

**MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY
AIR QUALITY DIVISION**

December 3, 2021

PERMIT TO INSTALL
102-21

ISSUED TO
Ford Motor Company – Michigan Assembly Plant

LOCATED AT
38303 Michigan Avenue
Wayne, Michigan 48184

IN THE COUNTY OF
Wayne

STATE REGISTRATION NUMBER
A8650

The Air Quality Division has approved this Permit to Install, pursuant to the delegation of authority from the Michigan Department of Environment, Great Lakes, and Energy. This permit is hereby issued in accordance with and subject to Section 5505(1) of Article II, Chapter I, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Pursuant to Air Pollution Control Rule 336.1201(1), this permit constitutes the permittee's authority to install the identified emission unit(s) in accordance with all administrative rules of the Department and the attached conditions. Operation of the emission unit(s) identified in this Permit to Install is allowed pursuant to Rule 336.1201(6).

DATE OF RECEIPT OF ALL INFORMATION REQUIRED BY RULE 203: October 25, 2021	
DATE PERMIT TO INSTALL APPROVED: December 3, 2021	SIGNATURE:
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

PERMIT TO INSTALL

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COMMON ACRONYMS

AQD	Air Quality Division
BACT	Best Available Control Technology
CAA	Clean Air Act
CAM	Compliance Assurance Monitoring
CEMS	Continuous Emission Monitoring System
CFR	Code of Federal Regulations
COMS	Continuous Opacity Monitoring System
Department/department/EGLE	Michigan Department of Environment, Great Lakes, and Energy
EU	Emission Unit
FG	Flexible Group
GACS	Gallons of Applied Coating Solids
GC	General Condition
GHGs	Greenhouse Gases
HVLP	High Volume Low Pressure*
ID	Identification
IRSL	Initial Risk Screening Level
ITSL	Initial Threshold Screening Level
LAER	Lowest Achievable Emission Rate
MACT	Maximum Achievable Control Technology
MAERS	Michigan Air Emissions Reporting System
MAP	Malfunction Abatement Plan
MSDS	Material Safety Data Sheet
NA	Not Applicable
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emission Standard for Hazardous Air Pollutants
NSPS	New Source Performance Standards
NSR	New Source Review
PS	Performance Specification
PSD	Prevention of Significant Deterioration
PTE	Permanent Total Enclosure
PTI	Permit to Install
RACT	Reasonable Available Control Technology
ROP	Renewable Operating Permit
SC	Special Condition
SCR	Selective Catalytic Reduction
SNCR	Selective Non-Catalytic Reduction
SRN	State Registration Number
TBD	To Be Determined
TEQ	Toxicity Equivalence Quotient
USEPA/EPA	United States Environmental Protection Agency
VE	Visible Emissions

*For HVLP applicators, the pressure measured at the gun air cap shall not exceed 10 psig.

POLLUTANT / MEASUREMENT ABBREVIATIONS

acfm	Actual cubic feet per minute
BTU	British Thermal Unit
°C	Degrees Celsius
CO	Carbon Monoxide
CO ₂ e	Carbon Dioxide Equivalent
dscf	Dry standard cubic foot
dscm	Dry standard cubic meter
°F	Degrees Fahrenheit
gr	Grains
HAP	Hazardous Air Pollutant
Hg	Mercury
hr	Hour
HP	Horsepower
H ₂ S	Hydrogen Sulfide
kW	Kilowatt
lb	Pound
m	Meter
mg	Milligram
mm	Millimeter
MM	Million
MW	Megawatts
NMOC	Non-Methane Organic Compounds
NO _x	Oxides of Nitrogen
ng	Nanogram
PM	Particulate Matter
PM10	Particulate Matter equal to or less than 10 microns in diameter
PM2.5	Particulate Matter equal to or less than 2.5 microns in diameter
pph	Pounds per hour
ppm	Parts per million
ppmv	Parts per million by volume
ppmw	Parts per million by weight
psia	Pounds per square inch absolute
psig	Pounds per square inch gauge
scf	Standard cubic feet
sec	Seconds
SO ₂	Sulfur Dioxide
TAC	Toxic Air Contaminant
Temp	Temperature
THC	Total Hydrocarbons
tpy	Tons per year
µg	Microgram
µm	Micrometer or Micron
VOC	Volatile Organic Compounds
yr	Year

GENERAL CONDITIONS

1. The process or process equipment covered by this permit shall not be reconstructed, relocated, or modified, unless a Permit to Install authorizing such action is issued by the Department, except to the extent such action is exempt from the Permit to Install requirements by any applicable rule. **(R 336.1201(1))**
2. If the installation, construction, reconstruction, relocation, or modification of the equipment for which this permit has been approved has not commenced within 18 months, or has been interrupted for 18 months, this permit shall become void unless otherwise authorized by the Department. Furthermore, the permittee or the designated authorized agent shall notify the Department via the Supervisor, Permit Section, Air Quality Division, Michigan Department of Environment, Great Lakes, and Energy, P.O. Box 30260, Lansing, Michigan 48909-7760, if it is decided not to pursue the installation, construction, reconstruction, relocation, or modification of the equipment allowed by this Permit to Install. **(R 336.1201(4))**
3. If this Permit to Install is issued for a process or process equipment located at a stationary source that is not subject to the Renewable Operating Permit program requirements pursuant to Rule 210 (R 336.1210), operation of the process or process equipment is allowed by this permit if the equipment performs in accordance with the terms and conditions of this Permit to Install. **(R 336.1201(6)(b))**
4. The Department may, after notice and opportunity for a hearing, revoke this Permit to Install if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of this permit or is violating the Department's rules or the Clean Air Act. **(R 336.1201(8), Section 5510 of Act 451, PA 1994)**
5. The terms and conditions of this Permit to Install shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by this Permit to Install. If the new owner or operator submits a written request to the Department pursuant to Rule 219 and the Department approves the request, this permit will be amended to reflect the change of ownership or operational control. The request must include all of the information required by subrules (1)(a), (b), and (c) of Rule 219 and shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environment, Great Lakes, and Energy. **(R 336.1219)**
6. Operation of this equipment shall not result in the emission of an air contaminant which causes injurious effects to human health or safety, animal life, plant life of significant economic value, or property, or which causes unreasonable interference with the comfortable enjoyment of life and property. **(R 336.1901)**
7. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the Department. The notice shall be provided not later than two business days after start-up, shutdown, or discovery of the abnormal condition or malfunction. Written reports, if required, must be filed with the Department within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal condition or malfunction has been corrected, or within 30 days of discovery of the abnormal condition or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5). **(R 336.1912)**
8. Approval of this permit does not exempt the permittee from complying with any future applicable requirements which may be promulgated under Part 55 of 1994 PA 451, as amended or the Federal Clean Air Act.
9. Approval of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.
10. Operation of this equipment may be subject to other requirements of Part 55 of 1994 PA 451, as amended and the rules promulgated thereunder.

