



TOYOTA MOTOR MANUFACTURING, KENTUCKY, INC.

Mail Code: MFGS/ENV-K

1001 Cherry Blossom Way, P.O. Box 2700

Georgetown, KY 40324-5700

(502) 868-2000

October 15th, 2025

Director Michael Kennedy
Division of Air Quality
300 Sower Boulevard, 2nd Floor
Frankfort, Kentucky 40601

Permit: V-20-026 R2
Agency Interest: 7998
Source ID: 21-209-00030

RE: TOYOTA KENTUCKY: Paint Line #2 Reborn (Re-submittal)

Director Kennedy,

Please see attached application for the replacement of Toyota Motor Manufacturing Kentucky, Inc. (TMMK's) Paint Line #2. This Paint Line has reached its end of life and requires extensive refurbishment to continue operation. TMMK will instead construct Paint # 2 Reborn in a separate, newly constructed, building. This new paint operation will feature upgraded control technology to drastically reduce emissions from the vehicle painting process.

Details of such are provided below.

Phosphate Treatment System (Remove)

TMMK proposes the demolition of the existing Phosphate Treatment system.

Electrodeposition coating system (F02R)

TMMK proposes the replacement of one electrocoating system. This includes pre-treatment, electrocoat deposition, oven curing of auto bodies, and an ED supply/storage tank. F02R is subject to 40 CFR Part 63 Subpart IIII and 40 CFR Part 60 Subpart MMa for Primecoat application. This system will utilize an RTO on the oven for the destruction of VOCs and condensable PM. TMMK estimates a 75% carryover of VOCs from the treatment process (an enclosed submersion bath) to the oven.

Body Repair Line (F03R) Insignificant Activity

TMMK proposes the replacement of one body repair line. This process includes as-needed welding, grinding, and sanding to repair a vehicle body.

Sealer Line (F04R)

TMMK proposes the replacement of one sealer application system. This includes sealer application and a curing oven. This system will utilize an RTO on the oven for the destruction of VOCs and condensable PM; this RTO will be shared with F02R.

Coating Operations (F05R)

TMMK proposes the replacement of one coating application system. This includes paint mixing, primer application, topcoat application (including base), and curing ovens. The Coating Line is subject to 40 CFR Part 63 Subpart IIII and 40 CFR Part 60 Subpart MMa for Guidecoat and Topcoat application. This system will utilize separate controls on the coating booth and ovens:

- Booths: Concentrator + RTO (VOC); Inherent Dry Filters (PM2.5)
- Oven: RTO (VOC and PM2.5/CPM)

TMMK proposes the modification of F05R to incorporate Blackout and Wax application. The Blackout & Wax portion of the Coating Line is subject to 40 CFR Part 63 Subpart IIII and 40 CFR Part 60 Subpart MMa for Topcoat application (Blackout only).

TMMK proposes the modification of F05R to incorporate Repair Painting operations. Repair painting operations are subject to 40 CFR Part 63 Subpart IIII and Subpart MMa for each applicable coating repair. Emissions will be reported as uncontrolled.

Wet Sand Line (Remove)

TMMK elects not to re-permit F06.

Topcoat Operations (Relocate)

Topcoat operations requests F07 be incorporated into F05R (Coating Operations) as a like-kind replacement.

Blackout Coating Operations (Remove)

TMMK elects to demolish the existing blackout operations.

Moon Roof Installation (Remove)

TMMK elects not to re-permit F10.

Wax Coating Operations (Remove)

TMMK elects to demolish the existing wax coating operations.

Paint Repair Operations (Remove)

TMMK elects to demolish the existing Paint Repair Operations.

Offline Maintenance and Equipment Cleaning (F13R)

TMMK proposes the replacement of various offline maintenance activities associated with painting autobodies. This includes cleaning activities such as booth cleaning and conveyance equipment cleaning. These maintenance operations are subject to 40 CFR Part 63 Subpart IIII and 401 KAR 59:185.

TMMK proposes the replacement one line purge and solvent recovery system. The purge/solvent recovery system are subject to 40 CFR Part 63 Subpart IIII. The solvent recovery system will be used to credit recovered VOCs in the recycled purge. The remaining emissions are emitted in the individual booths, which are controlled by the booth RTO (RTO-T2-BO). This emission unit will also include any solvent used in autobody cleaning in the various booths (like a manual spray and rag to remove dirt from the autobody).

Wastewater Treatment Operations (Remove)

TMMK proposes that the wastewater treatment system is not a source of emissions and does not require re-permitting.

Robot Teaching Booth (Remove)

TMMK proposes that the Offline Robot Teaching booth is not a source of emissions and does not require re-permitting.

Two Tone Masking Booth (Remove)

TMMK proposes that the masking booth is not a source of emissions and does not require re-permitting.

General Exhaust (Remove)

No sources of pollution exhaust to the ambient air inside the paint shop that are not already assigned an emission unit. TMMK elects not to re-permit F18.

Line 2 Reborn HAP Emissions (FHAP)

TMMK requests the creation of an emission unit solely for HAPs emitted in the emission units above. The SCC unit will be vehicles produced, and the emission factor will be in a specific HAP/vehicle. The potential to emit will be based on 2024 HAP emissions with buffer for varying HAP concentrations and usage between paints.

Installation of Natural Gas Comfort Heating Units (D13A)

TMMK proposes the installation of natural gas heating units for comfort heating. Units greater than 1 MMBTU/hr may be subject to 40 CFR 63 Subpart DDDDD.

Installation of Process Oxidizers, Pre-Heaters, and Baking Ovens (D13B)

TMMK proposes the installation of three (3) Regenerative Thermal Oxidizers and various ovens and pre-heaters burning pipeline natural gas. This unit will be a like-kind replacement of D03B. The overall capacity of Natural Gas between buildings will be less than existing capacity due to energy efficiency improvements. Units greater than 1 MMBTU/hr may be subject to 40 CFR 63 Subpart DDDDD.

Regulatory Discussion

NSPS Subpart MMA: The reconstruction and modifications of EUs F02, F04, and F05 triggers 40 CFR Part 60 Subpart MMA. TMMK will utilize RTOs to meet performance standards for this regulation. While the entire booth system will be captured, concentrator wheels will be used

improve the energy efficiency of the RTOs. TMMK will assume no VOC carryover from booth to oven for the initial permit application, to establish a conservative projected actual.

TMMK will meet all work practice, parametric monitoring, record-keeping, and reporting requirements for Paint #2 Reborn, per the new NSPS standard.

The MMA NSPS limit will only apply to Paint #2 Reborn and not the existing Paint #2 (F01-F18) during the requested shakedown period.

New Source Review:

TMMK requests a hybrid approach to the re-permitting of Line 2:

- EU's F02, F03, F04, F05, F07, F13, and D03B will be replaced with like-kind equipment.
 - F02 and F04 will demonstrate could-have-accommodated demand growth.
- EU's F01, F09, F11, F12, and F14 will be demolished and re-permitted as modifications to existing Emission Units.
 - A baseline of zero emissions will be used for the NSR evaluation for these units.
- EU's F06, F08, F10, F15, F16, F17, F18 will be demolished without reinstallation.
- EU D13A will be introduced as a new source for building heat.

Shakedown

TMMK requests special limits to allow the transition of production capacity from Paint # 2 to Paint #2 Reborn. These limits will be the Significant Emission Rate of PM, NO_x, and VOC and will only apply to the net emissions increase of the project. TMMK will comply with all existing limits on Paint #2. During simultaneous operation of Paint #2 and #2 Reborn, #2 Reborn will be subject only to this Shakedown Limit and applicable NSPS, NESHAP and KAR regulations. This shakedown limitations will expire at the shutdown of Paint #2. With the additional controls on Paint #2 Reborn and the conversion from solvent to waterborne primer, the actual emissions are expected to be much less between the old and new paint shop.

Best Available Control Technology: Existing BACT limits will carry over to the equivalent like-kind replacement unit described above.

- F02R: 0.19 lbs VOC/vehicle; 0.22 lbs PM/hr
- F04R: 1.15 lbs VOC/vehicle
- F05R:
 - Primer: 2.73 lbs VOC/vehicle; 1.91 lbs PM/hr
 - Excludes Soft Chip Application
 - Topcoat: 3.86 lbs VOC/vehicle; 7.42 lbs PM/hr
- F13R: 3.09 lbs VOC/vehicle; 1.00 lbs PM/hr

All other BACT limits for Paint Line #2 will retire along with their respective EU.

Aggregation Applicability:

In July 2025, TMMK submitted an application to modify Paint Line #1 to paint battery electric vehicles. The re-construction of Paint # 2 is not related to the modification of Paint Line #1. Paint #2 has reached the end of its depreciated life and has no relation to the battery vehicle

model change on Line 1. Paint #2 currently produces hybrid Camrys and RAV4s; Paint #2 Reborn will continue to produce the Camry and RAV4.

In July 2024, TMMK submitted an application to modify Paint Line #3 to support the Camry, and Paint Line #2 to continue supporting the RAV4. The reallocation of Camry production is unrelated to the reconstruction of Line #2. The updated RAV4 model has been incorporated into this application and is unrelated to the reconstruction of Line #2.

Schedule:

Project	Impacted EU	Location	Sitework	Building Foundation	EU Installation	Production
Line 2 Reborn	F01R-F18R	38°15'27.14"N 84°32'28.03"W	6/1/2025	3/1/2026	8/1/2027	1/1/2029
Line 2 Reborn Utilities	D13A	38°15'27.14"N 84°32'28.03"W	6/1/2025	3/1/2026	1/1/2027	1/1/2029

TMMK proposes a major modification for the Title V amendment for the new paint shop.
TMMK proposes a minor modification for PSD applicability (non-PSD) for the new paint shop.

Attached are:

- Required KYDEP Forms
- Technical Source Document
- Suggested Draft Amendment

If you have any questions, please contact Will Richardson at (502) 735-2554
will.richardson@toyota.com.

Sincerely,

Sandy Nott

Sandy Nott (Oct 13, 2025 10:15:17 PDT)

Sandy Nott,
Vice President
Toyota Motor Manufacturing Kentucky

H/2018		DEP7007AI	
Division for Air Quality		Administrative Information	
300 Sower Boulevard		___ Section AI.1: Source Information	
Frankfort, KY 40601		___ Section AI.2: Applicant Information	
(502) 564-3999		___ Section AI.3: Owner Information	
		___ Section AI.4: Type of Application	
		___ Section AI.5: Other Required Information	
		___ Section AI.6: Signature Block	
		___ Section AI.7: Notes, Comments, and Explanations	
		Additional Documentation	
		___ Additional Documentation attached	
Source Name: TOYOTA MOTOR MANUFACTURING KENTUCKY, INC			
KY EIS (AFS) #:		21- 209-00030	
Permit #:		V-20-026	
Agency Interest (AI) ID:		7998	
Date:		10/1/2025	
Section AI.1: Source Information			
Physical Location	Street:	1001 CHERRY BLOSSOM WAY	
Address:	City:	County:	SCOTT
	Street or	Zip Code:	40324
Mailing Address:	P.O. Box:		
	City:	State:	
		Zip Code:	
Standard Coordinates for Source Physical Location			
Longitude:	84.23.30 (decimal degrees)	Latitude:	38.16.05 (decimal degrees)
Primary (NAICS) Category:		Primary NAICS #:	

Classification (SIC) Category:

Automobile Assembly

Primary SIC #: 3711

Briefly discuss the type of business conducted at this site:

Description of Area Surrounding Source:

- ☒ Rural Area
☐ Urban Area

- ☐ Industrial Park
☐ Industrial Area

- ☐ Residential Area
☐ Commercial Area

Is any part of the source located on federal land?

- ☐ Yes
☐ No

Number of Employees:

9568

Approximate distance to nearest residence or commercial property:

Property Area:

1300 acres

Is this source portable?

- ☐ Yes
☒ No

What other environmental permits or registrations does this source currently hold or need to obtain in Kentucky?

NPDES/KPDES:

- ☒ Currently Hold

- ☐ Need

- ☐ N/A

Solid Waste:

- ☒ Currently Hold

- ☐ Need

- ☐ N/A

RCRA:

- ☒ Currently Hold

- ☐ Need

- ☐ N/A

UST:

- ☐ Currently Hold

- ☐ Need

- ☐ N/A

Type of Regulated Waste Activity:

- ☐ Mixed Waste Generator

- ☐ Generator

- ☐ Recycler

- ☐ Other: _____

- ☐ U.S. Importer of Hazardous Waste

- ☐ Transporter

- ☐ Treatment/Storage/Disposal Facility

- ☐ N/A

11/2018

Section AI.2: Applicant Information

Applicant Name: TOYOTA MOTOR MANUFACTURING KENTUCKY, INC

Title: (if individual)

Mailing Address:

Street or P.O. Box: _____
City: _____ **State:** _____ **Zip Code:** _____

Email: (if individual)

Phone: _____

Technical Contact

Name: Will Richardson

Title: Environmental Engineer

Mailing Address:

Street or P.O. Box: 101 Engineering Way
City: Georgetown **State:** KY **Zip Code:** 40324

Email: will.richardson@toyota.com

Phone: 502 642-1696

Air Permit Contact for Source

Name: Chris Holbrook

Title: Sr. Environmental Engineer

Mailing Address:

Street or P.O. Box: 1001 Cherry Blossom
City: Georgetown **State:** KY **Zip Code:** 40324

Email: Chris.Holbrook@toyota.com

Phone: +1 (859) 699-9479

Section AI.3: Owner Information	
☒ Owner same as applicant	
Name:	
Title:	
Mailing Address:	Street or P.O. Box: City: State: Zip Code:
Email:	
Phone:	
List names of owners and officers of the company who have an interest in the company of 5% or more.	
Name	Position

Section AI.4: Type of Application

Current Status:	☒ Title V	☐ Conditional Major	☐ State-Origin	☐ General Permit	☐ Registration	☐ None
Requested Action: <i>(check all that apply)</i>	☐ Name Change	☐ Initial Registration	☒ Significant Revision	☐ Administrative Permit Amendment		
	☐ Renewal Permit	☐ Revised Registration	☒ Minor Revision	☐ Initial Source-wide Operating Permit		
	☐ 502(b)(10)Change	☐ Extension Request	☐ Addition of New Facility	☐ Portable Plant Relocation Notice		
	☒ Revision	☐ Off Permit Change	☐ Landfill Alternate Compliance Submittal	☒ Modification of Existing Facilities		
	☐ Ownership Change	☐ Closure				
Requested Status:	☒ Title V	☐ Conditional Major	☐ State-Origin	☐ PSD	☐ NSR	Other: _____

Is the source requesting a limitation of potential emissions?		
Pollutant:	☐ Yes	☒ No
☒ Particulate Matter	Requested Limit: _____	
☒ Volatile Organic Compounds (VOC)	Pollutant: ☐ Single HAP	
☐ Carbon Monoxide	☐ Combined HAPs	
☐ Nitrogen Oxides	☐ Air Toxics (40 CFR 68, Subpart F)	
☐ Sulfur Dioxide	☐ Carbon Dioxide	
☐ Lead	☐ Greenhouse Gases (GHG)	
	☐ Other	
Requested Limit: _____		

For New Construction:
Proposed Start Date of Construction: (MM/YYYY)
03/2026
Proposed Operation Start-Up Date: (MM/YYYY)
01/2029

For Modifications:
Proposed Start Date of Modification: (MM/YYYY)
Proposed Operation Start-Up Date: (MM/YYYY)
Identify any non-applicable requirements for which permit shield is sought on a separate attachment to the application.

Section AI.5 Other Required Information

Indicate the documents attached as part of this application:

☒ DEP7007A Indirect Heat Exchangers and Turbines	☐ DEP7007CC Compliance Certification
☒ DEP7007B Manufacturing or Processing Operations	☐ DEP7007DD Insignificant Activities
☐ DEP7007C Incinerators and Waste Burners	☐ DEP7007EE Internal Combustion Engines
☐ DEP7007F Episode Standby Plan	☐ DEP7007FF Secondary Aluminum Processing
☐ DEP7007J Volatile Liquid Storage	☒ DEP7007GG Control Equipment
☒ DEP7007K Surface Coating or Printing Operations	☐ DEP7007HH Haul Roads
☐ DEP7007L Mineral Processes	☐ Confidentiality Claim
☐ DEP7007M Metal Cleaning Degreasers	☐ Ownership Change Form
☒ DEP7007N Source Emissions Profile	☐ Secretary of State Certificate
☐ DEP7007P Perchloroethylene Dry Cleaning Systems	☒ Flowcharts or diagrams depicting process
☐ DEP7007R Emission Offset Credit	☐ Digital Line Graphs (DLG) files of buildings, roads, etc.
☐ DEP7007S Service Stations	☒ Site Map
☐ DEP7007T Metal Plating and Surface Treatment Operations	☐ Map or drawing depicting location of facility
☐ DEP7007V Applicable Requirements and Compliance Activities	☐ Safety Data Sheet (SDS)
☐ DEP7007Y Good Engineering Practice and Stack Height Determination	☐ Emergency Response Plan
☐ DEP7007AA Compliance Schedule for Non-complying Emission Units	☐ Other: _____
☐ DEP7007BB Certified Progress Report	

Section AI.6: Signature Block

I, the undersigned, hereby certify under penalty of law, that I am a responsible official*, and that I have personally examined, and am familiar with, the information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the information is on knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false or incomplete information, including the possibility of fine or imprisonment.

Sandy Nott
Sandy Nott (Oct 13, 2025 10:24:40 PDT)

Authorized Signature

Sandy Nott

Type or Printed Name of Signatory

*Responsible official as defined by 401 KAR 52:001.

10/13/2025

Date

Vice President, Administration

Title of Signatory

Section AI.7: Notes, Comments, and Explanations	

Division for Air Quality

300 Sower Boulevard
Frankfort, KY 40601
(502) 564-3999

DEP7007A

Indirect Heat Exchangers and Turbines

- ___ Section A.1: General Information
___ Section A.2: Operating and Fuel Information
___ Section A.3: Notes, Comments, and Explanations

Additional Documentation

___ Complete DEP7007AI, DEP7007N,
DEP7007V, and DEP7007GG.

___ Manufacturer's specifications

Source Name: [Toyota Motor Manufacturing Kentucky INC](#)

KY EIS (AFS) #: [21-209-00330](#)

Permit #: [V-20-026-R2](#)

Agency Interest (AI) ID: [7998](#)

Date: [4/7/2026](#)

Section A.1: General Information

Emission Unit #	Emission Unit Name	Process ID	Process Name	Identify General Type: Indirect Heat Exchanger, Gas Turbine, or Combustion Turbine	Indirect Heat Exchanger Configuration	Manufacturer	Model No./ Serial No.	Proposed/Actual Date of Construction Commencement (MM/YYYY)	SCC Code	SCC Units	Control Device ID	Stack ID
See Notes and TSD Document												

Section A.2: Operating and Fuel Information

Emission Unit #	If multipurpose unit, identify the percentage of use by purpose				Rated Capacity Heat Input (MMBTU/hr)	Rated Capacity Power Output		Describe Operating Scenario (only if this unit will be used in different configurations)	Classify Fuel as Primary or Secondary	Identify Fuel Type: Coal, Natural Gas, Wood, Biomass, Landfill/Digester Gas, Fuel Oil # (specify 1-6), or Other	Heat Content (HHV)		Maximum Operating Hours	Ash Content (%)	Sulfur Content (%)
	Space Heat	Process Heat	Power	Emergency			(Specify units: hp, MW, or lb steam/hr)					(Specify units: Btu/lb, Btu/gal, or Btu/scf)			
See Notes and TSD Document															

Section A.3: Notes, Comments, and Explanations

[illegible]

**Maximum yearly fuel usage rate only applies if applicant request operating restrictions through federally enforceable limitations.*

Section B.3: Notes, Comments, and Explanations

Division for Air Quality

300 Sower Boulevard

Frankfort, KY 40601

(502) 564-3999

DEP7007GG

Control Equipment

Additional Documentation

- ___ Complete Sections GG.1 through GG.12, as applicable
- ___ Attach manufacturer's specifications for each control device
- ___ Complete DEP7007AI

Source Name: Toyota Motor Manufacturing Kentucky, Inc

KY EIS (AFS) #: 21- 208-00030

Permit #: V-20-026

Agency Interest (AI) ID: 7998

Date: 3/31/2025

Section GG.1: General Information - Control Equipment

Control Device ID #	Control Device Name	Cost	Manufacturer	Model Name/ Serial #	Date Installed	Inlet Gas Stream Data For <u>All</u> Control Devices					Inlet Gas Stream Data For Condensers, Adsorbers, Afterburners, Incinerators, Oxidizers Only			Equipment Operational Data For <u>All</u> Control Devices		
						Temperature (°F)	Flowrate (scfm @ 68 °F)	Average Particle Diameter (µm)	Particle Density (lb/ft³) or Specific Gravity	Gas Density (lb/ft³)	Gas Moisture Content (%)	Gas Composition	Fan Type	Pressure Drop Range (in. H ₂ O)	Pollutants Collected/ Controlled	Pollutant Removal (%)
RTO-T2-ED	ED/Sealer RTO		Durr		Jan-27	343	13,120									
RTO-T2-BO	Booth RTO		Durr		Feb-27	290	15,600									
RTO-T2-OV	Oven RTO		Durr		Mar-27	138	25,305									

Section GG.2: Flare Source Information

Control Device ID #	Identify all Emission Units and Control Devices that Feed to Flare	Type of Flare (e.g. steam-assisted, air- assisted, nonassisted)	Process Gas Flowrate (<i>acfm</i>)	Net Heating Value of Stream(s) (Btu/scf)	Removal Efficiency (%)	Flare Rated Capacity (<i>MMBtu/hr</i>)

Section GG.3: Cyclone

Control Device ID #	Identify all Emission Units and Control Devices that Feed to Cyclone	Identify Number of Cyclones: Single <u>or</u> Multiple	Identify Type: High-Efficiency, Conventional, <u>or</u> High-Throughput	Inlet Height (ft)	Inlet Width (ft)	Bottom Cone Height (ft)	Body Height (ft)	Body Diameter (ft)	Dust Outlet Tube Diameter (ft)	Gas Outlet Tube Diameter (ft)	Vortex Finder Height (ft)

Section GG.4: Electrostatic Precipitator (ESP)

Control Device ID #	Identify all Emission Units and Control Devices that Feed to ESP	Identify Type: Dry negative corona, Wet negative corona <u>or</u> Wet positive corona	Number of Stages	Number of Plates per Stage	Plate Spacing (in)	ESP Total Width (ft)	ESP Total Height (ft)	Collection Plate Height (ft)	Length of Collection Plate (ft)	Particle Migration (Drift) Velocity (specify units)	Particle Resistivity (specify units)	Primary and Secondary Voltage Across Plates (volts)	Primary and Secondary Current (amperes)

Section GG.5: Scrubber																		
Control Device ID #	Identify all Emission Units and Control Devices that Feed to Scrubber	Identify Type of Scrubber: Venturi, Packed Bed, Spray Tower, or Other (specify)	For Venturi Scrubbers:	For Packed Bed Scrubbers:		For Spray Towers:		Identify Type of Flow: Concurrent, Countercurrent, or Crossflow	Length in Direction of Gas Flow (ft)	Cross-Sectional Area (ft ²)	Venturi Throat Velocity (ft/s)	Mist Eliminator			Scrubbing Liquid			
			Identify Throat Type: Fixed or Adjustable	Identify Packing Type	Packing Height (in)	Number of Nozzles	Nozzle Pressure (psig)					Identify Type: Mesh or Vane	Cross-Sectional Area (ft ²)	Pressure Drop (in. H ₂ O)	Chemical Composition	Flowrate (gal/min)	Fresh Liquid Makeup Rate (gal/min)	Describe Disposal Method of Scrubber Effluent

Section GG.6: Filter														
Control Device ID #	Identify all Emission Units and Control Devices that Feed to Filter	Identify Type of Filter Unit: Baghouse, Cartridge Collector, or Other (specify)	Identify Type of Filtering Material: Fabric, Paper, Synthetic, or Other (specify)	Total Filter Area (ft ²)	Effective Air-to-Filter Ratio (acfm/ft ²)	Continuous Monitoring Instrumentation (e.g. COMS, BLDS, none)	Additional Materials Introduced into the Control System (e.g. lime, carbon)		Identify Cleaning Method: Shaker, Pulse Air, Reverse Air, Pulse Jet, or Other (specify)	Identify Gas Cooling Method: Ductwork, Heat Exchanger, Bleed-in Air, Water Spray, or Other (specify)	For Ductwork:		For Bleed-in Air:	For Water Spray:
							Material	Injection Rate (lb/hr)			Length (ft)	Diameter (ft)	Flowrate (scfm @ 68°F)	Flowrate (gal/min)
DF-T2-COAT	F05	Cartridge Collector	Fabric											

Section GG.7: Afterburner/Incinerator/Oxidizer																	
Control Device ID #	Identify all Emission Units and Control Devices that Feed to Afterburner/Incinerator/Oxidizer	Identify Type: Afterburner, Incinerator, Oxidizer, or Other (specify)	Number of Burners	Burner Rating (BTU/hr)	Dimensions of Combustion Chamber (specify units)	Residence Time (sec)	Combustion Chamber Temperature (°F)	Type of Catalyst (if applicable)	Type of Heat Exchanger (if applicable)	Auxiliary Fuel							Composition and Quantities of Combusted Waste
										Identify Fuel Type	Higher Heating Value (MMBtu/scf)	Hourly Fuel Usage (scf/hr)	% Sulfur (Maximum)	% Sulfur (Average)	% Ash (Maximum)	% Ash (Average)	
RTO-T2-ED	F02R, F04R	RTO	1	14			1500										
RTO-T2-BO	F05R, F13R	RTO	1	16			1500										
RTO-T2-OV	F05R, F13R	RTO	1	38			1500										

Section GG.8: Adsorber

[illegible]

Section GG.9: Condenser

[illegible]

Section GG.10: Selective Catalytic Reduction (SCR) / Selective Non-catalytic Reduction (SNCR)

Control Device ID #	Identify all Emission Units and Control Devices that Feed to SCR/SNCR	Type (SCR/SNCR)	Gas Composition	Injection Grid Design (e.g. honeycomb)	Design Temperature Range		Reagent			Maximum Design Ammonia Slip (ppm)	SCR <u>Only</u>			
					Min (°F)	Max (°F)	Type	Injection Rate			Catalyst			
								Min (lb/hr)	Max (lb/hr)		Composition	Volume (ft ³)	Weight (lb)	Replacement Schedule

Section GG.11: Other Control Equipment

Control Device ID #	Identify all Emission Units and Control Devices that Feed to Control Equipment	Type of Control Equipment (provide description and a diagram with dimensions)

Section GG.12: Notes, Comments, and Explanations

Control Systems still being spec'd. Final design criteria for emissions is listed in TSD.

Division for Air Quality 300 Sower Boulevard Frankfort, KY 40601 (502) 564-3999	DEP7007N Source Emissions Profile ___ Section N.1: Emission Summary ___ Section N.2: Stack Information ___ Section N.3: Fugitive Information ___ Section N.4: Notes, Comments, and Explanations	Additional Documentation ___ Complete DEP7007AI

Source Name:	Toyota Motor Manufacturing Kentucky, Inc
KY EIS (AFS) #:	21- 209-00030
Permit #:	V-20-026
Agency Interest (AI) ID:	7998
Date:	10/6/2025

N.1: Emission Summary																
Emission Unit #	Emission Unit Name	Process ID	Process Name	Control Device Name	Control Device ID	Stack ID	Maximum Design Capacity (SCC Units/hour)	Pollutant	Uncontrolled Emission Factor (lb/SCC Units)	Emission Factor Source (e.g. AP-42, Stack Test, Mass Balance)	Capture Efficiency (%)	Control Efficiency (%)	Hourly Emissions		Annual Emissions	
													Uncontrolled Potential (lb/hr)	Controlled Potential (lb/hr)	Uncontrolled Potential (tons/yr)	Controlled Potential (tons/yr)
See TSD.																

Section N.2: Stack Information

UTM Zone:

Stack ID	Identify all Emission Units (with Process ID) and Control Devices that Feed to Stack	Stack Physical Data			Stack UTM Coordinates		Stack Gas Stream Data		
		Equivalent Diameter <i>(ft)</i>	Height <i>(ft)</i>	Base Elevation <i>(ft)</i>	Northing <i>(m)</i>	Easting <i>(m)</i>	Flowrate <i>(acfm)</i>	Temperature <i>(° F)</i>	Exit Velocity <i>(ft/sec)</i>
See Stack Inventory in TSD document.									

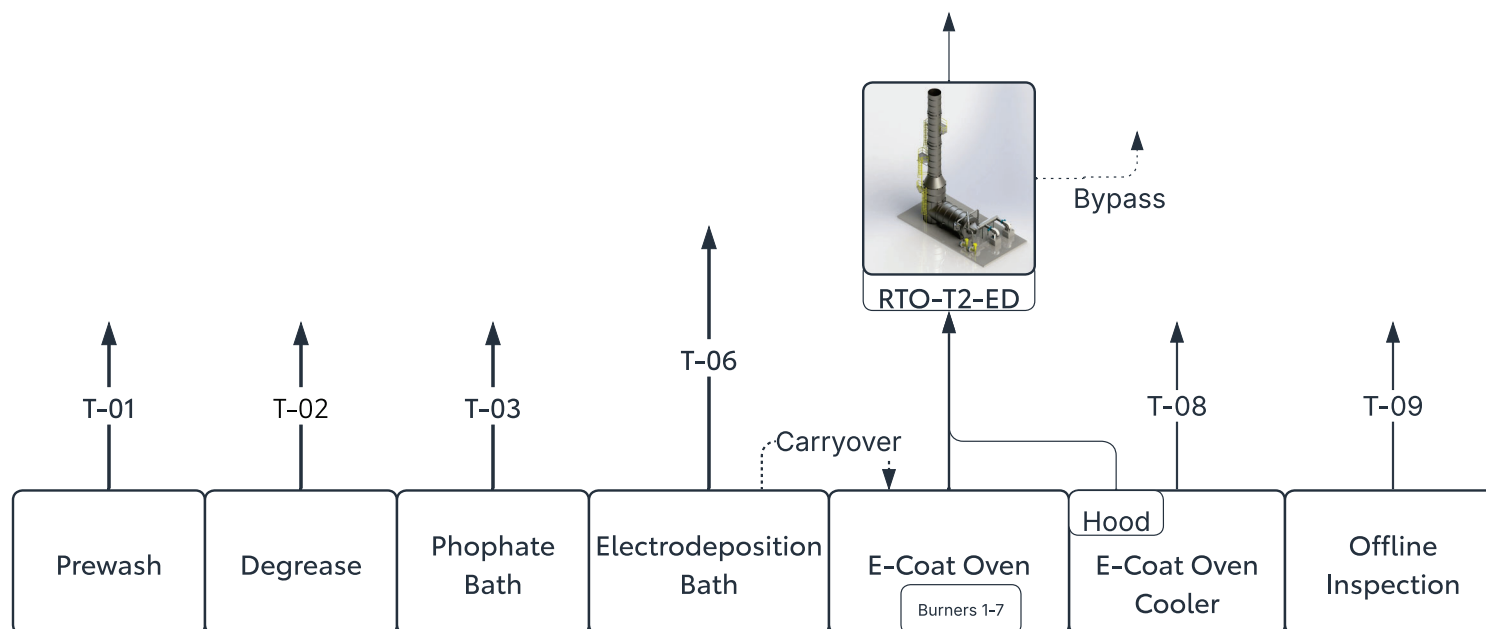
Section N.3: Fugitive Information

UTM Zone:

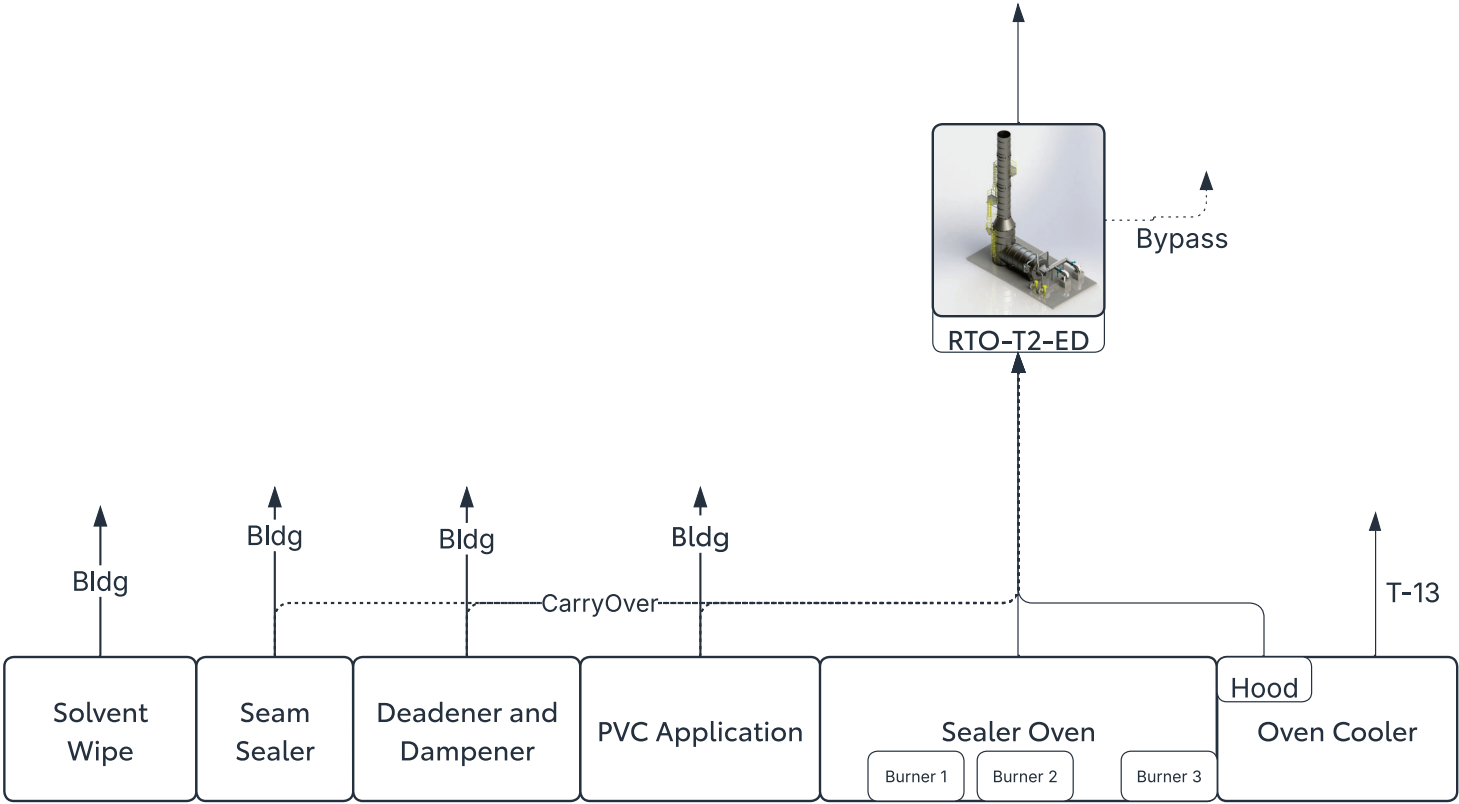
Emission Unit #	Emission Unit Name	Process ID	Area Physical Data		Area UTM Coordinates		Area Release Data	
			Length of the X Side <i>(ft)</i>	Length of the Y Side <i>(ft)</i>	Northing <i>(m)</i>	Easting <i>(m)</i>	Release Temperature <i>(°F)</i>	Release Height <i>(ft)</i>

