63, Subpart EEEE – National Emission Standards for Hazardous Air Pollutants: Organic Liquids Distribution (Non-Gasoline).

FG-Plastic MACT - Emission units subject to 40 CFR 63, Subpart PPPP – National Emission Standards for Hazardous Air Pollutants: Surface Coating of Plastic Parts and Products.

#### I. Emission Limits

FG-Plastic MACT is considered an existing TPO coating source, so for the emission limits listed in FG-Plastic MACT, I.1 through 8, only the limit of 1.7 applies:

7. IN COMPLIANCE. Facility reports an organic HAP emission rate of 0.18 lbs HAP/lb of coating solids on a 12-month rolling time period basis during the compliance period, demonstrating compliance with the permit limit of 0.26 lb HAP/lb of coating solids per 12-month rolling time period.

9b. IN COMPLIANCE. Facility chooses to demonstrate compliance with the HAP emission rate by using the emission rate without add-on control option in FG-Plastic MACT, I.9.b.

10. IN COMPLIANCE. Facility certifies that FG-Plastic MACT is in compliance with the applicable emission rate in FG-Plastic MACT, I.7.

11. NOT APPLICABLE. FG-Plastic MACT does not use add-on controls to demonstrate compliance, so these conditions are not applicable.

12. NOT APPLICABLE. Only the emission limit for existing TPO coating source applies to FG-Plastic MACT.

## II. Material Limits

1. IN COMPLIANCE. Thinners and additives used in FG-Plastic MACT do not contain organic HAPs.

2. IN COMPLIANCE. Cleaning materials used in FG-Plastic MACT do not contain organic HAPs.

## III. Process/Operational Controls

1 through 5. NOT APPLICABLE. FG-Plastic MACT does not use add-on controls to demonstrate compliance, so these conditions are not applicable.

## IV. Design/Equipment Parameters

1. NOT APPLICABLE. FG-Plastic MACT does not use add-on controls to demonstrate compliance, so this condition is not applicable.

## V. Testing/Sampling

1. IN COMPLIANCE. The mass fraction of organic HAP for each material used, the mass fraction of coating solids for each coating, and the density of each material used in FG-Plastic MACT is calculated in accordance with 40 CFR Part 63, Subpart PPPP.

2 and 3. NOT APPLICABLE. FG-Plastic MACT does not use add-on controls to demonstrate compliance, so these conditions are not applicable.

## VI. Monitoring/Recordkeeping

1. IN COMPLIANCE. An initial compliance demonstration was conducted from April 1 through May 31, 2007, in accordance with 40 CFR Part 63, Subpart PPPP. Notification of Compliance was received by AQD on June 29, 2007.

2. IN COMPLIANCE. Facility maintains required records and calculations in an acceptable format.

3. IN COMPLIANCE. Facility maintains the required records and calculations, as listed in a. through l. of this condition, as required by 40 CFR 63.4530.

4. NOT APPLICABLE. FG-Plastic MACT does not use add-on controls to demonstrate compliance, so this condition is not applicable.

5. IN COMPLIANCE. Facility demonstrates continuous compliance for each coating used for the compliant coating option, each thinner, and each cleaning material in accordance with 40 CFR 63.4541.

6. IN COMPLIANCE. Facility demonstrates continuous compliance with the emission limit in FG-Plastic MACT, I.7.

7. NOT APPLICABLE. FG-Plastic MACT does not use add-on controls to demonstrate compliance, so this condition is not applicable.

8. NOT APPLICABLE. FG-Plastic MACT does not use add-on controls to demonstrate compliance, so this condition is not applicable.

9. NOT APPLICABLE. FG-Plastic MACT does not use add-on controls to demonstrate compliance, so this condition is not applicable.

10. NOT APPLICABLE. FG-Plastic MACT does not use add-on controls to demonstrate compliance, so this condition is not applicable.

## VII. Reporting

1. IN COMPLIANCE. Deviations are reported pursuant to GC 21 and 22 of Part A.

2. IN COMPLIANCE. Semiannual reports of monitoring and deviations are submitted by March 15 (for reporting period July 1 through December 31) and September 15 (for reporting period January 1 through June 30) each year, as required per GC 23 of Part A.

3. IN COMPLIANCE. Annual compliance certification is submitted by March 15 for the previous calendar year, as required per GC 19 and 20 of Part A.

4. IN COMPLIANCE. Facility has not reported the use of any thinners or cleaning materials which do not meet the criteria specified in 40 CFR 63.4542(a).



5. IN COMPLIANCE. Reported HAP emission rates have not exceeded the emission limit in FG-Plastic MACT, I.7.
6. NOT APPLICABLE. FG-Plastic MACT does not use add-on controls to demonstrate compliance, so this condition is not applicable.
7. IN COMPLIANCE. An initial compliance demonstration was conducted from April 1 through May 31, 2007, in accordance with 40 CFR Part 63, Subpart PPPP. Notification of Compliance was received by AQD on June 29, 2007.
8. IN COMPLIANCE. Semiannual compliance reports for 40 CFR Part 63, Subpart PPPP are submitted by March 15 (for reporting period July 1 through December 31) and September 15 (for reporting period January 1 through June 30) each year, as required per 40 CFR 63.4510.
9. NOT APPLICABLE. FG-Plastic MACT does not use add-on controls to demonstrate compliance, so this condition is not applicable.
10. NOT APPLICABLE. FG-Plastic MACT does not use add-on controls to demonstrate compliance, so this condition is not applicable.