11. Except as provided in subrules (2) and (3) or unless the special conditions of the Permit to Install include an alternate opacity limit established pursuant to subrule (4) of Rule 301, the permittee shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of density greater than the most stringent of the following. The grading of visible emissions shall be determined in accordance with Rule 303 (R 336.1303). **(R 336.1301)**
 - a) A six-minute average of 20 percent opacity, except for one six-minute average per hour of not more than 27 percent opacity.
 - b) A visible emission limit specified by an applicable federal new source performance standard.
 - c) A visible emission limit specified as a condition of this Permit to Install.
12. Collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in Rule 370(2). **(R 336.1370)**
13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with Rule 1001 and Rule 1003, under any of the conditions listed in Rule 1001. **(R 336.2001)**

EMISSION UNIT SPECIAL CONDITIONS

EMISSION UNIT SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date / Modification Date	Flexible Group ID
EU-GUIDECOAT	Manual and automatic guidecoat application, flash-off, curing, and scuffing. Guidecoat includes anti-chip, exterior primer surfacer, interior primer surfacer, and door frame and pillar blackout that may be performed either in the Guidecoat Booth or in the Guidecoat portion of the 3-Wet (Topcoat) Booth.	05-18-1992	FG-FACILITY, FG-CONTROLS, FG-MACT
EU-TOPCOAT	Manual and automatic topcoat spray application and curing conducted in two parallel topcoat spray booths (Nos. 1 and 2) followed by two parallel topcoat ovens (Nos. 1 and 2) and a single dry filter topcoat scuff booth. This operation may be conducted either as a stand-alone topcoat operation or in conjunction with EU-Guidecoat in a 3-Wet (Topcoat) booth.	05-18-1992	FG-FACILITY, FG-CONTROLS, FG-MACT

Changes to the equipment described in this table are subject to the requirements of R 336.1201, except as allowed by R 336.1278 to R 336.1291.

EU-GUIDECOAT EMISSION UNIT CONDITIONS

DESCRIPTION

Manual and automatic guidecoat application, flash-off, curing, and scuffing. Guidecoat includes anti-chip, exterior primer surfacer, interior primer surfacer, and door frame and pillar blackout that may be performed either in the Guidecoat Booth or in the Guidecoat portion of the 3-Wet (Topcoat) Booth.

Flexible Group ID: FG-FACILITY, FG-CONTROLS, FG-MACT

POLLUTION CONTROL EQUIPMENT

Regenerative thermal oxidizers (No. 2 and No. 3) for control of VOC emissions from the EU-GUIDECOAT booth automatic sections and a regenerative thermal oxidizer (No. 4) for control of VOC emissions from the EU-GUIDECOAT ovens. Note that the regenerative thermal oxidizer (No. 23) also controls VOC emissions the EU-TOPCOAT booth No. 1 automatic sections, regenerative thermal oxidizer (No. 3) also controls VOC emissions from the EU-Topcoat booth No. 2 automatic sections, and regenerative thermal oxidizer (No. 4) also controls VOC emissions from the two EU-TOPCOAT ovens.

Water wash particulate controls on the spray booth portion of EU-GUIDECOAT.

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU-GUIDECOAT unless the appropriate sections of FG-CONTROLS are installed, maintained and operated in a satisfactory manner. Satisfactory operation of FG-CONTROLS includes maintaining a minimum combustion chamber temperature of 1400°F and a minimum retention time of 0.5 seconds. In lieu of a minimum temperature, the permittee may use an average temperature of 1400°F based upon a three-hour rolling average. **(R 336.1225, R 336.1901, R 336.2908(3))**
2. The permittee shall not operate the spray booth portions of EU-GUIDECOAT unless the water wash particulate controls are installed, maintained and operated in a satisfactory manner. Satisfactory operation of the water wash particulate controls includes conducting the required monitoring and recordkeeping pursuant to FG-FACILITY, SC VI. 3. **(R 336.1205, R 336.1301, R 336.1331, R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The VOC content, water content and density of any coating or material as applied and as received, shall be determined using federal Reference Test Method 24 or an alternative approved by the AQD District Supervisor. Alternatively, the VOC content may be determined from manufacturer's formulation data. If the tested and the formulation values should differ, the tested results shall be used to determine compliance.

Upon request of the AQD District Supervisor, the VOC content, water content and density of any coating or material shall be verified using federal Reference Test Method 24. **(R 336.2040, R 336.2041, R 336.2908(3))**

2. At least once every five years, unless the permittee has submitted a demonstration that the most recent acceptable test remains valid and representative, the permittee shall verify the overall transfer efficiency and the oven exhaust control device VOC loading of EU-GUIDECOAT, by testing at owner's expense, in accordance with Department requirements, 40 CFR 51 Appendix M, and the U.S. EPA "Protocol for Determining the Daily Volatile Organic Compound Emission Rate of Automobile and Light-Duty Truck Topcoat Operations," September 2008, EPA 453/R-08-002, as amended. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve the final plan prior to testing. Verification of emission limits includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. **(R336.2001)**

3. At least once every five years, unless the permittee has submitted a demonstration that the most recent acceptable test remains valid and representative, the permittee shall verify the capture efficiency of the spray booths and ovens to the VOC control device(s) of EU-GUIDECOAT, by testing at owner's expense, in accordance with Department requirements, and the U.S. EPA "Protocol for Determining the Daily Volatile Organic Compound Emission Rate of Automobile and Light-Duty Truck Topcoat Operations," September 2008, EPA 453/R-08-002, as amended. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve the final plan prior to testing. Verification of emission limits includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. **(R336.2001)**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

NA

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV00114/C16-001 – Guidecoat Spraybooth	54.0	107.0	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)
2. SV00115/C16-006 – Guidecoat Spraybooth	44.0	107.0	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)
3. SV00116/C16-003 – Guidecoat Spraybooth	38.0	95.0	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
4. SV00117/C15-005 – Guidecoat Spraybooth	54.0	108.0	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)
5. SV00118/C15-007 – Guidecoat Spraybooth	54.0	107.0	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)
6. SV00119/C14-007 – Guidecoat Spraybooth	54.0	108.0	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)
7. SV00120/A5-011 – Regenerative Thermal Oxidizer (RTO) No. 2 for Guidecoat and Topcoat 1 & 2 Ovens	62.0	75.0	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)
8. SV00122/PB-005 – Regenerative Thermal Oxidizer (RTO) No. 3 for Guidecoat and Topcoat 1 Spraybooths	48.0	95.0	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹ This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

EU-TOPCOAT EMISSION UNIT CONDITIONS

DESCRIPTION

Manual and automatic topcoat spray application and curing conducted in two parallel topcoat spray booths (Nos. 1 and 2) followed by two parallel topcoat ovens (Nos. 1 and 2) and a single dry filter topcoat scuff booth. This operation may be conducted either as a stand-alone topcoat operation or in conjunction with EU-Guidecoat in a 3-Wet (Topcoat) booth.