Section N.4: Notes, Comments, and Explanations

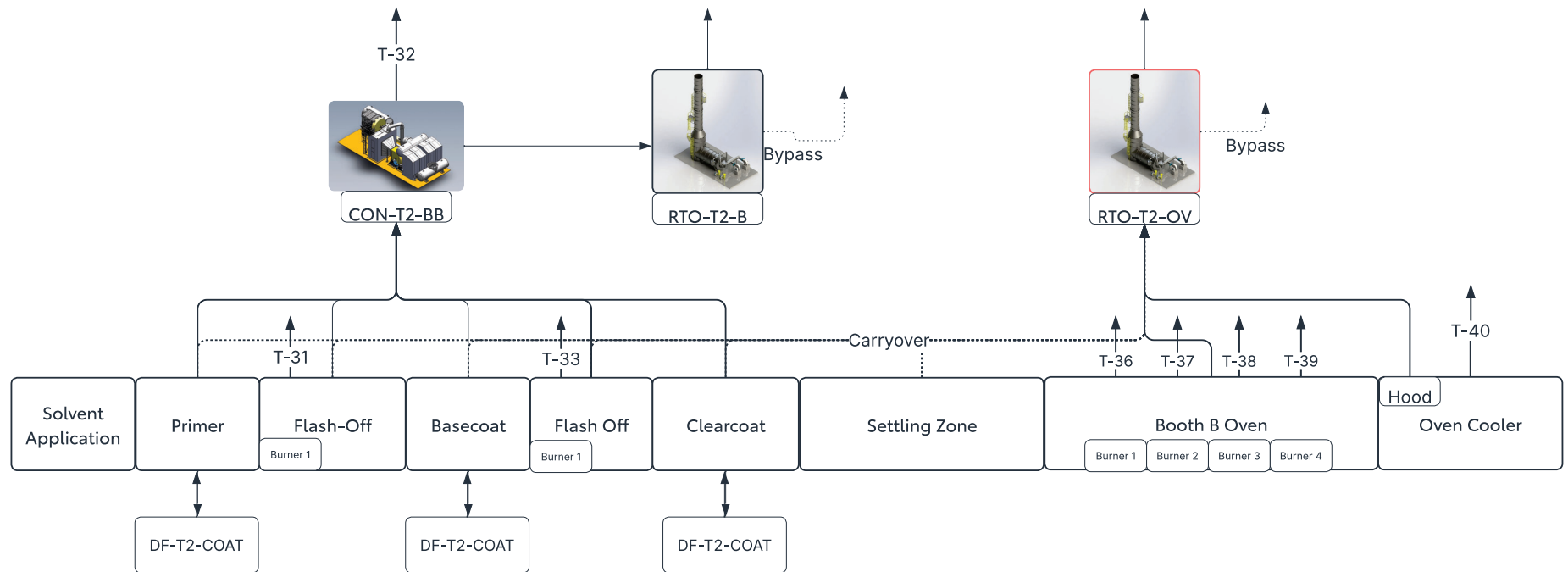
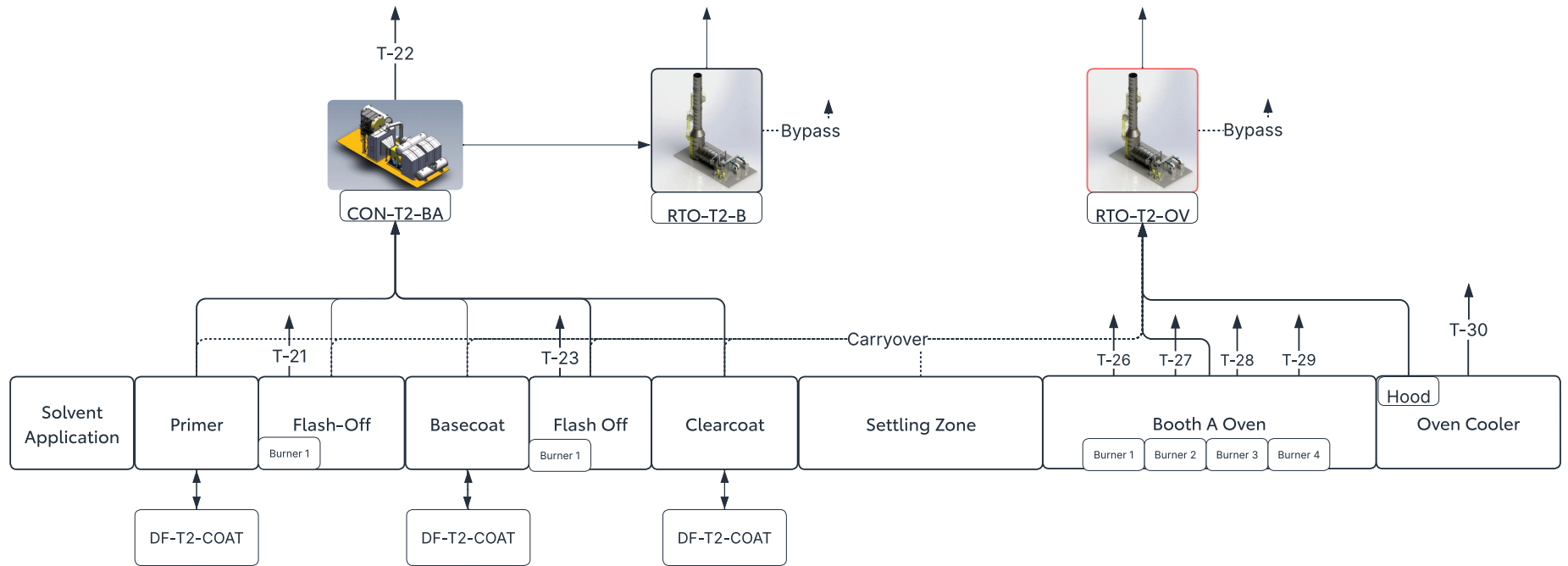
F02R Electrodeposition
Coating System



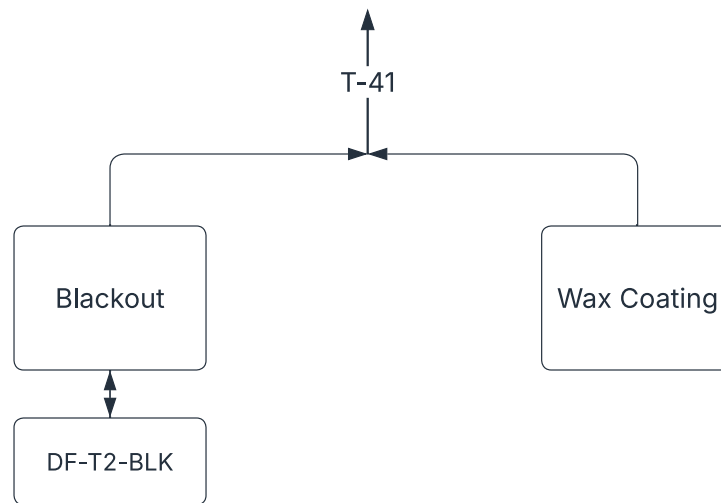
F04R Sealer Operations



F05R Coating Operations



F05R Blackout &
Wax Coating

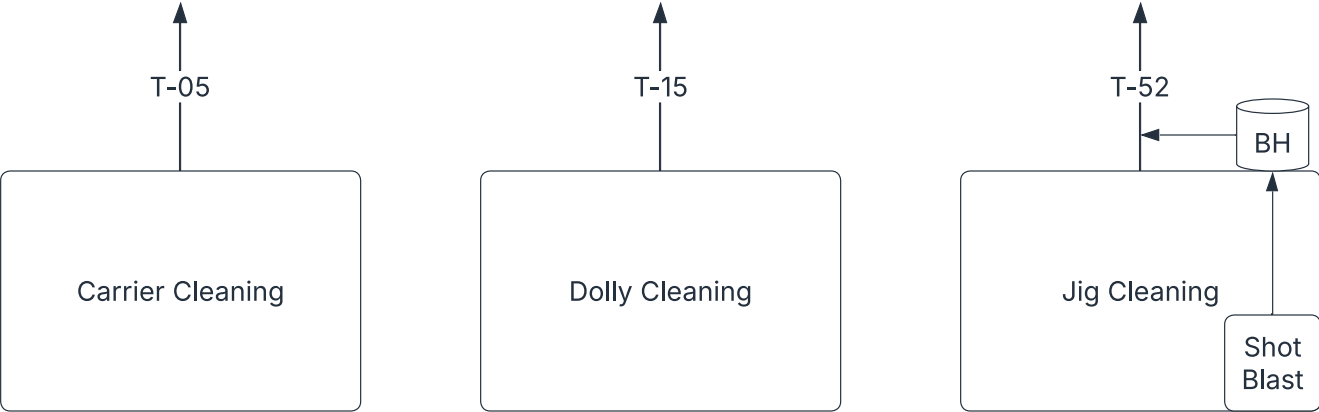


Paint Repair
(Reported under F05R)

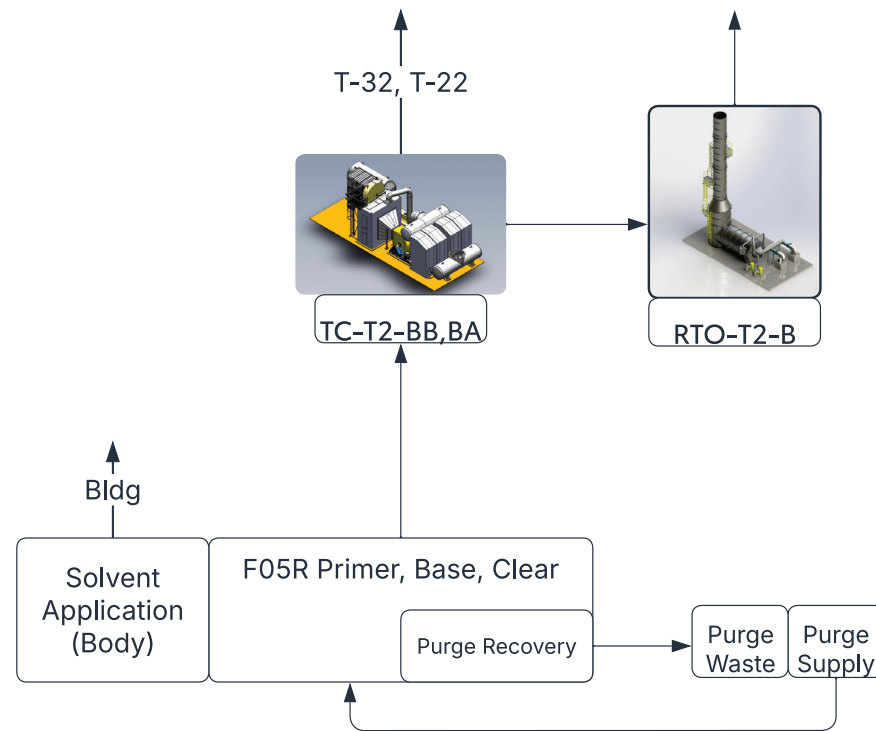


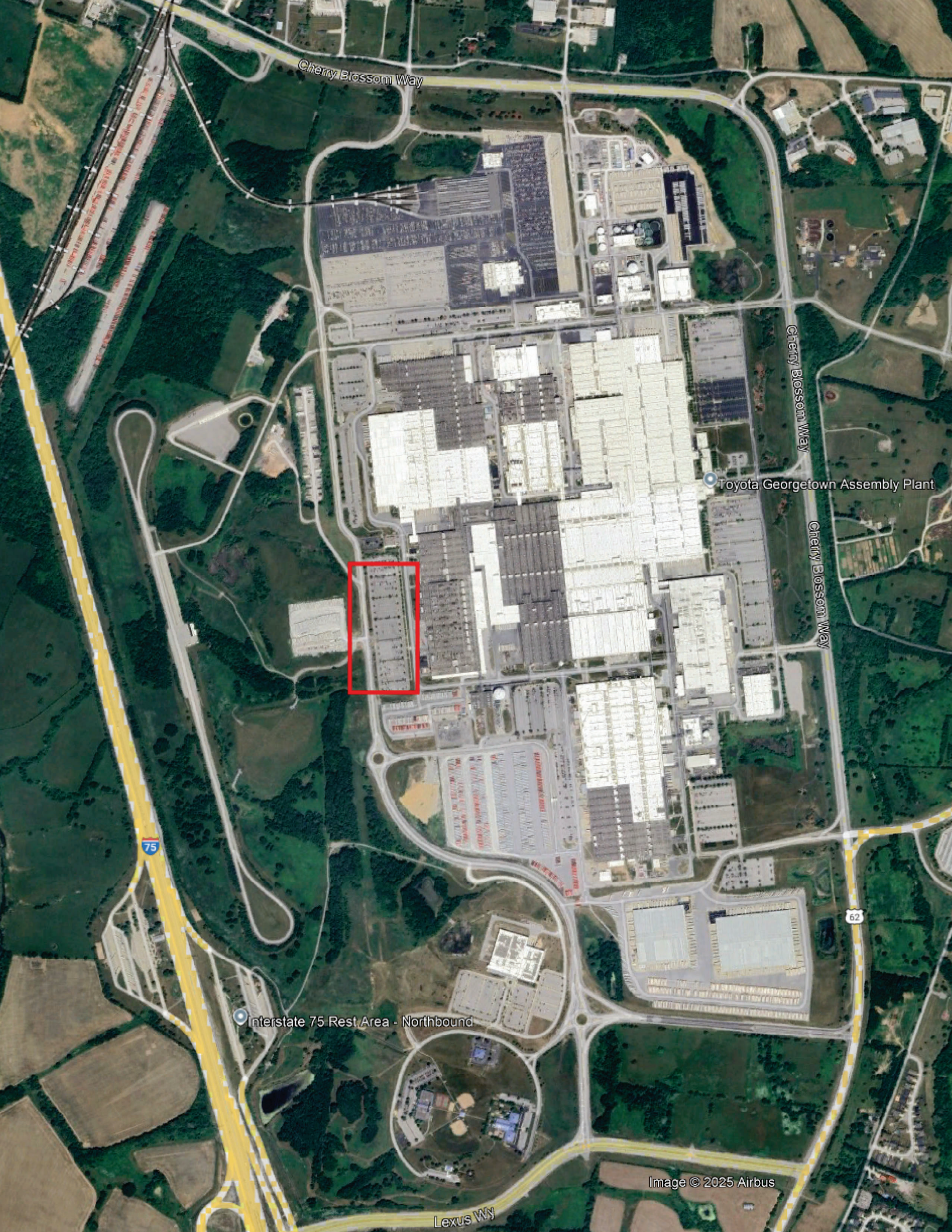
Offline Recoat Booth

F13R Maintenance and
Equipment Repair



F13R Line Purge





Cherry Blossom Way

Cherry Blossom Way

Cherry Blossom Way

Toyota Georgetown Assembly Plant

75

Interstate 75 Rest Area - Northbound

62

Image © 2025 Airbus

Lexus Way

Paint 2000 (D03A) Annual	2023	2024	PTE
HVAC (mmscf)	58.06	55.77	5,314
HVAC (MMBTU)	59,565	57,223	5,452,224

Paint 2000 (D03B)	MMBTU/Hr
T2-OVN-ECT-Z3	1.30
T2-AMU-PRI-1	10.30
T2-AMU-PRI-2	5.20
T2-AMU-PRI-3	18.30
T2-AMU-PRI-4	18.30
T2-AMU-TCA-1	16.10
T2-AMU-TCA-2	8.90
T2-AMU-TCA-3	11.80
T2-AMU-TCA-4	9.80
T2-AMU-TCA-5	5.20
T2-AMU-TCA-6	10.60
T2-AMU-TCB-1	16.10
T2-AMU-TCB-2	8.90
T2-AMU-TCB-3	11.80
T2-AMU-TCB-4	9.80
T2-AMU-TCB-5	5.20
T2-AMU-TCB-6	10.60
T2-AMU-TCC-1	12.10
T2-AMU-TCC-2	23.30
T2-AMU-TCC-3	14.60
T2-AMU-TCC-4	4.30
T2-AMU-TCC-5	8.30
T2-AMU-PDS-U	5.10
T2-AMU-RCT-DRS-U	3.40
T2-AMU-WTS-U	9.3
Repair dry sand booth	5.1
PVC underbody	8.3

Paint 2000 (D03B)
T2-OVN-ECT-INC
T2-OVN-ECT-Z1
T2-OVN-ECT-Z2
T2-OVN-PRI-INC
T2-OVN-PRI-Z1
T2-OVN-PRI-Z2
T2-OVN-TCA-INC
T2-OVN-TCB-INC
T2-OVN-TCC-INC
T2-ABA-PRI
T2-ABA-TCA
T2-ABA-TCB
T2-ABA-TCC
T2- OVN-WTS-Z1
T2- OVN-WTS-Z2
T2- OVN-WTS-Z3
T2- OVN-WTS-Z4
T2-OVN-SEL-INC
T2-AMU-PVC-U
T2-AMU-CHP-U

Total
Permitted

Paint 2500 (D13A)	Units #	MMBTU/Unit	MMBTU Total
HVAC	80	2	160
Water Heater	9	0.7	6.3
			166.30
			1,456,788

Paint 2500 (D13B)	Units #	MMBTU/Unit	MMBTU/Hr Total
ED/Sealer Oven RTO	1	1.667	1.67
ED Oven Zone	7	2.5	17.5
Sealer Oven Zone	3	3.5	10.5

Coating Oven Zone	8	3.5	28
Coating Booth HFO	4	2.5	10
Coating Air Makeup Units	4	6.75	27
Coating Oven RTO	1	16	1.59
Coating Booth RTO	1	38	6.32
Concentrators	2	1.5	3
Coating Oven Zones	8	5.9	47.2
			152.767

	VOC	PM	NOx	CO2e	SO2	CO
lb/MMscf	5.5	7.6	100	119,767	0.6	84

MMBTU/Hr

27.0
5.9
5.9
27.0
5.9
5.9
18.0
18.0
18.0
5.0
5.0
5.0
5.0
5.9
5.9
5.9
5.9
18.0
4.7
9.2

D03A (TPY)

	VOC	PM	NOx	CO2e	SO2	CO
2023	0.16	0.22	2.90	3,477	0.02	2.44
2024	0.15	0.21	2.79	3,340	0.02	2.34

D03B (TPY)

	VOC	PM	NOx	CO2e	SO2	CO
2023	1.34	1.85	24.83	29,160	0.15	20.41
2024	1.58	2.18	29.33	34,440	0.17	24.11

Process

Bldg

MMSCF

497

58

479.10
592.81

MMSCF/Hr
0.162
1,420

VOC	PM	NOx	CO2e	SO2	CO
<u>LB/hr</u>					
0.89	1.23	16.21	19,412.53	0.10	13.62
<u>TPY</u>					
3.90	5.40	70.99	85,027	0.43	59.63

MMSCF/Hr
0.002
0.017
0.010

0.027
0.010
0.026
0.002
0.006
0.003
0.046
0.149
1,304

LB/hr					
0.82	1.13	14.89	17,833	0.09	12.51
TPY					
3.59	4.96	65.22	78,108	0.39	54.78

Total	VOC	PM	NOx	CO2e	SO2	CO
Lb/Hr	1.71	2.36	31.10	37,245	0.19	26.12
TPY	7.49	10.35	136.21	163,135	0.82	114.42
SER (TPY)	40	10	40	75,000	40	100
MMSCF/Yr	14,545	2,632	800	1,252	133,333	2,381

Project	Impacted EU	Location	Sitework	Building Foundation	EU Installation
Line 2 Reborn	F01R-F18R	38°15'27.14"N 84°32'28.03"W	6/1/2025	3/1/2026	8/1/2027
Line 2 Reborn Utilities	D13A	38°15'27.14"N 84°32'28.03"W	6/1/2025	3/1/2026	1/1/2027

Production
1/1/2029
1/1/2029

Baseline Actual to Projected Actual

PJAC-BAE

	Operation	Impacted EU	Projected	2023
Replacements	Paint 2 Replacement - ElectroDeposition	F02 (F02R)	14.93	6.79
	Paint 2 Replacement - Metal Finishing	F03 (F03R)	0.00	0.00
	Paint 2 Replacement - Sealer	F04 (F04R)	41.26	22.82
	Paint 2 Replacement - Primer	F05 (F05R)	27.57	76.73
	Paint 2 Replacement - Topcoat	F07 (F05R)	111.63	159.96
	Paint 2 Replacement - Non Process Clean	F13 (F13R)	47.56	96.14
	Paint 2 Replacement - Process Heaters	D03B (D13B)	0.82	1.34
	Replacements - Total		243.77	363.79
New Installations, Modifications, and Demolitions	Paint 2 Demo - Phosphate	F01 (F02R)	0.00	0.00
	Paint 2 Demo - Wet Sand	F06	0.00	0.00
	Paint 2 Demo - Inspection	F08	0.00	0.00
	Paint 2 Demo - Blackout	F09	0.00	0.03
	Paint 2 Demo - Moon Roof	F10	0.00	0.00
	Paint 2 Demo - Wax	F11	0.00	9.90
	Paint 2 Demo - Repair Coating	F12	0.00	3.76
	Paint 2 Demo - Raw Materials	F14	0.00	0.00
	Paint 2 Demo - Wastewater	F15	0.00	0.00
	Paint 2 Demo - Robot Teaching	F16	0.00	0.00
	Paint 2 Demo - 2 Tone Masking	F17	0.00	0.00
	Paint 2 Demo - General Exhaust	F18	0.00	0.00
	Paint 2 Modification - Coating - Blackout	F05R	2.92	0.00
	Paint 2 Modification - Coating - Wax	F05R	7.67	0.00
	Paint 2 Modification - Coating - Repair	F05R	2.63	0.00
	Paint 2 Installation - Bldg Heating	D13A	1.76	0.00
	Installations, Modifications, and Demos - Totals		14.97	
Summary	Total Projects		258.75	
SER				

VOC			PM2.5					
2024	BAE	PJA-BAE	Projected	2023	2024	BAE	PJA-BAE	Projected
8.37	7.58	7.35	0.36	0.29	0.32	0.30	0.06	0.00
0.00	0.00	0.00	0.26	0.84	0.84	0.84	-0.58	0.00
12.23	17.53	23.74	2.22	3.51	1.31	2.41	-0.19	0.00
78.74	77.73	-50.17	2.81	1.10	0.91	1.00	1.81	0.00
173.75	166.86	-55.23	2.43	1.19	1.19	1.19	1.24	0.00
33.52	64.83	-17.27	0.21	0.20	0.20	0.20	0.01	0.00
1.58	1.46	-0.64	1.13	1.85	2.18	2.01	-0.88	14.89
308.19	335.99	31.08	9.42	8.97	6.95	7.96	3.11	14.89
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.48	0.48	0.48	-0.48	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2.83	1.43	-1.43	0.00	0.09	4.32	2.20	-2.20	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8.76	9.33	-9.33	0.00	1.56	1.39	1.48	-1.48	0.00
0.78	2.27	-2.27	0.00	0.12	0.04	0.08	-0.08	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.90	0.90	0.90	-0.90	0.00
0.00	0.00	2.92	0.03	0.00	0.00	0.00	0.03	0.00
0.00	0.00	7.67	0.41	0.00	0.00	0.00	0.41	0.00
0.00	0.00	2.63	2.28	0.00	0.00	0.00	2.28	0.00
0.00	0.00	1.76	2.43	0.00	0.00	0.00	2.43	32.00
		14.97	5.15				5.15	32.00
		46.06	14.58				8.26	46.89
		40.00					10.00	

Fail

Pass

PM10					Particulate Matter (PM)			
Projected	2023	2024	BAE	PJA-BAE	Projected	2023	2024	BAE
0.36	0.29	0.32	0.30	0.06	0.36	0.29	0.32	0.30
0.26	0.84	0.84	0.84	-0.58	0.26	0.84	0.84	0.84
1.87	3.51	1.31	2.41	-0.54	1.87	3.51	1.31	2.41
2.81	1.10	0.91	1.00	1.81	2.81	1.10	0.91	1.00
2.43	1.19	1.19	1.19	1.24	2.43	1.19	1.19	1.19
0.21	0.20	0.20	0.20	0.01	0.21	0.20	0.20	0.20
1.13	1.85	2.18	2.01	-0.88	1.13	2.18	2.18	2.18
9.07	8.97	6.95	7.96	3.11	9.07	9.31	6.95	8.13
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	1.06	1.06	1.06	-1.06	0.00	1.06	1.06	1.06
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.44	0.08	0.26	-0.26	0.00	0.44	0.08	0.26
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	1.56	1.39	1.48	-1.48	0.00	1.56	1.39	1.48
0.00	0.27	2.00	1.14	-1.14	0.00	0.27	2.00	1.14
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.02	0.00	0.01	-0.01	0.00	0.02	0.00	0.01
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2.00	2.01	2.00	-2.00	0.00	2.00	2.01	2.00
0.03	0.00	0.00	0.00	0.03	0.03	0.00	0.00	0.00
0.41	0.00	0.00	0.00	0.41	0.41	0.00	0.00	0.00
2.28	0.00	0.00	0.00	2.28	2.28	0.00	0.00	0.00
2.43	0.00	0.00	0.00	2.43	2.43	0.00	0.00	0.00
5.15				5.15	5.15			
14.22				8.26	14.22			
				15.00				

Pass

	Special Notes		
PJA-BAE	Change date	Actual Emissions Source	Other notes
0.06		VOC/PM emissions using Usage Data	
-0.58		VOC/PM emissions using Usage Data	
-0.54		VOC/PM emissions using Usage Data	
1.81		VOC/PM emissions using Usage Data	
1.24		VOC/PM emissions using Usage Data	
0.01		VOC/PM emissions using Usage Data	
-1.05			
3.11			
0.00			
-1.06			
0.00			
-0.26		VOC emissions using Usage Data	
0.00			
-1.48		VOC/PM emissions using Usage Data	
-1.14			
0.00			
-0.01			
0.00			
0.00			
-2.00			
0.03			
0.41			
2.28			
2.43			
5.15			
8.26			
25.00			

Pass

Could Have Accommodated 'CHA'

	Operation	Impacted EU	Projected
Replacements	Paint 2 Replacement - ElectroDeposition	F02	14.93
	Paint 2 Replacement - Metal Finishing	F03	0.00
	Paint 2 Replacement - Sealer	F04	41.26
	Paint 2 Replacement - Primer	F05->F05R	27.57
	Paint 2 Replacement - Topcoat	F07->F05R	111.63
	Paint 2 Replacement - Non Process Clean	F13	47.56
	Paint 2 Replacement - Process Heaters	D03B	0.82
	Replacements - Total		243.77
New Installations, Modifications, and Demolitions	Paint 2 Demo - Phosphate	F01*	0.00
	Paint 2 Demo - Wet Sand	F06	0.00
	Paint 2 Demo - Inspection	F08	0.00
	Paint 2 Demo - Blackout	F09	0.00
	Paint 2 Demo - Moon Roof	F10	0.00
	Paint 2 Demo - Wax	F11	0.00
	Paint 2 Demo - Repair Coating	F12*	0.00
	Paint 2 Demo - Raw Materials	F14	0.00
	Paint 2 Demo - Wastewater	F15	0.00
	Paint 2 Demo - Robot Teaching	F16	0.00
	Paint 2 Demo - 2 Tone Masking	F17	0.00
	Paint 2 Demo - General Exhaust	F18	0.00
	Paint 2 Modification - Coating - Blackout	F05R	2.92
	Paint 2 Modification - Coating - Wax	F05R	7.67
	Paint 2 Modification - Coating - Repair	F05R	2.63
	Paint 2 Installation - Bldg Heating	D13A	1.76
	Installations, Modifications, and Demos - Totals		14.97
Summary	Total Projects		258.75
SER			

*Source eliminated and emissions introduced as modification to replaced source.

VOC					PM10/PM2.5			
BAE	CHA	Demand Growth	Adj-PJAC	PJAC-BAE	Projected	BAE	CHA	Demand Growth
7.58	9.04	1.46	13.47	5.89	0.36	0.30	0.34	0.04
0.00	0.00	0.00	0.00	0.00	0.26	0.84	0.87	0.03
17.53	25.44	7.91	33.35	15.82	2.22	2.41	3.84	1.43
77.73	90.15	12.41	15.15	-62.58	2.81	1.00	3.41	2.41
166.86	191.80	24.95	86.68	-80.17	2.43	1.19	1.41	0.22
64.83	148.53	83.70	-36.14	-100.97	0.21	0.20	0.21	0.01
1.46	1.46	0.00	0.82	-0.64	1.13	2.01	2.01	0.00
335.99			149.48	21.71	9.42	7.96		
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.48	0.48	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.43	1.43	0.00	0.00	-1.43	0.00	2.20	2.20	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9.33	9.33	0.00	0.00	-9.33	0.00	1.48	1.48	0.00
2.27	2.27	0.00	0.00	-2.27	0.00	0.08	0.08	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.90	0.90	0.00
0.00	0.00	0.00	2.92	2.92	0.03	0.00	0.00	0.00
0.00	0.00	0.00	7.67	7.67	0.41	0.00	0.00	0.00
0.00	0.00	0.00	2.63	2.63	2.28	0.00	0.00	0.00
0.00	0.00	0.00	1.76	1.76	2.43	0.00	0.00	0.00
			14.97	14.97	5.15			
335.99			164.46	36.69	14.58	7.96		
				40.00				
-9.37			Pass			-40.69		

Adj-PJAC	PJAC-BAE
0.32	0.02
0.23	-0.61
0.79	-1.62
0.40	-0.60
2.21	1.02
0.20	0.00
1.13	-0.88
5.29	1.04
0.00	0.00
0.00	-0.48
0.00	0.00
0.00	-2.20
0.00	0.00
0.00	-1.48
0.00	-0.08
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.00	-0.90
0.03	0.03
0.41	0.41
2.28	2.28
2.43	2.43
5.15	5.15
10.44	6.19
	10.00

Pass

Process ID	Description	Control Device	% Capture	% Control
POC: F02 - Electro de				

Applicable Regulations

SCC Code: 4-02-002-10
 SCC Unit: Gallons
 1 ED Coating

Hourly Design Rate: 72.164 Gallons/hr
 Max. Yearly Capacity: 632,157 Gallons/yr

Thermal Oxidizer	100.00%	69.80%

SCC Code: 3-99-999-95
 SCC Unit: Gallons
 2 pH adjustment

Hourly Design Rate: 0.153 Gallons/hr
 Max. Yearly Capacity: 1340.28 Gallons/yr

SCC Code: 3-99-999-92
 SCC Unit: Hour
 Wednesday, January 4, 1900 ED Coating booth/oven

Hourly Design Rate: 1 Hour/hr
 Max. Yearly Capacity: 8760 Hour/yr

POC: F03 - M

SCC Code: 3-99-999-92
 SCC Unit: Hour
 Sunday, January 1, 1900 E-coat/Metal Repair

Hourly Design Rate: 1 Hour/hr
 Max. Yearly Capacity: 8760 Hour/yr

Applicable Regulations:

SCC Code: 4-02-016-07
 SCC Unit: Gallons
 Sunday, January 1, 1900 Seam Sealer

Hourly Design Rate: 20.86 Gallons/hr
 Max. Yearly Capacity: 182,698.56 Gallons/yr

Thermal Oxidizer	87.30%	95.00%

SCC Code: 4-02-016-08
 SCC Unit: Gallons
 Tuesday, January 3, 1900 Damping Coat

Hourly Design Rate: 53.85 Gallons/hr
 Max. Yearly Capacity: 471,726.00 Gallons/yr

Thermal Oxidizer	95.00%	95.00%

SCC Code: 4-02-016-07
SCC Unit: Gallons
Thursday, January 5, 1900 Rocker Antichip

Hourly Design Rate: 1.77 Gallons/hr
Max. Yearly Capacity: 15,470.16 Gallons/yr

Thermal Oxidizer	21.00%	95.00%

SCC Code: 4-02-016-07
SCC Unit: Gallons
Saturday, January 7, 1900 Wheel Antichip

Hourly Design Rate: 0.94 Gallons/hr
Max. Yearly Capacity: 8,242.98 Gallons/yr

Thermal Oxidizer	21.00%	95.00%

SCC Code: 4-02-016-07
SCC Unit: Gallons
Monday, January 9, 1900 PVC Undercoat

Hourly Design Rate: 38.066 Gallons/hr
Max. Yearly Capacity: 333458.16 Gallons/yr

Thermal Oxidizer	93.60%	95.00%

SCC Code: 4-02-009-98
SCC Unit: Gallons
Wednesday, January 11, 1900 Solvent Wiping

Hourly Design Rate: 0.768 Gallons/hr
Max. Yearly Capacity: 6727.68 Gallons/yr

SCC Code: 3-99-999-93
SCC Unit: Each
Thursday, January 12, 1900 HAPs lbs/job

Hourly Design Rate: 29.9 Each/hr
Max. Yearly Capacity: 261924 Each/yr

SCC Code: 3-99-999-92
SCC Unit: Hour
Friday, January 13, 1900 ntichip/PVC booths Removed

Hourly Design Rate: 0 Hour/hr
Max. Yearly Capacity: 0 Hour/yr

Applicable Regulations:

SCC Code: 4-02-009-98
SCC Unit: Gallons
Sunday, January 1, 1900 Solvent Wiping

Hourly Design Rate: 0.072 Gallons/hr
Max. Yearly Capacity: 630.72 Gallons/yr

SCC Code: 4-02-001-10
SCC Unit: Gallons
Monday, January 2, 1900 Soft Chip

Hourly Design Rate: 0.941 Gallons/hr
Max. Yearly Capacity: 8,243 Gallons/yr

Thermal Oxidizer	100.00%	6.40%

SCC Code: 4-02-001-10
SCC Unit: Gallons
Thursday, January 5, 1900 Exterior Paint

Hourly Design Rate: 14.62 Gallons/hr
Max. Yearly Capacity: 128,071 Gallons/yr

Thermal Oxidizer	100.00%	61.90%

SCC Code: 4-02-001-10
SCC Unit: Gallons
Saturday, January 7, 1900 Interior Paint

Hourly Design Rate: 6.678 Gallons/hr
Max. Yearly Capacity: 58,499 Gallons/yr

Thermal Oxidizer	100.00%	20.40%

SCC Code: 4-02-001-10
SCC Unit: Gallons
Monday, January 9, 1900 Blackout Paint

Hourly Design Rate: 3.425 Gallons/hr
Max. Yearly Capacity: 30,003 Gallons/yr

Thermal Oxidizer	100.00%	9.60%

SCC Code: 3-99-999-93
SCC Unit: Each
Wednesday, January 11, 1900 HAP lbs/job

Hourly Design Rate: 29.909 Each/hr
Max. Yearly Capacity: 262,003 Each/yr

SCC Code: 3-99-999-92
SCC Unit: Hour

Hourly Design Rate: 1 Hour/hr
Max. Yearly Capacity: 8760 Hour/yr

Thursday, January 12, 1900

Primer Surfacers

Wet Scrubber	100.00%	95.00%
Wet Scrubber	100.00%	95.00%
Wet Scrubber	100.00%	95.00%

SCC Code: 3-99-999-92
SCC Unit: Hour
Sunday, January 1, 1900 Dry Sand / Wet Sand

Hourly Design Rate: 1 Hour/hr
Max. Yearly Capacity: 8760 Hour/yr

SCC Code: 3-99-999-95
SCC Unit: Gallons
Monday, January 2, 1900 Touch-up

Hourly Design Rate: 0.69532 Gallons/hr
Max. Yearly Capacity: 6091.0032 Gallons/yr

SCC Code: 3-99-999-92
SCC Unit: Hour
Sunday, January 1, 1900 Topcoat A, B & C

Hourly Design Rate: 1 Hour/hr
Max. Yearly Capacity: 8760 Hour/yr

Wet Scrubber	100.00%	95.00%
Wet Scrubber	100.00%	95.00%
Wet Scrubber	100.00%	95.00%

SCC Code: 4-02-009-98
SCC Unit: Gallons
Monday, January 2, 1900 Solvent Wiping

Hourly Design Rate: 0.66 Gallons/hr
Max. Yearly Capacity: 5,782 Gallons/yr

SCC Code: 4-02-002-10
SCC Unit: Gallons
Tuesday, January 3, 1900 Base

Hourly Design Rate: 47.92 Gallons/hr
Max. Yearly Capacity: 419,779 Gallons/yr

Thermal Oxidizer	100.00%	28.60%

SCC Code: 4-02-001-10
SCC Unit: Gallons
Friday, January 6, 1900 Clear

Hourly Design Rate: 18.41 Gallons/hr
Max. Yearly Capacity: 161,272 Gallons/yr

Thermal Oxidizer	100.00%	74.02%

Applicable Regulations:

SCC Code: 4-02-001-10
SCC Unit: Gallons
Monday, January 9, 1900 Solid

Hourly Design Rate: 17.69 Gallons/hr

Max. Yearly Capacity: 154,964 Gallons/yr

Thermal Oxidizer	100.00%	70.99%

SCC Code: 3-99-999-93
SCC Unit: Each
Thursday, January 12, 1900 HAPs lbs/job

Hourly Design Rate: 29.909 Each/hr

Max. Yearly Capacity: 262,003 Each/yr

Applicable Regulations

SCC Code: 3-99-999-92
SCC Unit: Hour
Sunday, January 1, 1900 Blackout Booth/ Underbody

Hourly Design Rate: 1 Hour/hr

Max. Yearly Capacity: 8760 Hour/yr

SCC Code: 3-99-999-95
SCC Unit: Gallons
Monday, January 2, 1900 Grille

Hourly Design Rate: 0.295 Gallons/hr

Max. Yearly Capacity: 2,583 Gallons/yr

SCC Code: 3-99-999-95
SCC Unit: Gallons
Tuesday, January 3, 1900 Wheelhouse

Hourly Design Rate: 2.316 Gallons/hr

Max. Yearly Capacity: 20,288 Gallons/yr

SCC Code: 3-99-999-95
SCC Unit: Gallons

Hourly Design Rate: 0.178 Gallons/hr

Max. Yearly Capacity: 1,559 Gallons/yr

Wednesday, January 4, 1900

Blackout

SCC Code:

3-99-999-93

SCC Unit:

Each

Thursday, January 5, 1900

HAPS lbs/job

Hourly Design Rate: 29.909 Each/hr

Max. Yearly Capacity: 262,002.84 Each/yr

POC: F1

SCC Code:

3-99-999-92

SCC Unit:

Hour

Sunday, January 1, 1900

Cavity Wax Booth

Hourly Design Rate: 1 Hour/hr

Max. Yearly Capacity: 8760 Hour/yr

SCC Code:

3-99-999-95

SCC Unit:

Gallons

Monday, January 2, 1900

Spot Wax

Hourly Design Rate: 0.0724 Gallons/hr

Max. Yearly Capacity: 634.224 Gallons/yr

SCC Code:

3-99-999-95

SCC Unit:

Gallons

Tuesday, January 3, 1900

Cavity Wax

Hourly Design Rate: 0.9934 Gallons/hr

Max. Yearly Capacity: 8702.184 Gallons/yr

SCC Code:

3-99-999-95

SCC Unit:

Gallons

Wednesday, January 4, 1900

Hinge Wax

Hourly Design Rate: 0.658 Gallons/hr

Max. Yearly Capacity: 5764.08 Gallons/yr

SCC Code:

3-99-999-95

SCC Unit:

Gallons

Thursday, January 5, 1900

Rocker Wax

Hourly Design Rate: 7.417432 Gallons/hr

Max. Yearly Capacity: 64976.70432 Gallons/yr

Applicable Regulations:

SCC Code: 3-99-999-92
SCC Unit: Hour
Sunday, January 1, 1900 Off-line repair

Hourly Design Rate: 1 Hour/hr
Max. Yearly Capacity: 8760 Hour/yr

SCC Code: 3-99-999-93
SCC Unit: Each
Monday, January 2, 1900 Primer Exterior

Hourly Design Rate: 29.909 Each/hr
Max. Yearly Capacity: 262002.84 Each/yr

SCC Code: 3-99-999-93
SCC Unit: Each
Tuesday, January 3, 1900 Topcoat - Air dry

Hourly Design Rate: 29.909 Each/hr
Max. Yearly Capacity: 262002.84 Each/yr

SCC Code: 3-99-999-93
SCC Unit: Each
Wednesday, January 4, 1900 Adhesion Promoter

Hourly Design Rate: 29.909 Each/hr
Max. Yearly Capacity: 262002.84 Each/yr

SCC Code: 3-99-999-93
SCC Unit: Each
Thursday, January 5, 1900 Polisher

Hourly Design Rate: 29.909 Each/hr
Max. Yearly Capacity: 262002.84 Each/yr

SCC Code: 3-99-999-93
SCC Unit: Each
Friday, January 6, 1900 Topcoat - Spot

Hourly Design Rate: 29.909 Each/hr
Max. Yearly Capacity: 262002.84 Each/yr

SCC Code: 3-99-999-93
SCC Unit: Each
Saturday, January 7, 1900 Repair Primer

Hourly Design Rate: 29.909 Each/hr
Max. Yearly Capacity: 262002.84 Each/yr

SCC Code: 3-99-999-93
SCC Unit: Each
Sunday, January 8, 1900 Adhesion Promoter

Hourly Design Rate: 29.909 Each/hr
Max. Yearly Capacity: 262002.84 Each/yr

SCC Code: 3-99-999-93
SCC Unit: Each
Monday, January 9, 1900 HAPS lbs/job

Hourly Design Rate: 29.909 Each/hr
Max. Yearly Capacity: 262002.84 Each/yr

Applicable Regulations

SCC Code: 3-99-999-92
SCC Unit: Hour
Sunday, January 1, 1900 Paint Stripper/Water Blaster

Hourly Design Rate: 1 Hour/hr
Max. Yearly Capacity: 8760 Hour/yr

SCC Code: 3-99-999-95
SCC Unit: Gallons
Monday, January 2, 1900 Caustic strip room

Hourly Design Rate: 0.4177 Gallons/hr
Max. Yearly Capacity: 3659.052 Gallons/yr

SCC Code: 3-99-999-95
SCC Unit: Gallons
Tuesday, January 3, 1900 Surface Cleaning (All)

Hourly Design Rate: 12.643 Gallons/hr
Max. Yearly Capacity: 110752.68 Gallons/yr

SCC Code: 3-99-999-92
SCC Unit: Hour
Sunday, January 1, 1900 Paint Stripper

Hourly Design Rate: 1 Hour/hr
Max. Yearly Capacity: 8760 Hour/yr

[illegible]

Emission Factor lb/SCC Unit	Pollutant (CAS #)	EF Source	Hours per Year	Pollutant Specific Applicable Regulations	Include in PTE?	Allowable (lb/hr)	Allowable (TPY)

position Coating System, including rinse tanks, dip tank, dry sanding, and oven

: 401 KAR 51:017, 401 KAR 59:010, 40 CFR 60 Subpart MM, 40 CFR 63 Subpart IIII

Hours per Year: 8760

Fugitive?: No

0.19	VOC				Yes		
					Yes		
					Yes		
					Yes		

Hours per Year: 8760

Fugitive?: No

8.75	VOC				Yes		
					Yes		
					Yes		
					Yes		

Hours per Year: 8760

Fugitive?: No

0.22	PM10				Yes		
0.099	PM2.5				Yes		
0.22	PT				Yes		
					Yes		
					Yes		

metal Finishing Line, including metal assembly (Insignificant Activity)

Applicable Regulations: 401 KAR 59:010, 401 KAR 51:017

Hours per Year: 8760

Fugitive?: No

0.42	PM10				Yes		
0.189	PM2.5				Yes		
0.42	PT				Yes		
					Yes		

POC: F04 - Sealer Line and Oven

401 KAR 59:010, 401 KAR 51:017, 40 CFR 60 Subpart MM, 40 CFR 63 Subpart IIII

Hours per Year: 8760 0.463467

Fugitive?: No

0.41	VOC				Yes		
					Yes		
					Yes		
					Yes		

Hours per Year: 8760

Fugitive?: No

0.28	VOC				Yes		

					Yes		
					Yes		
					Yes		

Hours per Year: 8760

Fugitive?: No

4.003	VOC				Yes		
					Yes		
					Yes		
					Yes		
					Yes		

Hours per Year: 8760

Fugitive?: No

1.334	VOC				Yes		
					Yes		
					Yes		
					Yes		
					Yes		
					Yes		

Hours per Year: 8760

Fugitive?: No

0.6	VOC				Yes		
					Yes		
					Yes		
					Yes		

Hours per Year: 8760

Fugitive?: No

6.57	VOC				Yes		
					Yes		
					Yes		
					Yes		
					Yes		

Hours per Year: 8760

Fugitive?: No

0.02937	Ethylhexyl) Phthalate				Yes		
0.019984	Naphthalene				Yes		
0.000277	Vinyl Chloride				Yes		
					Yes		

Hours per Year: 8760

Fugitive?: No

0.8942	PM10				Yes		
0.40239	PM2.5				Yes		
0.8942	PT				Yes		
					Yes		
					Yes		

POC: F05 - Primer Booth and Oven

Hours per Year: 8760

Fugitive?: No

8.34	VOC				Yes		
					Yes		
					Yes		
					Yes		

Hours per Year: 8760

Fugitive?: No

6.61	VOC				Yes		
					Yes		
					Yes		
					Yes		

Hours per Year: 8760

Fugitive?: No

4.76	VOC				Yes		
					Yes		
					Yes		
					Yes		
					Yes		

Hours per Year: 8760

Fugitive?: No

5.1	VOC				Yes		
					Yes		
					Yes		
					Yes		
					Yes		
					Yes		

Hours per Year: 8760

Fugitive?: No

5.4	VOC				Yes		
					Yes		
					Yes		
					Yes		

Hours per Year: 8760

Fugitive?: No

0.698975	Ethyl Benzene				Yes		
0.03959	Formaldehyde				Yes		
0.011492	Methanol				Yes		
0.113578	Naphthalene				Yes		
1.068347	Toluene				Yes		
2.73	Xylenes (Total)				Yes		
					Yes		
					Yes		

Hours per Year: 8760

Fugitive?: No

1.91	PM10				Yes		
0.8595	PM2.5				Yes		
1.91	PT				Yes		
					Yes		
					Yes		

POC: F06 - Wet Sand Line

Applicable Regulations: 401 KAR 59:010, 401 KAR 51:017

Hours per Year: 8760

Fugitive?: No

0.53	PM10				Yes		
0.2385	PM2.5				Yes		
0.53	PT				Yes		
					Yes		

Hours per Year: 8760

Fugitive?: No

5.4	VOC				Yes		
					Yes		
					Yes		
					Yes		

POC: F07 - Topcoat Lines A, B, C

401 KAR 59:010, 401 KAR 51:017, 40 CFR 63 Subpart IIII, 40 CFR 60 Subpart MM

Hours per Year: 8760

Fugitive?: No

144.4	PM10				Yes		
64.98	PM2.5				Yes		
144.4	PT				Yes		
					Yes		

Hours per Year: 8760

Fugitive?: No

6.57	VOC				Yes		
					Yes		
					Yes		
					Yes		

Hours per Year: 8760

Fugitive?: No

1.29	VOC				Yes		
					Yes		
					Yes		
					Yes		
					Yes		

Hours per Year: 8760

Fugitive?: No

4.77	VOC				Yes		
					Yes		

					Yes		
					Yes		
					Yes		
					Yes		

Hours per Year: 8760

Fugitive?: No

4.7	VOC				Yes		
					Yes		
					Yes		
					Yes		

Hours per Year: 8760

Fugitive?: No

0.004014	Cumene				Yes		
0.022126	Ethyl Benzene				Yes		
0.139309	Formaldehyde				Yes		
0.152654	Methanol				Yes		
0.487664	Naphthalene				Yes		
0.021163	Toluene				Yes		
0.121256	Triethyl Amine				Yes		
0.610097	Xylenes (Total)				Yes		
					Yes		
					Yes		

POC: F09 - Blackout Coating

ations: 401 KAR 59:010, 401 KAR 51:017, 401 KAR 60:005, 401 KAR 63:002

Hours per Year: 8760

Fugitive?: No

0.22	PM10				Yes		
0.099	PM2.5				Yes		
0.22	PT				Yes		
					Yes		

Hours per Year: 8760

Fugitive?: No

3.29	VOC				Yes		
					Yes		
					Yes		
					Yes		

Hours per Year: 8760

Fugitive?: No

6.17	VOC				Yes		
					Yes		
					Yes		
					Yes		
					Yes		

Hours per Year: 8760

Fugitive?: No

6.17	VOC				Yes		
					Yes		
					Yes		
					Yes		
					Yes		
					Yes		

Hours per Year: 8760

Fugitive?: No

0.000389	ethyl Ethyl Ketone				Yes		
					Yes		
					Yes		
					Yes		

1 - Wax Coating, including cavity wax, hinge wax and spot wax

Applicable Regulations: 401 KAR 59:010, 401 KAR 51:017

Hours per Year: 8760

Fugitive?: No

0.04	PM10				Yes		
0.018	PM2.5				Yes		
0.04	PT				Yes		
					Yes		

Hours per Year: 8760

Fugitive?: No

5.06	VOC				Yes		
					Yes		
					Yes		
					Yes		

Hours per Year: 8760

Fugitive?: No

3.42	VOC				Yes		
					Yes		
					Yes		
					Yes		
					Yes		

Hours per Year: 8760

Fugitive?: No

6.51	VOC				Yes		
					Yes		
					Yes		

Hours per Year: 8760

Fugitive?: No

0.02	VOC				Yes		
					Yes		
					Yes		

POC: F12 - Repair Deck Operations

Hours per Year: 8760

Fugitive?: No

0.137	PM10				Yes		
0.06165	PM2.5				Yes		
0.137	PT				Yes		
					Yes		

Hours per Year: 8760

Fugitive?: No

0.00847	VOC				Yes		
					Yes		
					Yes		
					Yes		

Hours per Year: 8760

Fugitive?: No

0.0017	VOC				Yes		
					Yes		
					Yes		
					Yes		
					Yes		

Hours per Year: 8760

Fugitive?: No

0.001627	VOC				Yes		
					Yes		
					Yes		
					Yes		
					Yes		
					Yes		

Hours per Year: 8760

Fugitive?: No

0.000792	VOC				Yes		
					Yes		
					Yes		
					Yes		

Hours per Year: 8760

Fugitive?: No

0.01733	VOC				Yes		
					Yes		
					Yes		
					Yes		
					Yes		

Hours per Year: 8760

Fugitive?: No

0.003024	VOC				Yes		
					Yes		
					Yes		

					Yes		
					Yes		
					Yes		

Hours per Year: 8760

Fugitive?: No

0.0016279	VOC				Yes		
					Yes		
					Yes		
					Yes		

Hours per Year: 8760

Fugitive?: No

0.000262	Ethyl Benzene				Yes		
0.001353	ethyl Isobutyl Ketone				Yes		
0.00289	Toluene				Yes		
0.002127	Xylenes (Total)				Yes		
					Yes		

POC: F13 - Non-Process Cleaning Activities

Applicable Regulations: 401 KAR 59:010, 401 KAR 51:017, 401 KAR 59:185, 401 KAR 63:002

Hours per Year: 8760

Fugitive?: No

0.994	PM10				Yes		
0.4473	PM2.5				Yes		
0.994	PT				Yes		
					Yes		

Hours per Year: 8760

Fugitive?: No

1.56	VOC				Yes		
					Yes		
					Yes		
					Yes		

Hours per Year: 8760

Fugitive?: No

7.26	VOC				Yes		
					Yes		
					Yes		
					Yes		
					Yes		

POC: F15 - Water/Wastewater Treatment Operations

Applicable Regulations: 401 KAR 59:010, 401 KAR 51:017

Hours per Year: 8760

Fugitive?: No

0.01	PM10				Yes		
0.0045	PM2.5				Yes		
0.01	PT				Yes		

				Yes		

POC: F18 - General Building Exhaust

Applicable Regulations: 401 KAR 59:010, 401 KAR 51:017

Hours per Year: 8760

Fugitive?: No

1	PM10			Yes		
0.45	PM2.5			Yes		
1	PT			Yes		
				Yes		

D03A - Indirect / Direct Bldg Heat Combustion Units (Plant 2)

Applicable Regulations: 401 KAR 51:017, 401 KAR 59:015

Hours per Year: 8760

Fugitive?: No

0.0002	Arsenic (and Compounds)			Yes		
0.0021	Benzene			Yes		
120000	Carbon Dioxide			Yes		
84	CO			Yes		
0.0012	Dichlorobenzene			Yes		
0.075	Formaldehyde			Yes		
1.8	Hexane; N-Hexane			Yes		
0.0005	Lead			Yes		
0.00038	Manganese			Yes		
0.00026	Mercury (and Compounds)			Yes		
2.3	Methane			Yes		
0.00061	Naphthalene			Yes		
0.0021	Nickel (and Compounds)			Yes		
2.2	Nitrous Oxide			Yes		
100	NOx			Yes		
7.6	PM10			Yes		
3	PM2.5			Yes		
7.6	PT			Yes		
0.6	SO2			Yes		
0.0034	Toluene			Yes		
5.5	VOC			Yes		
				Yes		
				Yes		

DC: D03B - Indirect / Direct Shop Process Combustion Units

Applicable Regulations: 401 KAR 59:015, 401 KAR 51:017

Hours per Year: 8760

Fugitive?: No

0.0002	Arsenic (and Compounds)			Yes		
0.0021	Benzene			Yes		
120,000	Carbon Dioxide			Yes		
84	CO			Yes		

0.0012	Dichlorobenzene			Yes		
0.075	Formaldehyde			Yes		
1.8	Hexane; N-Hexane			Yes		
0.0005	Lead			Yes		
0.00038	Manganese			Yes		
0.00026	Mercury (and Compounds)			Yes		
2.3	Methane			Yes		
0.00061	Naphthalene			Yes		
0.0021	Nickel (and Compounds)			Yes		
2.2	Nitrous Oxide			Yes		
100	NOx			Yes		
7.6	PM10			Yes		
7.6	PM2.5			Yes		
7.6	PT			Yes		
0.6	SO2			Yes		
0.0034	Toluene			Yes		
5.5	VOC			Yes		
				Yes		
				Yes		
				Yes		

Controlled lb/hr Maximum	Maximum Uncontrolled Emissions (TPY)	Maximum Controlled Emissions (TPY)	Emission Potential (TPY)

4.14077032	60.0548808	18.136574	18.136574

1.33875	5.863725	5.863725	5.863725

0.22	0.9636	0.9636	0.9636
0.099	0.43362	0.43362	0.43362
0.22	0.9636	0.9636	0.9636

0.42	1.8396	1.8396	1.8396
0.189	0.82782	0.82782	0.82782
0.42	1.8396	1.8396	1.8396

1.459221324	37.4532048	6.391389399	6.391389399

1.470105	66.04164	6.4390599	6.4390599

5.658973049	30.96352524	24.78630195	24.78630195

1.00484149	5.498070862	4.401205725	4.401205725

2.53062768	100.037448	11.08414924	11.08414924

5.04576	22.1004288	22.1004288	22.1004288

0.878163	3.84635394	3.84635394	3.84635394
0.5975216	2.617144608	2.617144608	2.617144608
0.0082823	0.036276474	0.036276474	0.036276474

0	0	0	0
0	0	0	0
0	0	0	0

0.60048	2.6301024	2.6301024	2.6301024
5.821805621	27.24306476	25.49950862	25.49950862
26.5142472	304.809456	116.1324027	116.1324027
27.1100088	149.173164	118.7418385	118.7418385
16.71948	81.0081	73.2313224	73.2313224
20.90564328	91.56671754	91.56671754	91.56671754
1.18409731	5.186346218	5.186346218	5.186346218
0.343714228	1.505468319	1.505468319	1.505468319
3.397004402	14.87887928	14.87887928	14.87887928
31.95319042	139.9549741	139.9549741	139.9549741
81.65157	357.6338766	357.6338766	357.6338766

0.0955	8.3658	0.41829	0.41829
0.042975	3.76461	0.1882305	0.1882305
0.0955	8.3658	0.41829	0.41829

0.53	2.3214	2.3214	2.3214
0.2385	1.04463	1.04463	1.04463
0.53	2.3214	2.3214	2.3214

3.754728	16.44570864	16.44570864	16.44570864

7.22	632.472	31.6236	31.6236
3.249	284.6124	14.23062	14.23062
7.22	632.472	31.6236	31.6236

4.3362	18.992556	18.992556	18.992556

44.1371952	270.757584	193.320915	193.320915

22.81451886	384.632766	99.92759261	99.92759261

24.1197843	364.16634	105.6446552	105.6446552

0.120054726	0.5258397	0.5258397	0.5258397
0.661766534	2.898537419	2.898537419	2.898537419
4.166592881	18.24967682	18.24967682	18.24967682
4.565728486	19.99789077	19.99789077	19.99789077
14.58554258	63.88467648	63.88467648	63.88467648
0.632964167	2.772383051	2.772383051	2.772383051
3.626645704	15.88470818	15.88470818	15.88470818
18.24739117	79.92357334	79.92357334	79.92357334

0.22	0.9636	0.9636	0.9636
0.099	0.43362	0.43362	0.43362
0.22	0.9636	0.9636	0.9636

0.9700894	4.248991572	4.248991572	4.248991572

14.28972	62.5889736	62.5889736	62.5889736

1.09826	4.8103788	4.8103788	4.8103788

0.011634601	0.050959552	0.050959552	0.050959552

0.04	0.1752	0.1752	0.1752
0.018	0.07884	0.07884	0.07884
0.04	0.1752	0.1752	0.1752

0.366344	1.60458672	1.60458672	1.60458672

3.397428	14.88073464	14.88073464	14.88073464

4.28358	18.7620804	18.7620804	18.7620804

0.14834864	0.649767043	0.649767043	0.649767043

0.896564

0.137	0.60006	0.60006	0.60006
0.06165	0.270027	0.270027	0.270027
0.137	0.60006	0.60006	0.60006
0.25332923	1.109582027	1.109582027	1.109582027
0.0508453	0.222702414	0.222702414	0.222702414
0.048661943	0.21313931	0.21313931	0.21313931
0.023687928	0.103753125	0.103753125	0.103753125
0.51832297	2.270254609	2.270254609	2.270254609
0.090444816	0.396148294	0.396148294	0.396148294

0.048688861	0.213257212	0.213257212	0.213257212

0.007836158	0.034322372	0.034322372	0.034322372
0.040466877	0.177244921	0.177244921	0.177244921
0.08643701	0.378594104	0.378594104	0.378594104
0.063616443	0.27864002	0.27864002	0.27864002

0.994	4.35372	4.35372	4.35372
0.4473	1.959174	1.959174	1.959174
0.994	4.35372	4.35372	4.35372

0.651612	2.85406056	2.85406056	2.85406056

91.78818	402.0322284	402.0322284	402.0322284

0.01	0.0438	0.0438	0.0438
0.0045	0.01971	0.01971	0.01971
0.01	0.0438	0.0438	0.0438

4.528837

1	4.38	4.38	4.38
0.45	1.971	1.971	1.971
1	4.38	4.38	4.38
0.00	0.00	0.00	0.00
0.00	0.01	0.01	0.01
71,131	311,556	311,556	311,556
49.79	218.09	218.09	218.09
0.00	0.00	0.00	0.00
0.04	0.19	0.19	0.19
1.07	4.67	4.67	4.67
0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00
1.36	5.97	5.97	5.97
0.00	0.00	0.00	0.00
0.00	0.01	0.01	0.01
1.30	5.71	5.71	5.71
59.28	259.63	259.63	259.63
4.50	19.73	19.73	19.73
1.78	7.79	7.79	7.79
4.50	19.73	19.73	19.73
0.36	1.56	1.56	1.56
0.00	0.01	0.01	0.01
3.26	14.28	14.28	14.28
0.000112916	0.000494573	0.000494573	0.000494573
0.00118562	0.005193016	0.005193016	0.005193016
67,750	296,744	296,744	296,744
47.4248	207.720624	207.720624	207.720624

0.000677497	0.002967437	0.002967437	0.002967437
0.042343571	0.185464843	0.185464843	0.185464843
1.016245714	4.451156229	4.451156229	4.451156229
0.00028229	0.001236432	0.001236432	0.001236432
0.000214541	0.000939689	0.000939689	0.000939689
0.000146791	0.000642945	0.000642945	0.000642945
1.29853619	5.687588514	5.687588514	5.687588514
0.000344394	0.001508447	0.001508447	0.001508447
0.00118562	0.005193016	0.005193016	0.005193016
1.242078095	5.440302057	5.440302057	5.440302057
56.45809524	247.2864571	247.2864571	247.2864571
4.290815238	18.79377074	18.79377074	18.79377074
4.290815238	18.79377074	18.79377074	18.79377074
4.290815238	18.79377074	18.79377074	18.79377074
0.338748571	1.483718743	1.483718743	1.483718743
0.001919575	0.00840774	0.00840774	0.00840774
3.105195238	13.60075514	13.60075514	13.60075514

Process ID	Description	Control Device	% Capture

Applicable Regulation

SCC Code: 4-02-002-10
SCC Unit: Gallons
1 Electrodeposition System (F02R)

Hourly Design Rate: 136.15
Max. Yearly Capacity: 550,200

Thermal Oxidizer	75.00%
Thermal Oxidizer	100.00%

SCC Code: 3-99-999-92
SCC Unit: Hour
1 Body Repair (F03R)

Hourly Design Rate: 70
Max. Yearly Capacity: 262,000

Applicable Regulation

SCC Code: 4-02-016-07
SCC Unit: Gallons
1 Sealer (F04R)

Hourly Design Rate: 357.38
Max. Yearly Capacity: 1,337,608

Thermal Oxidizer	90.00%
Building	10.00%

SCC Code: 4-02-016-07
SCC Unit: Gallons
4 Oven (F04R)

Hourly Design Rate: 357.38
Max. Yearly Capacity: 1,337,608

Thermal Oxidizer	90.00%

Applicable Regulation

SCC Code: 4-02-009-98
SCC Unit: Gallons
1 Primer

Hourly Design Rate: 37.10
Max. Yearly Capacity: 170,300

Thermal Oxidizer	85.00%
Dry Scrubber (Inherent)	100.00%

SCC Code: 4-02-001-10

Hourly Design Rate: 2.10

SCC Unit:
2

Gallons
Primer Soft Chip

Max. Yearly Capacity: 9,825

Thermal Oxidizer	85.00%
Dry Scrubber (Inherent)	100.00%

SCC Code:

4-02-001-10

Hourly Design Rate: 68.39

SCC Unit:
3

Gallons
Base

Max. Yearly Capacity: 307,169

Thermal Oxidizer	85.00%
Dry Scrubber (Inherent)	100.00%

SCC Code:

4-02-001-10

Hourly Design Rate: 32.35

SCC Unit:
4

Gallons
Clear

Max. Yearly Capacity: 167,680

Thermal Oxidizer	85.00%
Dry Scrubber (Inherent)	100.00%

SCC Code:

4-02-001-10

Hourly Design Rate: 139.94

SCC Unit:
5

Gallons
Oven Bake

Max. Yearly Capacity: 654,974

Thermal Oxidizer	100.00%

SCC Code:

4-02-001-10

Hourly Design Rate: 0.11

SCC Unit:
6

Gallons
Repair Coating (Manual)

Max. Yearly Capacity: 1,000

	100.00%

SCC Code:

3-99-999-95

Hourly Design Rate: 2.79

SCC Unit:
7

Gallons
Blackout

Max. Yearly Capacity: 12,526

SCC Code:

3-99-999-92

Hourly Design Rate: 8.25

SCC Unit:
8

Hour
Wax Booth

Max. Yearly Capacity: 39,300

Applicable

SCC Code:

3-99-999-92

Hourly Design Rate: 70

SCC Unit:

Hour

Max. Yearly Capacity: 262,000

Shot Blasting

3-99-999-95

Gallons

Surface Cleaning (All)

3-99-999-95

Gallons

Line Purge (water)

3-99-999-95

Gallons

Line Purge (solvent)

3-99-999-95

Gallons

Solvent Application (veh)

Applicable

3-99-999-95

Gallons

HAPS - Annualized

85.00%

	85.00%
	85.00%
	85.00%
	85.00%
	85.00%
	85.00%
	85.00%

SCC Code: 1-03-006-03
 SCC Unit: MMscf
 1 Bldg Heat Combustion Units

Hourly Design Rate:	0.1621
Max. Yearly Capacity:	639.94

SCC Code: 1-03-006-03
 SCC Unit: MMscf
 1 Shop Process Combustion Units

Hourly Design Rate:	0.149
Max. Yearly Capacity:	1,304

% Control	Emission Factor lb/SCC Unit	Pollutant (CAS #)	EF Source	Hours per Year	Pollutant Specific Applicable Regulations	Include in PTE?	Allowable (lb/hr)

POC: F02R - Electro deposition Coating System

Regulations: 401 KAR 51:017, 401 KAR 59:010, 40 CFR 60 Subpart MMA, 40 CFR 63 Subpart IIII

Gallons/hr		Hours per Year:		8760			
Gallons/yr		Fugitive?:		No			
80.00%	0.21	VOC				Yes	
80.00%	0.01	PM10/PM2.5				Yes	

POC: F03 - Body Repair

Applicable Regulations: 401 KAR 59:010, 401 KAR 51:017

Units/hr		Hours per Year:		8760			
Units/yr		Fugitive?:		No			
	0.01	PM10/PM2.5				Yes	

POC: F04R - Sealer Line

Regulations: 401 KAR 59:010, 401 KAR 51:017, 40 CFR 60 Subpart MMA, 40 CFR 63 Subpart IIII

Gallons/hr		Hours per Year:		8760			
Gallons/yr		Fugitive?:		No			
80.00%	0.37	VOC				Yes	
70.00%	0.04	PM10/2.5				Yes	
						Yes	
						Yes	
Gallons/hr		Hours per Year:		8760			
Gallons/yr		Fugitive?:		No			
80.00%	0.025	PM/PM2.5				Yes	
						Yes	
						Yes	
						Yes	

POC: F05R - Coating Booth and Oven

Regulations: 401 KAR 59:010, 401 KAR 51:017, 40 CFR 60 Subpart MMA, 40 CFR 63 Subpart IIII

Gallons/hr		Hours per Year:		8760			
Gallons/yr		Fugitive?:		No			
80.00%	1.35	VOC				Yes	
80.00%	2.76	PM/PM2.5				Yes	
						Yes	
						Yes	
Gallons/hr		Hours per Year:		8760			

Gallons/yr		Fugitive?:	No				
80.00%	6.30	VOC				Yes	
80.00%	2.40	PM/PM2.5				Yes	
						Yes	
						Yes	

Gallons/hr **Hours per Year:** 8760

Gallons/yr		Fugitive?:	No				
80.00%	1.65	VOC				Yes	
80.00%	0.78	PM/PM2.5				Yes	
						Yes	
						Yes	
						Yes	

Gallons/hr **Hours per Year:** 8760

Gallons/yr		Fugitive?:	No				
80.00%	4.50	VOC				Yes	
80.00%	1.21	PM/PM2.5				Yes	
						Yes	
						Yes	

Gallons/hr **Hours per Year:** 8760

Gallons/yr		Fugitive?:	No				
80.00%	0.29	PM/PM2.5				Yes	
						Yes	
						Yes	

Gallons/hr **Hours per Year:** 8760

Gallons/yr		Fugitive?:	No				
	5.25	VOC				Yes	
70.00%	6.52	PM				Yes	

Gallons/hr **Hours per Year:** 8760

Gallons/yr		Fugitive?:	No				
	3.5	VOC				Yes	
70.00%	0.119	PM/PM2.5				Yes	
						Yes	

Gallons/hr **Hours per Year:** 8760

Gallons/yr		Fugitive?:	No				
	4.5	VOC				Yes	
70.00%	0.024	PM/PM2.5				Yes	

POC: F13R - Maintenance and Equipment Cleaning

Regulations: 401 KAR 59:010, 401 KAR 51:017, 401 KAR 59:185, 401 KAR 63:002

Veh/hr **Hours per Year:** 8760

Veh/yr		Fugitive?:	No				

	0.018	PM10				Yes	
						Yes	

Gallons/hr **Hours per Year:** 8760

Gallons/yr **Fugitive?:** No

	7.26	VOC				Yes	
						Yes	
						Yes	
						Yes	

Gallons/hr **Hours per Year:** 8760

Gallons/yr **Fugitive?:** No

						Yes	
80.00%	4.00	VOC				Yes	
						Yes	
						Yes	
						Yes	

Gallons/hr **Hours per Year:** 8760

Gallons/yr **Fugitive?:** No

						Yes	
80.00%	6.96	VOC				Yes	
						Yes	
						Yes	
						Yes	

Gallons/hr **Hours per Year:** 8760

Gallons/yr **Fugitive?:** No

	6.56	VOC				Yes	
						Yes	
						Yes	
						Yes	
						Yes	

POC: FHAPS: Paint Line 2 HAPs

Regulations: 401 KAR 59:010, 401 KAR 51:017, 401 KAR 59:185, 401 KAR 63:002

veh/hr **Hours per Year:** 8760

veh/yr **Fugitive?:** No

80.00%	0.00	123 Trimethylbenzene				Yes	
80.00%	0.03	124 Trimethylbenzene				Yes	
80.00%	0.01	135 Trimethylbenzene				Yes	
80.00%	0.00	Acrylic acid				Yes	
80.00%	0.00	Acrylonitrile				Yes	
80.00%	0.00	Benzene				Yes	
80.00%	0.00	Cumene				Yes	
80.00%	0.00	Ethyl acrylate				Yes	
80.00%	0.00	Ethyl Toluene				Yes	
80.00%	0.00	Ethylbenzene				Yes	
80.00%	0.01	Formaldehyde				Yes	

80.00%	0.15	Glycol Ethers			Yes	
0.00%	0.02	Hydrogen Flouride			Yes	
80.00%	0.01	Methyl Isobutyl Ketone			Yes	
80.00%	0.00	Toluene			Yes	
80.00%	0.00	Triethylamine			Yes	
80.00%	0.00	Vinyl Acetate			Yes	
80.00%	0.00	Xylene			Yes	

POC: D13A - Indirect / Direct Bldg Heat Combustion Units (Plant 2R)

Applicable Regulations: 401 KAR 51:017, 401 KAR 59:015

MMscf/hr **Hours per Year:** 8760

MMscf/yr **Fugitive?:** No

	7.6	PT	AP-42 Section 1.4		Yes	
	7.6	PM10	AP-42 Section 1.4		Yes	
	7.6	PM2.5	AP-42 Section 1.4		Yes	
	100	NOx	AP-42 Section 1.4		Yes	
	84	CO	AP-42 Section 1.4		Yes	
	0.6	SO2	AP-42 Section 1.4		Yes	
	5.5	VOC	AP-42 Section 1.4		Yes	
	119,767	Carbon Dioxide	40 CFR Part 98 Subpart C Table C-1		Yes	
	0.22572	Nitrous Oxide	40 CFR Part 98 Subpart C Table C-2		Yes	
	2.2572	Methane	40 CFR Part 98 Subpart C Table C-2		Yes	
	0.0005	Lead	AP-42 Section 1.4		Yes	
	0.075	Formaldehyde	AP-42 Section 1.4		Yes	
	1.8	hexane; N-Hexar	AP-42 Section 1.4		Yes	
					Yes	

POC: D13B - Indirect / Direct Shop Process Combustion Units (Plant 2R)

Applicable Regulations: 401 KAR 59:015, 401 KAR 51:017

MMscf/hr **Hours per Year:** 8760

MMscf/yr **Fugitive?:** No

	7.6	PT	AP-42 Section 1.4 (lb/MMSCF)		Yes	
	7.6	PM10	AP-42 Section 1.4 (lb/MMSCF)		Yes	
	7.6	PM2.5	AP-42 Section 1.4 (lb/MMSCF)		Yes	
	100	NOx	AP-42 Section 1.4 (lb/MMSCF)		Yes	
	84	CO	AP-42 Section 1.4 (lb/MMSCF)		Yes	
	0.6	SO2	AP-42 Section 1.4 (lb/MMSCF)		Yes	
	5.5	VOC	AP-42 Section 1.4 (lb/MMSCF)		Yes	
	119,767	Carbon Dioxide	40 CFR Part 98 Subpart C Table C-1		Yes	
	0.22572	Nitrous Oxide	40 CFR Part 98 Subpart C Table C-2		Yes	
	2.2572	Methane	40 CFR Part 98 Subpart C Table C-2		Yes	
	0.0005	Lead	AP-42 Section 1.4 (lb/MMSCF)		Yes	
	0.075	Formaldehyde	AP-42 Section 1.4 (lb/MMSCF)		Yes	
	1.8	hexane; N-Hexar	AP-42 Section 1.4 (lb/MMSCF)		Yes	
					Yes	

POC: D03A - Indirect / Direct Bldg Heat Combustion Units (Plant 2)

Applicable Regulations: 401 KAR 51:017, 401 KAR 59:015

MMscf/hr	Hours per Year: 8760					
MMscf/yr	Fugitive?: No					
	7.6	PT	AP-42 Section 1.4		Yes	
	7.6	PM10	AP-42 Section 1.4		Yes	
	7.6	PM2.5	AP-42 Section 1.4		Yes	
	100	NOx	AP-42 Section 1.4		Yes	
	84	CO	AP-42 Section 1.4		Yes	
	0.6	SO2	AP-42 Section 1.4		Yes	
	5.5	VOC	AP-42 Section 1.4		Yes	
	119,767	Carbon Dioxide	40 CFR Part 98 Subpart C Table C-1		Yes	
	0.22572	Nitrous Oxide	40 CFR Part 98 Subpart C Table C-2		Yes	
	2.2572	Methane	40 CFR Part 98 Subpart C Table C-2		Yes	
	0.0005	Lead	AP-42 Section 1.4		Yes	
	0.075	Formaldehyde	AP-42 Section 1.4		Yes	
	1.8	hexane; N-Hexane	AP-42 Section 1.4		Yes	
					Yes	

Allowable (TPY)	Controlled lb/hr Maximum	Maximum Uncontrolled Emissions (TPY)	Maximum Controlled Emissions (TPY)	Emission Potential (TPY)