#### IX. Other Requirements

1. IN COMPLIANCE. Based on the information reviewed during this inspection and the semiannual compliance certification reports submitted by FRAP certifying compliance with Subpart PPPP, the facility appears to be in compliance with the applicable provisions of 40 CFR Part 63, Subpart PPPP – National Emission Standards for Hazardous Air Pollutants: Surface Coating of Plastic Parts and Products.

FG-Coldcleaners – Any cold cleaner that is grandfathered or exempt from Rule 201 pursuant to Rule 278 and Rule 281(h) or Rule 285(r)(iv).

#### II. Material Limits

1. IN COMPLIANCE. Facility does not use any cleaning solvents in EU-Coldcleaners containing the compounds listed in this condition.

#### III. Process/Operational Restrictions

1. IN COMPLIANCE. Cleaned parts are dried for no less than 15 seconds.
2. IN COMPLIANCE. Routine maintenance is performed per manufacturer's recommendations.

#### IV. Design/Equipment Parameters

- 1b. IN COMPLIANCE. Emissions from the cold cleaner is released to the general in-plant environment.
2. IN COMPLIANCE. Cold cleaner is equipped with a device for draining cleaned parts.
3. IN COMPLIANCE. Lid of cold cleaner is closed when not in use.
- 4 and 5. NOT APPLICABLE. Vapor pressure of cleaning solvent is less than 0.3 psia and is not heated.

#### VI. Monitoring/Recordkeeping

1. NOT APPLICABLE. Cleaning solvent is not heated.
2. IN COMPLIANCE. Facility maintains the required information for each cold cleaner, including date of installation and equipment specifications and identification.
3. IN COMPLIANCE. Facility maintains written operating procedures, which are posted near the cold cleaners.
4. IN COMPLIANCE. Waste cleaning solvents are kept in closed containers.

#### VII. Reporting

1. IN COMPLIANCE. Deviations are reported pursuant to GC 21 and 22 of Part A.
2. IN COMPLIANCE. Semiannual reports of monitoring and deviations are submitted by March 15 (for reporting period July 1 through December 31) and September 15 (for reporting period January 1 through June 30) each year, as required per GC 23 of Part A.
3. IN COMPLIANCE. Annual compliance certification is submitted by March 15 for the previous calendar year, as required per GC 19 and 20 of Part A.

FG-Rule 287(c) – Any emission unit that emits air contaminants and is exempt from the requirements of Rule 201 pursuant to Rules 278 and 287(c).

#### II. Material Limits

- 1, IN COMPLIANCE. Records of coating usage in FG-Rule 278(c) were not reviewed during this inspection to verify compliance with the 200 gallon per month limit, but facility has certified compliance with this condition, so this condition will be considered to be in compliance for this inspection. Records of coating usage will be reviewed during the next full compliance evaluation.

IV. Design/Equipment Parameters

1. IN COMPLIANCE. All spray booths are equipped with properly installed and operating particulate control systems.

VI. Monitoring/Recordkeeping

1. IN COMPLIANCE. Facility maintains records of amount of coatings used and replacement filters in the paint spray booths.

VII. Reporting

1. IN COMPLIANCE. Deviations are reported pursuant to GC 21 and 22 of Part A.

2. IN COMPLIANCE. Semiannual reports of monitoring and deviations are submitted by March 15 (for reporting period July 1 through December 31) and September 15 (for reporting period January 1 through June 30) each year, as required per GC 23 of Part A.

3. IN COMPLIANCE. Annual compliance certification is submitted by March 15 for the previous calendar year, as required per GC 19 and 20 of Part A.

FG-Rule290 – Any emission unit that emits air contaminants and is exempt from the requirements of Rule 201 pursuant to Rules 278 and 290.

IN COMPLIANCE. A review of records demonstrating compliance for any emission units operating under Rule 290 was not performed during this inspection. The facility has certified compliance with this condition during the compliance period, so this condition will be considered to be in compliance at the time of inspection. Records demonstrating compliance with Rule 290 will be reviewed during the next full compliance evaluation.

VII. Reporting

1. IN COMPLIANCE. Deviations are reported pursuant to GC 21 and 22 of Part A.

2. IN COMPLIANCE. Semiannual reports of monitoring and deviations are submitted by March 15 (for reporting period July 1 through December 31) and September 15 (for reporting period January 1 through June 30) each year, as required per GC 23 of Part A.

3. IN COMPLIANCE. Annual compliance certification is submitted by March 15 for the previous calendar year, as required per GC 19 and 20 of Part A.

MACT Subpart DDDDD

IN COMPLIANCE. The exempt boilers subject to 40 CFR 63, Subpart DDDDD are not included in the ROP. Facility submitted an Initial Notification of Applicability on May 24, 2013, and submitted the Notification of Compliance and Tune-Up to USEPA on February 12, 2016, and to AQD on March 9, 2016.

EU-Generators

NOT EVALUATED. The emergency generators were not evaluated during this inspection. These units will be evaluated during the next full compliance inspection, including an assessment of 30 CFR Part 63, Subpart ZZZZ applicability.

**FINAL COMPLIANCE DETERMINATION:**

At the time of inspection, FRAP was determined to be in substantial compliance with the conditions of ROP No. MI-ROP-N0929-2011a and applicable State and federal regulations. In some cases, compliance was determined based solely on FRAP certifying compliance with those conditions, including the HAP emission rates of FG-Auto MACT. A more thorough evaluation of those conditions will be performed during the next full compliance evaluation.

There have been Violation Notices issued to FRAP during this compliance period for noncompliance with Rule 901 which are currently unresolved. AQD will continue to evaluate this issue, but for the purposes of this inspection, FRAP is determined to be in compliance.

NAME Shan

DATE 10-4-16

SUPERVISOR JK