Flexible Group ID: FG-FACILITY, FG-CONTROLS, FG-MACT

POLLUTION CONTROL EQUIPMENT

Regenerative thermal oxidizer (No. 2) for control of VOC emissions from the EU-TOPCOAT booth No. 1 automatic sections; regenerative thermal oxidizer (No. 3) for control of VOC emissions from the EU-TOPCOAT booth No. 2 automatic sections; and regenerative thermal oxidizer (No. 4) for control of VOC emissions from the EU-TOPCOAT ovens. Note that the regenerative thermal oxidizers (No.2 and No. 3) also control VOC emissions the EU-GUIDECOAT booth automatic sections and regenerative thermal oxidizer (No. 4) also controls VOC emissions from the EU-GUIDECOAT ovens.

Dry filter particulate controls on the scuff booth portion of EU-TOPCOAT. Water wash particulate controls on spray booth portions of EU-TOPCOAT.

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU-TOPCOAT unless the appropriate sections of FG-CONTROLS are installed, maintained and operated in a satisfactory manner. Satisfactory operation of FG-CONTROLS includes maintaining a minimum combustion chamber temperature of 1400°F and a minimum retention time of 0.5 seconds. In lieu of a minimum temperature, the permittee may use an average temperature of 1400°F based upon a three-hour rolling average. **(R 336.1225, R 336.1901, R 336.2908(3))**
2. The permittee shall not operate the spray booth portions of EU-TOPCOAT unless the water wash particulate controls are installed, maintained and operated in a satisfactory manner. Satisfactory operation of the water wash particulate controls includes conducting the required monitoring and recordkeeping pursuant to FG-FACILITY, SC VI. 3. **(R 336.1205, R 336.1301, R 336.1331, R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The VOC content, water content and density of any coating or material as applied and as received, shall be determined using federal Reference Test Method 24 or an alternative approved by the AQD District Supervisor. Alternatively, the VOC content may be determined from manufacturer's formulation data. If the

tested and the formulation values should differ, the tested results shall be used to determine compliance. Upon request of the AQD District Supervisor, the VOC content, water content and density of any coating or material shall be verified using federal Reference Test Method 24. **(R 336.2040, R 336.2041, R 336.2908(3))**

2. At least once every five years, unless the permittee has submitted a demonstration that the most recent acceptable test remains valid and representative, the permittee shall verify the overall transfer efficiency and the oven exhaust control device VOC loading of EU-TOPCOAT, by testing at owner's expense, in accordance with Department requirements, 40 CFR 51 Appendix M, and the U.S. EPA "Protocol for Determining the Daily Volatile Organic Compound Emission Rate of Automobile and Light-Duty Truck Topcoat Operations," September 2008, EPA 453/R-08-002, as amended. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve the final plan prior to testing. Verification of emission limits includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. **(R336.2001)**

3. At least once every five years, unless the permittee has submitted a demonstration that the most recent acceptable test remains valid and representative, the permittee shall verify the capture efficiency of the spray booths and ovens to the VOC control device(s) of EU-TOPCOAT, by testing at owner's expense, in accordance with Department requirements, and the U.S. EPA "Protocol for Determining the Daily Volatile Organic Compound Emission Rate of Automobile and Light-Duty Truck Topcoat Operations," September 2008, EPA 453/R-08-002, as amended. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve the final plan prior to testing. Verification of emission limits includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. **(R336.2001)**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall keep the following information on a monthly basis for EU-TOPCOAT:
 - a) The uncontrolled total formaldehyde content of each basecoat coating as applied.
 - b) The uncontrolled total formaldehyde content of each clearcoat coating as applied.

The permittee shall keep the records on file, in a format acceptable to the AQD District Supervisor, and make them available to the Department upon request.¹ **(R 336.1225, R 336.1901)**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV00139/A14-002 – Topcoat #1 Spraybooth	54.0	107.0	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
2. SV00128/B13-007 – Topcoat #1 Spraybooth	38.0	95.0	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)
3. SV00129/B14-011 – Topcoat #1 Spraybooth	54.0	107.0	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)
4. SV00130/B13-003 – Topcoat #1 Spraybooth	54.0	107.0	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)
5. SV00131/B14-009 – Topcoat #1 Spraybooth	54.0	107.0	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)
6. SV00132/B15-003 – Topcoat #1 Spraybooth	54.0	95.0	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)
7. SV00133/B15-005 – Topcoat #1 Spraybooth	54.0	107.0	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)
8. SV00134/B16-016 – Topcoat #1 Spraybooth	54.0	107.0	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)
9. SV00135/B16-005 – Topcoat #1 Spraybooth	54.0	107.0	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)
10. SV00136/A16-004 – Topcoat #1 Spraybooth	54.0	107.0	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)
11. SV00137/A16-002 – Topcoat #1 Spraybooth	54.0	107.0	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
12. SV00138/A15-001 – Topcoat #1 Spraybooth	54.0	107.0	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)
13. SV00140/A15-003 – Topcoat #1 Spraybooth	54.0	107.0	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)
14. SV00141/A14-001 – Topcoat #1 Spraybooth	54.0	96.0	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)
15. SV00174/B16-002 – Topcoat #2 Spraybooth	54.0	107.0	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)
16. SV00176/B13-014 – Topcoat #2 Spraybooth	38.0	95.0	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)
17. SV00177/C15-011 – Topcoat #2 Spraybooth	38.0	95.0	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)
18. SV00178/C15-015 – Topcoat #2 Spraybooth	38.0	95.0	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)
19. SV00179/B19-003 – Topcoat #2 Spraybooth	54.0	107.0	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)
20. SV00180/B19-004 – Topcoat #2 Spraybooth	54.0	107.0	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)
21. SV00181/B19-001 – Topcoat #2 Spraybooth	54.0	107.0	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
22. SV00182/B18-001 – Topcoat #2 Spraybooth	54.0	107.0	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)
23. SV00183/B17-001 – Topcoat #2 Spraybooth	54.0	107.0	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)
24. SV00184/B16-001 – Topcoat #2 Spraybooth	54.0	107.0	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)
25. SV00302/B4-002 – Topcoat Scuff Booth	66.0	75.0	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)
26. SV00303/B5-002 – Topcoat Scuff Booth	66.0	75.0	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)
27. SV00120/A5-011 – Regenerative Thermal Oxidizer (RTO) No. 2 for Guidecoat and Topcoat 1 & 2 Ovens	62.0	75.0	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)
28. SV00122/PB-005 – Regenerative Thermal Oxidizer (RTO) No. 3 for Guidecoat and Topcoat #1 Spraybooths	48.0	95.0	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)
29. SV00260/PB-007 – Regenerative Thermal Oxidizer (RTO) No. 4 for Guidecoat and Topcoat #2 Spraybooths	48.0	75.0	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)