	11.44	57.77	23.11	23.11
	0.17	1.75	0.35	0.35

	0.42	0.786	0.786	0.786

	36.63	244.85	68.56	68.56
	4.21	26.29	7.89	7.89

	2.52	16.83	4.71	4.71

	15.99	114.72	36.71	36.71
	20.47	234.87	46.97	46.97

	4.23	30.95	9.91	9.91
	1.01	11.79	2.36	2.36

	36.11	253.41	81.09	81.09
	10.73	120.44	24.09	24.09

	46.58	377.28	120.73	120.73
	7.83	101.48	20.30	20.30

	8.01	93.70	18.74	18.74

	0.60	2.63	2.63	2.63
	0.22	3.26	0.98	0.98

	9.76	21.92	21.92	21.92
	0.33	0.00	0.75	0.75

	37.13	88.43	88.43	88.43
	0.20	0.47	0.47	0.47

	1.27	2.37	2.37	2.37

	21.34	39.94	39.94	39.94

	4.40	45.80	9.16	9.16

	12.25	127.55	25.51	25.51

	3.61	7.51	7.51	7.51

	0.03	0.16	0.05	0.05
	0.59	3.46	1.11	1.11
	0.14	0.81	0.26	0.26
	0.00	0.01	0.00	0.00
	0.00	0.01	0.00	0.00
	0.00	0.01	0.00	0.00
	0.05	0.29	0.09	0.09
	0.00	0.01	0.00	0.00
	0.00	0.01	0.00	0.00
	0.03	0.19	0.06	0.06
	0.24	1.37	0.44	0.44

	3.28	19.17	6.13	6.13
	1.15	2.15	2.15	2.15
	0.32	1.88	0.60	0.60
	0.05	0.28	0.09	0.09
	0.05	0.27	0.09	0.09
	0.09	0.54	0.17	0.17
	0.11	0.65	0.21	0.21

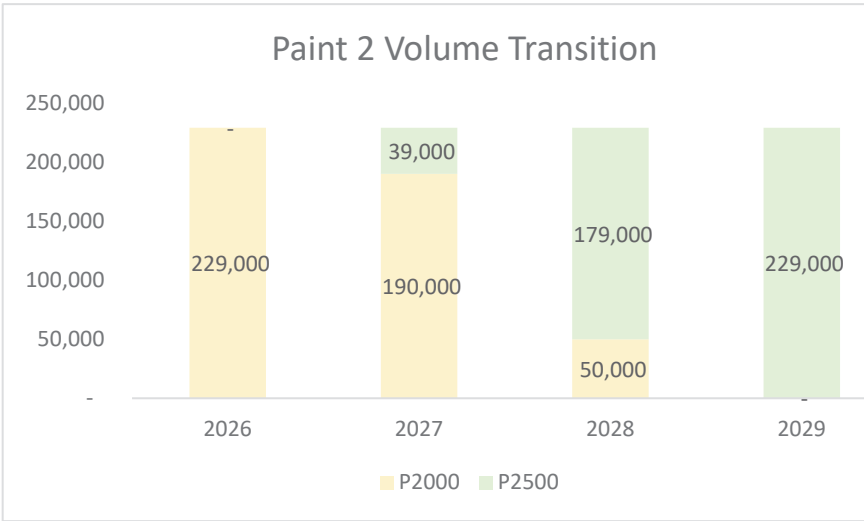
	1.23	2.43	2.43	2.43
	1.23	2.43	2.43	2.43
	1.23	2.43	2.43	2.43
	16.21	32.00	32.00	32.00
	13.62	26.88	26.88	26.88
	0.10	0.19	0.19	0.19
	0.89	1.76	1.76	1.76
	19,413	38,322	38,322	38,322
	0.04	0.07	0.07	0.07
	0.37	0.72	0.72	0.72
	0.00	0.00	0.00	0.00
	0.01	0.02	0.02	0.02
	0.29	0.58	0.58	0.58

	1.13	4.96	4.96	4.96
	1.13	4.96	4.96	4.96
	1.13	4.96	4.96	4.96
	14.89	65.22	65.22	65.22
	12.51	54.78	54.78	54.78
	0.09	0.39	0.39	0.39
	0.82	3.59	3.59	3.59
	17,833	78,108	78,108	78,108
	0.03	0.15	0.15	0.15
	0.34	1.47	1.47	1.47
	0.00	0.00	0.00	0.00
	0.01	0.05	0.05	0.05
	0.27	1.17	1.17	1.17

	4.50	19.73	19.73	19.73
	4.50	19.73	19.73	19.73
	4.50	19.73	19.73	19.73
	59.28	259.63	259.63	259.63
	49.79	218.09	218.09	218.09
	0.36	1.56	1.56	1.56
	3.26	14.28	14.28	14.28
	70,993	310,951	310,951	310,951
	0.13	0.59	0.59	0.59
	1.34	5.86	5.86	5.86
	0.00	0.00	0.00	0.00
	0.04	0.19	0.19	0.19
	1.07	4.67	4.67	4.67

TMMK	2023	2024	2029	Capacity
Line 1	171,525	183,021	206,000	341,298
Line 2	217,625	212,116	229,000	262,000
Line 3	44,758	40,645	-	70,000
	433,908	435,782	435,000	673,298

	2026	2027	2028	2029	Capacity
P2000	229,000	190,000	50,000	-	-
P2500	-	39,000	179,000	229,000	262,000
Sum	229,000	229,000	229,000	229,000	262,000



Process Stack List

Stack No.		Process	Line Name		Bldg (60 ft)
	Associated EUID			Stack Dia	Stack Height (ft)
T-01	F02R	PT	Pre Wash exhaust	1'-8"	80.0
T-02	F02R	PT	Degrease exhaust	2'-8"	80.0
T-03	F02R	PT	Phosphate exhaust	2'-6"	80.0
T-05	F13R	Others	Carrier Cleaning	2'-6"	80.0
T-06	F02R	ED	E-Coat exhaust	2'-8"	80.0
T-08	F02R	ED	E-Coat Oven Cooler exhaust	6'-6"	80.0
T-09	F03R	ED	ED Inspection inc offline exhaust	6'-8"	80.0
T-13	F04R	Sealer	Sealer Oven Cooler exhaust	6'-0"	80.0
RTO-T2-ED	F02R, F04R	ED/Sealer	RTO for ED and Sealer	2.4	20.0
T-14	F05R	Sealer Topcoat	Topcoat offline & 2K/Recoat Booth exhaust	9'-8"	80.0
T-15	F13R	Others	Dolly Cleaning exhaust	3'-8"	80.0
T-19	F05R	Top Coat	Topcoat & 2 tone inspection exhaust	6'-8"	80.0
T-21	F05R	Top Coat	3WET Primer (A) Hab Burner exhaust	1'-2"	80.0
T-22	F05R	Top Coat	3WET Booth A Concentrator exhaust	7'-6"	80.0
T-23	F05R	Top Coat	3WET Base (A) Hab Burner exhaust	1'-2"	80.0
T-26	F05R	Top Coat	3WET(A) TC Oven Burner exhaust Z1	1'-8"	80.0
T-27	F05R	Top Coat	3WET(A) TC Oven Burner exhaust Z2	1'-8"	80.0
T-28	F05R	Top Coat	3WET(A) TC Oven Burner exhaust Z3	1'-8"	80.0
T-29	F05R	Top Coat	3WET(A) TC Oven Burner exhaust Z4	1'-8"	80.0
T-30	F05R	Top Coat	3WET(A) Oven Cooler exhaust	5'-6"	80.0
TC-T2-BO	F05R	Top Coat	RTO for Topcoat Booths	4.0	20.0
T-31	F05R	Top Coat	3WET Primer (B) Hab Burner exhaust	1'-2"	80.0
T-32	F05R	Top Coat	3WET Booth B Concentrator exhaust	7'-6"	80.0

T-33	F05R	Top Coat	3WET Base (B) Hab Burner exhaust	1'-2"	80.0
T-36	F05R	Top Coat	3WET(B) TC Oven Burner exhaust Z1	1'-8"	80.0
T-37	F05R	Top Coat	3WET(B) TC Oven Burner exhaust Z2	1'-8"	80.0
T-38	F05R	Top Coat	3WET(B) TC Oven Burner exhaust Z3	1'-8"	80.0
T-39	F05R	Top Coat	3WET(B) TC Oven Burner exhaust Z4	1'-8"	80.0
T-40	F05R	Top Coat	3WET(B) Oven Cooler exhaust	5'-6"	80.0
TC-T2-OV	F05R	Top Coat	RTO for Topcoat Ovens	2.6	20.0
T-41	F05R	Top Coat	Blackout & WAX Booth exhaust	8'-4"	80.0
T-52	F13R	Others	Process Jig Cleaning exhaust	4'-4"	80.0

*With Bldg

Est. Exhaust	Design Velocity	Est. Temp	UTM East	UTM North
CFM	[FPM]	[degree F]		
3,500	1600	Ambient	715110	4237324
8,000	1600	Ambient	715112	4237304
7,000	1600	Ambient	715121	4237232
7,000	1600	Ambient	715095	4237392
8,800	1600	Ambient	715120	4237186
53,000	1600	100	715130	4237109
54,800	1600	Ambient	715112	4237167
42,400	1600	100	715084	4237220
14,000	3000	440	715191	4237190
113,700	1600	Ambient	715053	4237274
17,000	1600	Ambient	715118	4237367
53,700	1600	Ambient	715089	4237145
500	300	500	715066	4237282
96,600	1600	Ambient	715086	4237130
500	300	500	715077	4237197
500	300	500	715095	4237104
500	300	500	715098	4237077
500	300	500	715101	4237050
500	300	500	715105	4237027
35,400	1600	100	715092	4237056
38,000	3000	249	715081	4237171
500	300	500	715052	4237282
96,600	1600	Ambient	715071	4237129

500	300	500
500	300	500
500	300	500
500	300	500
500	300	500
35,400	1600	100
16,000	3000	367
83,200	1600	Ambient
21,200	1600	100

715063 4237196

715073 4237094

715076 4237074

715079 4237048

715083 4237024

715086 4237055

715084 4237154

715063 4237318

715095 4237392

TMMK Paint 2000 2023 Adjusted Actuals

	2023
Vehicles/Hr	54
Vehicles/Year	217,571
Hrs/Year	4,001

Electrodeposition System (F02)	Description	Emission Point	Gallons/Veh
	Bath Hood Exhaust		1.64
	Oven Emissions	RTO	-

Body Repair (F03)	Description	Emission Point	Gallons/Veh
	Body Repair	Building	0

Sealer Application (F04)	Description	Emission Point	Gallons/Veh
	Sealer	Building	1.46
	Deadener	Building	1.13
	PVC	Building	5.73
	Oven Emissions	RTO	-

Coating Application (F05)	Description	Emission Point	Gallons/Veh
	Primer		0.44
	Soft Chip Primer		0.00
	Conc. Emissions		-
	Booth Emissions	RTO	-
	Oven Emissions	RTO	-

Coating Application (F07)	Basecoat		0.73
	Clearcoat		0.43
	Conc. Emissions		-
	Booth Emissions	RTO	-
	Oven Emissions	RTO	-

*Internal Booth Air Filtration Considered Inherent Control

	Description	Emission Point	Gallons/Veh
Wax Coating (F11, F09)	Blackout Coating		0.000
	Wax Coating		0.051

	Description	Emission Point	Gallons/Veh
Offline Maintenance & Cleaning (F13)	Equipment Surface Cleaning		0.143
	Shot Blasting		
	Line Purge - Water		0.014
	Line Purge - Solvent		0.283
	Solvent Application		0.001
	Conc. Emissions	-	
	Booth Emissions	-	

*Overspray = 1/ Transfer Eff = Used/Applied

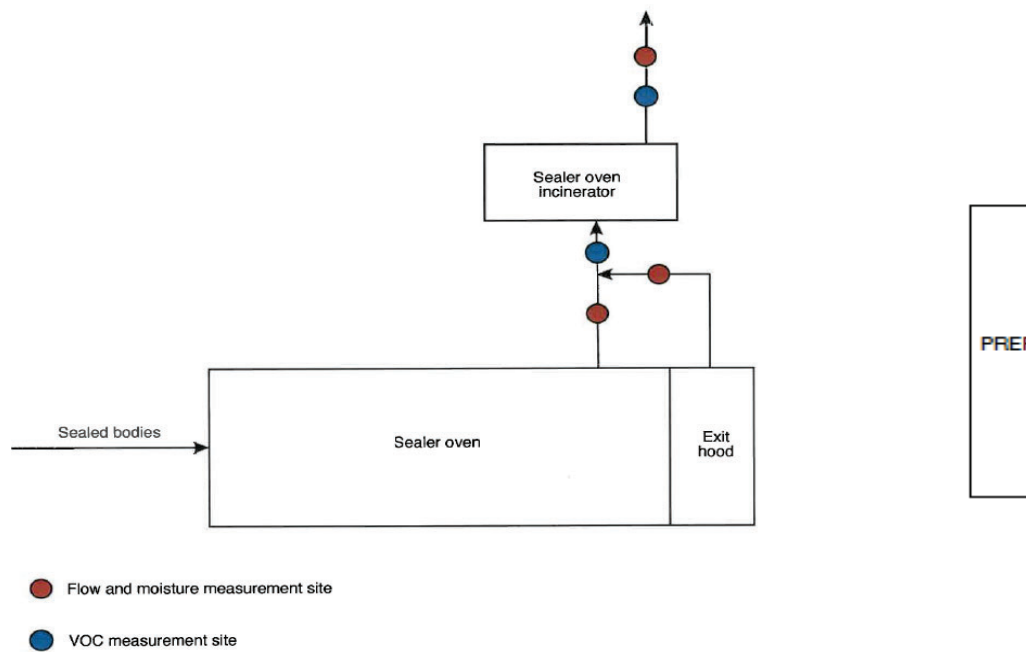


Figure 4.1 Sealer process flow diagram

Capacity
70
262,000
8760

ED/Seal	RTO Control	99%	ED Carry
Coat	RTO Control	98%	Seal Carry
Purge	Solvent Recov	50%	Dry Booth
Coat	Conc.	92%	Purge Rec

						VOC - UNC
Avg VOC (lb VOC/Gal)	Avg Solids (lb/gal)	Overspray (%)	Capture	VOC Control	PM Control	lb/hr
0.15	4.03	0%	25%	0%	0%	3.34
-	-	0.2%	75%	99.4%	80.0%	10.01

						VOC - UNC
Avg VOC (lb VOC/Gal)	Overspray (%)	Capture	VOC Control	PM Control	lb/hr	
0	0%	0%	0%	0%	0.00	

						VOC - UNC
Avg VOC (lb VOC/Gal)	Avg Solids (lb/gal)	Overspray (%)	Capture	VOC Control	PM Control	lb/hr
0.31	10.85	0.25%	13%	0%	70%	3.09
0.15	11.74	0.25%	5%	0%	70%	0.47
0.32	7.263	0.25%	6%	0%	70%	6.36
-	-	0.2%		98.8%	80.0%	123.30

						VOC - UNC
Avg VOC (lb VOC/Gal)	Avg Solids (lb/gal)	Overspray (%)	Capture	VOC Control	PM Control	lb/hr
3.25	7.46	37%	49%	0%	98.6%	37.79
5.25	0.39	70%	49%	0%	98.6%	0.00
-	-	-	0.3%	0%	0.0%	0.23
-	-	-	43%	99.5%	80.0%	33.28
-	-	-	8%	97.4%	80.0%	6.20

1.17	2.39	29%	56%	0%	98.6%	25.89
3.94	4.32	28%	56%	0%	98.6%	51.34
-	-	-	3%	0%	0.0%	1.79
-	-	-	22%	98.4%	80.0%	13.38
-	-	-	75%	98.4%	80.0%	45.51

							VOC - UNC
Avg VOC (lb VOC/Gal)	Avg Solids (lb/gal)	Overspray (%)	Capture	VOC Control	PM Control		lb/hr
0.60	2.56	69%	100%	0%	0.00%		0.02
1.78	5.60	5%	100%	0%	0.00%		4.95

							VOC - UNC
Avg VOC (lb VOC/Gal)	Avg Solids (lb/gal)	Overspray (%)	Capture	VOC Control	PM Control		lb/hr
4.59	0	0%	100%	0%	0%		35.61
			100%	0%	90%		0.00
1.45	0	0%	100%	0%	0%		1.09
5.57	0	0%	50%	100%	0%		42.81
4.41	0.00	0%	100%	0%	0%		0.14
-	-	-	25%	0%	0%		10.70
-	-	-	75%	98.4%	0%		32.11

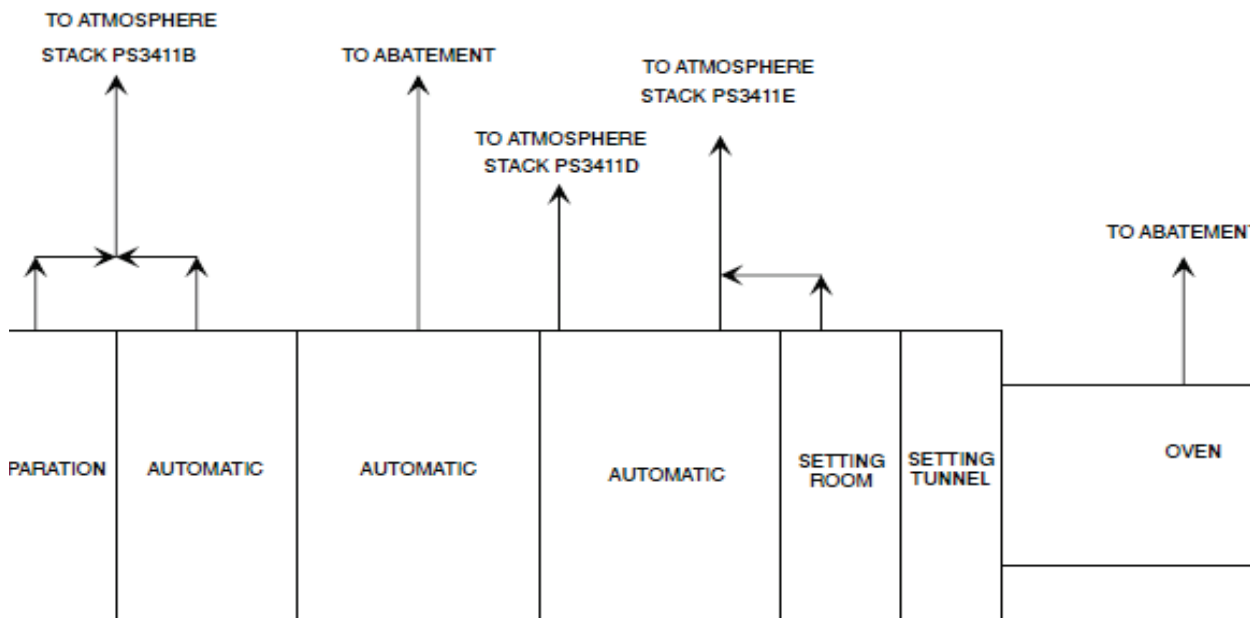


Figure 4.1 Primer paint system process flow diagram

75%
90%
95%
50%

	VOC -CNT		PM -UNC		PM -CNT	
TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
6.67	3.34	6.67	-	-	-	-
20.02	0.06	0.12	0.72	1.44	0.14	0.29

	VOC -CNT		PM -UNC		PM -CNT	
TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
0.00	0.00	0.00	0.42	0.84	0.42	0.84

	VOC -CNT		PM -UNC		PM -CNT	
TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
6.18	3.09	6.18	0.27	0.55	0.08	0.16
0.95	0.47	0.95	0.09	0.18	0.03	0.05
12.73	6.36	12.73	0.36	0.72	0.11	0.22
246.66	1.48	2.96	7.70	15.40	1.54	3.08

	VOC -CNT		PM -UNC		PM -CNT	
TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
75.61	37.79	75.61	32.05	64.11	0.46	0.93
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47	0.23	0.47	0.20	0.40	0.00	0.01
66.58	0.17	0.33	28.22	56.45	0.08	0.16
12.40	0.16	0.32	5.26	0.19	0.02	0.00

51.79	25.89	51.79	15.39	30.80	0.22	0.43
102.71	51.34	102.71	15.77	31.54	0.22	0.44
3.58	1.79	3.58	1.64	3.28	0.02	0.05
26.77	0.21	0.43	12.27	12.42	0.03	0.03
91.04	0.73	1.46	41.73	83.49	0.12	0.23

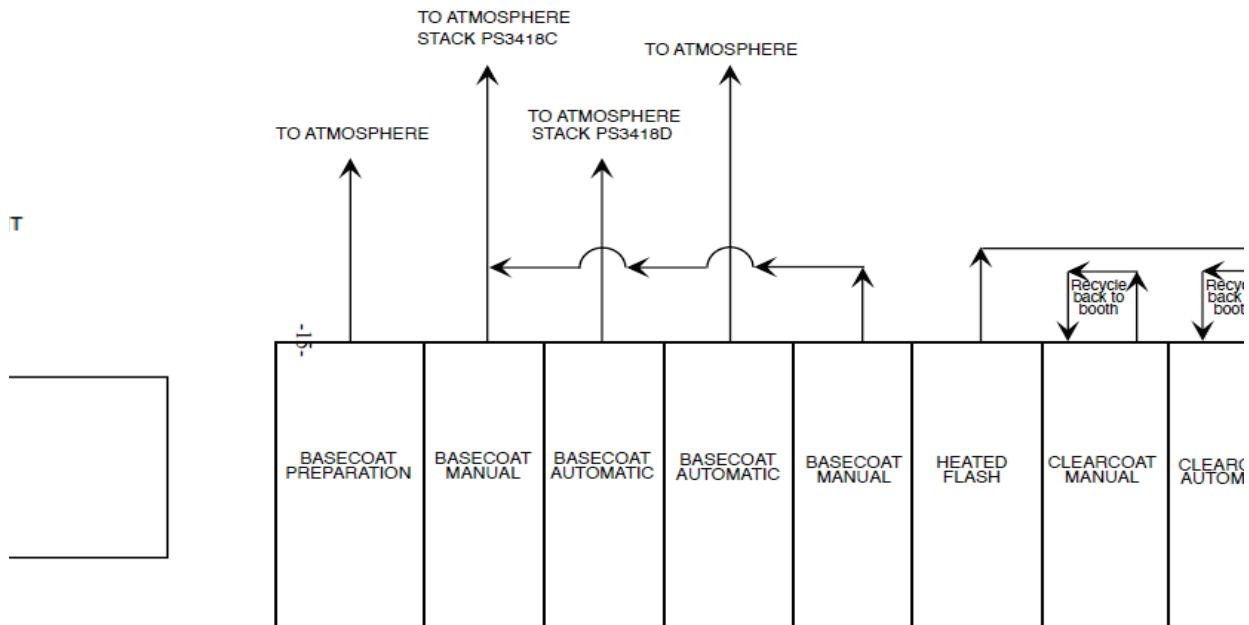
	VOC -CNT		PM -UNC		PM -CNT	
TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
0.03	0.02	0.03	0.04	0.09	0.04	0.09
9.90	4.95	9.90	0.78	1.56	0.78	1.56

	VOC -CNT		PM -UNC		PM -CNT	
TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
71.23	35.61	71.23	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.99	1.99	0.10	0.20
2.19	1.09	2.19	0.00	0.00	0.00	0.00
85.65	0.00	0.00	0.00	0.00	0.00	0.00
0.28	0.14	0.28	0.00	0.00	0.00	0.00
21.41	10.70	21.41	0.00	0.00	0.00	0.00
64.24	0.51	1.03	0.00	0.00	0.00	0.00

979.09

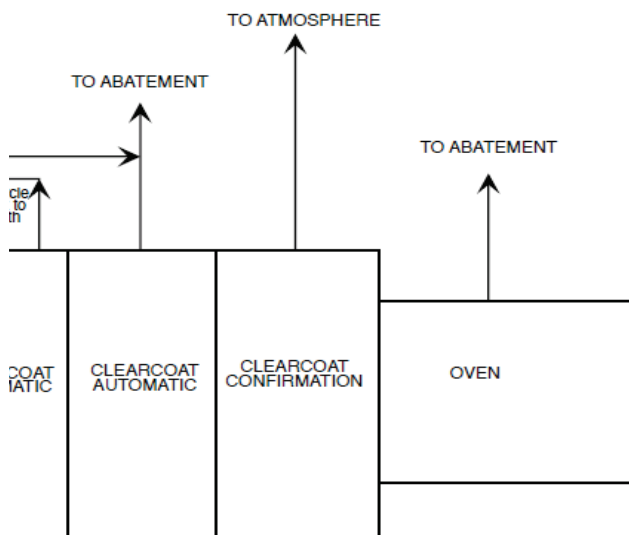
372.38

62%



NOTE: The numbered stacks were tested for PM. Since there are two stacks from basecoat auto and clearcoat auto, the emissions from these two stacks are multiplied by two when determining total booth emissions.

Figure 4.3 Topcoat B paint system process flow diagram



to and only one is tested, emissions from the basecoat

agram

TMMK Paint 2000 2024 Adjusted Actuals

	2024
Vehicles/Hr	53
Vehicles/Year	212,116
Hrs/Year	4,001

	Description	Emission Point	Gallons/Veh
Electrodeposition System (F02)	Bath Hood Exhaust		1.85
	Oven Emissions	RTO	-

*Oven Overspray is smoke emissions from baking proce

	Description	Emission Point	Gallons/Veh
Body Repair (F03)	Body Repair	Building	0

	Description	Emission Point	Gallons/Veh
Sealer Application (F04)	Sealer	Building	1.10
	Deadener	Building	0.94
	PVC	Building	2.15
	Oven Emissions	RTO	-

	Description	Emission Point	Gallons/Veh
Coating Application (F05)	Primer		0.41
	Soft Chip Primer		0.00
	Conc. Emissions		-
	Booth Emissions	RTO	-
	Oven Emissions	RTO	-

Coating Application (F07)	Basecoat		0.68
	Clearcoat		0.48
	Conc. Emissions		-
	Booth Emissions	RTO	-
	Oven Emissions	RTO	-

	Description	Emission Point	Gallons/Veh
Wax Coating (F11, F09)	Blackout Coating		0.008
	Wax Coating		0.047

	Description	Emission Point	Gallons/Veh
Offline Maintenance & Cleaning (F13)	Equipment Surface Cleaning		0.026
	Shot Blasting		
	Line Purge - Water		0.058
	Line Purge - Solvent		0.135
	Solvent Application		0.000
	Conc. Emissions	-	
	Booth Emissions	-	

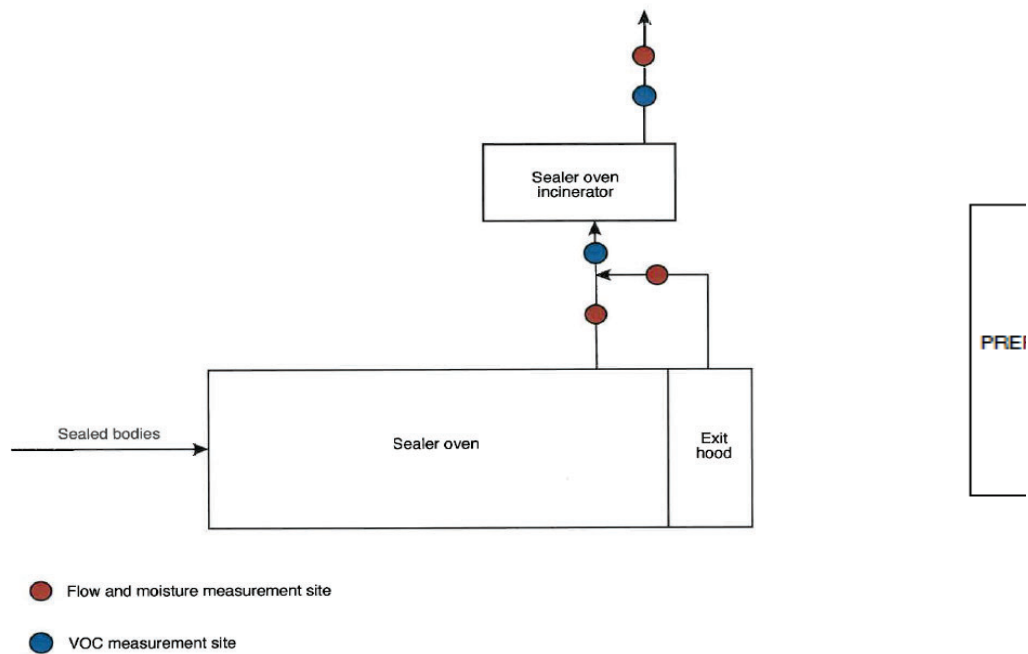


Figure 4.1 Sealer process flow diagram

Capacity
70
262,000
8760

ED/Seal	RTO Control	99%	ED Carry
Coat	RTO Control	98%	Seal Carry
Purge	Solvent Recov	50%	Dry Booth
Coat	Conc.	92%	Purge Rec

						VOC - UNC
Avg VOC (lb VOC/Gal)	Solids (lb/gal)	Overspray (%)	Capture	VOC Control	PM Control	lb/hr
0.17	4.04	0%	25%	0%	0%	4.11
-	-	0.2%	75%	99.4%	80.0%	12.33

SS.

						VOC - UNC
Avg VOC (lb VOC/Gal)		Overspray (%)	Capture	VOC Control	PM Control	lb/hr
0	0	0%	0%	0%	0%	0.00

						VOC - UNC
Avg VOC (lb VOC/Gal)	Solids (lb/gal)	Overspray (%)	Capture	VOC Control	PM Control	lb/hr
0.31	12.58	0.25%	13%	0%	70%	2.26
0.33	11.29	0.25%	5%	0%	70%	0.82
0.31	0.96	0.25%	6%	0%	70%	2.26
-	-	0.2%		98.8%	80.0%	64.25

						VOC - UNC
Avg VOC (lb VOC/Gal)	Solids (lb/gal)	Overspray (%)	*Capture	VOC Control	PM Control	lb/hr
3.59	6.64	37%	49%	0%	98.6%	38.28
5.25	3.43	70%	49%	0%	98.6%	0.50
-	-	-	0.3%	0%	0%	0.24
-	-	-	43%	99.5%	80.0%	34.15
-	-	-	8%	97.4%	80.0%	6.36

1.19	2.70	29%	56%	0%	98.6%	23.85
4.22	3.92	28%	56%	0%	98.6%	60.04
-	-	-	3%	0%	0%	1.94
-	-	-	22%	98.4%	80.0%	14.53
-	-	-	75%	98.4%	80.0%	49.43

							VOC - UNC
Avg VOC (lb VOC/Gal)	Solids (lb/gal)	Overspray (%)	Capture	VOC Control	PM Control		lb/hr
3.30	7.30	69%	100%	0%	0%		1.41
1.75	5.55	5%	100%	0%	0%		4.38

							VOC - UNC
Avg VOC (lb VOC/Gal)	Solids (lb/gal)	Overspray (%)	Capture	VOC Control	PM Control		lb/hr
7.03	0	0%	100%	0%	0%		9.86
			100%	0%	90%		0.00
0.66	0	0%	100%	0%	0%		2.04
4.98	0	0%	50%	100%	0%		17.88
6.56	0.00	0%	100%	0%	0%		0.17
-	-	-	25%	0%	0%		4.47
-	-	-	75%	98.4%	0%		13.41

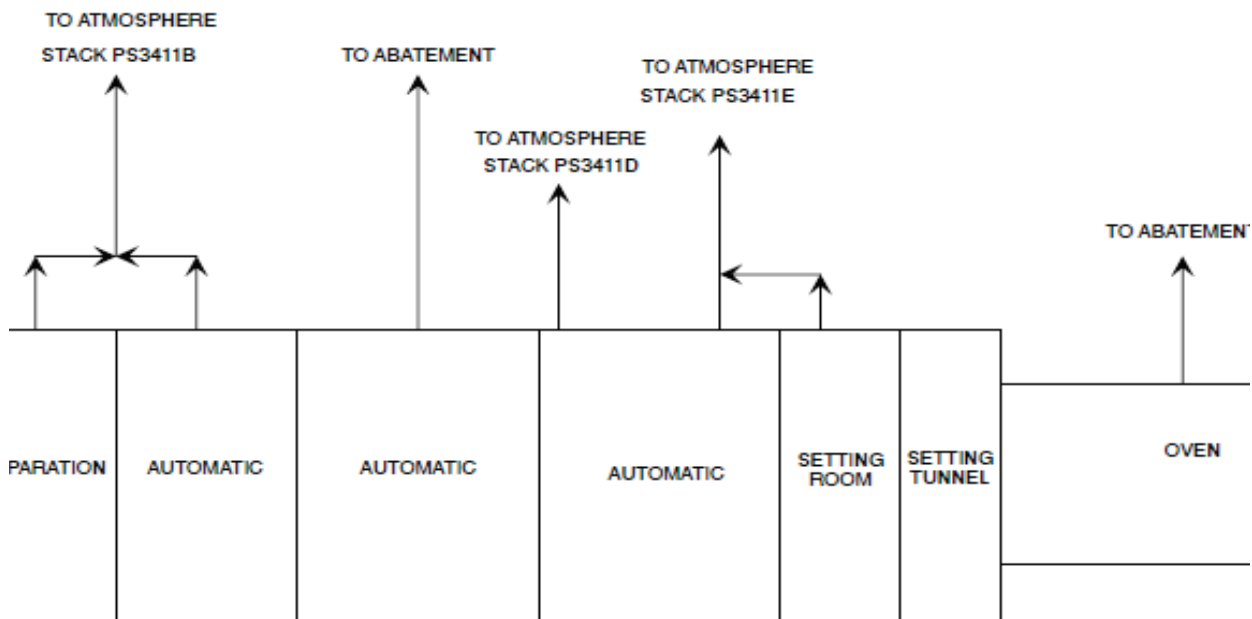


Figure 4.1 Primer paint system process flow diagram

75%
90%
95%
50%

	VOC -CNT		PM -UNC		PM -CNT	
TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
8.23	4.11	8.23	-	-	-	-
24.68	0.07	0.15	0.79	1.59	0.16	0.32

	VOC -CNT		PM -UNC		PM -CNT	
TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
0.00	0.00	0.00	0.42	0.84	0.42	0.84

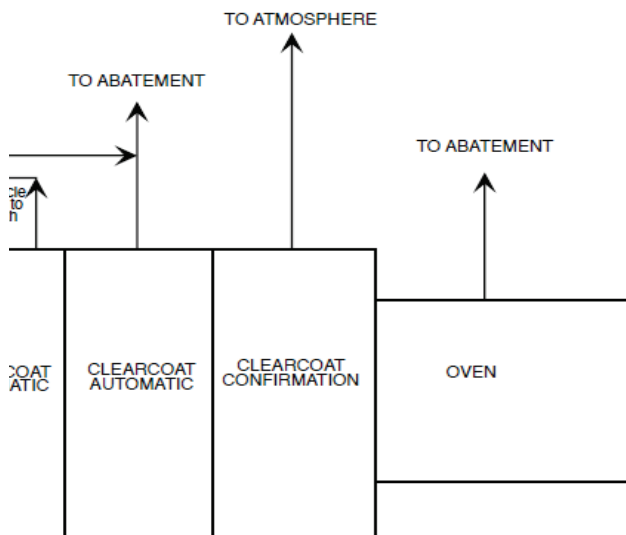
	VOC -CNT		PM -UNC		PM -CNT	
TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
4.52	2.26	4.52	0.23	0.46	0.07	0.14
1.64	0.82	1.64	0.07	0.14	0.02	0.04
4.53	2.26	4.53	0.02	0.04	0.01	0.01
128.54	0.77	1.54	2.80	5.60	0.56	1.12

	VOC -CNT		PM -UNC		PM -CNT	
TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
76.58	38.28	76.58	26.24	52.49	0.38	0.76
1.00	0.50	1.00	0.23	0.46	0.00	0.01
0.48	0.24	0.48	0.16	0.33	0.00	0.00
68.32	0.17	0.34	23.31	46.62	0.07	0.14
12.73	0.17	0.33	4.34	0.16	0.01	0.00

47.71	23.85	47.71	15.72	31.44	0.22	0.44
120.10	60.04	120.10	15.61	31.23	0.22	0.44
3.89	1.94	3.89	1.65	3.30	0.02	0.05
29.07	0.23	0.47	12.34	12.30	0.03	0.03
98.89	0.79	1.58	41.96	83.94	0.12	0.24

49%

58%



to and only one is tested, emissions from the basecoat

igram

TMMK Paint 2000 Could Have Accommodated

	Could Have
Vehicles/Hr	55
Vehicles/Year	229,000
Hrs/Year	5,600

	Description	Emission Point	Gallons/Veh
Electrodeposition System (F02)	Bath Hood Exhaust		1.85
	Oven Emissions	RTO	-

	Description	Emission Point	Gallons/Veh
Body Repair (F03)	Body Repair	Building	0

	Description	Emission Point	Gallons/Veh
Sealer Application (F04)	Sealer	Building	1.46
	Deadener	Building	1.13
	PVC	Building	5.73
	Oven Emissions	RTO	-

	Description	Emission Point	Gallons/Veh
Coating Application (F05)	Primer		0.44
	Soft Chip Primer		0.00
	Conc. Emissions		-
	Booth Emissions	RTO	-
	Oven Emissions	RTO	-

Coating Application (F07)	Basecoat		0.73
	Clearcoat		0.48
	Conc. Emissions		-
	Booth Emissions	RTO	-
	Oven Emissions	RTO	-