IX. OTHER REQUIREMENT(S)

1. The permittee shall not use any basecoat coating that exceeds an uncontrolled total formaldehyde content of 0.09 pounds per gallon as applied. The permittee shall not use any clearcoat coating that exceeds an uncontrolled total formaldehyde content of 0.15 pounds per gallon as applied. The uncontrolled total formaldehyde content is defined as the total of free formaldehyde in the coating formulation and any additional formaldehyde liberated from the melamine formaldehyde resin during curing, without any reduction for add-on VOC control equipment being taken.¹ **(R 336.1225, R 336.1901)**

Footnotes:

¹ This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

FLEXIBLE GROUP SPECIAL CONDITIONS

FLEXIBLE GROUP SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FG-FACILITY	This flexible group covers equipment used for automotive stamping, assembly, and painting operations for the entire Michigan Assembly Plant.	EU-PHOSPHATE, EU-ECOAT, EU-SEALERS, EU-GUIDECOAT, EU-TOPCOAT, EU-MISCCOAT. EU-PURGE&CLEAN EU-FLUIDFILL, EU-GASOLINETANKS
FG-CONTROLS	Regenerative thermal oxidizers used for control of VOC emissions from the paint spray booths and curing ovens.	EU-ECOAT, EU-GUIDECOAT, EU-TOPCOAT EU-PURGE&CLEAN
FG-MACT	Each new, reconstructed, or existing affected source as defined in 40 CFR 63.3082, that is located at a facility which applies topcoat to new automobile or new light duty truck bodies or body parts, 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) is subject to the requirements of 40 CFR 63 Subpart IIII. This includes equipment covered by other permits, grandfathered equipment, and exempt equipment.	EU-ECOAT, EU-SEALERS, EU-GUIDECOAT, EU-TOPCOAT, EU-MISCCOAT. EU-PURGE&CLEAN

**FG-FACILITY
 FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

This flexible group covers equipment used for automotive stamping, assembly, and painting operations for the entire Michigan assembly Plant.

Emission Unit: All emission units and flexible groups associated with automotive stamping, assembly, and painting operations.

POLLUTION CONTROL EQUIPMENT

Regenerative thermal oxidizers used for control of VOC emissions from portions of the painting operations and curing ovens. Water wash or dry filter particulate controls in the paint spray booths.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	903.0 tpy	12-month rolling time period as determined at the end of each calendar month	FG-FACILITY	SC VI.1	R 336.1225, R 336.1901 R 336.2908(3)
2. VOC	4.8 pounds per job	12-month rolling time period as determined at the end of each calendar month	FG-FACILITY	SC VI.1	R 336.1225, R 336.1901 R 336.2908(3)
3. PM10	7.75 tpy ^A	12-month rolling time period as determined at the end of each calendar month	FG-FACILITY	SC V.1 SC VI.1	R 336.1205, R 336.2803, R 336.2804, R 336.2810
4. PM2.5	7.75 tpy ^A	12-month rolling time period as determined at the end of each calendar month	FG-FACILITY	SC V.1 SC VI.1	R 336.1205, R 336.2803, R 336.2804, R 336.2810
5. NOx	81.5 tpy ^B	12-month rolling time period as determined at the end of each calendar month	FG-FACILITY	SC V.2 SC VI.1	R 336.1205, R 336.2803, R 336.2804, R 336.2810
6. CO	68.5 tpy ^B	12-month rolling time period as determined at the end of each calendar month	FG-FACILITY	SC V.2 SC VI.1	R 336.1205, R 336.2804, R 336.2810

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
7. SO2	2.0 tpy ^B	12-month rolling time period as determined at the end of each calendar month	FG-FACILITY	SC VI.1	R 336.1205, R 336.2803, R 336.2804, R 336.2810
8. GHGs as CO2e	95,360 tpy ^B	12-month rolling time period as determined at the end of each calendar month	FG-FACILITY	SC VI.1	R 336.1205, R 336.2810

^A This includes PM10/PM2.5 from all natural gas combustion at the Michigan Assembly Complex and all coating operations including EU-COAT scuff booth, EU-GUIDECOAT spray and scuff booths, EU-TOPCOAT spray and scuff booths, and EU-MISCOAT Black Out and Cavity Wax and Final Repair. It does not include the Powerhouse (EU-BOILER#1, EU-BOILER#2, and EU-BOILER#3) or the emergency engines.

^B This includes the emissions of this pollutant from all natural gas combustion at the Michigan Assembly Complex. It does not include the Powerhouse or the emergency engines.

II. MATERIAL LIMIT(S)

Material	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. Natural gas	1.63 Billion cubic feet per year	12-month rolling time period as determined at the end of each calendar month	FG-FACILITY	SC VI.1	R 336.1205, R 336.2803, R 336.2804, R 336.2810

* This includes total natural gas combustion for all operations at the Michigan Assembly Complex. It does not include the Powerhouse.

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

- The permittee shall equip and maintain each spray coating booth and scuff booth operation with one of the following: water wash particulate controls, dry filter particulate controls, or equivalent particulate control technology. (R 336.1301, R 336.1331, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1201(3))

- The permittee shall verify PM10 and PM2.5 emission rates from representative particulate emission units or portions of emission units as identified in a complete test plan by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
PM10 / PM2.5	40 CFR Part 51, Appendix M

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol. No less than 60 days prior to testing, the permittee shall submit a complete test plan to the

AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1301, R 336.2001, R 336.2003, R 336.2004, R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(c) & (d))**

- The permittee shall verify NO_x and CO emission rates from a representative phosphate boiler and a representative regenerative thermal oxidizer (RTO) portion of FG-FACILITY by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
NO _x	40 CFR Part 60, Appendix A
CO	40 CFR Part 60, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol. No less than 60 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1301, R 336.2001, R 336.2003, R 336.2004, R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(c) & (d))**

- The permittee shall verify the PM₁₀ and PM_{2.5} emission rates from representative particulate emission units or portions of emission units as identified in a complete test plan by testing at owner's expense, at a minimum, every five years from the date of the last test, unless the permittee maintains a yearly demonstration that the most recent acceptable test remains valid and representative. **(R 336.2001, R 336.2003, R 336.2004)**
- The permittee shall verify the NO_x and CO emission rates from a representative phosphate boiler and a representative regenerative thermal oxidizer (RTO) portion of FG-FACILITY by testing at owner's expense, at a minimum, every five years from the date of the last test, unless the permittee maintains a yearly demonstration that the most recent acceptable test remains valid and representative. **(R 336.2001, R 336.2003, R 336.2004)**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