	Description	Emission Point	Gallons/Veh
Wax Coating (F11, F09)	Blackout Coating		0.01
	Wax Coating		0.05

	Description	Emission Point	Gallons/Veh
Offline Maintenance & Cleaning (F13)	Equipment Surface Cleaning		0.143
	Shot Blasting		0.000
	Line Purge - Water		0.058
	Line Purge - Solvent		0.283
	Solvent Application		0.001
	Conc. Emissions	-	
	Booth Emissions	-	

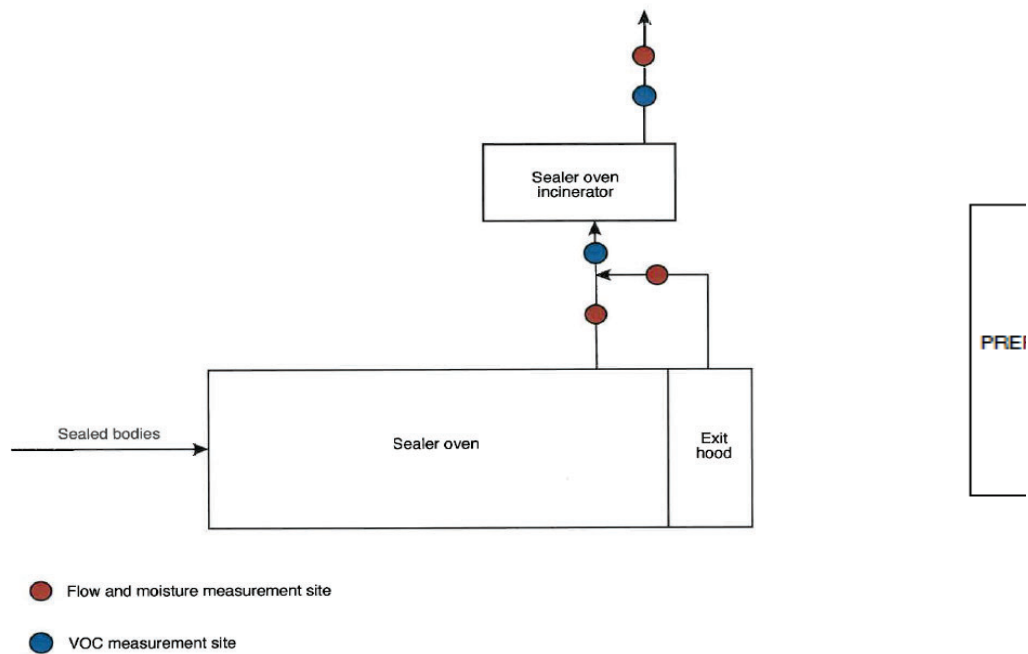


Figure 4.1 Sealer process flow diagram

Capacity
70
262,000
8760

Max Monthly Veh/Month	Aug-23 22,396
Veh/Yr	268,752

ED/Seal
Coat
Purge
Coat

							VOC - UNC	
Max VOC (lb VOC/Gal)	Solids (lb/gal)	Overspray (%)	Capture	VOC Control	PM Control		lb/hr	TPY
0.17	4.04	0%	25%	0%	0%		4.27	8.88
-	-	0.2%	75%	99.4%	80.0%		12.80	26.64

							VOC - UNC	
Max VOC (lb VOC/Gal)		Overspray (%)	Capture	VOC Control	PM Control		lb/hr	TPY
0	0	0%	0%	0%	0%		0.00	0.00

							VOC - UNC	
Max VOC (lb VOC/Gal)	Solids (lb/gal)	Overspray (%)	Capture	VOC Control	PM Control		lb/hr	TPY
0.31	12.58	0.25%	13%	0%	70%		3.13	6.51
0.33	11.74	0.25%	5%	0%	70%		1.04	2.16
0.32	7.26	0.25%	6%	0%	70%		6.44	13.40
-	-	0.2%		98.8%	80.0%		135.27	281.61

							VOC - UNC	
Max VOC (lb VOC/Gal)	Solids (lb/gal)	Overspray (%)	Capture	VOC Control	PM Control		lb/hr	TPY
3.59	7.46	37%	49%	0%	95%		42.15	87.74
5.25	3.43	70%	49%	0%	95%		0.52	1.08
-	-	-	0.3%	0%	95%		0.26	0.55
-	-	-	43%	99.5%	99.5%		37.57	78.22
-	-	-	8%	97.4%	97.4%		7.00	14.57

1.19	2.70	29%	56%	0%	98.6%		26.70	55.58
4.22	4.32	28%	56%	0%	98.6%		62.28	129.66
-	-	-	3%	0%	0%		2.06	4.29
-	-	-	22%	98.4%	80.0%		15.42	32.09
-	-	-	75%	98.4%	80.0%		52.44	109.16

							VOC - UNC	
Max VOC (lb VOC/Gal)	Solids (lb/gal)	Overspray (%)	Capture	VOC Control	PM Control		lb/hr	TPY
3.30	7.30	69%	100%	0%	0%		1.47	3.05
1.78	5.60	5%	100%	0%	0%		5.00	10.42

							VOC - UNC	
Max VOC (lb VOC/Gal)	Solids (lb/gal)	Overspray (%)	Capture	VOC Control	PM Control		lb/hr	TPY
7.03	0.00	0%	100%	0%	0%		55.16	114.83
0	0.00		100%	0%	90%		0.00	0.00
1.45	0.00	0%	100%	0%	0%		4.63	9.64
5.57	0.00	0%	50%	100%	0%		43.30	90.15
6.56	0.00	0%	100%	0%	0%		0.21	0.45
-	-	-	25%	0%	0%		10.83	22.54
-	-	-	75%	98.4%	0%		32.48	67.61

1170.84

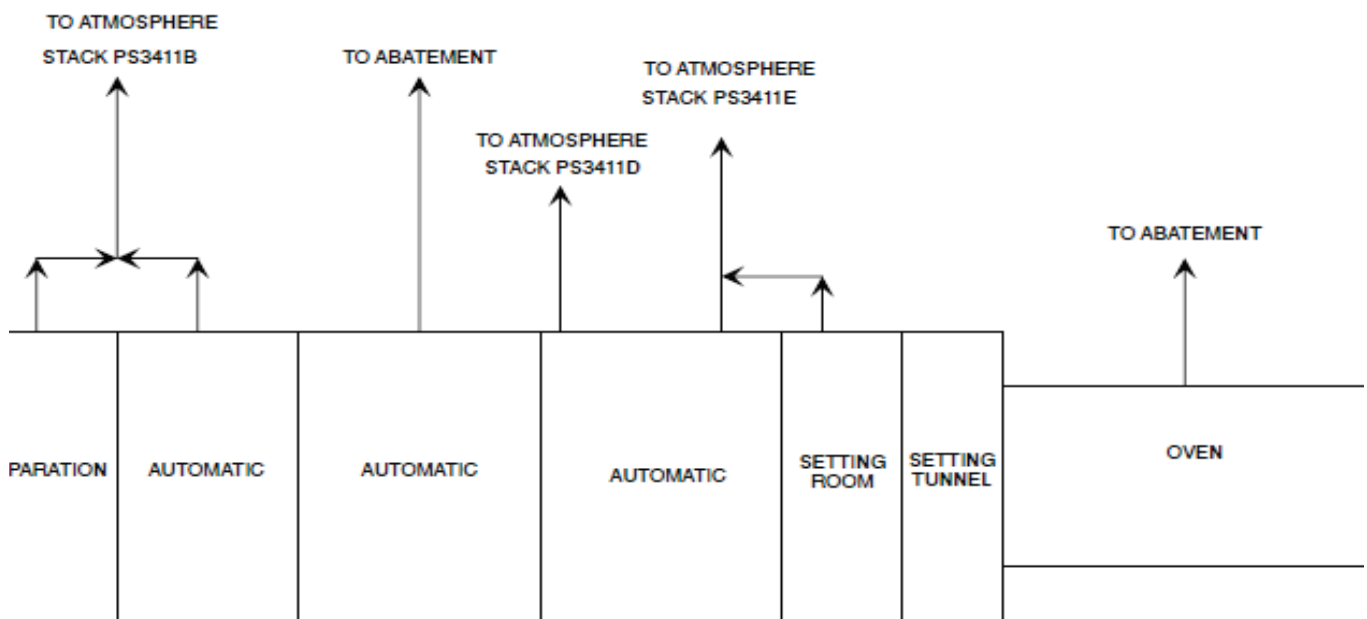


Figure 4.1 Primer paint system process flow diagram

RTO Control	99%	ED Carry	75%
RTO Control	98%	Seal Carry	90%
Solvent Rec	50%	Dry Booth	95%
Conc.	92%	Purge Rec	50%

VOC -CNT		PM -UNC		PM -CNT	
lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
4.27	8.88	-	-	-	-
0.08	0.16	0.82	1.71	0.16	0.34

NSPS	Solid vol%	Solids Applied (L)
Prime	0.337	540,632

VOC -CNT		PM -UNC		PM -CNT	
lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
0.00	0.00	0.42	0.87	0.42	0.87

VOC -CNT		PM -UNC		PM -CNT	
lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
3.13	6.51	0.32	0.67	0.10	0.20
1.04	2.16	0.09	0.19	0.03	0.06
6.44	13.40	0.37	0.76	0.11	0.23
1.62	3.38	8.06	16.78	1.61	3.36

25.44 3.84

VOC -CNT		PM -UNC		PM -CNT	
lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
42.15	87.74	32.41	67.48	1.62	3.37
0.52	1.08	0.24	0.49	0.01	0.02
0.26	0.55	0.20	0.42	0.00	0.00
0.19	0.39	28.75	59.85	0.01	0.01
0.18	0.38	5.36	0.27	0.01	0.00

NSPS	Solid vol%	Solids Applied (L)
Guide	0.531	127,064
Guide	0.323	310

26.70	55.58	17.59	36.63	0.25	0.51
62.28	129.66	17.85	37.16	0.25	0.52
2.06	4.29	1.87	3.89	0.03	0.05
0.25	0.51	13.96	14.63	0.04	0.04
0.84	1.75	47.47	98.83	0.13	0.28

Top	0.219	98,201
Top	0.474	141,620

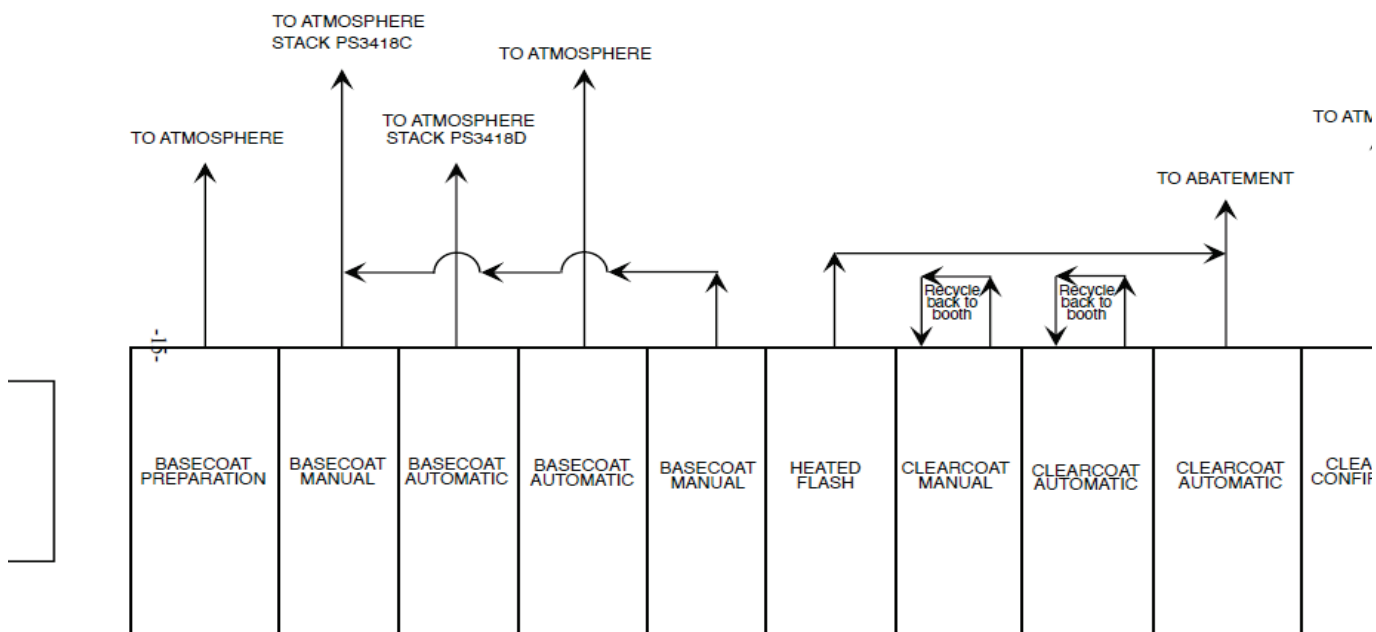
VOC -CNT		PM -UNC		PM -CNT	
lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
1.47	3.05	2.24	4.66	2.24	4.66
5.00	10.42	0.79	1.64	0.79	1.64

NSPS	Solid vol%	Solids Applied (L)
Top	0.2392	519

VOC -CNT		PM -UNC		PM -CNT	
lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
55.16	114.83	0.00	0.00	0.00	0.00
0.00	0.00	0.99	2.07	0.10	0.21
4.63	9.64	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00
0.21	0.45	0.00	0.00	0.00	0.00
10.83	22.54	0.00	0.00	0.00	0.00
0.52	1.08	0.00	0.00	0.00	0.00

478.43

59%



NOTE: The numbered stacks were tested for PM. Since there are two stacks from basecoat auto and only one is tested, en auto stack are multiplied by two when determining total booth emissions.

Figure 4.3 Topcoat B paint system process flow diagram

UNC VOC (Kg)	CNT VOC (kg)	
32,218	8,199	25%

BACT	Limit
0.08	0.19

NSPS	LIMIT
0.015	0.17

BACT	Limit
0.11	1.15

UNC VOC (Kg)	CNT VOC (kg)	
163,246	82,463	51%
2,013	1,017	51%

PM-CNT
TPY
6.92
0.05

NSPS	LIMIT
0.655	1.4

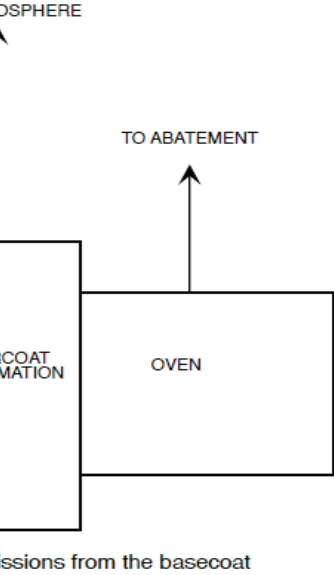
182 92.02

90,044	50,460	56%
210,050	117,711	56%

13.08
13.27

NSPS	LIMIT
0.711	1.47

UNC VOC		
(Kg)	CNT VOC (kg)	
2,771	2,771	100%



TMMK Paint 2500 Projected Actual

	Actual
Vehicles/Hr	55
Vehicles/Year	229,000
Hrs/Year	5600

	Description	Emission Point	Gallons/Veh
Electrodeposition System (F02R)	Bath Hood Exhaust	T-06	1.95
	Oven Emissions	RTO-T2-ED	-

*Oven emits smoke during curing. Captured in oven exh

	Description	Emission Point	Gallons/Veh
Body Repair (F03R)	Body Repair	Building	0

*PM control of 70% for activity inside building.

	Description	Emission Point	Gallons/Veh
Sealer Application (F04R)	Sealer	Building	1.22
	Deadener	Building	1.05
	PVC	Building	1.81
	Oven Emissions	RTO-T2-ED	-

*PM control of 70% for activity inside building.

	Description	Emission Point	Gallons/Veh
Coating Application (F05R)	Primer	RTO-T2-OV, RTO-	0.53
	Soft Chip Primer	RTO-T2-OV, RTO-	0.03
	Basecoat	RTO-T2-OV, RTO-	0.98
	Clearcoat	RTO-T2-OV, RTO-	0.46
	Conc. Emissions	T-22, T-32	-
	Booth/Oven Emissions	RTO-T2-B, RTO-T-	-
	Repair Paint	Building	0.0038

*Minimum carryover for Booth to Oven for conservative

**Dry Filter Controls re-circulate booth air and are to er

	Description	Emission Point	Gallons/Veh

Coating Application (F05R)	Blackout Coating	T-41	0.040
	Wax Coating	T-41	0.150

**Dry Filter Controls re-circulate booth air and are to er

Maintenance & Cleaning (F13R)	Description	Emission Point	Gallons/Veh
	Equipment Surface Cle	T-05, T-15, T-52	0.042
	Shot Blasting	T-52	
	Line Purge - Water	RTO-T2-B, T-22, T	0.100
	Line Purge - Solvent	RTO-T2-B, T-22, T	0.160
	Solvent Application	Building	0.010
	Conc. Emissions	T-22, T-32	-
	Booth Emissions	RTO-T2-B	-

Capacity
70
262,000
8760

ED/Seal	RTO Control	95%	ED Carry	75%
Coat	RTO Control	95%	Seal Carry	90%
Purge	Solvent Recov	0%	Dry Booth	95%
Coat	Conc.	85%	Purge Rec	50%

							VOC - UNC	
Max VOC (lb VOC/Gal)	Solids (lb/gal)	Overspray (%)	Capture	VOC Control	PM Control		lb/hr	TPY
0.17	4.04	0%	25%	0%	0%		4.48	9.33
-	-	0.2%	75%	80%	80%		13.45	27.99

haust and destroyed in RTO.

							VOC - UNC	
Max VOC (lb VOC/Gal)		Overspray (%)	Capture	VOC Control	PM Control		lb/hr	TPY
0		0	0%	0%	0%	70%	0.00	0.00

							VOC - UNC	
Max VOC (lb VOC/Gal)	Solids (lb/gal)	Overspray (%)	Capture	VOC Control	PM Control		lb/hr	TPY
0.34	12.58	0.25%	10%	0%	70%		2.29	4.77
0.30	11.74	0.25%	10%	0%	70%		1.71	3.56
0.31	7.26	0.25%	10%	0%	70%		3.08	6.41
-	-	0.2%	90%	80%	80%		63.71	132.63

							VOC - UNC	
Max VOC (lb VOC/Gal)	Solids (lb/gal)	Overspray (%)	*Capture	VOC Control	PM Control		lb/hr	TPY
1.12	7.46	37%	0%	0%	95%		0.00	0.00
5.25	3.43	70%	0%	0%	95%		0.00	0.00
1.31	2.70	29%	0%	0%	95%		0.00	0.00
3.83	4.32	28%	0%	0%	95%		0.00	0.00
-	-	-	15%	0%	0%		31.35	65.27
-	-	-	85%	80%	80%		177.66	369.85
5.25	7.46	70%	100%	0%	0%		1.40	2.63

e estimate. Actual emissions will also be partially routed to the Oven RTO.

asure even paint application for Quality. Proposed inherent per EPA criteria.

							VOC - UNC	
Max VOC (lb VOC/Gal)	Solids (lb/gal)	Overspray (%)	Capture	VOC Control	PM Control		lb/hr	TPY

0.64	0.17	70%	100%	0%	95%	1.40	2.92
0.45	0.48	5%	100%	0%	0%	3.69	7.67

asure even paint application for Quality. Proposed inherent per EPA criteria.

							VOC - UNC	
Max VOC (lb VOC/Gal)	Solids (lb/gal)	Overspray (%)	Capture	VOC Control	PM Control		lb/hr	TPY
5.14	0	0%	100%	0%	0%		11.87	24.72
			100%	0%	90%		0.00	0.00
1.45	0	0%	0%	0%	0%		0.00	0.00
5.57	0	0%	0%	100%	0%		0.00	0.00
6.56	0.00	0%	100%	0%	0%		3.61	7.51
-	-	-	15%	0%	0%		8.55	17.80
-	-	-	85%	95%	0%		48.46	100.88

783.93

VOC -CNT		PM -UNC		PM -CNT	
lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
4.48	9.33	-	-	-	-
2.69	5.60	0.86	1.80	0.173	0.36

NSPS	Solid vol%
Prime	0.337

VOC -CNT		PM -UNC		PM -CNT	
lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
0.00	0.00	0.42	0.87	0.13	0.26

VOC -CNT		PM -UNC		PM -CNT	
lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
2.29	4.77	0.21	0.44	0.06	0.13
1.71	3.56	0.17	0.35	0.05	0.11
3.08	6.41	0.18	0.38	0.05	0.11
12.74	26.53	4.50	9.36	0.90	1.87

41.26

VOC -CNT		PM -UNC		PM -CNT	
lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00
31.35	65.27	23.59	49.11	1.18	2.46
35.53	73.97	133.68	278.29	1.34	2.78
1.40	2.63	1.10	2.28	1.10	2.28

NSPS	Solid vol%
Guide	0.531
Guide	0.323
Top	0.219
Top	0.474

VOC -CNT		PM -UNC		PM -CNT	
lb/hr	TPY	lb/hr	TPY	lb/hr	TPY

NSPS	Solid vol%

1.40	2.92	0.26	0.54	0.01	0.03
3.69	7.67	0.20	0.41	0.20	0.41

Top	0.2392

VOC -CNT		PM -UNC		PM -CNT	
lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
11.87	24.72	0.00	0.00	0.00	0.00
0.00	0.00	0.99	2.07	0.10	0.21
0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00
3.61	7.51	0.00	0.00	0.00	0.00
8.55	17.80	0.00	0.00	0.00	0.00
2.42	5.04	0.00	0.00	0.00	0.00

263.72
66%

Solids	UNC VOC	CNT VOC	
Applied (L)	(Kg)	(kg)	
568,125	33,856	13,542	40%

2.22

Solids	UNC VOC	CNT VOC		PM CNT
Applied (L)	(Kg)	(kg)		
153,695	61,807	19,778	32%	2.68
2,517	16,363	5,236	32%	0.13
131,710	132,942	42,541	32%	1.40
136,668	183,615	58,757	32%	1.02

Solids	UNC VOC	CNT VOC
Applied (L)	(Kg)	(kg)

2,478

2,645

2,645

100%

BACT

	veh/hr	veh/year	Hrs/Year	Paint	#2	VOC (lb/veh)
Line 2	70	262,000	8760	F02	ED	0.19
				F04	Sealer	1.15
				F05	Primer	2.73
				F06	Wet	0.13
				F07	Topcoat	3.86
				F09	Blackout	0.55
				F11	Wax	0.27
				F12	Repair	
				F13	Non-Proce	3.09
				F18	General	

PTE (w/BACT)

				VOC		PM
				lb/hr	TPY	lb/hr
F01	Phosphate			0.00	0.00	0.00
F02	ED			13.30	24.89	0.22
F03	Metal Finishing			0.00	0	0.42
F04	Sealer			80.50	150.65	0.00
F05	Primer			191.10	357.63	1.91
F06	Wet Sand			9.10	17.03	0.53
F07	Topcoat			270.20	505.66	7.42
F08	Inspection			0.00	0.00	0.00
F09	Blackout			38.50	72.05	0.22
F10	Moon Roof (Insg)			0.00	0.00	0.00
F11	Wax			18.90	35.37	0.04
F12	Repair Deck			1.03	1.94	0.14
F13	Non Process Clean			216.3	404.79	0.18
F14	Material Supply			0.00	0.00	0.00
F15	Wastewater			0.00	0.00	0.01
F16	Robot Teaching			0.00	0.00	0.00
F17	2-Tone Masking			0.00	0.00	0.00
F18	Exhaust			0.00	0.00	1.00
Sum	Paint #2			838.93	1570.01	12.09

PM (lb/hr)
0.22
1.91
0.53
7.42
0.22
0.18
1.00
1.00

Projected

VOC (lb/veh)	PM (lb/hr)
0.130	0.173
0.360	
0.241	2.81
N/A	N/A
0.975	2.43
0.025	0.01
0.067	
	N/A
0.481	0.21
	N/A

Accomodated

VOC (lb/veh)	PM (lb/hr)
0.079	0.16
0.222	
0.804	3.41
N/A	N/A
1.68	1.41
0.000	4.66
0.000	
	N/A
1.087	0.21
	N/A

TPY

0.00
0.96
1.84
0.00
8.37
2.32
32.50
0.00
0.96
0.00
0.18
0.60
0.79
0.00
0.04
0.00
0.00
4.38

52.94

		UNC	CNT	UNC
		L Solids	Kgs VOC	Kgs VOC/L Sol
Primecoat	F02R	568,125	33,856	13,542
Guidecoat	F05R	153,695	78,169	25,014
Topcoat	F05R, F09R	270,857	319,203	103,944

CNT Kgs VOC/L Sol	MMa Limit	MM Limit	
0.024	0.027	0.17	88%
0.163	0.35	1.4	47%
0.384	0.42	1.47	91%

183,000 veh/yr

2024 Estimates from Paint 1 Reborn

EU	Desc.	Chemical	Lb/Year	EU
E01R	Phos	Hydrogen Flouride	2000	F01HAPS
E04R	Damp	Glycol Ethers	2600	
		Cumene	100	
	UBC	124 Trimethylbenzene	440	
		Acrylonitrile	5	
		Benzene	5	
		Cumene	50	
		Vinyl Acetate	500	
		Xylene	50	
E05R	Primer	Cumene	5	
		124 Trimethylbenzene	5	
		135 Trimethylbenzene	5	
		Acrylic acid	5	
		Formaldehyde	5	
		Xylene	5	
		Ethylbenzene	5	
		Toluene	10	
		Ethylbenzene	25	
		Formaldehyde	25	
		Glycol Ethers	3500	
		Methanol	5	
		Triethylamine	250	
		Xylene	250	
	Soft Chip	124 Trimethylbenzene	20	
		Ethylbenzene	150	
		Methyl Isobutyl Ketone	1500	
		Xylene	150	
	Base	124 Trimethylbenzene	10	
E07R		Ethyl acrylate	10	
		Formaldehyde	1250	
		Glycol Ethers	3500	
	Top	123 Trimethylbenzene	150	
		124 Trimethylbenzene	2000	
		135 Trimethylbenzene	750	
		Cumene	100	
		Methanol	200	
		Methyl Isobutyl Ketone	250	
		Xylene	150	
	E13R	124 Trimethylbenzene	750	
		Cumene	15	
		Toluene	250	

Glycol Ethers	7500
Glycol Ethers	750
Ethyl Toluene	5

Chemical	Lbs/Yr	Lbs/veh
123 Trimethylbenzene	150	0.0012
124 Trimethylbenzene	3,225	0.0264
135 Trimethylbenzene	755	0.0062
Acrylic acid	5	0.0000
Acrylonitrile	5	0.0000
Benzene	5	0.0000
Cumene	270	0.0022
Ethyl acrylate	10	0.0001
Ethyl Toluene	5	0.0000
Ethylbenzene	180	0.0015
Formaldehyde	1,280	0.0105
Glycol Ethers	17,850	0.1463
Hydrogen Flouride	2,000	0.0164
Methanol	205	0.0017
Methyl Isobutyl Ketone	1,750	0.0143
Toluene	260	0.0021
Triethylamine	250	0.0020
Vinyl Acetate	500	0.0041
Xylene	605	0.0050
	-	-
	-	-

Sum	29,310	0.240

27.51

TABLE OF CONTENTS

SECTION	ISSUANCE	PAGE
A. PERMIT AUTHORIZATION	Revision 1	1
B. EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS	Revision 4	2
C. INSIGNIFICANT ACTIVITIES	Revision 1	234
D. SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS	Renewal	236
E. SOURCE CONTROL EQUIPMENT REQUIREMENTS	Renewal	240
F. MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS	Renewal	272
G. GENERAL PROVISIONS	Revision 4	275
H. ALTERNATE OPERATING SCENARIOS	Renewal	282
I. COMPLIANCE SCHEDULE	Renewal	282

Permit	Permit Type	Activity #	Complete Date	Issuance Date	Summary of Action
V-20-026	Renewal	APE20200001	9/22/2020	5/23/2021	Permit Renewal
V-20-026 R1	Minor Revision	APE20220001	3/24/2022	7/1/2022	Addition of RT12 RTO to control emissions from G22 and G26 Booths, moving replaced Concentrators and Oxidizers to an alternate operating scenario. Replacement of C08 and C09.

V-20-026 R2	Minor Revision	APE20220004	11/1/2022	2/20/2023	Addition of Soft Chip to E05R, Replacement at F05, New Tanks H11, Replacements at A09, H01-19 Machining Equipment, ED Bath replacement E02, Weld Mods C06 and C17, Paint 1 Mods E02-11
V-20-026 R3	Minor Revision	APE20240001	6/10/2024	3/28/2025	Addition of EV Battery Vehicle modifications to Line 1, Two 35 HP Emergency Generators at D07, and Replacement of Spray Applicators at F04.
V-20-026 R4	Significant Revision	APE20250005	TBD	TBD	Addition of Paint Line #2 Reborn Project (Revisions and Modifications)

SECTION A - PERMIT AUTHORIZATION

Pursuant to a duly submitted application the Kentucky Energy and Environment Cabinet (Cabinet) hereby authorizes the operation of the equipment described herein in accordance with the terms and conditions of this permit. This permit was issued under the provisions of Kentucky Revised Statutes (KRS) Chapter 224 and regulations promulgated pursuant thereto.

The permittee shall not construct, reconstruct, or modify any affected facilities without first submitting a complete application and receiving a permit for the planned activity from the permitting authority, except as provided in this permit or in 401 KAR 52:020, Title V Permits.

Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by the Cabinet or any other federal, state, or local agency.

Toyota Motor Manufacturing, Kentucky, Incorporated (TMMK), Source ID # 21-209-00030, Agency Interest: 7998 and Toyota Motor Engineering & Manufacturing North America, Inc. (TEMA), Source ID # 21-209-00072, Agency Interest: 126184, are located on contiguous properties, belong to the same industrial grouping, and are under common control. By the definition of major stationary source in 401 KAR 51:001, TMMK and TEMA constitute one major source for PSD purpose. By the definition of major source in 401 KAR 52:001 for Title V program, they constitute one major source for non-hazardous regulated air pollutants and hazardous air pollutants, therefore, both facilities' emissions should be aggregated for the purpose of Title V, and PSD applicability determination.

**SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE
REGULATIONS, AND OPERATING CONDITIONS**

ASSEMBLY#1

ASSEMBLY#2

ASSEMBLY#3

PRODUCTION CONTROL

QUALITY CONTROL

TOYOTA LOGISTICS

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Description and Applicable Regulations:

401 KAR 59:010 and 401 KAR 51:017 apply to all affected facilities listed in the following table, unless otherwise stated.

ASSEMBLY #1, 300 BUILDING, Operations include the following processes:

EMISSION UNIT	OPERATION	CONSTRUCTION COMMENCED	CONTROL EQUIPMENT	OTHER APPLICABLE REGULATIONS
A01	Source Reassigned to Emission Unit A02	July 17, 1986	None	
A02	Miscellaneous Wax Coating Operations, including hinge and hub wax.	July 17, 1986	None	401 KAR 63:002
A03	Glass Installation, including glass primer, body primer and window sealer.	July 17, 1986 Modification Projected June 2025	None	401 KAR 63:002
A04	Miscellaneous Adhesive Applications	July 17, 1986	None	401 KAR 63:002
A05	Fluid Filling Operations, including windshield cleaner, brake fluid, antifreeze, steering fluid, transmission fluid, refrigerants, and fuel. (Insignificant Activities List)	July 17, 1986 December 2015 July 2022 Modification Projected June 2025	None	
A06	Non-Process Cleaning Activities	July 17, 1986	None	401 KAR 59:185 401 KAR 63:002
A07	Process Cleaning Activities, including solvent wiping.	July 17, 1986	None	401 KAR 63:002
A08	Process Lubrication, including hose installation. (Insignificant Activities List)	July 17, 1986	None	
A09	Testing Operations, including Brake Tester, Drum Tester, Final Line, Off-line Vehicle Inspection/Testing, Tester Waiter, Toe Tester	July 17, 1986 Modified December 20, 2022 Modification Projected July 2025	None	
A10	Paint Hospital, including Sanding and Buffing	July 17, 1986		401 KAR 63:002
		July 17, 1986	None	

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EMISSION UNIT	OPERATION	CONSTRUCTION COMMENCED	CONTROL EQUIPMENT	OTHER APPLICABLE REGULATIONS
	Painting Deck	July 17, 1986	None	
	ED Repair	Construction Projected July 2025	None	
A11	Raw Material Supply	July 17, 1986	None	401 KAR 63:002
A12	Miscellaneous Assembly Operations, not otherwise listed (e.g., minor repairs, chassis assembly, trim installation, engine installation...). (Insignificant Activities List)	July 17, 1986	None	
A13	General Exhausts	July 17, 1986	None	
A14	Battery Assembly cleaner use and thermal interface application	October, 2024	None	401 KAR 63:002 *401 KAR 51:017 and 401 KAR 59:010 do not apply to A14

ASSEMBLY #2, 3000 BUILDING, Operations include the following processes:

EMISSION UNIT	OPERATION	CONSTRUCTION COMMENCED	CONTROL EQUIPMENT	OTHER APPLICABLE REGULATIONS
B01	Source Reassigned to Emission Unit B02	N/A		
B02	Miscellaneous Wax Coating Operations, including hinge and hub wax.	March 22, 1991	None	401 KAR 63:002
B03	Glass Installation, including glass primer, body primer and window sealer.	March 22, 1991, April 2019	None	401 KAR 63:002
B04	Miscellaneous Adhesive Applications	March 22, 1991	None	401 KAR 63:002
B05	Fluid Filling Operations, including windshield cleaner, brake fluid, antifreeze, steering fluid, transmission fluid, refrigerants, and fuel. (Insignificant Activities List)	March 22, 1991 December 2015	None	
B06	Non-Process Cleaning Activities	March 22, 1991	None	401 KAR 59:185 401 KAR 63:002
B07	Process Cleaning Activities, including solvent wiping	March 22, 1991	None	401 KAR 63:002

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EMISSION UNIT	OPERATION	CONSTRUCTION COMMENCED	CONTROL EQUIPMENT	OTHER APPLICABLE REGULATIONS
B08	Process Lubrication, including hose installation. (Insignificant Activities List)	March 22, 1991	None	
B09	Testing Operations, including Line Off, Functional Inspection, Vibr. Toe and Strg. Test, Roll Test, Brake and Flutter test, Em. Test and Ubody Test	March 22, 1991	None	
B10	Paint Hospital, including: Sanding and Buffing Painting Deck	March 22, 1991	None	401 KAR 63:002
B11	Raw Material Supply / Storage	March 22, 1991	None	
B12	Miscellaneous Assembly Operations, not otherwise listed (e.g., minor repairs, chassis assembly, trim installation, engine installation...). (Insignificant Activities List)	March 22, 1991	None	
B13	General Exhaust	March 22, 1991	None	

ASSEMBLY #3, 3000 BUILDING, Operations include the following processes:

EMISSION UNIT	OPERATION	CONSTRUCTION COMMENCED	CONTROL EQUIPMENT	OTHER APPLICABLE REGULATIONS
M01	Miscellaneous Wax Coating Operations, including underbody, engine, and hub wax.	March 2014	None	401 KAR 63:002
M02	Glass Installation, including glass primer, body primer and window sealer.	March 2014	None	401 KAR 63:002
M03	Fluid Filling Operations, including windshield cleaner, brake fluid, antifreeze, steering fluid, transmission fluid, refrigerants, and fuel.	March 2014	None	
M04	Testing Operations, including brake tester, drum tester, final line, off-line vehicle inspection/testing, tester waiter, toe tester.	March 2014	None	
M05	Miscellaneous Process Cleaners	March 2014	None	401 KAR 63:002
M06	Miscellaneous Adhesive Applications	March 2014	None	401 KAR 63:002

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EMISSION UNIT	OPERATION	CONSTRUCTION COMMENCED	CONTROL EQUIPMENT	OTHER APPLICABLE REGULATIONS
M07	Non-Process Cleaning Activities	March 2014	None	401 KAR 59:185 401 KAR 63:002
M08	Process Lubrication, including hose installation.	March 2014	None	
M09	Raw Material Supply / Storage	March 2014	None	401 KAR 63:002

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

PRODUCTION CONTROL OPERATIONS include the following processes:

EMISSION UNIT	OPERATION	CONSTRUCTION COMMENCED	CONTROL EQUIPMENT	OTHER APPLICABLE REGULATIONS
K01	Dock Unloading Areas (Insignificant Activities List)	July 17, 1986	None	
K02	Parts Conveyance (Insignificant Activities List)	July 17, 1986	None	
K03	Shipping Preparation (Insignificant Activities List)	July 17, 1986	None	
K04	Fork Truck Repair Painting (Insignificant Activities List)	July 17, 1986	None	
K05	Cross Dock (Insignificant Activities List)	Feb 2004	None	
K06	Battery Charging Stations (Insignificant Activities List)	July 17, 1986	None	
K07	Non-Process Cleaning Activities	July 17, 1986	None	401 KAR 59:185

QUALITY CONTROL OPERATIONS include the following processes:

EMISSION UNIT	OPERATION	CONSTRUCTION COMMENCED	CONTROL EQUIPMENT	OTHER APPLICABLE REGULATIONS
J01	Audit Lab (Insignificant Activities List)	July 17, 1986	None	
J02	Raw Material Test Lab (Insignificant Activities List)	July 17, 1986	None	
J03	Test Track Operations (Insignificant Activities List)	July 17, 1986	None	
J04	Non-Process Cleaning Activities	July 17, 1986	None	401 KAR 59:185

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

LOGISTICS OPERATIONS include the following processes:

EMISSION UNIT	OPERATION	CONSTRUCTION COMMENCED	CONTROL EQUIPMENT	OTHER APPLICABLE REGULATIONS
L01	Repair Painting	July 17, 1986	None	401 KAR 63:002
L02	Accessory Installation (Insignificant Activities List)	July 17, 1986	None	
L03	Shipping Preparation (Insignificant Activities List)	July 17, 1986	None	
L04	Non-Process Cleaning Activities	July 17, 1986	None	401 KAR 59:185 401 KAR 63:002

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

APPLICABLE REGULATIONS:

401 KAR 51:017, *Prevention of significant deterioration of air quality*

401 KAR 59:010, *New Process Operations*

401 KAR 59:185, *New solvent metal cleaning equipment*

401 KAR 63:002 Section 2(4)(ooo), 40 C.F.R. 63.3080 to 63.3176, Tables 1 through 4, and Appendix A (Subpart IIII), National Emission Standards for Hazardous Air Pollutants: Surface Coating of Automobiles and Light-Duty Trucks (Refer to Section B Group Requirements)

1. Operating Limitations:

- a. The usage rates of materials used in all affected facilities shall be limited so as not to exceed the emission limitations in Section B.2. Wherever practicable, the permittee shall utilize work practices to minimize emissions from non-process cleaning activities. Refer to Section B Group Requirements for requirements specific to 40 CFR 63 Subpart IIII.

Specific Operating Limitations for Cold Cleaner in Emission Unit A06, B06, M07, K07, J04, L04:

- b. The permittee shall comply with control equipment and operating requirements specified in 401 KAR 59:185, Section 4 (1) & (2). Refer to Section B Group Requirements.

2. Emission Limitations:

- a. **401 KAR 59:010, Section 3 (1):** The opacity of visible emissions from each stack shall not equal or exceed 20 percent.

Compliance Demonstration Method:

Compliance with the opacity standard is assumed given the processes and activities associated with Assembly #1, Assembly #2, Production Control, Quality Control, Toyota Logistics and Assembly #3.

- b. **401 KAR 59:010, Section 3 (2):** Emission of particulate matter from a control device or stack of any affected facility up to a process rate of 1000 lbs/hr shall not exceed **2.34** lbs/hr.

Compliance Demonstration Method:

The total process weight, "P" as defined in 401 KAR 59:010 must reflect a period that covers a complete operation or an integral number of cycles, divided by the hours of actual process operation during such a period. This period shall not exceed 24 hours. In the case where there are no periodic monitoring requirements associated with the affected facility, continuous compliance shall be assumed as long as there are no process or operational changes. The determination of the emission rate "E" in pounds per hour for compliance with 401 KAR 59:010 may also be used to demonstrate compliance with 401 KAR 51:017, except that the period allowed for the determination of "P" shall be one month.

The source is considered to be in compliance when the emission units under Production Control, Quality Control, Toyota Logistics and Assembly #3 are properly operated and maintained.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- c. **401 KAR 51:017:** Emissions of VOC and PM shall not exceed the following, as calculated on a monthly basis:

EMISSION UNIT	OPERATION	VOC LIMIT (lb/job)	PM LIMIT (lb/hr)
A02	Misc Wax Coating	0.28	N/A
A03	Glass Installation	0.11	N/A
A06	Non-Process Cleaning Activities	0.081	N/A
A09	Testing Operations	N/A	0.85
A13	General Exhaust	N/A	1.05
B02	Miscellaneous Wax Coating	0.19	N/A
B03	Glass Installation	0.11	N/A
B06	Non-Process Cleaning Activities	0.081	N/A
B09	Testing Operations	N/A	0.79
B13	General Exhaust	N/A	1.08
M02	Glass Installation	0.17	N/A
M05	Miscellaneous Process Cleaners	0.316	N/A

Compliance Demonstration Method:

$$VOC\ Value = \frac{\sum U_i * V_i * E_i * (1 - C_i * F_i)}{P}$$

U_i = Usage of material “i”,

V_i = Volatile organic compound (VOC) content,

E_i = VOC Emission Factor,

F_i = Control efficiency,

C_i = Collection efficiency,

P = Production rate (number of vehicles produced)

PM Value = Measurement, when prescribed by periodic monitoring requirements table.

Otherwise PM shall be calculated as follows:

$$PM\ Value = \sum \frac{P}{P_m} * E_i, \text{ or equivalent methods approved by the Division}$$

P = Average shop production throughput,

P_m = Maximum vehicle production rate

E_i = PM Emission Factor (controlled) for each stack “i”.

See Compliance Demonstration Method for 401 KAR 59:010, in this Section.

- d. **401 KAR 51:017:** Emissions of VOC shall not exceed the following, based on a 12-month rolling total:

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EMISSION UNIT	VOC LIMIT (tons/year)
Assembly #1	92.4
Assembly #2	61.3
Production Control	5
Quality Control	5
Toyota Logistics	5
Assembly #3	23

Compliance Demonstration Method:

$$VOC\ Value = \sum U_i * V_i * E_i * (1 - C_i * F_i)$$

U_i = Usage of material “i”,

V_i = Volatile organic compound (VOC) content,

E_i = VOC Emission Factor,

F_i = Control efficiency,

C_i = Collection efficiency.

- e. **401 KAR 51:017:** PM emissions from Assembly #1 Operations and Assembly #2 Operations shall not exceed 5.26 tons and 8.76 tons per year respectively, based on a 12-month rolling total.

Compliance Demonstration Method:

$$PM\ Value = \sum P * E_i$$

P = Average shop production throughput

E_i = PM Emission Factor (controlled) for “i”,

See Compliance Demonstration Method for 401 KAR 59:010, in this Section.

- f. **40 CFR 63 Subpart IIII, Section 63.3091 - Emission Limits for Existing Sources**

EMISSION UNITS	NESHAP AFFECTED OPERATIONS	EMISSION LIMIT
A02, B02, M01	Miscellaneous Wax Coating Operations	Refer to Section B Group Requirements for Group Emission Limits.
A03, B03, M02	Glass Bonding Primer	
A03, B03, M02	Glass Bonding Adhesive	
A04, A14, B04, M06	Adhesives and sealers other than glass bonding adhesive	
A06, B06, M07	Non -Process Cleaning*	
A07, B07, M05	Process Cleaning*	
A10, B10	Final Repair	

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

L01	Final Repair	Refer to Section B Group Requirements for Group Emission Limits.
L04	Non-Process Cleaning Activities	

* Applicable only to organic-HAP-containing cleaning materials used in coating operations for which emission limits are established under 40 CFR 63 Section 63.3901(a) through (d).

Compliance Demonstration Method:

Refer to Section B Group Requirements.

g. Synthetic Minor Limit for PM_{2.5}, NO_x and CO_{2e} emissions. See Section D.4.

3. **Testing Requirements:**

Testing shall be conducted at such times as may be requested by the Cabinet [401 KAR 50:045, Section 1].

4. **Specific Monitoring Requirements:**

The permittee shall monitor raw material usages as necessary to demonstrate compliance with all requirements of this permit. Refer to Section B Group Requirements for requirements specific to Subpart III.

5. **Specific Recordkeeping Requirements:**

a. The permittee shall keep calendar month records of usage of all applicable raw materials. Following the end of each month, Volatile Organic Compounds (VOC) emissions and Particulate Matter (PM) emissions shall be calculated on a twelve-month rolling total basis and recorded. Following the end of each month, pounds per job limits for VOC and pounds per hour limits for PM shall be calculated and recorded. These records shall represent the most recent year and shall show compliance with VOC and PM emission limitations listed in this permit. These records shall be made available for inspection upon request by any duly authorized representatives of the Division for Air Quality. Refer to Section B Group Requirements for requirements specific to Subpart III.

b. The permittee shall maintain monthly records of the data specified in subsection 2. **Emission Limitations** required to calculate the emission rate of VOC in terms of pounds per job.

6. **Specific Reporting Requirements:**

The permittee shall submit summary monitoring reports every 6 months containing monitoring information listed in Sections B.4, B.5, D.4 and D.6 of this permit. (See Section F.5 for specific reporting dates.)

7. **Specific Control Equipment Operating Conditions:**

Refer to Section E

**SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE
REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

BODY OPERATIONS

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Description and Applicable Regulations:

401 KAR 59:010 and 401 KAR 51:017 apply to all affected facilities listed in the following table, unless otherwise stated.

BODY OPERATIONS, 100/100A BUILDINGS and 400 BUILDING, Operations include the following processes:

EMISSION UNIT	OPERATION	CONSTRUCTION COMMENCED	CONTROL EQUIPMENT	OTHER APPLICABLE REGULATIONS
C01	Die Construction (Insignificant Activities List)	March 22, 1991	None	
C02	Stamping Press Operations (Line 1, 2 & 3)	March 22, 1991 January 2016 Modified December 2024	None	
C03	Welding Operations, including Laser (stamping), Arc, and Resistance Welding	March 22, 1991 January 2016 July 2019 Modified November 2024	Dust Collector DC03 for PM	
C04	Brazing, Grinding and Finishing Operations	March 22, 1991	None	
C06	Sealer and Adhesive Application, including Precure Ovens (Line 1 & 2)	July 17, 1986 January 2016 Modified November 2022 Modified November 2024	None	401 KAR 63:002
C08	Small Parts Phosphate System, including De-greasing Tank, Rinse Tanks, and Phosphate Dip Tank (Line 1 & 3)	April 1, 2022	None	
C09	Small Parts Electro deposition System, Including Rinse Tanks, Dip Tank, and Oven (Line 1, 2 & 3)	April 1, 2022	Oven - RTO WT01	401 KAR 60:005 401 KAR 63:002

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EMISSION UNIT	OPERATION	CONSTRUCTION COMMENCED	CONTROL EQUIPMENT	OTHER APPLICABLE REGULATIONS
C10	Fuel Tank Antichip Coating (Line 2), including Booths & Ovens	March 22, 1991 December 26, 2016 October 2018	Booths – Filters FTAC02 for PM	401 KAR 63:002
C11	Process Lubrication (Insignificant Activities List)	March 22, 1991	None	
C12	Non-Process Cleaning Activities	July 17, 1986	None	401 KAR 59:185 401 KAR 63:002
C13	Fuel Tank Cleaning (Insignificant Activities List)	July 17, 1986	None	
C14	General Exhaust	March 22, 1991 Modified November 2024	None	
C15	Welding Operations, including Resistance and Arc Welding	March 2014	None	
C16	Bodyweld Sealers and Adhesives (Line 3)	March 2014	None	401 KAR 63:002
C17	Welding Operations, including Laser and MIG Welding. Each MIG welding equipment equipped with integral dust collector	January 2016 April 2019 Modified February 2022 Modified November 2024	Integral dust collectors	
C18	Battery Case Welding	December 2024	None	*401 KAR 51:017 does not apply to C18

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

APPLICABLE REGULATIONS:

401 KAR 51:017, *Prevention of significant deterioration of air quality*

401 KAR 59:010, *New Process Operations*

401 KAR 59:185, *New solvent metal cleaning equipment*

401 KAR 60:005 Section 2(2)(tt) 40 C.F.R. 60.390 to 60.398 (Subpart MM), *Standards of Performance for Automobile and Light Duty Truck Surface Coating Operations*, (Refer to Section B Group Requirements).

401 KAR 63:002 Section 2(4)(ooo), 40 C.F.R. 63.3080 to 63.3176, Tables 1 through 4, and Appendix A (Subpart IIII), *National Emission Standards for Hazardous Air Pollutants: Surface Coating of Automobiles and Light-Duty Trucks* (Refer to Section B Group Requirements)

1. Operating Limitations:

- a. The usage rates of materials used in all affected facilities shall be limited so as not to exceed the emission limitations in Section B.2. Wherever practicable, the permittee shall utilize work practices to minimize emissions from non-process cleaning activities. Refer to Section B Group Requirements for requirements specific to 40 CFR 63 Subpart IIII.

Specific Operating Limitations for Emission Unit C03:

- b. The maximum weld wire usage from all arc welding operations in the Body Operations Shop shall not exceed 463.6 pounds per hour based on monthly usage data.

Compliance Demonstration Method:

The permittee shall perform semiannual primary production welder consumption audits to determine the weld wire percentage control ratio.

- c. Good operating practices shall be followed for each arc welding operation in the Body Operations shop.

Compliance Demonstration Method: Good operating practices shall include the following:

- (1) Weld nozzle cleaning, to allow appropriate flow characteristics of shielding gas, shall be performed at least daily per production week.
- (2) Visual inspections shall be performed at least once per shift on the majority of arc welds on the individual parts that make up a vehicle.
- (3) Weld wire confirmation shall be performed for each weld wire drum change.
- (4) Part jigs shall be cleaned to remove slag build-up as required to ensure proper part fit.

d. Specific Operating Limitations for Thermal Oxidizers:

- (1) The average combustion chamber temperature in any 3-hour period shall not fall more than 28°C (50°F) below the combustion temperature established during the most recent performance test, which demonstrated compliance.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- (2) The permittee shall use the data collected during the performance test to calculate and record the average combustion temperature. This average combustion temperature is the minimum set point for the thermal oxidizer. The minimum-operating limit for thermal oxidizers is 28°C (50°F) below the minimum set point temperature.

Compliance Demonstration Method:

The permittee must monitor the temperature in the firebox of the thermal oxidizer or immediately downstream of the firebox before any substantial heat exchange occurs. Compliance shall be demonstrated by monitoring and recording the combustion temperature as required in the Periodic Monitoring Requirements table, averaged over 3 hours.

e. **Specific Operating Limitations for Cold Cleaner in Emission Unit C12:**

The permittee shall comply with control equipment and operating requirements specified in 401 KAR 59:185, Section 4 (1) & (2). Refer to Section B Group Requirements.

2. Emission Limitations:

- a. **401 KAR 59:010, Section 3 (1):** The opacity of visible emissions from each stack shall not equal or exceed 20 percent.

Compliance Demonstration Method:

- (1) See Specific Monitoring Requirements, B.4.
(2) See Periodic Monitoring Requirements table.

- b. **401 KAR 59:010, Section 3 (2):** For emissions from a control device or stack no person shall cause, suffer, allow or permit the emission into the open air of particulate matter from any affected facility which is in excess of 2.34 pounds per hour.

Compliance Demonstration Method:

- (1) For affected facilities that use transfer efficiency in the determination of PM/PM₁₀ emissions the permittee shall:
- i. Use the transfer efficiency value specified in 40 CFR 60.393 for the application method used; or
 - ii. Use a transfer efficiency value determined through testing approved by the Division.
- Previous transfer efficiency tests may be accepted if the following conditions are met:
- iii. The previous test must have been conducted using methods and conditions approved by the Division.
 - iv. Either no process or equipment changes have been made since the previous test was performed, or the owner or operator must be able to demonstrate that the results of the performance test reliably demonstrate compliance despite process or equipment changes.
 - v. Either the required operating parameters were established in the previous test, or sufficient data were collected in the previous test to establish the operating parameters.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- (2) The total process weight, “P” as defined in 401 KAR 59:010 must reflect a period that covers a complete operation or an integral number of cycles, divided by the hours of actual process operation during such a period. This period shall not exceed 24 hours. In the case where there are no periodic monitoring requirements associated with the affected facility, continuous compliance shall be assumed as long as there are no process or operational changes. The determination of the emission rate “E” in pounds per hour for compliance with 401 KAR 59:010 may also be used to demonstrate compliance with 401 KAR 51:017, except that the period allowed for the determination of “P” shall be one month.
- (3) For affected facilities with periodic monitoring requirements for particulate emissions the source shall demonstrate continuous compliance by adhering to the periodic monitoring requirements table. The source must maintain a record of deviations from “standard ranges” in the periodic monitoring requirements table and determine the particulate emissions from the deviation. The duration of the deviation shall be the period between when the “out of standard condition” was noted and when it is corrected. If an engineering evaluation utilizing control efficiency is used to determine particulate emissions for the affected facility, the allowed control efficiency shall be zero during the deviation period unless testing is conducted to prove otherwise.
- c. **401 KAR 51:017:** Emissions of VOC and PM shall not exceed the following, as calculated on a monthly average basis:

EMISSION UNIT	OPERATION	VOC LIMIT (lb/job)	PM LIMIT (lb/hr)
C02	Stamping Operations (Line 1, 2 & 3)	0.518	N/A
C03/C14	Welding Activities (all affected facilities) Line 1 & 2	N/A N/A	14.48
C04	Brazing and Grinding (all affected facilities) Line 1 & 2	N/A	0.28
C06	Adhesive/Sealer Application Line 1 Line 2	0.120 0.306	N/A
C08	Small Parts Phosphate (Line 1 & 3)	N/A	0.38
C09	Small Parts Electro deposition (Line 1, 2 & 3)	0.041	0.115
C10	Fuel Tank Anti-chip Coating Line 2	0.279	0.288
C12	Non-Process Cleaning Activities	0.270	N/A

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Compliance Demonstration Method:

$$VOC\ Value = \frac{\sum U_i * V_i * E_i * (1 - C_i * F_i)}{P}$$

U_i = Usage of material “i”,
 V_i = Volatile organic compound (VOC) content,
 E_i = VOC Emission Factor,
 F_i = Control efficiency,
 C_i = Collection efficiency,
 P = Production rate (number of vehicles produced)

PM Value = Measurement, when prescribed by periodic monitoring requirements table. Otherwise PM shall be calculated as follows:

$$PM\ Value = \sum \frac{P}{P_m} * E_i, \text{ or equivalent methods approved by the Division}$$

P = Average shop production throughput,
 P_m = Maximum vehicle production rate
 E_i = PM Emission Factor (controlled) for each stack “i”.
 See Compliance Demonstration method for 401 KAR 59:010, in this Section.

- d. **401 KAR 51:017:** VOC emissions from Line 2 Body Operations shall not exceed 176.1 tons per year, and VOC emissions shall not exceed 399.4 tons per year from the entire Body Operations shop, based on a 12-month rolling total.

Compliance Demonstration Method:

$$VOC\ Value = \sum U_i * V_i * E_i * (1 - C_i * F_i)$$

U_i = Usage of material “i”,
 V_i = Volatile organic compound (VOC) content,
 E_i = VOC Emission Factor,
 F_i = Control efficiency,
 C_i = Collection efficiency.

- e. **401 KAR 51:017:** PM emissions from Line 1 and Line 2 Body Operations combined (Emission Unit C01 through C14) shall not exceed 39.6 tons per year, based on a 12-month rolling total.

Compliance Demonstration Method:

- (1) Calculated from the following equation, except where testing specified
 (See item 2)

$$PM\ Value = \sum P * E_i$$

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

P = Average shop production throughput

E_i = PM Emission Factor (controlled) for “i”, See Compliance Demonstration

Method for 401 KAR 59:010, in this Section.

(2) Testing, see Periodic Monitoring Requirements table.

f. 40 CFR 60 Subpart MM - 60.392:

On and after the date on which the initial performance test required by 40 CFR 60.8 is completed, no owner or operator subject to the provisions of 40 CFR 60 Subpart MM shall discharge or cause the discharge into the atmosphere from any affected facility VOC emissions in excess of:

NSPS CATEGORY (Affected Facilities)	EMISSION LIMIT (kg VOC per liter solid applied)	COATINGS INCLUDED IN GROUP
Primecoat Operations	0.17	C09- Electro deposition

Compliance Demonstration Method:

See Section B Group Requirements

g. 40 CFR 63 Subpart IIII, Section 63.3091 - Emission Limits for Existing Sources

EMISSION UNITS	NESHAP AFFECTED OPERATIONS	EMISSION LIMIT
C06	Sealer and Adhesive Application	Refer to Section B Group Requirements for Group Emission Limits.
C09	Small Parts Electro deposition System, Including Rinse Tanks, Dip Tank, and Oven (Line 1)	
C10	Fuel Tank Antichip Coating (Line 1 & 2),	
C12	Non-Process Cleaning*	
C16	Bodyweld Sealers and Adhesives	

* Applicable only to organic-HAP-containing cleaning materials used in coating operations for which emission limits are established under 40 CFR 63 Section 63.3901(a) through (d).

Compliance Demonstration Method:

Refer to Section B Group Requirements.

h. Synthetic Minor Limit for PM_{2.5} and CO₂e emissions from **Emission Unit C15**. See Section D 4.

3. Testing Requirements:

a. Testing shall be conducted at such times as may be requested by the Cabinet [401 KAR 50:045, Section 1].

b. See Section B Group Requirements.

c. The permittee shall perform periodic stack tests for Emission Unit C09 according to the standards and schedule specified in the Periodic Monitoring Requirements table.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

4. Specific Monitoring Requirements:

- a. The permittee shall conform to the monitoring requirements, as prescribed in its Periodic Monitoring Requirements table.
- b. The permittee shall monitor raw material usages as necessary to demonstrate compliance with all requirements of this permit. Refer to Section B Group Requirements for requirements specific to 40 CFR 60 Subpart MM and 40 CFR 63 Subpart IIII.
- c. The permittee shall perform a qualitative visual observation of the opacity of emissions at each stack no less than weekly while the affected facility is operating. If visible emissions from the stacks are observed (not including condensed water in the plume), the permittee shall determine the opacity using Reference Method 9. In lieu of determining the opacity using U.S. EPA Method 9, the permittee shall immediately perform a corrective action which results in no visible emissions (not including condensed water in the plume) [401 KAR 59:010].
- d. Stacks that are subject to specific periodic visible emissions monitoring are identified in the Periodic Monitoring Requirements table and are subject to the conditions specified below:
 - (1) The permittee shall perform a qualitative visual observation of the opacity of emissions at each stack on a weekly basis. See Section B 4. c.
 - (2) If no visible emissions are detected for a period of 1 month then the monitoring frequency shall be reduced from weekly to monthly.
 - (3) If visible emissions are detected during the monthly check, then the weekly check shall be re-instated until there are no visible emissions detected for 1 month period.
 - (4) If the method of operation changes for processes emitting to the atmosphere, then the requirement to perform weekly qualitative observations will be reinstated.

5. Specific Recordkeeping Requirements:

- a. The permittee shall conform to the record keeping requirements, as prescribed in its Periodic Monitoring Requirements table. All periodic monitoring records shall be maintained onsite for a period of not less than 5 years.
- b. The permittee shall keep calendar month records of usage of all applicable raw materials. Following the end of each month, Volatile Organic Compounds (VOC) emissions and Particulate Matter (PM) emissions shall be calculated on a twelve-month rolling total basis and recorded. Following the end of each month, pounds per job limits for VOC and pounds per hour limits for PM shall be calculated and recorded. These records shall represent the most recent year and shall show compliance with VOC and PM emission limitations listed in this permit. These records shall be made available for inspection upon request by any duly authorized representatives of the Division for Air Quality.
- c. The permittee shall maintain a log of the visual observations noting date, time, initials of observers, and records of corrective actions taken as a result of visible emissions from a stack and records of any Reference Method 9 readings performed.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- d. Records documenting the results of any required inspection and repair, as a result of a recorded opacity over 20% shall be maintained.
- e. The permittee shall maintain monthly records of the data specified in Emission Limitations B.2. required to calculate the emission rate of VOC in terms of pounds per job.

Thermal Oxidizer Specific Recordkeeping Requirements:

- f. The permittee shall maintain records of the following information for the thermal oxidizer:
 - (1) All 3-hour periods (during coating operations) during which the average combustion chamber temperature of the thermal oxidizer is more than 28°C (50°F) below the average combustion chamber temperature of the thermal oxidizer determined during the most recent performance test which demonstrated compliance. Each occurrence shall be considered a deviation from permit requirements. See Section F.6.
- g. During all periods of operation of the thermal oxidizer in which the 3-hour average combustion chamber temperature of the thermal oxidizer is more than 28°C (50°F) below the average combustion chamber temperature of the thermal oxidizer during the most recent performance test which demonstrated compliance, or other malfunction of the thermal oxidizer, a daily log of the following information shall be kept:
 - (1) Whether any air emissions were visible from the facilities associated with the thermal oxidizer.
 - (2) Whether visible emissions were normal for the process.
 - (3) The cause of the visible emissions.
 - (4) Corrective action(s) taken shall be recorded.

6. Specific Reporting Requirements:

The permittee shall submit summary monitoring reports every 6 months containing monitoring information listed in Sections B.4, B.5, D.4 and D.6 of this permit. (See Section F.5 for specific reporting dates.) The report shall list any “out of standard” conditions or periodic monitoring requirements, as listed in the Periodic Monitoring Requirements table below. If no “out of standard” conditions occurred, the permittee shall submit a negative report.

7. Specific Control Equipment Operating Conditions:

The permittee shall install, maintain, and operate its control equipment in accordance with manufacturers’ recommendations and good engineering practice.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

BODY OPERATIONS - PERIODIC MONITORING REQUIREMENTS

Emission Unit	Operation	Equipment Monitored	Characteristic Monitored	Parameter Monitored	Method or Device	Monitoring Frequency	Recording Frequency	Calibration Frequency	Standard Range
C03	Welding Operations (ALL)	Primary Production Arc Welders	Welding Emissions	Weld Wire consumption	Weld wire percentage control ratio	Semiannual	Semiannual	N/A	N/A
C03	Welding Operations – Arc Welding Robots (Primary)	Dust Collector (DC-03)	PM Removal Efficiency	Pressure Drop	Gauge	Continuous	Monthly	Annual	0.2 – 7.0 inches of water
C09	Electro deposition Prime #1	Oven	Electro coat Emissions	Opacity	Visual Inspection	Refer to Section B.4	Refer to Section B.4	N/A	< 20 Percent
C09	Small Parts Electro deposition – Oven	Thermal Oxidizer (WT01)	Destruction Efficiency	Combustion Chamber Temperature	Thermocouple	Continuous **	15 Minutes	Annual	Not More Than 28°C Below Combustion Temperature Limit
C09	Small Parts Electro deposition - Oven	Thermal Oxidizer (WT01)	Destruction Efficiency	VOC In / Out	Stack Test (EPA Method 25A)	Every 5 Years*	Every 5 Years*	Each Test	DRE ≥ 80%
C10	Fuel Tank Antichip Coating (Line 2)	Booth Exhaust Filters FTAC-02	PM Removal Efficiency	Filters in Place	Visual Inspection	Weekly	Weekly	N/A	No Visible Gaps
C15	Welding Operations – Arc Welding	Welders	Welding Emissions	Weld Wire consumption	N/A	Monthly	Monthly	N/A	Synthetic Minor Limit. Section D.4

* No more than 5 years from the last performance test.

** “Continuous” means at least one (1) reading every 15 minutes

Permit Number: V-20-026 R4

Page: 24 of 273

**SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE
REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

FACILITIES CONTROL

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Description and Applicable Regulations:

401 KAR 51:017 shall apply to all affected facilities listed in the following table.

FACILITIES CONTROL, Operations include the following processes:

EMISSION UNIT	OPERATION	CONSTRUCTION COMMENCED	CONTROL EQUIPMENT	OTHER APPLICABLE REGULATIONS
D02	Wastewater Pretreatment Facility (Insignificant Activities List)	March 22, 1991	None	401 KAR 59:010
D03A	Indirect / Direct Bldg Heat Combustion Units (Plant 2) > 1 MMBtu/hr (Natural Gas Only) (Total Capacity 622.4 MMBtu/hr)	1991 - 2015	None	401 KAR 59:015
D03B	Indirect / Direct Shop Process Combustion Units (Plant 2) > 1 MMBtu/hr (Natural Gas Only) (Total Capacity = 592.81 MMBtu/hr)	1991 - 2021	None	401 KAR 59:015 40 CFR 63 Subpart DDDDD
D04A	Indirect / Direct Bldg Heat Combustion Units (Plant 1) > 1 MMBtu/hr (Natural Gas Only) (Total Capacity 350.4 MMBtu/hr)	1986 – 2015	None	401 KAR 59:015
D04B	Indirect / Direct Shop Process Combustion Units (Plant 1) > 1 MMBtu/hr (Natural Gas Only) (Total Capacity = 748.38 MMBtu/hr – including existing Plant 1 process units Total Capacity = 476.58 MMBtu/hr – after remove existing Plant 1 process units)	1986 – 2015	None	401 KAR 59:015 40 CFR 63 Subpart DDDDD
D05	Cooling Tower Facilities, including primary towers and individual building towers (Insignificant Activities List)	March 22, 1991	None	401 KAR 59:010
D06	Raw Material Storage / Supply	March 22, 1991 for D06a-f, and g-j July 2023 for D06ff Construction projected June 2025 for D06k	Gasoline and Virgin Purge– Conservation Vents Gasoline Tanks - Submerged Fill	401 KAR 59:050 401 KAR 63:020

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EMISSION UNIT	OPERATION	CONSTRUCTION COMMENCED	CONTROL EQUIPMENT	OTHER APPLICABLE REGULATIONS
D07	Backup Generators utilizing #2 Fuel Oil D07(01, 02) Two (2) Backup Generators (17.45 MMBtu/hr, each) D07(03) One (1) Backup Generator (34.74 MMBtu/hr) D07(04) One (1) Backup Generator (2.26 MMBtu/hr, Mobile Unit) D07(05, 06) Two (2) Backup Generators (8.48 MMBtu/hr, each) D07(07) One (1) Backup Generator (17.45 MMBtu/hr, Mobile Unit) D07(08) Two (2) Backup Fire Pumps (269 HP, each) D07(09, 10) Two Backup Generators (35 HP, each)	August 27, 1992 July 17, 1986 1996 2002 2003 1987 2004	None None None None None None None	40 CFR 63 Subpart ZZZZ
D08	Miscellaneous Combustion Sources, including Indirect Heat Exchangers ≤ 1 MMBtu/hr (Insignificant Activities List)	1986 - 2022	None	
D09	Non-Process Cleaning	July 17, 1986	None	401 KAR 59:185
D11A	Indirect / Direct Bldg Heat Combustion Units (Line 3) > 1 MMBtu/hr (Natural Gas Only) (Total Capacity 49.99 MMBtu/hr)	March 2014	None	401 KAR 59:015
D11B	Indirect / Direct Shop Process Combustion Units (Line 3) > 1 MMBtu/hr (Natural Gas Only) (Total Capacity = 184.3 MMBtu/hr)	March 2014	None	401 KAR 59:015 40 CFR 63 Subpart DDDDD

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

APPLICABLE REGULATIONS:

401 KAR 51:017, *Prevention of significant deterioration of air quality*

401 KAR 59:010, *New Process Operations*

401 KAR 59:015, *New Indirect Heat Exchangers*

401 KAR 59:050, *New Storage Vessels for Petroleum Liquids*

401 KAR 59:185, *New solvent metal cleaning equipment*

401 KAR 63:002 Section 2(4)(eeee) 40 C.F.R. 63.6580 to 63.6675, Tables 1a through 8, and Appendix A (Subpart ZZZZ), *National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*,

401 KAR 63:002 Section 2(4) (iii) 40 C.F.R. 63.7480 to 63.7575, Tables 1 through 13 (Subpart DDDDD), *National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters*

STATE-ORIGIN REQUIREMENTS:

401 KAR 63:020, *Potentially hazardous matter or toxic substances*

1. Operating Limitations:

- a. The affected facilities shall be operated so as not to exceed the emission limitations in Section B.2.

Specific Operating Limitations for Emission Unit D06:

- b. The gasoline storage tanks, T5311, T5312, T800-B1, T800-3 and T800-4, shall be equipped with submerged fill pipes, and a vapor balance system for gasoline truck unloading. Tank trucks shall not be unloaded unless they are properly connected to the vapor balance system [401 KAR 59:050, Section 3 (2)].

Specific Operating Limitations for Cold Cleaner in Emission Unit D09:

- c. The permittee shall comply with control equipment and operating requirements specified in 401 KAR 59:185, Section 4 (1) & (2). Refer to Section B Group Requirements.

Specific Operating Limitations for Emission Unit D07:

40 CFR 63 Subpart ZZZZ:

- d. For emergency stationary CI RICE [40 CFR 63.6602 and Table 2c],:
 - (1) Change oil and filter every 500 hours of operation or annually, whichever comes first;
 - (2) Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary;
 - (3) Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- (4) Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply [40 CFR 63.6625 (h)].
- (5) The source has the option to utilize an oil analysis program as described in 40 CFR 63.6625(i) in order to extend the specified oil change requirement.

Work or Management Practices [40 CFR 63.6625 (e) and Table 6 (9)]:

- e. The permittee shall operate and maintain the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions or maintenance plan developed by permittee which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.
- f. The permittee shall install a non-resettable hour meter on the Emission Unit D07 engines [40 CFR 63.6625 (f)].
- g. The permittee shall operate the emergency stationary RICE according to the requirements in paragraphs (f)(1) through (4) of this 40 CFR 63.6640. In order for the engine to be considered an emergency stationary RICE under 40 CFR 63 subpart ZZZZ, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1) through (4) of 40 CFR 63.6640, is prohibited. If the permittee does not operate the engine according to the requirements in paragraphs (f)(1) through (4) of 40 CFR 63.6640, the engine will not be considered an emergency engine under 40 CFR 63 subpart ZZZZ and must meet all requirements for non-emergency engines [40 CFR 63.6640 (f)].
 - (1) There is no time limit on the use of emergency stationary RICE in emergency situations.
 - (2) The permittee may operate their emergency stationary RICE for any combination of the purposes specified in paragraphs (f)(2)(i) through (iii) of 40 CFR 63.6640 for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraphs (f)(3) and (4) of 40 CFR 63.6640 counts as part of the 100 hours per calendar year allowed by 40 CFR 63.6640(f)(2).
 - (3) Emergency stationary RICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- (4) Emergency stationary RICE located at major sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing provided in paragraph (f)(2) of 40 CFR 63.6640.
- h. Line 3 Operations (Emission Units D11A and D11B) natural gas usage shall not exceed 787.82 million cubic feet of per year, based on a 12 month rolling total, to preclude applicability of 401 KAR 51:017 for PM2.5, NOx and CO2e pollutants.
- i. Paint Line #1 Rebuilt project natural gas usage shall not exceed 1485.58 million cubic feet of per year, based on a 12 month rolling total, to preclude applicability of 401 KAR 51:017 for PM10, NOx, CO and CO2e pollutants.

Specific Operating Limitations for Boilers and Process Heaters in Emission Units, D03B, D04B, and D11B:

40 CFR 63 Subpart DDDDD:

- j. Pursuant to 40 CFR 63.7500 and Table 3 to Subpart DDDDD, the permittee shall comply with the following applicable work practice standards:

40 CFR 63 Subpart DDDDD

If boiler or process heater is . . .	The permittee shall meet the following . . .
1. A new or existing boiler or process heater with a continuous oxygen trim system that maintains an optimum air to fuel ratio, or a heat input capacity of less than or equal to 5 million Btu per hour in any of the following subcategories: unit designed to burn gas 1; unit designed to burn gas 2 (other); or unit designed to burn light liquid, or a limited use boiler or process heater	Conduct a tune-up of the boiler or process heater every 5 years as specified in 40 CFR 63.7540.
2. A new or existing boiler or process heater without a continuous oxygen trim system and with heat input capacity of less than 10 million Btu per hour in the unit designed to burn heavy liquid or unit designed to burn solid fuel subcategories; or a new or existing boiler or process heater with heat input capacity of less than 10 million Btu per hour, but greater than 5 million Btu per hour, in any of the following subcategories: unit designed to burn gas 1; unit designed to burn gas 2 (other); or unit designed to burn light liquid	Conduct a tune-up of the boiler or process heater biennially as specified in 40 CFR 63.7540.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

3. A new or existing boiler or process heater without a continuous oxygen trim system and with heat input capacity of 10 million Btu per hour or greater	Conduct a tune-up of the boiler or process heater annually as specified in 40 CFR 63.7540. Units in either the Gas 1 or Metal Process Furnace subcategories will conduct this tune-up as a work practice for all regulated emissions under 40 CFR 63 Subpart DDDDD. Units in all other subcategories will conduct this tune-up as a work practice for dioxins/furans.
4. An existing boiler or process heater located at a major source facility, not including limited use units	Must have a one-time energy assessment performed by a qualified energy assessor. An energy assessment completed on or after January 1, 2008, that meets or is amended to meet the energy assessment requirements in this table, satisfies the energy assessment requirement. A facility that operates under an energy management program compatible with ISO 50001 that includes the affected units also satisfies the energy assessment requirement. The energy assessment must include the following with extent of the evaluation for items a. to e. appropriate for the on-site technical hours listed in 40 CFR 63.7575: a. A visual inspection of the boiler or process heater system. b. An evaluation of operating characteristics of the boiler or process heater systems, specifications of energy using systems, operating and maintenance procedures, and unusual operating constraints. c. An inventory of major energy use systems consuming energy from affected boilers and process heaters and which are under the control of the boiler/process heater owner/operator. d. A review of available architectural and engineering plans, facility operation and maintenance procedures and logs, and fuel usage. e. A review of the facility's energy management practices and provide recommendations for improvements

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

	consistent with the definition of energy management practices, if identified. f. A list of cost-effective energy conservation measures that are within the facility's control. g. A list of the energy savings potential of the energy conservation measures identified. h. A comprehensive report detailing the ways to improve efficiency, the cost of specific improvements, benefits, and the time frame for recouping those investments.