- The permittee shall keep the following records/calculations in a format acceptable to the AQD District Supervisor. The permittee shall compile all required records and complete all required calculations and make them available within 30 days following the end of each calendar month for which records are required to be kept.
 - For each material used in FG-FACILITY:
 - Material identification;
 - Material VOC content; and,
 - Material usage.
 - The amount of natural gas burned during each calendar month and 12-month rolling time period, in cubic feet.
 - Number of jobs each calendar month, where a job is defined as a painted vehicle leaving the assembly line.
 - Calculations showing the FG-FACILITY monthly and annual mass VOC emission rates, in tons per month and tons per 12-month rolling time period, as determined at the end of each calendar month. Calculations must show the capture and control efficiency of each control device used. Calculations must also include a sample calculation based on the production of a single job and that specifies all measured or assumed process parameters (e.g., transfer, capture and control efficiencies, booth splits, etc.) and VOC emissions due to natural gas combustion. Prior to the initial testing, for each controlled section, the design combined capture and control efficiency may be used. Thereafter, values no greater than the most recently tested values may be used.

- e) Calculations showing the VOC emission rate (lb/job) on a 12-month rolling basis, as determined at the end of each calendar month for the equipment covered by FG-FACILITY.
- f) Calculations showing the PM10, PM2.5, NOx, SO₂, and CO mass emission rate in tons on a monthly and 12-month rolling time period, as determined at the end of each calendar month for the equipment in FG-FACILITY. These calculations shall be done according to a method acceptable to the AQD District Supervisor and shall use AP-42 (or other agreed upon emission factors) or emission factors developed from the testing required in SC V.1 and SC V.2.
- g) Calculations showing the GHGs as CO_{2e} mass emission rate in tons on a monthly and 12-month rolling time period, as determined at the end of each calendar month for the equipment in FG-FACILITY.
- h) Hours of operation for each calendar month and 12-month rolling time period.

All records/calculations shall be kept on file and made available to the Department upon request.
(R 336.1225, R 336.1901, R 336.2810, R 336.2908(3))

2. The permittee shall monitor the condition of each particulate control system through weekly visual inspections. The permittee shall keep records of visual inspections of each exhaust filter, or water wash particulate control system which include the dates and results of the inspections, and the dates and reasons for repairs. All records shall be kept on file and made available to the Department upon request. **(R 336.1301, R 336.1331, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**
3. The permittee shall maintain a record of modifications to any add-on control equipment including any testing and monitoring to demonstrate satisfactory operation upon which compliance with any of the emission limits in FG-FACILITY, SC I.1, 2, and 3 depends. **(R 336.1225, R 336.1301, R 336.1331, R 336.1901, R 336.1910, R 336.2803, R 336.2804, R 336.2908(3), 40 CFR 52.21(c) & (d))**

VII. REPORTING

1. For each emission unit (EU) and flexible group (FG) included in this permit, the permittee shall submit to the AQD District Supervisor, in an acceptable format, within 30 days following the end of the quarter in which the data was collected, the actual VOC, PM10, PM2.5, NOx, CO, SO₂, and GHGs as CO_{2e} emission rates for each limit included in the permit. **(R 336.1205, R 336.2810, R 336.2908(3))**
2. The permittee shall notify the AQD District Supervisor, in writing, of projects authorized by SC IX.3 and 4 at least 30 days prior to initialization of the activity. The notification shall include, at a minimum, a description of the type of project and any changes in testing, monitoring, recordkeeping or other compliance evaluation activities. **(R 336.1201)**

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

NA

IX. OTHER REQUIREMENT(S)

1. This permit covers automotive assembly and painting operations for the Michigan Assembly Plant. Changes to these operations or replacement with a different process type are subject to the requirements of R 336.1201, except as disallowed by R 336.1278 or as allowed by R 336.1279 through R 336.1290 or SC IX.3 or 4. **(R 336.1201)**
2. The Department has determined that compliance with the limits listed in SC I.1 through SC1.8 provides a level of control that is at least equivalent to and not less stringent than the standards in 40 CFR 60.392, *et seq.* and R 336.1610. Accordingly, compliance with the limitations in this permit meets all applicable requirements of 40 CFR Part 60, Subpart MM and R 336.1610. **(R 336.1610, 40 CFR 60, Subpart MM)**

3. This permit authorizes any activities including projects involving physical changes or changes in the method of operation to existing emission units that do not require an increase in the emissions limits or performance levels specified in SC I.1 through SC1.8. As a state only enforceable requirement¹, the changes to the emission unit(s) shall not result in a meaningful change in the nature or quantity of toxic air contaminants emitted from the stationary source. The permittee shall keep on file a demonstration, consistent with AQD Policy and Procedure number AQD-025, or according to the method outlined in SC IX.4. Such activities do not require the facility to obtain any federal or state air permits. **(R 336.1201)**
4. This permit authorizes projects involving the installation of new emission units that do not require an increase in the emissions limits or performance levels specified in SC I.1 through SC1.8 under the following conditions: **(R 336.1201)**
 - a) As a state-only enforceable requirement, the new emission unit will not result in an exceedance of any air toxics standards found in Rule 336.1226 or Rule 336.1227. The permittee shall keep on file, a copy of all demonstrations that the air toxics impact from the new emission unit(s) will comply with the levels specified in Rule 336.1226 or Rule 336.1227. The permittee may devise its own method to perform this demonstration subject to approval by the department.¹
 - b) The new emissions unit will not be a newly constructed or reconstructed major source of hazardous air pollutants as defined in and subject to 40 C.F.R. §63.2 and §63.5(b)(3), National Emission Standard for Hazardous Air Pollutants; and,
 - c) The installation of the new emissions unit will not cause the violation of any applicable air requirement.
 - d) A demonstration that the new installation meets these criteria shall be kept on site for the life of the new emission unit and made available to the department upon request. The permittee must notify the department of the installation of the new emission unit. This notification must contain the information specified in R 336.1215(3)(c)(i) through (v). Construction of the new emission unit may commence upon submittal of the notice.
5. The emission limits and performance levels specified in SC I.1 through SC1.8 may be reviewed and/or adjusted when newly applicable federal requirements or any other requirement that is enforceable as a practical matter and that the Department, under its State Implementation Plan, may impose on the facility become applicable during the term of the permit that would lower allowable emissions. Adjustments to SC I.1 through SC1.8 will be made through a permit revision as of the effective date of the new applicable requirements and will reflect the impact the new applicable requirements will have on the affected emission units. Initial compliance with the adjusted emission limits and performance levels will be demonstrated over the initial compliance period granted by the newly applicable federal requirement. **(R 336.1225, R 336.1901, R 336.2908(3))**
6. The permittee may, at any time, request that the Department terminate the flexible emission limit provisions of this permit and issue a traditional permit. In the event of such termination, the requirements of this permit shall remain in effect until a new permit is issued. At that time, the permit conditions for any existing emission unit that has not been modified and to which new requirements have not become applicable will revert to those found in the previous permits. For any new or modified emission unit, or any emission unit for which new requirements have become applicable the permit conditions will reflect requirements contemporaneous with the date of installation, modification or new requirement applicability. **(R 336.1225, R 336.1901, R 336.2908(3))**

Footnotes:

¹ This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

FG-CONTROLS FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Regenerative thermal oxidizers used for control of VOC emissions from the paint spray booths and curing ovens.