2. Emission Limitations:

- a. **401 KAR 51:017 and 401 KAR 59:015:** Emissions of PM, SO₂, NO_x, CO, and VOC from Facilities Control Operations shall not exceed:

<i>401 KAR 51:017, D11A and D11B, Indirect / Direct Bldg Heat and Shop Process Combustion Units (Line 3) > 1 MMBtu/hr (Natural Gas Only) (Total Capacity 234.29 MMBtu/hr)</i>	
Pollutants	Natural Gas Allowable Emission Rates (lb/MMBtu heat Input)
VOC	0.0054
<i>401 KAR 51:017, D03A, Indirect / Direct Bldg Heat Combustion Units (Plant 2) > 1 MMBtu/hr (Natural Gas Only) (Total Capacity 622.4 MMBtu/hr)</i>	
Pollutants	Allowable Emission Rate (Tons pollutant/year)
PM	10.6
SO ₂	0.8
NO _x	139.3
CO	117.0
VOC	7.7

<i>401 KAR 59:015, D03A, D03B, D04A, D04B, D11A, D11B Indirect Heat Exchangers > 1 MM Btu/hr</i>	
Pollutants	Allowable Emission Rate (lb/MMBtu)
PM	0.1
SO _x	0.8

Fuels are limited to natural gas only.

Compliance Demonstration Method:

- (1) Combustion units are assumed to be in compliance with 401 KAR 51:017 and 401 KAR 59:015 lb/MMBtu standards while burning natural gas.
- (2) See subsection **5. Recordkeeping requirements.**

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

b. Specific Emission Limitations for Indirect Heat Exchangers in Emission Units, D03A, D03B, D04A, D04B, D11A, and D11B:

Pursuant to 401 KAR 59:015, Section 4(2), emissions from each unit shall not exceed 20% opacity.

c. Synthetic Minor Limits for PM_{2.5}, NO_x and CO_{2e} emissions from Emission Units D11A and D11B. See Section D.4.

d. Persons responsible for a source from which hazardous matter or toxic substances may be emitted shall provide the utmost care and consideration, in the handling of these materials, to the potentially harmful effects of the emissions resulting from such activities. No owner or operator shall allow any affected facility to emit potentially hazardous matter or toxic substances in such quantities or duration as to be harmful to the health and welfare of humans, animals and plants. Evaluation of such facilities as to adequacy of controls and/or procedures and emission potential will be made on an individual basis by the cabinet. [401 KAR 63:020, Section 3]

Compliance Demonstration Method:

Based upon the emission rates of toxics and hazardous air pollutants determined by the Cabinet using information provided in the application and supplemental information submitted by the source, the Cabinet determines the affected facility to be in compliance with 401 KAR 63:020.

3. Testing Requirements:

Testing shall be conducted at such times as may be requested by the Cabinet [401 KAR 50:045, Section 1].

4. Specific Monitoring Requirements:

a. The permittee shall conform to the monitoring requirements, as prescribed in its Periodic Monitoring Requirements table.

**b. Specific Monitoring Requirements for Emission Unit D07:
40 CFR 63 Subpart ZZZZ:**

The permittee shall monitor the hours of operation of the engine that is recorded through the non-resettable hour meter.

5. Specific Recordkeeping Requirements:

a. The permittee shall conform to the record keeping requirements, as prescribed in its Periodic Monitoring Requirements table. All periodic monitoring records shall be maintained onsite for a period of not less than 5 years.

b. The permittee shall keep calendar month records of natural gas usage. These records shall be made available for inspection upon request by any duly authorized representatives of the Division for Air Quality.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

c. Specific Recordkeeping Requirements for Emission Units D03A, D03B, D04A, D04B, D11A and D11B:

- (1) The permittee shall maintain records of volume of natural gas burned for each building with affected facilities included in Emission Units D03A, D03B, D04A, D04B, D11A and D11B. These records shall represent the most recent year. Following the end of each month, PM, SO₂, NO_x, CO and VOC emissions shall be calculated on a twelve-month rolling total and recorded.
- (2) The permittee shall maintain records of the AP-42 emission factors and heating value of natural gas used in the compliance demonstration for unit D03A, D03B, D04A, D04B, D11A and D11B. The compliance demonstration records shall be updated if these values change.

Specific Recordkeeping Requirements for Emission Unit D07: 40 CFR 63 Subpart ZZZZ:

- d. The permittee shall keep records of the maintenance conducted on the stationary RICE in order to demonstrate that the engine was operated and maintained according to the maintenance plan for the engine.
- e. The permittee shall keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The permittee must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation [40 CFR 63.6655(f)].

6. Specific Reporting Requirements:

- a. The permittee shall submit summary monitoring reports every 6 months containing monitoring information listed in Sections B.4 and B.5 of this permit. (See Section F.5 for specific reporting dates.) The report shall list any “out of standard” conditions or periodic monitoring requirements, as listed in the Periodic Monitoring Requirements table below. If no “out of standard” conditions occurred, the permittee shall submit a negative report.

Specific Reporting Requirements for Emission Unit D07: 40 CFR 63 Subpart ZZZZ:

- b. The permittee shall submit an initial notification that includes the information in 40 CFR 63.9(b)(2)(i) through (v), and a statement that the stationary RICE has no additional requirements and explain the basis of the exclusion.

Specific Reporting Requirements for Emission Units D03B, D04B, D011B: 40 CFR 63 Subpart DDDDD

- c. The permittee shall submit compliance reports required in 40 CFR 63, Subpart DDDDD, 63.7550.
- d. Unless the EPA Administrator has approved a different schedule for submission of reports under 40 CFR 63.10(a), the permittee must submit each report, according to paragraph (h) of this 40 CFR 63.7550, by the date in Table 9 to 40 CFR 63 Subpart DDDDD and according to the requirements in paragraphs (b)(1) through (4) of 40 CFR 63.7550. For

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

units that are subject only to a requirement to conduct subsequent annual, biennial, or 5-year tune-up according to 40 CFR 63.7540(a)(10), (11), or (12), respectively, and not subject to emission limits or Table 4 operating limits, the permittee may submit only an annual, biennial, or 5-year compliance report, as applicable, as specified in paragraphs (b)(1) through (4) of 40 CFR 63.7550, instead of a semi-annual compliance report [40 CFR 63.7550(b)].

- (1) The first semi-annual compliance report must cover the period beginning on the compliance date that is specified for each boiler or process heater in 40 CFR 63.7495 and ending on June 30 or December 31, whichever date is the first date that occurs at least 180 days after the compliance date that is specified for the permittee's source in 40 CFR 63.7495. If submitting an annual, biennial, or 5-year compliance report, the first compliance report must cover the period beginning on the compliance date that is specified for each boiler or process heater in 40 CFR 63.7495 and ending on December 31 within 1, 2, or 5 years, as applicable, after the compliance date that is specified for the permittee's source in 40 CFR 63.7495 [40 CFR 63.7550(b)(1)].
 - (2) The first semi-annual compliance report must be postmarked or submitted no later than July 31 or January 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for each boiler or process heater in 40 CFR 63.7495. The first annual, biennial, or 5-year compliance report must be postmarked or submitted no later than January 31 [40 CFR 63.7550(b)(2)].
 - (3) Each subsequent semi-annual compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31. Annual, biennial, and 5-year compliance reports must cover the applicable 1-, 2-, or 5-year periods from January 1 to December 31 [40 CFR 63.7550(b)(3)].
 - (4) Each subsequent semi-annual compliance report must be postmarked or submitted no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period. Annual, biennial, and 5-year compliance reports must be postmarked or submitted no later than January 31 [40 CFR 63.7550(b)(4)].
- e. If the facility is subject to the requirements of a tune up the permittee must submit a compliance report with the information in paragraphs (c)(5)(i) through (iii) of 40 CFR 63.7550, (xiv) and (xvii) of 40 CFR 63.7550, and paragraph (c)(5)(iv) of 40 CFR 63.7550 for limited-use boiler or process heater [40 CFR 63.7550(c)(1)].
- (1) Company and Facility name and address [40 CFR 63.7550(c)(5)(i)].
 - (2) Process unit information, emissions limitations, and operating parameter limitations [40 CFR 63.7550(c)(5)(ii)].
 - (3) Date of report and beginning and ending dates of the reporting period [40 CFR 63.7550(c)(5)(iii)].
 - (4) The total operating time during the reporting period [40 CFR 63.7550(c)(5)(iv)].
 - (5) Include the date of the most recent tune-up for each unit subject to only the requirement to conduct an annual, biennial, or 5-year tune-up according to 40 CFR 63.7540(a)(10), (11), or (12) respectively. Include the date of the most recent burner inspection if it was not done annually, biennially, or on a 5-year period and was delayed until the next scheduled or unscheduled unit shutdown [40 CFR 63.7550(c)(5)(xiv)].

Permit Number: V-20-026 R4

Page: 35 of 273

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(6) Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report [40 CFR 63.7550(c)(5)(xvii)].

7. Specific Control Equipment Operating Conditions:

The permittee shall install, maintain, and operate its control equipment in accordance with manufacturers' recommendations and good engineering practices.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

FACILITIES CONTROL - PERIODIC MONITORING REQUIREMENTS

Emission Unit	Operation	Equipment Monitored	Characteristic Monitored	Parameter Monitored	Method or Device	Monitoring Frequency	Recording Frequency	Calibration Frequency	Standard Range
D03A	Indirect /Direct Bldg Heat Combustion Units > 1 MMBTU/hr (Plant 2, F-99-029 Only)	Plant 2 Natural Gas	Volume used	Standard Cubic Feet (SCF)	N/A	Monthly	Monthly	N/A	See Section B.2
D03B	Indirect /Direct Shop Process Combustions Unit > 1 MMBTU/hr (Plant 2)	Plant 2 Natural Gas	Volume used	Standard Cubic Feet (SCF)	N/A	Monthly	Monthly	N/A	N/A
D04A	Indirect /Direct Bldg Heat Combustions Units > 1 MMBTU/hr (Plant 1)	Plant 1 Natural Gas	Volume used	Standard Cubic Feet (SCF)	N/A	Monthly	Monthly	N/A	N/A
D04B	Indirect /Direct Shop Process Combustions Units > 1 MMBTU/hr (Plant 1)	Plant 1 Natural Gas	Volume used	Standard Cubic Feet (SCF)	N/A	Monthly	Monthly	N/A	N/A
D06	Bulk / Tank Farm Storage (gasoline and virgin purge only)	Conservation Valve	Valve Function	Movement	Visual	Annual	Annual	N/A	Operational
D07	Back-up Generators	Back-up Generators	Hours of Operation per generator	Hours of Operation per generator	N/A	Monthly	Monthly	N/A	< 50 hours per year per generator in non-emergency situations
D11A	Indirect /Direct Bldg Heat Combustion Units > 1 MMBTU/hr	Line 3 Natural Gas	Volume used	Standard Cubic Feet (SCF)	N/A	Monthly	Monthly	N/A	See Section B.2 and D.8
D11B	Indirect /Direct Shop Process Combustions Units > 1 MMBTU/hr	Line 3 Natural Gas	Volume used	Standard Cubic Feet (SCF)	N/A	Monthly	Monthly	N/A	See Section B.2 and D.8

**SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE
REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

PAINT #1

PAINT #2

PLASTICS

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Description and Applicable Regulations:

401 KAR 59:010 and 401 KAR 51:017 apply to all affected facilities listed in the following table.

PAINT #1 Rebuilt, 250 BUILDING, Operations include the following processes

EMISSION UNIT	OPERATION ¹	CONSTRUCTION COMMENCED	CONTROL EQUIPMENT	OTHER APPLICABLE REGULATIONS
E01R	Metal Pretreatment System, including degrease and conversion coating processes	May 2016	None	
E02R	Electro deposition Coating System, including rinse tanks, dip tank, dry sanding, and oven	May 2016 Modified December 2022	Oven – Thermal Oxidizer RTO-03 for VOC	401 KAR 60:005 401 KAR 63:002
E03R	Metal Finishing Line, including metal assembly (Insignificant Activities List)	May 2016	None	
E04R	Sealer Line and Oven, including:			
	Solvent Wiping Stations	May 2016	None	401 KAR 63:002
	Seam Sealer Stations (robot and manual application)	May 2016 Modified December 2022 Modified July 2024	VOC Carryover to Sealer Oven	401KAR 63:002
	Seal Damping Coat Area	May 2016 Modified December 2022 Modified July 2024	VOC Carryover to Sealer Oven	401 KAR 63:002
	PVC Booths (Undercoat, mask, unmask, PVC rocker, flange & wheel arch, underbody and touch-up)	May 2016 Modified December 2022 Modified July 2024	VOC Carryover to Sealer Oven	401 KAR 63:002

1-All processes exclude non-process cleaning activities, except emission unit E13R.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EMISSION UNIT	OPERATION ¹	CONSTRUCTION COMMENCED	CONTROL EQUIPMENT	OTHER APPLICABLE REGULATIONS
	Bake Oven	May 2016 Modified December 2022	Oven – Thermal Oxidizer RTO-03 for VOC	
E05R	Primer Booths D and E, including: Solvent Wiping and Blow-off	May 2016	None	401 KAR 63:002
	Soft Chip	April 2022 (NSPS) December 2022 (NSR)	None	401 KAR 60:005 401 KAR 63:002
	Primer Booths, Lines D and E	May 2016	Lines D and E – Scrubbers TS11, TS12 for PM VOC Carryover to Heated Flash Off	401 KAR 60:005 401 KAR 63:002
	Heated Flash Off, Lines D and E	May 2016 2019	Line D - Thermal Oxidizer RTO-05 Line E - Thermal Oxidizer RTO-06	
E07R	Topcoat Lines D and E, including: Solvent Wiping and Blow-off Area	May 2016	None	40 CFR64
	Basecoat Booths, Lines D and E	May 2016 Modified December 2022 Modified July 2024	Lines D and E – Scrubbers TS11, TS12 for PM VOC Carryover to Heated Flash Off	401 KAR 60:005 401 KAR 63:002
	Heated Flash Off, Lines D and E	May 2016 2019 Modified December 2022	Line D - Thermal Oxidizer RTO-05 Line E - Thermal Oxidizer RTO-06	
	Clearcoat Booths, Lines D and E	May 2016 2019 Modified December 2022 Modified July 2024	Lines D and E – Scrubbers TS11, TS12 for PM Line D - Thermal Oxidizer RTO-05 Line E - Thermal Oxidizer RTO-06 VOC Carryover to Oven	401 KAR 60:005 401 KAR 63:002

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EMISSION UNIT	OPERATION ¹	CONSTRUCTION COMMENCED	CONTROL EQUIPMENT	OTHER APPLICABLE REGULATIONS
	Bake Ovens, D and E	May 2016 2019 Modified December 2022	Oven D – Thermal Oxidizer RTO-05 for VOC Oven E – Thermal Oxidizer RTO-06 for VOC	401 KAR 60:005
E08R	Inspection Lines (Insignificant Activities List)	May 2016	None	
E09R	Blackout Coating, including grille blackout, wheelhouse blackout and windshield blackout	May 2016 Modified December 2022	Grille and Wheelhouse – Dry Filter TF05 for PM	401 KAR 60:005 401 KAR 63:002
E10R	Moon Roof Installation (Insignificant Activities List)	Modified July 2024		
E11R	Wax Coating, including cavity wax, hinge wax and spot wax	May 2016 Modified December 2022	None	401 KAR 63:002
E12R	Repair Deck Operations, including ED, sealer, primer, topcoat and blackout repairs	Modified July 2024	None	
E13R	Non-Process Cleaning Activities, including caustic stripping, grate coating, water blasting, line purging, shot blasting, cold cleaner and surface cleaning	May 2016	None	401 KAR 60:005 401 KAR 63:002
E14R	Raw Material Supply Systems, including ED system supply and paint mix/supply rooms	May 2016	None	401 KAR 59:185 401 KAR 63:002
E15R	Water/Wastewater Treatment Operations, including all De-ionizing processes and sludge pool processes	May 2016	None	401 KAR 63:002
E16R	Robot Teaching Booth (Insignificant Activities List)	May 2016	None	
E17R	Two Tone Masking Booth (Insignificant Activities List)	May 2016	None	
E18R	General Exhaust	May 2016	None	

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

401 KAR 59:010 and 401 KAR 51:017 apply to all affected facilities listed in the following table.

PAINT #2, 2000 BUILDING, Operations include the following processes

EMISSION UNIT	OPERATION ³	CONSTRUCTION COMMENCED	CONTROL EQUIPMENT	OTHER APPLICABLE REGULATIONS
F01	Phosphate System, including de-greasing tank, rinse tanks, and phosphate dip tank	March 22, 1991	None	
F02	Electrodeposition Coating System, including rinse tanks, dip tank, dry sanding, and oven	March 22, 1991	Oven - Thermal Oxidizer TT02 for VOC	401 KAR 60:005 401 KAR 63:002
F03	Metal Finishing Line, including metal assembly (Insignificant Activities List)	March 22, 1991	None	
F04	Sealer Line and Oven, including: Solvent Wiping Areas Seam Sealer Area (robot and manual application) Damping Coat Area PVC Booths (underbody and touch-up) Bake Oven	March 22, 1991 January 2016 March 22, 1991 January 2016 2004 January 2016 Modified July 2024 March 22, 1991 January 2016 March 22, 1991	None VOC Carryover to Oven VOC Carryover to Oven VOC Carryover to Oven Thermal Oxidizer TT03 for VOC	401 KAR 63:002 401 KAR 63:002 401 KAR 63:002 401 KAR 63:002
F05	Primer Booth and Oven, including: Solvent Wiping and Blow-off	March 22, 1991	None	401 KAR 63:002

2 -All processes exclude non-process cleaning activities, except emission units F13 and F25.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EMISSION UNIT	OPERATION ³	CONSTRUCTION COMMENCED	CONTROL EQUIPMENT	OTHER APPLICABLE REGULATIONS
	Soft Chip	March 22, 1991 Modified April 2022 (NSPS), December 2022 (NSR)	None	401 KAR 60:005 401 KAR 63:002
	Exterior	December, 2014	Scrubber TS19 for PM VOC Concentrator TC01 for VOC Thermal Oxidizer TT10 for VOC VOC Carryover to Oven	401 KAR 60:005 401 KAR 63:002
	Interior	March 22, 1991	Scrubber TS19 for PM VOC Carryover to Oven	401 KAR 60:005 401 KAR 63:002
	Door sash and Rocker	March 22, 1991	Scrubber TS19 for PM VOC Carryover to Oven	401 KAR 60:005 401 KAR 63:002
	Oven	March 22, 1991	Thermal Oxidizer TT05 for VOC	
	Wet Sand Line, including wet sand and dry sand booth, re-coat dry sand booth, touch-up booth (not in Use) and oven (Not in use)	March 22, 1991	None	
F06	Topcoat Lines A and B, including: Solvent Wiping and Blow-off Area	March 22, 1991	None	40 CFR 64 401 KAR 63:002

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EMISSION UNIT	OPERATION ³	CONSTRUCTION COMMENCED	CONTROL EQUIPMENT	OTHER APPLICABLE REGULATIONS
	All Coating Applications, Lines A & B	December, 2014	Booth A – Scrubber TS23 and exhaust filters TF27 for PM Booth B – Scrubber TS24 and exhaust filters TF28 for PM Booth A – VOC Concentrator TC02 for VOC Booth B – VOC Concentrator TC03 for VOC Booth A – VOC Thermal Oxidizer TT06 for VOC (Back-up for RTO-03) Booth B – Thermal Oxidizer TT08 for VOC (Back-up for RTO-03) Booths A/B – Thermal Oxidizer RTO-03 for VOC Booths A/B – VOC Carryover to Oven Oven A – Thermal Oxidizer TT07 for VOC Oven B – Thermal Oxidizer TT09 for VOC	401 KAR 60:005 401 KAR 63:002
F08	Inspection Lines (Insignificant Activities List)	March 22, 1991	None	
F09	Blackout Coating, including grille blackout, wheelhouse blackout and windshield blackout and touch-up station	March 22, 1991 December 2014 April 1, 2017	Blackout Booth - exhaust filters TF12 for PM Underbody, Touchup Station – Filter TF12 for PM	401 KAR 60:005 401 KAR 63:002
F10	Moon Roof Installation (Insignificant Activities List)	March 22, 1991	None	
F11	Wax Coating, including cavity wax, hinge wax, spot wax and rocker wax	March 22, 1991 March, 2019	None	
F12	Repair Deck Operations, including ED, sealer, primer, topcoat and blackout repairs	March 22, 1991	None	401 KAR 60:005 401 KAR 63:002

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EMISSION UNIT	OPERATION ³	CONSTRUCTION COMMENCED	CONTROL EQUIPMENT	OTHER APPLICABLE REGULATIONS
F13	Non-Process Cleaning Activities, including, grate coating, water blasting, line purging, cold cleaner and surface cleaning	March 22, 1991	None	401 KAR 59:185 401 KAR 63:002
F14	Raw Material Supply Systems, including ED system supply and paint mix/supply rooms	March 22, 1991	None	401 KAR 63:002
F15	Water/Wastewater Treatment Operations, including all De-ionizing processes and sludge pool processes (Insignificant Activities List)	March 22, 1991	None	
F16	Robot Teaching Booth (Insignificant Activities List)	March 22, 1991	None	
F17	Two Tone Masking Booth (Insignificant Activities List)	March 22, 1991	None	
F18	General Exhaust	March 22, 1991	None	
F19	Electrodeposition Coating System, including rinse tanks, dip tank, dry sanding, and oven	March 2014	VOC Carryover to Oven with Thermal Oxidizer TT12	401 KAR 60:005 401 KAR 63:002
F20	Sealer and PVC application line and Oven			
	Sealer Area (robot and manual application)	March 2014	VOC Carryover to Oven	401 KAR 63:002
	Dampening Coat Area	March 2014	VOC Carryover to Oven	401 KAR 63:002
	PVC Area (underbody coat robot and manual application)	March 2014	VOC Carryover to Oven	401 KAR 63:002
	Bake Oven	August 2014	Thermal Oxidizer TT03 for VOC	
F21	Primer Booth and Oven, including: Hood Soft Chip/Rocker Antichip	March 2014	Scrubber TS25 for PM VOC Carryover to Oven	401 KAR 60:005 401 KAR 63:002

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EMISSION UNIT	OPERATION ³	CONSTRUCTION COMMENCED	CONTROL EQUIPMENT	OTHER APPLICABLE REGULATIONS
	Interior/ Exterior	August 2014	Scrubber TS25 for PM Automatic Zone – VOC Concentrator TC04 and Thermal Oxidizer TT13 for VOC VOC Carryover to Oven	401 KAR 60:005 401 KAR 63:002
	Oven	March 2014 December 26, 2016	Thermal Oxidizer TT11 for VOC	
F22	Topcoat Line C Booth and Oven, including: Basecoat Booth Clearcoat Booth	March 2014 July 2016 August 2014	Scrubber TS25 for PM VOC Carryover to Oven Scrubber TS25 for PM VOC Carryover to Oven Automatic Zone – VOC Concentrator TC04 and Thermal Oxidizer TT13 for VOC	40 CFR 64 401 KAR 60:005 401 KAR 63:002 401 KAR 60:005 401 KAR 63:002
	Bake Oven	March 2014 December 26, 2016	Thermal Oxidizer TT11 for VOC	
F23	Wax Coating, including cavity wax, hinge wax, spot wax and rocker wax	March 2014 March, 2019	None	
F24	Repair Operations, including offline repair, underbody touchup booth and repair polish booth	March 2014	None	401 KAR 60:005 401 KAR 63:002
F25	Non-Process Cleaning Activities, including, grate coating, water blasting, line purging, and surface cleaning	March 2014	Work Practice Standards	401 KAR 63:002
F26	Miscellaneous Process Cleaners - Wiping Solvents	March 2014	None	401 KAR 63:002

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

401 KAR 59:010 and 401 KAR 51:017 apply to all affected facilities listed in the following table, unless otherwise stated.

PLASTICS, 400/400A BUILDING, Operations include the following processes

EMISSION UNIT	OPERATION	CONSTRUCTION COMMENCED	CONTROL EQUIPMENT	OTHER APPLICABLE REGULATIONS
G01	Thermal Injection Molding Operations	1991-2015 April 2019	None	
G02	Source Shutdown / Removed	March 22, 1991	None	
G04	Repair Painting	March 22, 1991 July 18, 2016, 2018		401 KAR 63:002
G05	Raw Material Supply Systems, including injection part and bumper painting, exterior painting, injection molding (silos), monofoam, mold release, slush molding supply and regrind	March 22, 1991 April 2019		401 KAR 63:002
G06	Source Shutdown / Removed	N/A	N/A	
G07	Source Reassigned to Emission Unit G22	N/A	N/A	
G08	Source Shutdown / Removed	N/A	N/A	
G09	Source Reassigned to Emission Unit G22	N/A	N/A	
G10	Source Reassigned to G22	N/A	N/A	
G12	Source Removed	March 22, 1991	N/A	
G13	Slush Molding Operation, including molding, miniblasting, dry ice machine, and repair painting	March 22, 1991 April 2019	System 1 – Fluidized Bed Filter RF01 for PM System 2 – Fluidized Bed Filter RF02 for PM System 3 – Fluidized Bed Filter RF03 for PM System 4 – Fluidized Bed Filter RF04 for PM	401 KAR 63:002
G14	Source Removed	N/A	N/A	
G14b	Vacuum Form Machines	Proposed June, 2025	N/A	401 KAR 63:020 *401 KAR 51:017 does not apply to G14b

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EMISSION UNIT	OPERATION	CONSTRUCTION COMMENCED	CONTROL EQUIPMENT	OTHER APPLICABLE REGULATIONS
G15	Source Removed	N/A	N/A	
G16	Source Reassigned to Emission Unit G19	N/A	N/A	
G17	Water/Wastewater Treatment Operations, including sludge pool processes	March 22, 1991	None	
G18	Source Removed	N/A	N/A	
G19	Non-Process Cleaning Activities, including paint stripping, water blasting, line purging, surface cleaning cold cleaner, jig cleaning and chemical honing	July 17, 1986/ March 22, 1991/ January 2011/ June 15, 2015/ January 2016	None	401 KAR 59:185 401 KAR 63:002
G20	Monofoam Molding, including turntables, clamp molds, hot knife scoring / heat treating, day tanks	July 17, 1986 July 2016/ April 2019	None	
G21	Exterior Part Painting Operations including: Solvent Wiping, Line B1 All Coating Applications, Line B1	January 2016 January 2016	None Booth B1 – Filter RF14 for PM Booth B1 – Wet Scrubber RSI6 for PM Booth B1 (Primer/Base/Clear) – VOC Concentrator RC07 and Thermal Oxidizer RT11 for VOC	40 CFR 64 401 KAR 63:002 401 KAR 63:002
	Repair Painting, Line B1 Bake Oven, Line B1	January 2016 January 2016	None None	401 KAR 63:002
G22	Bumper Painting Operations including: Solvent Wiping, Lines G & H	June 15, 2015	None	40 CFR 64 401 KAR 63:002

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EMISSION UNIT	OPERATION	CONSTRUCTION COMMENCED	CONTROL EQUIPMENT	OTHER APPLICABLE REGULATIONS
	Coating Applications, Lines G & H	June 15, 2015	Booth G – Wet Scrubber RS14 for PM Booth H – Wet Scrubber RS15 for PM Booths G and H - RT12 for VOC <i>Backup VOC Control equipment:</i> <i>Booth G – Concentrator RC04 for VOC</i> <i>Booth H – Concentrator RC05 for VOC</i> <i>Booth G – Thermal Oxidizer RT08 for VOC</i> <i>Booth H – Thermal Oxidizer RT09 for VOC</i>	401 KAR 63:002
	Repair Painting, Lines G & H	June 15, 2015	None	401 KAR 63:002
	Bake Oven, Lines G & H	June 15, 2015	Oven G & H - None	
G24	General Exhaust	March 22, 1991	None	
G25	Manifold Assembly Operation (Insignificant Activities List)	Aug 1, 1999	None	

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EMISSION UNIT	OPERATION	CONSTRUCTION COMMENCED	CONTROL EQUIPMENT	OTHER APPLICABLE REGULATIONS
G26	Plastic Bumper and Rocker Painting Operations including: Primer/Basecoat/Clearcoat Booths	August 2014	Primer Booth – Filters RF11 and Wet Scrubber RS13 for PM Basecoat Booth – Filters RF12 and Wet Scrubber RS13 for PM Clearcoat Booth – Filters RF13 and Wet Scrubber RS13 for PM Primer and Basecoat Booth (Automatic Zone) and Clearcoat Booth (Automatic Zone) - RT12 for VOC <i>Backup VOC Control equipment: Primer and Basecoat Booth (Automatic Zone) – VOC Concentrator RC06 and Thermal Oxidizer RT10 for VOC Clearcoat Booth (Automatic Zone) – Concentrator RC03 and Thermal Oxidizer RT07 for VOC</i>	401 KAR 63:002
	Bake Oven, Line D	March 2014	None	
	Non-Process Cleaning Activities, including paint stripping, water blasting, line purging, surface cleaning and jig cleaning	March 2014	Work Practice Standards	401 KAR 63:002
	Miscellaneous Process Cleaners - Wiping Solvents	March 2014	None	401 KAR 63:002
G29	Four Plasma Robots (Insignificant Activities List)	2017	None	

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

APPLICABLE REGULATIONS:

401 KAR 51:017, *Prevention of significant deterioration of air quality*

401 KAR 59:010, *New Process Operations*

401 KAR 59:185, *New solvent metal cleaning equipment*

401 KAR 60:005 Section 2(2)(tt) 40 C.F.R. 60.390 to 60.398 (Subpart MM), *Standards of Performance for Automobile and Light Duty Truck Surface Coating Operations*, (Refer to Section B Group Requirements).

401 KAR 63:002 Section 2(4)(ooo), 40 C.F.R. 63.3080 to 63.3176, Tables 1 through 4, and Appendix A (Subpart IIII), *National Emission Standards for Hazardous Air Pollutants: Surface Coating of Automobiles and Light-Duty Trucks* (Refer to Section B Group Requirements)

40 CFR 64, *Compliance Assurance Monitoring (CAM)*, (See Section E, EU E05R, E07R, F07, F22, G21, G22 and G26).

STATE-ORIGIN REQUIREMENTS:

401 KAR 63:020, *Potentially hazardous matter or toxic substances*

1. Operating Limitations:

- a. The usage rates of materials used in all affected facilities shall be limited so as not to exceed the emission limitations in Section B.2. Wherever practicable, the permittee shall utilize work practices to minimize emissions from non-process cleaning activities.
- b. The permittee shall install, maintain, and operate its control equipment in accordance with manufacturers' recommendations and good engineering practices. The permittee shall conform to the operating conditions, as prescribed in the periodic monitoring requirements table. Refer to Section B Group Requirements for requirements specific to 40 CFR 63 Subpart IIII.
- c. See Periodic Monitoring Requirements Table.
- d. **401 KAR 51:017: Specific Operating Conditions for Purging Solvent Borne Solvents:** Except for applicator nozzles/tips, coating applicator purging solvents shall be collected and retained until such time as they are shipped offsite for disposal or recycled. Waste purge solvent tanks shall be kept closed when not in use.
- e. **Specific Operating Limitations for Cold Cleaner in Emission Units E13R, F13, G19:** The permittee shall comply with control equipment and operating requirements specified in 401 KAR 59:185, Section 4 (1) & (2). Refer to Section B Group Requirements.
- f. **401 KAR 51:017:** The permittee shall operate the control equipment listed in the Periodic Monitoring Requirements table.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

2. Emission Limitations:

- a. **401 KAR 59:010, Section 3 (1):** The opacity of visible emissions from each stack shall not equal or exceed 20 percent.

Compliance Demonstration Method:

- (1) See Monitoring Requirements, B.4.
- (2) See periodic monitoring requirements table.

- b. **401 KAR 59:010, Section 3 (2):**

Emission of particulate matter from a control device or stack of any affected facility up to a process rate of 1000 lbs/hr shall not exceed **2.34** lbs/hr. For processing rates greater than 1000 lbs/hr up to 60,000 lbs/hr, particulate emissions shall not exceed the emission rate calculated by the following equation:

$$E = 3.59(P)^{0.62}$$

E = the PM emissions rate (pounds/hour)

P = the process rate (tons/hour)

Compliance Demonstration Method:

- (1) For affected facilities that use transfer efficiency in the determination of PM/PM₁₀ emissions the permittee shall:

- i. Use the transfer efficiency value specified in 40 CFR 60.393 for the application method used; or
- ii. Use a transfer efficiency value determined through testing approved by the Division.

Previous transfer efficiency tests may be accepted if the following conditions are met:

- iii. The previous test must have been conducted using methods and conditions approved by the Division.
 - iv. Either no process or equipment changes have been made since the previous test was performed or the owner or operator must be able to demonstrate that the results of the performance test, reliably demonstrate compliance despite process or equipment changes.
 - v. Either the required operating parameters were established in the previous test or sufficient data were collected in the previous test to establish the operating parameters.
- (2) The total process weight, "P" as defined above must reflect a period that covers a complete operation or an integral number of cycles, divided by the hours of actual process operation during such a period. This period shall not exceed 24 hours. In the case where there are no periodic monitoring requirements associated with the affected facility, continuous compliance shall be assured as long as there are no process or operational changes. The determination of the emission rate "E" in pounds per hour for compliance with 401 KAR 59:010 may also be used to demonstrate compliance with 401 KAR 51:017, except that the period allowed for the determination of "P" shall be one month.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(3) For affected facilities with periodic monitoring requirements for particulate emissions the source shall demonstrate continuous compliance by adhering to the periodic monitoring requirements table. The source must maintain a record of deviations from “standard ranges” in the periodic monitoring requirements table and determine the particulate emissions from the deviation. The duration of the deviation shall be the period between when the “out of standard condition” was noted and when it is corrected. If an engineering evaluation utilizing a control efficiency that is used to determine particulate emissions for the affected facility, the allowed control efficiency shall be zero during the deviation period unless testing is conducted to prove otherwise.

- c. **401 KAR 51:017:** Emissions of VOC and PM shall not exceed those in the table below, as calculated on a monthly basis:

EMISSION UNIT	OPERATION	VOC LIMIT (lb/job)	PM LIMIT (lb/hr)
Paint #1			
E01R	Phosphate System	N/A	0.54
E02R	Electro deposition System	0.185	N/A
E04R	Sealer Line/Oven	1.15	N/A
E05R	Primer Line/Oven	2.11	4.02
E07R	Topcoat Booth/Oven	3.86	7.43
E09R	Blackout Coating	0.11	0.59
E11R	Wax Coating	0.27	1.33
E12R	Repair Coating and Sanding	N/A	0.93
E13R	Non-Process Cleaning Activities	3.09	0.26
E14R	Raw Material Supply	N/A	2.23
E15R	Water/Wastewater Treatment	N/A	1.63
E18R	General Exhaust	N/A	1.02
Paint #2			
F02	Electro Dip System	0.19	0.22
F04	Sealer Line/Oven	1.15	N/A
F05	Primer Line/Oven	2.73	1.91
F06	Wet Sand Line/Oven	0.13	0.53
F07	Topcoat A,B Booth/Oven	3.86	7.42
F09	Blackout Coating	0.55	0.22
F11	Wax Coating	0.27	N/A
F12	Repair Coating and Sanding	N/A	0.18
F13	Non-Process Cleaning Activities	3.09	1.00
F18	General Exhaust	N/A	1.00
F19	Electrodeposition Coating System	0.116	N/A
F20	Sealer and PVC application line	0.8	N/A
F21	Primer Booths/Oven	1.026	N/A

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

F22	Topcoat Booths/Oven	3.54	N/A
F25	Non-Process Cleaning - Purging/Cleaning	1.68	N/A
F26	Process Cleaners	0.186	N/A
Plastic			
G04	Repair Painting	0.26	0.41
G13	Slush Molding Operation	N/A	1.28
G17	Water/Wastewater Treatment	N/A	0.56
G19	Non-Process Cleaning Activities Purge/Cleaning	1.17	0.14
G20	Monofoam	0.24	2.36
G21	Exterior Part Painting	0.21	0.99
G22	Bumper Painting	1.04	5.42
G24	General Exhaust	N/A	1.73
G26	Bumper and Rocker Painting	0.88	N/A
G27	Non-Process Cleaning Activities Purge/Cleaning	0.36	N/A
G28	Process Cleaners – Wiping Solvents	0.45	N/A

Compliance Demonstration Method:

$$VOC\ Value = \frac{\sum U_i * V_i * E_i * (1 - C_i * F_i)}{P}$$

U_i = Usage of material “i”,

V_i = Volatile organic compound (VOC) content,

E_i = VOC Emission Factor,

F_i = Control efficiency,

C_i = Collection efficiency,

P = Production rate (number of vehicles produced)

PM Value = Measurement, when prescribed by periodic monitoring requirements table.