Emission Unit: All emission units and flexible groups associated with automotive assembly and painting operations with VOC controls.

POLLUTION CONTROL EQUIPMENT

Regenerative thermal oxidizers used for control of VOC emissions from portions of the painting operations and curing ovens.

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall develop, maintain and implement an Operation and Maintenance Plan (O & M Plan) for FG-CONTROLS. The O & M Plan shall contain the minimum requirements as outlined in Appendix 2-3. The O & M Plan shall be updated as necessary to reflect changes in equipment and monitoring, to implement corrective actions and to address malfunctions. Changes in the O & M Plan as outlined in Appendix A shall be submitted to the AQD District Supervisor for review and approval. All records and activities associated with the O & M Plan shall be made available to the Department upon request. **(R 336.1901, R 336.1910, R 336.2908(3))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall conduct destruction efficiency testing on the applicable FG-Controls emission units by testing at owner's expense, in accordance with Department requirements. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve the final plan prior to testing. Verification of emission limits includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. **(R336.2001, R336.2003, R336.2004)**
2. The permittee shall conduct capture efficiency testing, and transfer efficiency testing on the applicable FG-Controls emission units by testing at owner's expense, in accordance with Department requirements. However, it is understood that changes at this facility may require a delay in this testing requirement. Should circumstances arise that would necessitate changes to the testing timeframe, the permittee may request in writing to the District Supervisor for an extension to the testing timeframe. The Department may consider a delay to the testing requirement in the permit and provide for an extension to the testing requirement. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve the final plan prior to testing. Verification of emission limits includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. **(R336.2001, R336.2003, R336.2004)**

3. After the testing required in Special Condition V.1 is completed, the permittee shall conduct capture efficiency testing, destruction efficiency, and transfer efficiency testing every 5 years, unless an acceptable demonstration has been made that the current testing remains valid and representative. The permittee shall verify the capture efficiency, destruction efficiency and the transfer efficiency on the applicable FG-Controls emission units by testing at owner's expense, in accordance with Department requirements. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve the final plan prior to testing. Verification of emission limits includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. **(R336.2001, R336.2003, R336.2004)**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall install, maintain and operate in a satisfactory manner, combustion chamber temperature monitoring devices for the thermal oxidizers in FG-CONTROLS to monitor and record the temperature on a continuous basis during operation. Temperature data recording shall consist of measurements made at equally spaced intervals at least once every 15 minutes. All records shall be kept on file and made available to the Department upon request. **(R 336.1910, R 336.2908(3), 40 CFR 60 Subpart MM)**
2. The permittee shall maintain records of maintenance and repair activities. Records shall identify the equipment inspected and the date of the inspection. The permittee shall also record any maintenance activities or corrective actions taken as a result of equipment inspections or due to malfunction. All records shall be kept on file and made available to the Department upon request. **(R 336.1910)**
3. For each control device in operation during production (coating vehicles, booth cleaning if credit is taken, etc.), the permittee shall conduct bypass monitoring for each bypass line such that the valve or closure method cannot be opened without creating an alarm condition for which a record shall be made. Records of the bypass line that was open and the length of time the bypass was open shall be kept on file. **(R 336.1910)**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

NA

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹ This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

**FG-MACT
 FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Each new, reconstructed, or existing affected source as defined in 40 CFR 63.3082, that is located at a facility which applies topcoat to new automobile or new light duty truck bodies or body parts, 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) is subject to the requirements of 40 CFR 63 Subpart III. This includes equipment covered by other permits, grandfathered equipment, and exempt equipment.

Emission Units: All emission units and flexible groups associated with automotive assembly and painting operations.

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring /Testing Method	Underlying Applicable Requirements
1. Organic HAP	0.60 lb per GACS	Calendar month	EU-ECOAT, EU-SEALERS, EU-GUIDECOAT, EU-TOPCOAT, EU-MISCCOAT, glass bonding primer, and glass bonding adhesive operations plus all coatings and thinners, except for deadener materials and for adhesive and sealer materials that are not components of glass bonding systems, used in coating operations in the Paint Shop.	SC III.3, SC V.1, SC VI.3	40 CFR 63.3091(a)
2. Organic HAP	1.10 lbs per GACS*,	Calendar month	EU-GUIDECOAT, EU-TOPCOAT, EU-MISCCOAT, glass bonding primer, and glass bonding adhesive operations plus all coatings and thinners, except for deadener materials and for adhesive and sealer materials that are not components of glass bonding systems, used in coating operations in the Paint Shop.	SC III.3, SC V.1, SC VI.3	40 CFR 63.3091(b)
3. Organic HAP	0.01 lb per lb of coating	Calendar month	NGB Adhesives and Sealers that are not components of glass bonding systems.	SC III.3, SC V.1, SC VI.3	40 CFR 63.3090(c) or 63.3091(c)
4. Organic HAP	0.01 lb per lb of coating	Calendar month	Deadener materials	SC III.3, SC V.1, SC VI.3	40 CFR 63.3090(d) or 63.3091(d)

* The permittee may choose to comply with this limit if the criteria in SC I.5 are met.

5. The permittee may choose to comply with either SC I.1 or 2. SC I.2 may be chosen only if EU-ECOAT meets either of the following requirements. **(40 CFR 63.3092)**
 - a) Each individual material added to EU-ECOAT contains no more than 1.0 percent by weight of any organic HAP and no more than 0.10 percent by weight of any OSHA-defined carcinogenic organic HAP; or,

- b) The emissions from all EU-ECOAT bake ovens are captured and ducted to the oven thermal oxidizer which achieves a minimum destruction efficiency of at least 95 percent (by weight).

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall develop and implement a work practice plan 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 SC I.1 through 4. The work practice plan must specify practices and procedures to ensure that, at a minimum, the following elements are implemented consistent with the requirements of 40 CFR 63.3094. The permittee shall comply with the applicable work practice plans at all times. **(40 CFR 63.3094)**
 - a) All organic-HAP-containing coatings, thinners, cleaning materials, and waste materials must be stored in closed containers.
 - b) Spills of organic-HAP containing coatings, thinners, cleaning materials, and waste materials must be minimized.
 - c) Organic-HAP-containing coatings, thinners, cleaning materials, and waste materials must be conveyed from one location to another in closed containers or pipes.
 - d) Mixing vessels, other than day tanks equipped with continuous agitation systems, which contain organic-HAP-containing coatings and other materials must be closed except when adding to, removing, or mixing the contents.
 - e) Emissions of organic HAP must be minimized during cleaning of storage, mixing, and conveying equipment.
 - f) Organic HAP emissions from cleaning and from purging of equipment associated with all coating operations subject to emission limits in SC I.1 through 4 above must be minimized by addressing:
 - i. Vehicle body wipe pursuant to 40 CFR 63.3094(c)(1)(i);
 - ii. Coating line purging pursuant to 40 CFR 63.3094(c)(1)(ii);
 - iii. Coating system flushing pursuant to 40 CFR 63.3094(c)(1)(iii);
 - iv. Cleaning of spray booth grates pursuant to 40 CFR 63.3094(c)(1)(iv);
 - v. Cleaning of spray booth walls pursuant to 40 CFR 63.3094(c)(1)(v);
 - vi. Cleaning of spray booth equipment pursuant to 40 CFR 63.3094(c)(1)(vi);
 - vii. Cleaning of external spray booth areas pursuant to 40 CFR 63.3094(c)(1)(vii);
 - viii. Additional housekeeping measures pursuant to 40 CFR 63.3094(c)(1)(viii).
2. The permittee may choose to comply with an alternative to the work practice standard, after receiving prior approval from the USEPA in accordance with 40 CFR 63.6(g). **(40 CFR 63.3100(c), 40 CFR 63.4493(b) and (c))**
3. The work practice plan shall not become part of the facility's Renewable Operating Permit. Revisions to the work practice plan likewise do not represent revisions to the facility's Renewable Operating Permit. Copies of the current work practice plan and any earlier plan developed within the past five years are required to be made available for inspection and copying by the Air Quality Division upon request. **(40 CFR 63.3094)**
4. For any coating operation(s) for which HAP emission reductions due to the use of add-on control equipment

5. are relied upon to demonstrate compliance with the emission limits in SC I.1 through 4 above, the permittee shall meet the operating limits specified in Table 1 of 40 CFR 63 Subpart IIII as identified below. The operating limits in Table 1 apply to the emission capture and add-on control systems on the coating operations. The permittee must establish the operating limits during the performance test according to the requirements in 40 CFR 63.3167. The operating limits shall be met at all times after they are established, except for periods of startup, shutdown and malfunction. **(40 CFR 63.3093, 40 CFR 63.3100(b), (d) and Table 1)**

Add-On Control Device:	Operating Limit:
Thermal Oxidizer	The average combustion temperature in any 3-hour period must not fall below the combustion temperature limit established according to 40 CFR 63.3167(a).

6. The permittee shall develop and implement a written startup, shutdown and malfunction plan (SSMP) in accordance with 40 CFR 63.6(e)(3). This plan must address the startup, shutdown and corrective actions in the event of a malfunction of any emission capture system or add-on control device upon which compliance with any of the emission limits in SC I.1 through 4 depends. The SSMP must also address any coating operation equipment that may cause increased emissions or that would affect capture efficiency if the process equipment malfunctions, such as conveyors that move parts among enclosures. **(40 CFR 63.3100(f))**
7. The permittee shall operate and maintain FG-MACT including any emission capture system or add-on control device upon which compliance with any of the emission limits in SC I.1 through 4 depends, according to the provisions in 40 CFR 63.6(e)(1)(i). **(40 CFR 63.3100(d))**
8. The permittee shall maintain a log detailing the operation and maintenance of any emission capture system, add-on control device, or continuous parameter monitor upon which compliance with any of the emission limits in SC I.1 through 4 depends. The log shall cover the period between the compliance date specified in 40 CFR 63.3083 and the date when the initial emission capture system and add-on control device performance tests have been completed, as specified in 40 CFR 63.3160. **(40 CFR 63.3100(e))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1201(3), 40 CFR 63.3130, 40 CFR 63.3131)**

1. The permittee shall perform the applicable performance tests and compliance demonstrations in accordance with 40 CFR 63.3150-3152, 40 CFR 63.3160-3161, 40 CFR 63.3163-3168, 40 CFR 63.3170-3171, and 40 CFR 63.3173. **(40 CFR Part 63, Subpart IIII)**
2. The permittee may rely upon the results of capture, destruction or transfer efficiency tests that have been previously conducted upon written approval from the AQD District Supervisor. Any such previous tests must meet the criteria identified in 40 CFR 63.3160(c)(1) through (3). **(40 CFR 63.3160)**
3. The permittee shall determine the mass fraction of each organic HAP for each material used according to the procedures established under 40 CFR 63.3151(a)(1) through (5). The permittee may use USEPA Method ALT-017 as an alternative for any material used, after demonstrating that its use as an alternative test methodology for that material, has been approved by the USEPA pursuant to the requirements of 40 CFR 63.3151(a)(3) and 40 CFR 63.7. **(40 CFR 63.7, 40 CFR 63.3151)**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3), 40 CFR 63.3131)**

1. The permittee shall compile all required records and complete all required calculations in a format acceptable to the AQD District Supervisor and make them available by the end of the calendar month following each compliance period unless otherwise specified in any monitoring/recordkeeping condition. **(40 CFR 63.3130)**

2. The permittee shall conduct an initial compliance demonstration for the initial compliance period described in 40 CFR 63.3150-3151, 40 CFR 63.3160-3161, and 40 CFR 63.3170-3171. The initial compliance period begins on the applicable compliance date specified in 40 CFR 63.3083 and ends on the last day of the month following the compliance date. If the initial date occurs on any day other than the first day of a month, then the initial compliance period extends through the end of that month plus the next month. **(40 CFR 63.3150, 40 CFR 63.3160, 40 CFR 63.3170, 40 CFR 63.3083(a) and (b))**
3. The permittee shall install, operate and maintain each continuous parametric monitoring system in accordance with the applicable provisions of 40 CFR 63.3168. **(40 CFR 63.3168)**
4. The permittee shall keep all records as required by 40 CFR 63.3130 in the format and timeframes outlined in 40 CFR 63.3131. **(40 CFR 63.3130, 40 CFR 63.3131)**
5. The permittee shall maintain, at a minimum, the following records as of the applicable compliance date:
 - a) A copy of each notification and report that is submitted to comply with 40 CFR Part 63, Subpart IIII and the documentation supporting each notification and report as specified in 40 CFR 63.3130(a). **(40 CFR 63.3130(a))**
 - b) A current copy of information provided by materials suppliers or manufactures, such as manufacturer's formulation data, or test data used to determine the mass fraction of organic HAP for each coating, thinner and cleaning material, the density for each coating and thinner, and the volume fraction of coating solids for each coating. **(40 CFR 63.3130(b))**
 - c) Monthly records of the following:
 - i. For each coating or thinner used in FG-MACT, the volume used in each month, the mass fraction organic HAP content, the density, and the volume fraction of solids. **(40 CFR 63.3130(c))**
 - ii. For each deadener material, and NGB Sealers and Adhesives used, the mass used in each month and the mass organic HAP content. **(40 CFR 63.3130(c))**
 - iii. Calculations of the organic HAP emission rate for FG-MACT in pounds per gallon of applied coating solids. If permittee chooses to comply with the option identified in SC I.5.a., a record of the weight fraction of each organic HAP in each material added to EU-ECOAT. These calculations and records must include all raw data, algorithms, and intermediate calculations. If the "Protocol for Determining Daily Volatile Organic Compound Emission Rate of Automobile and Light-Duty Truck Topcoat Operations," EPA-453/R-08-002 (Docket ID No. OAR-2002-0093 and Docket ID No. A-2001-22), is used, all data input to this protocol must be recorded. If these data are maintained as electronic files, the electronic files, as well as any paper copies must be maintained. **(40 CFR 63.3130(c), 40 CFR 63.3163, 40 CFR 63.3173)**
 - iv. Calculation of the average monthly mass organic HAP content in pounds per pound of coating, separately for deadener materials and NGB Sealers and Adhesives. **(40 CFR 63.3130(c), 40 CFR 63.3152)**
 - v. The name, volume, mass fraction organic HAP content and density of each cleaning material used. **(40 CFR 63.3130(d) - (f))**
 - d) Any additional records pertaining to deviations; startup, shutdown or malfunctions; emission capture systems; performance testing; capture and control efficiency determinations; transfer efficiency determinations; and work practice plans for any emission capture system or add-on control device upon which compliance with any of the emission limits in SC I.1 through 4 depends, pursuant to 40 CFR 63.3130(g) through (n). **(40 CFR 63.3130(g) – (n))**
 - e) Records pertaining to the design and operation of control and monitoring systems for any emission capture system or add-on control device upon which compliance with any of the emission limits in SC I.1 through 4 depends must be maintained on-site for the life of the equipment in a location readily available to plant operators and inspectors. **(40 CFR 63.3130(o))**

6. The permittee shall demonstrate continuous compliance with the operating limits specified in Table 1 to Subpart IIII of Part 63 for any emission capture system or add-on control device upon which compliance with any of the emission limits in SC I.1 through 4 depends, pursuant to 40 CFR 63.3163 and 40 CFR 63.3173 using the method(s) described below: **(40 CFR 63.3163, 40 CFR 63.3173 and Table 1)**

Add-On Control Device	Operating Limit:	Continuous Compliance Demonstration Method
Thermal Oxidizer	The average combustion temperature in any 3-hour period must not fall below the combustion temperature limit established According to 40 CFR 63.3167(a).	a. Collect the combustion temperature data according to 40 CFR 63.3168(c); b. Reduce the data to 3-hour block averages; and c. Maintain the 3-hour average combustion temperature at or above temperature limit.

7. The permittee shall monitor or secure the valve or closure mechanism controlling each bypass line for each capture system upon which compliance with any of the emission limits in SC I.1 through 4 depends in a non-bypass mode such that the valve or closure mechanism cannot be opened without creating a record that it was opened. The method used to monitor or secure the valve or closure mechanism must meet one of the following:
- a) Flow control position indicator requirements pursuant to 40 CFR 63.3168(b)(1)(i);
 - b) Car-seal or lock-and-key valve closures requirements pursuant to 40 CFR 63.3168(b)(1)(ii);
 - c) Valve closure monitoring requirements pursuant to 40 CFR 63.3168(b)(1)(iii);
 - d) Automatic shutdown system requirements pursuant to 40 CFR 63.3168(b)(1)(iv).

If any bypass line is opened, a description of why the line was opened and the length of time it remained open must be included in the semi-annual compliance reports required in SC VII.1. **(40 CFR 63.3168(b))**

VII. REPORTING

1. The permittee shall submit all semiannual compliance reports as required by 40 CFR 63.3120(a). The first time period covered by these reports shall be shortened so as to end on either June 30 or December 31, whichever comes first. These reports shall be due March 15 for the reporting period July 1 to December 31 and September 15 for the reporting period January 1 to June 30. **(40 CFR 63.3120(a))**
2. The permittee shall submit applicable notifications specified in 40 CFR 63.7(b) and (c), 63.8(f)(4) and 63.9(b) through (e) and (h), as specified in 40 CFR 63.3110. **(40 CFR Part 63, Subparts A and IIII)**
3. For any emission capture system or add-on control device upon which compliance with any of the emission limits in SC I.1 through 4 depends, the permittee shall submit all performance test reports for emission capture systems and add-on control devices, and reports of transfer efficiency tests as required by 40 CFR 63.3120(b). **(40 CFR 63.3120(b))**
4. For any emission capture system or add-on control device upon which compliance with any of the emission limits in SC I.1 through 4 depends, for which a startup, shutdown, or malfunction occurs during the semiannual reporting period, the permittee shall submit a SSMP report as specified in 40 CFR 63.3120(c). **(40 CFR 63. 3120(c), 40 CFR 63.10(d))**

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all applicable provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63, Subpart A and Subpart IIII for Surface Coating of Automobiles and Light Duty Trucks by the initial compliance date. **(40 CFR Part 63, Subparts A and IIII)**

Appendix 3. Monitoring Requirements

Specific monitoring requirement procedures, methods or specifications are detailed in Part A or the appropriate Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Therefore, this appendix is not applicable.

Elements of an O & M Plan

General – Keep records of maintenance inspections which include the dates, results of the inspections and the dates and reasons for repairs if made. The following items shall be inspected for each respective add-on control device used to demonstrate compliance with applicable VOC emissions limits.

Thermal Oxidizers

1. Validation of thermocouple accuracy or recalibration of each thermocouple a minimum of once every 12 months. The thermocouple can be replaced in lieu of validation.
2. Perform a heat exchanger visual internal inspection a minimum of once every 18 months.*

Regenerative Thermal Oxidizers

1. Validation of thermocouple accuracy or recalibration of each thermocouple a minimum of once every 12 months. The thermocouple can be replaced in lieu of validation.
2. Perform a heat exchange/heat transfer media inspection a minimum of once every 18 months.*
3. Perform an inspection of the valve seals condition and verify valve timing/synchronization a minimum of once every 18 months.*

* The requirement to address this issue is satisfied if a performance test (i.e., stack test) has been performed on the control device within the prior 18 month period.