Otherwise PM shall be calculated as follows:

$$PM\ Value = \sum \frac{P}{P_m} * E_i, \text{ or equivalent method approved by the Division}$$

P = Average shop production throughput,

P_m = Maximum vehicle production rate

E_i = PM Emission Factor (controlled) for each stack “i”.

See Compliance Demonstration Method for 401 KAR 59:010, in this Section.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- d. **401 KAR 51:017:** Emissions of VOC shall not exceed the following, based on a 12-month rolling total.

EMISSION UNIT	VOC LIMIT (tons/year)
Paint #1 Rebuilt	809
Paint #2 (Emission Unit F01 through F18)	1,571
Plastic (Line 2 operations)	498
Plastics Shop*	1047
Paint #2, Line 3 operations (Emission Unit F19 through F24)	197
Plastics, Line 3 operations (Emission Unit G26)	31

* Emissions from entire Plastic Shop exclude Line 3 operations.

Compliance Demonstration Method:

$$VOC\ Value = \sum U_i * V_i * E_i * (1 - C_i * F_i)$$

U_i = Usage of material “i”,
 V_i = Volatile organic compound (VOC) content,
 E_i = VOC Emission Factor,
 F_i = Control efficiency,
 C_i = Collection efficiency.

- e. **401 KAR 51:017:** Emissions of PM shall not exceed the following, based on a 12-month rolling total.

EMISSION UNIT	PM LIMIT (tons/year)
Paint #1 Rebuilt	25.65
Paint #2 (Emission Unit F01 through F18)	60.62
Plastic (Line 2 operations)	27.4
Plastics Shop (Emission Unit G01 through G25, except G14b)	68.5

Compliance Demonstration Method:

- (1) Calculated from the following equation, except where testing specified (see item 3)

$$PM\ Value = \sum P * E_i$$

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

P = Average shop production throughput

E_i = PM Emission Factor (controlled) for “i”,

(2) See Compliance Demonstration Method for 401 KAR 59:010, in this Section.

(3) Testing, see periodic monitoring requirements table.

- f. **401 KAR 51:017:** Emissions of VOC shall not exceed the following from process and non-process cleaning operations including paint purging, based on a 12-month rolling total.

EMISSION UNIT	VOC LIMIT (tons/year)
Paint #2, Line 3 operations (Emission Unit F25 and F26)	65
Plastics, Line 3 operations (Emission Unit G27 and G28)	28

Compliance Demonstration Method:

$$VOC\ Value = [\sum (U_i * V_i * E_i) - \sum (R * V)] * (1 - C_i * F_i)$$

U_i = Usage of material “i”,

V_i = Volatile organic compound (VOC) content,

E_i = VOC Emission Factor,

F_i = Control efficiency,

C_i = Collection efficiency,

R = Volume of reclaimed purging solvent,

V = VOC content of reclaimed purging solvent.

- g. Synthetic Minor Limit for PM_{2.5} emissions from Line 3 Operations (Emission Unit F19 through F26 and G26). See Section D.4.

- h. **40 CFR 60 Subpart MM - 60.392:**

The permittee shall not cause the discharge into the atmosphere of more than the following, as calculated on a monthly average basis:

NSPS CATEGORY (Affected Facilities)	EMISSION LIMIT (kg VOC per liter solid applied)	COATINGS INCLUDED IN GROUP
(a) - Primecoat Operations	0.17	E02R, F02 & F19 - Electro deposition
(b) - Guidecoat Operations	1.40	E04R, F04 & F20 - Sealer E05R, F05 & F21 - Soft Chip, Interior, Exterior E12R, F12 & F24 - Repair
(c) - Topcoat Operations	1.47	E05R & F05 – Door sash and Rocker Panel Black E07R, F07 & F22 - Topcoat Solid, Base, Clear

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

NSPS CATEGORY (Affected Facilities)	EMISSION LIMIT (kg VOC per liter solid applied)	COATINGS INCLUDED IN GROUP
		E09R & F09 – Blackouts E12R, F12 & F24 - Repair

Compliance Demonstration Method:

See Section B Group Requirements

i. **40 CFR 63 Subpart IIII, Section 63.3091 - Emission Limits for Existing Sources**

EMISSION UNITS	NESHAP AFFECTED OPERATIONS	EMISSION LIMIT
E02R, F02 & F19 E04R, F04 & F20 E04R, F04, F20 E04R, F04 & F20 E05R, F05 & F21 E07R, F07 & F22 E09R & F09 E11R, F11 & F23 E12R, F12 & F24 G04, & G26 G21, G22 E13R, F13, F25, G19 & G27 E04R, E05R, E07R, F04, F05, F07, F26 & G28	Electro deposition primer Primer-surfacer Adhesives and sealers Deadener Primer-surfacer Topcoat Blackout Wax Coating Final Repair Coatings and repair painting Coating, process cleaning* and repair painting Non-Process Cleaning* Process Cleaning*	Refer to Section B Group Requirements for Group Emission Limits.

* Applicable only to organic-HAP-containing cleaning materials used in coating operations for which emission limits are established under 40 CFR 63 Section 63.3901(a) through (d).

Compliance Demonstration Method:

Refer to Section B Group Requirements.

- j. Persons responsible for a source from which hazardous matter or toxic substances may be emitted shall provide the utmost care and consideration, in the handling of these materials, to the potentially harmful effects of the emissions resulting from such activities. No owner or operator shall allow any affected facility to emit potentially hazardous matter or toxic substances in such quantities or duration as to be harmful to the health and welfare of humans, animals and plants. Evaluation of such facilities as to adequacy of controls and/or procedures and emission potential will be made on an individual basis by the cabinet. [401 KAR 63:020, Section 3]

Compliance Demonstration Method:

Based upon the emission rates of toxics and hazardous air pollutants determined by the Cabinet using information provided in the application and supplemental information submitted by the source, the Cabinet determines the affected facility to be in compliance with 401 KAR 63:020.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

3. Testing Requirements:

- a. The permittee shall perform stack testing according to the standards and schedule specified in the Periodic Monitoring Requirements table.
- b. The permittee shall conduct initial performance tests for RT12 using EPA Method 25A, or an alternate method approved by the Administrator, to determine the destruction efficiency of the oxidizer in accordance with SECTION G.4. and G.5. of this permit (V-20-026 R1).

4. Specific Monitoring Requirements:

- a. The permittee shall conform to the monitoring requirements, as prescribed in the Periodic Monitoring Requirements table. The permittee shall monitor raw material usages as necessary to demonstrate compliance with all requirements of this permit. Refer to Section B Group Requirements for requirements specific to 40 CFR 60 Subpart MM and 40 CFR 63 Subpart IIII.
- b. The permittee shall perform a qualitative visual observation of the opacity of emissions at each stack no less than weekly while the affected facility is operating. If visible emissions from the stacks are observed (not including condensed water in the plume), the permittee shall determine the opacity using Reference Method 9. In lieu of determining the opacity using U.S. EPA Method 9, the permittee shall immediately perform a corrective action which results in no visible emissions (not including condensed water in the plume).
- c. Stacks that are subject to specific periodic visible emissions monitoring are identified in the Periodic Monitoring Requirements table and are subject to the conditions specified below:
 - (1) The permittee shall perform a qualitative visual observation of the opacity of emissions at each stack on a weekly basis. See Section B 4.b.
 - (2) If no visible emissions are detected for a period of 1 month then the monitoring frequency shall be reduced from weekly to monthly.
 - (3) If visible emissions are detected during the monthly check, then the weekly check shall be re-instated until there are no visible emissions detected for 1 month period.
 - (4) If the method of operation changes for processes emitting to the atmosphere, then the requirement to perform weekly qualitative observations will be reinstated.
- d. **Specific Monitoring Requirements for Emission Units E02R, E04R, E05R, E07R, F02, F04, F05, F07, F19, F20, F21, F22, G21, G22 and G26:**
An alarm system shall be installed on these emission units which will notify the operator of the units in the event the burner temperature of the incinerator falls below indicator range as prescribed by periodic monitoring requirements table.

Specific Monitoring Requirements for VOC Concentrator

- e. The performance of the adsorbent material will be verified by examining representative samples and testing the performance (adsorbent activity) per the manufacturer's recommendation. The results shall be assessed (e.g., compared to historical results or results for new adsorbent) and the adsorbent shall be replaced as appropriate.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- f. Alternatively, performance can be checked with a portable flame ionization detector (FID), photo ionization detector (PID), or other appropriate equipment or methodologies. In this case, the concentration of the adsorber outlet stream, or the percent reduction in concentration of the inlet/outlet stream measurements are compared to historical data from performance tests. The results shall be assessed and the adsorbent shall be replaced as appropriate.

401 KAR 51:017, Section 16(5)(c). Source Obligation

- g. The permittee shall monitor and calculate annual VOC emissions from emission units A03, A05, A10 (Case ED Coating Repair), A14, C02, C06, C08, C09, D06, E02R, E04R, E05R, E07R, E09R, E11R, E13R, G14b, G21 and G22 and maintain a record of the annual emissions, in tons per year on a calendar year basis for five years following resumption of regular operations after the year 2024-2026 EV battery modification to Line #1. The source shall submit a report to the Division if:
 - (1) The annual VOC emissions, in tons per year, from this proposed project exceeds the baseline actual emissions by a significant amount for these pollutants; and
 - (2) The VOC emissions exceed the projected actual emissions as submitted in the application for the Line #1 modification.
- h. The permittee shall monitor and calculate annual VOC emissions from emission units E05R, F05, C06, E13R, F13 and maintain a record of the annual emissions, in tons per year on a calendar year basis for five years following resumption of regular operations after the year 2022 Camry model year change modifications to Line #1 and Line #2, including soft-chip paint additions, and increased adhesive and solvent use. The source shall submit a report to the Division if:
 - (1) The annual VOC emissions, in tons per year, from this proposed project exceeds the baseline actual emissions by a significant amount for these pollutants; and
 - (2) The VOC emissions exceed the projected actual emissions as submitted in the application for the Line 1 and 2 Camry modification.

5. Specific Recordkeeping Requirements:

- a. The permittee shall conform to the record keeping requirements, as prescribed in the Periodic Monitoring Requirements table. The permittee shall maintain monthly and annual records of the maximum material usage rates and maximum vehicle production rates for each emission unit which uses a control device to demonstrate compliance with the pounds per job emission limits for VOC specified in subsection 2. **Emission Limitations.** These records shall specify the methodology used to determine the maximum material usage rate, and must reflect the most current technology used.
- b. Refer to Section B Group Requirements for requirements specific to 40 CFR 60 Subpart MM and 40 CFR 63 Subpart IIII.
- c. The permittee shall maintain a log of the visual observations noting date, time, initials of observers, and records of corrective actions taken as a result of visible emissions from a stack and records of any Reference Method 9 readings performed.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- d. In addition, for all required emissions control equipment, the permittee shall keep the following records:
 - (1) Design or manufacturer's specifications.
 - (2) Preventive maintenance records related to performance of control equipment.
 - (3) All periods, during normal operating conditions, where parameters listed in the periodic monitoring requirements table are "out of standard". For thermal oxidizers and VOC wheel concentrators, "out of standard" is defined as a confirmed three-hour period during which the average of the monitored values fails to meet the specified temperature requirements.
 - (4) All periods, during normal operating conditions, where emissions control equipment, required by this permit, is not operating.
 - (5) All periods, during normal operating conditions, where emissions control equipment, required by this permit, is bypassed.
 - (6) Description of operating, temperature-measuring devices (e.g., automatic strip charts, digital data acquisition systems).
 - (7) Data from the temperature-measuring devices (as prescribed by the periodic monitoring requirements table) and any temporary data logged manually as back up.
 - (8) Inspection reports and maintenance performed in response to recommendations in inspection reports.
 - (9) Monitoring system malfunctions.
 - (10) Corrective actions taken in response to "out of standard" conditions as specified in the periodic monitoring requirements table.
 - (11) Calibration records for monitoring equipment specified in the periodic monitoring requirements table.
 - (12) Records documenting the results of any required inspection and repair, as a result of a recorded opacity over 20%.

Thermal Oxidizer Specific Recordkeeping Requirements:

The permittee shall maintain records of the following information for the thermal oxidizer:

- e. All 3-hour periods (during coating operations) during which the average combustion chamber temperature of the thermal oxidizer is more than 28°C (50°F) below the average combustion chamber temperature of the thermal oxidizer determined during the most recent performance test which demonstrated compliance. Each occurrence shall be considered a deviation from permit requirements. See Section F.6.
- f. During all periods of operation of the thermal oxidizer in which the 3-hour average combustion chamber temperature of the thermal oxidizer is more than 28°C (50°F) below the average combustion chamber temperature of the thermal oxidizer during the most recent performance test which demonstrated compliance, or other malfunction of the thermal oxidizer, a daily log of the following information shall be kept:
 - (1) Whether any air emissions were visible from the facilities associated with the thermal oxidizer.
 - (2) Whether visible emissions were normal for the process.
 - (3) The cause of the visible emissions.
 - (4) Corrective action(s) taken shall be recorded.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

VOC Concentrator Specific Recordkeeping Requirements:

- g. The permittee shall maintain records of the following information for the VOC concentrator:
 - (1) All periods (during coating operations) during which the 3-hour average desorption gas inlet temperature is more than 8°C (15°F) below the average desorption gas inlet temperature determined during the most recent performance test, which demonstrated compliance. Each occurrence shall be considered a deviation from permit requirements. See Section F.6.
 - (2) During all periods of operation of the VOC concentrator in which the 3-hour average desorption gas inlet temperature is more than 8°C (15°F) below the average desorption gas temperature determined during the most recent performance test which demonstrated compliance, or other malfunction of the VOC concentrator, a daily log of the following information shall be kept:
 - (3) Whether any air emissions were visible from the facilities associated with the VOC concentrator.
 - (4) Whether visible emissions were normal for the process.
 - (5) The cause of the visible emissions.
 - (6) Corrective action(s) taken shall be recorded.
- h. The permittee shall keep calendar month records of usage of all applicable raw materials. Following the end of each month, Volatile Organic Compounds (VOC) emissions and Particulate Matter (PM) emissions shall be calculated on a twelve-month rolling total basis and recorded. Following the end of each month, pounds per job limits for VOC and pounds per hour limits for PM shall be calculated and recorded. These records shall represent the most recent year and shall show compliance with VOC and PM emission limitations listed in this permit. These records shall be made available for inspection upon request by any duly authorized representatives of the Division for Air Quality. See Section B Group Requirements.
- i. All records required by this permit shall be kept onsite for a minimum of 5 years.
- j. The permittee shall maintain records of the annual emissions, in tons per year on a calendar year basis for emission unit G22 and its line purging (G19) for 5 years according to subsection 4. **Specific Monitoring Requirements h.**

6. **Specific Reporting Requirements:**

- a. The permittee shall submit summary monitoring reports every 6 months containing monitoring information listed in Sections B.4, B.5, D.4 and D.6 of this permit. (See Section F.5 for specific reporting dates.) The report shall list any “out of standard” conditions for periodic monitoring requirements, as listed in the Periodic Monitoring Requirements table below. If no “out of standard” conditions occurred, the permittee shall submit a negative report.
- b. Refer to subsection 4. **Specific Monitoring Requirements** g. and h.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

7. Specific Control Equipment Operating Conditions:

a. See Section B.1, Section B Group Requirements, and Section E.

b. **Specific Operating Limitations for Thermal Oxidizers:**

- (1) The average combustion chamber temperature in any 3-hour period shall not fall more than 28°C (50°F) below the combustion temperature limit established during the most recent performance test, which demonstrated compliance.
- (2) The permittee shall use the data collected during the performance test to calculate and record the average combustion temperature. This average combustion temperature is the minimum set point for the thermal oxidizer. The minimum-operating limit for thermal oxidizers is 28°C (50°F) below the minimum set point temperature.

Compliance Demonstration Method:

The permittee must monitor the temperature in the firebox of the thermal oxidizer or immediately downstream of the firebox before any substantial heat exchange occurs. Compliance shall be demonstrated by monitoring and recording the combustion temperature as required in the Periodic Monitoring Requirements table, averaged over 3 hours.

c. **Specific Operating Limitations for VOC Concentrators:**

- (1) The permittee must keep the set point for the desorption gas inlet temperature no lower than 6°C (10°F) below the lower of that set point during the last successful performance test for the concentrator and the average desorption gas inlet temperature established during the performance test.
- (2) The permittee shall use the data collected during the performance test to calculate and record the average desorption gas inlet temperature. The minimum operating limit for the concentrator is 8°C (15°F) below the average desorption gas inlet temperature established during the performance test.

Compliance Demonstration Method:

Compliance shall be demonstrated by monitoring and recording desorption gas inlet temperature as required by the periodic monitoring requirements table, averaged over 3 hours.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

8. Alternate Operating Scenarios:

Alternate operating scenarios for Emission Units F21 Primer Booth and F22 Topcoat Booth:

Description and Applicable Regulations:

401 KAR 59:010 and 401 KAR 51:017 apply to all affected facilities listed in the following table.

EMISSION UNIT	OPERATION	CONSTRUCTION COMMENCED	CONTROL EQUIPMENT	OTHER APPLICABLE REGULATIONS
F21	Primer Booth and Oven, including:			
	Hood Soft Chip/Rocker Antichip	July 2016	Scrubber TS27 for PM VOC Carryover to Oven	401 KAR 60:005 401 KAR 63:002
	Interior/ Exterior	July 2016	Scrubber TS27 for PM Automatic Zone – VOC Concentrator TC05 (optional) and Thermal Oxidizer TT14 for VOC	401 KAR 60:005 401 KAR 63:002
	Oven	July 2016	VOC Carryover to Oven Thermal Oxidizer TT15 for VOC	
F22	Topcoat Booth and Oven, including:			40 CFR 64
	Basecoat Booth	March 2014	Scrubber TS25 for PM VOC Carryover to Oven	401 KAR 60:005 401 KAR 63:002
	Clearcoat Booth	August 2014	Scrubber TS25 for PM VOC Carryover to Oven Automatic Zone – VOC Concentrator TC04 and Thermal Oxidizer TT13 for VOC	401 KAR 60:005 401 KAR 63:002
	Bake Oven	March 2014 December 26, 2016	Thermal Oxidizer TT11 for VOC	

Emission Limitations:

- 401 KAR 51:017:** Emissions of VOC from Emission Unit F25 (Non-Process Cleaning Activities including paint purging) in this alternate operating scenario shall not exceed 0.75 lb/job, as calculated on a monthly basis.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

8. Alternate Operating Scenarios (continued):

Compliance Demonstration Method:

$$VOC\ Value = \frac{\sum U_i * V_i * E_i * (1 - C_i * F_i)}{P}$$

U_i = Usage of material “i”,

V_i = Volatile organic compound (VOC) content,

E_i = VOC Emission Factor,

F_i = Control efficiency,

C_i = Collection efficiency,

P = Production rate (number of vehicles produced)

PM Value = Measurement, when prescribed by periodic monitoring requirements table. Otherwise PM shall be calculated as follows:

PM Value = SUM (P/Pm x E_i), or equivalent method approved by the Division

P = Average shop production throughput,

Pm = Maximum vehicle production rate

E_i = PM Emission Factor (controlled) for each stack “i”.

See Compliance Demonstration Method for 401 KAR 59:010, in this Section.

- b. **401 KAR 51:017:** The total VOC emissions from Emission Units F25 and F26 (Process and Non-Process Cleaning Activities including paint purging) in this alternate operating scenario shall not exceed 33 tons per year, based on a 12-month rolling total.

Compliance Demonstration Method:

$$VOC\ Value = [\sum (U_i * V_i * E_i) - \sum (R * V)] * (1 - C_i * F_i)$$

U_i = Usage of material “i”,

V_i = Volatile organic compound (VOC) content,

E_i = VOC Emission Factor,

F_i = Control efficiency,

C_i = Collection efficiency,

R = Volume of reclaimed purging solvent,

V = VOC content of reclaimed purging solvent.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Alternate Operating Scenario for Emission Units G22 and G26 Bumper Paint Booths VOC Control Equipment:

G22	Bumper Painting Operations: Coating Applications, Lines G & H	June 15, 2015	Booth G – Wet Scrubber RS14 for PM Booth H – Wet Scrubber RS15 for PM Booth G (Clear) – Concentrator RC04 for VOC Booth H (Clear) – Concentrator RC05 for VOC Booth G (Clear) – Th.Oxidizer RT08 for VOC Booth H (Clear) – Th.Oxidizer RT09 for VOC	401 KAR 63:002
G26	Plastic Bumper and Rocker Painting Operations:: Primer/Basecoat/Clearcoat Booths	August 2014	Primer Booth – Filters RF11 and Wet Scrubber RS13 for PM Basecoat Booth – Filters RF12 and Wet Scrubber RS13 for PM Clearcoat Booth – Filters RF13 and Wet Scrubber RS13 for PM Primer and Basecoat Booth (Automatic Zone) – VOC Concentrator RC06 and Thermal Oxidizer RT10 for VOC Clearcoat Booth (Automatic Zone) – Concentrator RC03 and Thermal Oxidizer RT07 for VOC	401 KAR 63:002

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

PAINT #1 Rebuilt - PERIODIC MONITORING REQUIREMENTS

Emission Unit	Operation	Equipment Monitored	Characteristic Monitored	Parameter Monitored	Method or Device	Monitoring Frequency	Recording Frequency	Calibration Frequency	Standard Range
E02R & E04R	Electro Deposition Oven & Sealer Oven	Thermal Oxidizer (RTO-03)	Destruction Efficiency	Combustion Chamber Temperature	Thermocouple	Continuous***	15 Minutes & Each Occurrence of an Alarm	Annual	Not More Than 28°C Below Combustion Temperature Limit
E02R & E04R	Electro Deposition Oven & Sealer Oven	Thermal Oxidizer (RTO-03)	Destruction Efficiency	VOC In / Out	Stack Test (EPA Method 25A)	Every 5 Years*	Every 5 Years*	Each Test	DRE ≥ 90%
E05R	Primer Booth/Oven	Entrance/ Exit Bypass Hood	Primer Emissions	Opacity	Visual	Refer to Section B.4	Refer to Section B.4	N/A	< 20 Percent
E05R & E07R	Primer-Booth Topcoat-Booth	Booth Scrubber (TS11, TS12)	PM Removal Efficiency	Water Flow	Flow Meter	Continuous	Hourly & Each occurrence of an alarm	Annual	Primer, Clear Exterior : 30-80 gpm Base Exterior, Clear Interior 40-110 gpm Base Exterior, 50-140 gpm
E05R	Primer-Booth	Booth Exhaust	Emission Rate	Particulate Emission	Stack Test (EPA Method 17)	Every 5 Years*	Every 5 Years*	Each Test	See Section B.2
E05R & E07R	Primer & Basecoat - Heated Flash Off, Clearcoat-Booth & ovens (D, E)	Thermal Oxidizer (RTO-05, RTO-06)	Destruction Efficiency	Combustion Chamber Temperature	Thermocouple	Continuous***	15 Minutes & Each Occurrence of an Alarm	Annual	Not More Than 28°C Below Combustion Chamber Limit
E05R & E07R	Primer & Basecoat - Heated Flash Off, Clearcoat-Booth & ovens (D, E)	Thermal Oxidizer (RTO-05, RTO-06)	Destruction Efficiency	VOC In / Out	Stack Test (EPA Method 25A)	Every 5 Years*	Every 5 Years*	Each Test	DRE ≥ 95%
E07R	Topcoat Booths	Booth Exhaust	Emission Rate	Particulate Emission	Stack Test (EPA Method 17)	Every 5 Years*	Every 5 Years*	Each Test	See Section B.2
E09R	Blackout Coating	Exhaust Filters (TF05)	PM Removal Efficiency	All Final Filters In Place	Visual Inspection	Monthly	Monthly	N/A	No Visible By-Pass

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Unit	Operation	Equipment Monitored	Characteristic Monitored	Parameter Monitored	Method Device	Monitoring Frequency	Recording Frequency	Calibration Frequency	Standard Range
E09R	Blackout Coating	Exhaust Filters (TF05)	PM Removal Efficiency	Pressure Drop	Gauge	Continuous	Daily**	Annual	1.5 in H20
E13R	Non-process Cleaning Activities (Purge Recovery)	Waste Purge Tank	VOC Emission Reclaimed	Recovered Purge	Meter	Monthly	Monthly	Annual	See Permit Limit Section B.2
E13R	Non-process Cleaning Activities (Purge Recovery)	Virgin Purge Tank	VOC Emission	Virgin Purge	Meter (Primary)	Monthly	Monthly	Annual	See Permit Limit Section B.2

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

PAINT #2 PERIODIC MONITORING REQUIREMENTS

Emission Unit	Operation	Equipment Monitored	Characteristic Monitored	Parameter Monitored	Method or Device	Monitoring Frequency	Recording Frequency	Calibration Frequency	Standard Range
F02	Electrodeposition -Oven	Oven Stacks	Electro coat Emissions	Opacity	Visual	Refer to Section B.4	Refer to Section B.4	N/A	< 20 Percent
F02	Electrodeposition -Oven	Thermal Oxidizer (TT02)	Destruction Efficiency	Combustion Chamber Temperature	Thermocouple	Continuous*** **	15 Minutes & Each Occurrence of an Alarm	Annual	Not More Than 28°C Below Combustion Chamber Limit
F02	Electrodeposition -Oven	Thermal Oxidizer (TT02)	Destruction Efficiency	VOC In / Out	Stack Test (EPA Method 25A)	Every 5 Years*	Every 5 Years*	Each Test	DRE ≥ 93%
F04	Sealer-Oven	Thermal Oxidizer (TT03)	Destruction Efficiency	Combustion Chamber Temperature	Thermocouple	Continuous*** **	15 Minutes & Each Occurrence of an Alarm	Annual	Not More Than 28°C Below Combustion Chamber Limit
F04	Sealer-Oven	Thermal Oxidizer (TT03)	Destruction Efficiency	VOC In / Out	Stack Test (EPA Method 25A)	Every 5 years*	Every 5 years*	Each Test	DRE ≥ 95%
F05	Primer-Booth	VOC Concentrator System (TC01)	Collection Efficiency	Desorption Gas Inlet Temperature	Thermocouple	Continuous*** **	15 Minutes	Annual	Not More Than 8°C Below Desorption Gas Inlet Temperature Limit
F05	Primer-Booth	VOC Concentrator System (TC01)	Collection Efficiency	Desorption/ Reactivation Fan Operation	Visual	Monthly	Monthly	N/A	Operating
F05	Primer-Booth	VOC Concentrator System (TC01)	Collection Efficiency	Revolutions Per Hour (rph)	Stopwatch	Annually	Annually	N/A	1.0 – 2.0 rph

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Unit	Operation	Equipment Monitored	Characteristic Monitored	Parameter Monitored	Method or Device	Monitoring Frequency	Recording Frequency	Calibration Frequency	Standard Range
F05	Primer-Booth	VOC Concentrator System (TC01)	Collection Efficiency	Adsorbent Material Performance	See Section B4	Annually	Annually	See Section B4	See Section B4
F05	Primer-Booth	VOC Concentrator System (TC01)	Collection Efficiency	VOC In / Out	Stack Test (EPA Method 25A)	Every 5 Years*	Every 5 Years*	Each Test	Collection Efficiency $\geq 85\%$
F05	Primer-Booth	VOC Concentrator System (TC01)	Collection Efficiency	Wheel Rotation	Proximity Switch	Continuous	Each Occurrence of an Alarm	Annual Confirm	No Faults
F05	Primer-Booth	VOC Concentrator System (TC01)	Incinerator Collection	By-Pass Damper Position	Alarm	Continuous	Each Occurrence of an Alarm	Annual Confirm	No Faults
F05	Primer-Booth	Thermal Oxidizer (TT10)	Destruction Efficiency	Combustion Chamber Temperature	Thermocouple	Continuous***	15 Minutes & Each Occurrence of an Alarm	Annual	Not More Than 28°C Below Combustion Chamber Limit
F05	Primer-Booth	Thermal Oxidizer (TT10)	Destruction Efficiency	VOC In / Out	Stack Test (EPA Method 25A)	Every 5 Years*	Every 5 Years*	Each Test	DRE $\geq 95\%$
F05	Primer-Booth	Booth Scrubber (TS19)	PM Removal Efficiency	Gaps at Venturi	Visual	Weekly	Weekly	N/A	No Significant Gaps
F05	Primer-Booth	Booth Exhaust	Emission Rate	Particulate Emission	Stack Test (EPA Method 17)	Every 5 Years*	Every 5 Years*	Each Test	See Section B.2
F05	Primer-Oven	Thermal Oxidizer (TT05)	Destruction Efficiency	Combustion Chamber Temperature	Thermocouple	Continuous***	15 Minutes & Each Occurrence of an Alarm	Annual	Not More Than 28°C Below Combustion Chamber Limit

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Unit	Operation	Equipment Monitored	Characteristic Monitored	Parameter Monitored	Method or Device	Monitoring Frequency	Recording Frequency	Calibration Frequency	Standard Range
F05	Primer-Oven	Thermal Oxidizer (TT05)	Destruction Efficiency	VOC In / Out	Stack Test (EPA Method 25A)	Every 5 Years*	Every 5 Years*	Each Test	DRE ≥ 95%
F07	Topcoat Booths (A & B)	Exhaust Filters (Final Stage) (TF27, TF28)	PM Removal Efficiency	Pressure Drop	Gauge	Weekly	Weekly	Annual	0 - 2 in. H ₂ O
F07	Topcoat Booths (A & B)	Exhaust Filters (Final Stage) (TF27, TF28)	PM Removal Efficiency	All Final Filters In Place	Visual	Monthly	Monthly	N/A	No Visible By-Pass
F07	Topcoat Booths (A & B)	Booth Scrubber (TS23, TS24)	PM Removal Efficiency	Gaps at Venturi	Visual	Weekly	Weekly	N/A	No Significant Gaps
F07	Topcoat Booths (A & B)	Booth Exhaust	Emission Rate	Particulate Emission	Stack Test (EPA Method 17)	Every 5 Years*	Every 5 Years*	Each Test	See Section B.2
F07	Topcoat Booths (A & B)	VOC Concentrator System (TC02, TC03)	Collection Efficiency	Desorption Gas Inlet Temperature	Thermocouple	Continuous***	15 Minutes	Annual	Not More Than 8°C Below Desorption Gas Inlet Temperature Limit
F07	Topcoat Booths (A & B)	VOC Concentrator System (TC02, TC03)	Collection Efficiency	Desorption/Reactivation Fan Operation	Visual	Monthly	Monthly	N/A	Operating
F07	Topcoat Booths (A & B)	VOC Concentrator System (TC02, TC03)	Collection Efficiency	Revolutions Per Hour (rph)	Stopwatch	Annually	Annually	N/A	2.0 – 3.5 rph
F07	Topcoat Booths (A & B)	VOC Concentrator System (TC02, TC03)	Collection Efficiency	Adsorbent Material Performance	See Section B.4	Annually	Annually	See Section B.4	See Section B.4

Permit Number: V-20-026 R4

Page: 70 of 273

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Unit	Operation	Equipment Monitored	Characteristic Monitored	Parameter Monitored	Method or Device	Monitoring Frequency	Recording Frequency	Calibration Frequency	Standard Range
F07	Topcoat Booths (A & B)	VOC Concentrator System (TC02, TC03)	Collection Efficiency	VOC In / Out	Stack Test (EPA Method 25A)	Every 5 Years*	Every 5 Years*	Each Test	Collection Efficiency $\geq$ 85%
F07	Topcoat Booths (A & B)	VOC Concentrator System (TC02, TC03)	Collection Efficiency	Wheel Rotation	Proximity Switch	Continuous	Each Occurrence of an Alarm	Annual Confirm	No Faults
F07	Topcoat Booths (A & B)	VOC Concentrator System (TC02, TC03)	Incinerator Collection	By-Pass Damper Position	Alarm	Continuous	Each Occurrence of an Alarm	Annual Confirm	No Faults
F07	Topcoat Booths (A & B)	Thermal Oxidizer RTO-03 (Back-up TT06, TT08) *****	Destruction Efficiency	Combustion Chamber Temperature	Thermocouple	Continuous**	15 Minutes & Each Occurrence of an Alarm	Annual	Not More Than 28°C Below Combustion Chamber Limit
F07	Topcoat Booths (A & B)	Thermal Oxidizer RTO-03 (Back-up TT06, TT08) *****	Destruction Efficiency	VOC In / Out	Stack Test (EPA Method 25A)	Every 5 Years*	Every 5 Years*	Each Test	DRE $\geq$ 95%
F07	Topcoat Ovens (A & B)	Thermal Oxidizer (TT07, TT09)	Destruction Efficiency	Combustion Chamber Temperature	Thermocouple	Continuous***	15 Minutes & Each Occurrence of an Alarm	Annual	Not More Than 28°C Below Combustion Chamber Limit
F07	Topcoat Ovens (A & B)	Thermal Oxidizer (TT07, TT09)	Destruction Efficiency	VOC In / Out	Stack Test (EPA Method 25A)	Every 5 Years*	Every 5 Years*	Each Test	DRE $\geq$ 95%
F09	Blackout Coating	Exhaust Filters (Final Stage) (TF12)	PM Removal Efficiency	All Final Filters In Place	Visual Inspection	Monthly	Monthly	N/A	No Visible By-Pass

Permit Number: V-20-026 R4

Page: 71 of 273

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Unit	Operation	Equipment Monitored	Characteristic Monitored	Parameter Monitored	Method or Device	Monitoring Frequency	Recording Frequency	Calibration Frequency	Standard Range
F09	Blackout Coating	Exhaust Filters (Final stage) (TF12)	PM Removal Efficiency	Pressure Drop	Gauge	Continuous	Daily**	Annual	0 – 0.7 in. H ₂ O
F13 & F25	Non-process Cleaning Activities (Purge Supply)	Virgin WB Purge Tank	VOC Emission	Virgin WB Purge	Manual	Monthly	Monthly	Annual	See Permit Limit Section B.2
F13 & F25	Non-process Cleaning Activities (Purge Recovery)	Waste SB Purge Tank	VOC Emission Reclaimed	Recovered SB Purge	Meter (Primary)	Monthly	Monthly	Annual	See Permit Limit Section B.2
F13 & F25	Non-process Cleaning Activities (Purge Supply)	Virgin SB Purge Tank	VOC Emission	Virgin SB Purge	Meter (Primary)	Monthly	Monthly	Annual	See Permit Limit Section B.2
F19	Electrodeposition Oven	Thermal Oxidizer (TT12)	Destruction Efficiency	Combustion Chamber Temperature	Thermocouple	Continuous***	15 Minutes & Each Occurrence of an Alarm	Annual	Not More Than 28°C Below Combustion Chamber Limit
F19	Electrodeposition Oven	Thermal Oxidizer (TT12)	Destruction Efficiency	VOC In / Out	Stack Test (EPA Method 25A)	Every 5 Years*	Every 5 Years*	Each Test	DRE ≥ 90%
F20	Sealer-Oven	Thermal Oxidizer (TT03)	Destruction Efficiency	Combustion Chamber Temperature	Thermocouple	Continuous***	15 Minutes & Each Occurrence of an Alarm	Annual	Not More Than 28°C Below Combustion Chamber Limit
F20	Sealer-Oven	Thermal Oxidizer (TT03)	Destruction Efficiency	VOC In / Out	Stack Test (EPA Method 25A)	Every 5 year*	Every 5 year*	Each Test	DRE ≥ 90%
F21	Primer-Booth	Booth Scrubber (TS27)	PM Removal Efficiency	Gaps at Venturi	Visual	Weekly	Weekly	N/A	No Significant Gaps
F21	Primer-Booth	Booth Scrubber (TS27)	Control Efficiency	Particulate Emission	Stack Test (EPA Method 17)	Every 5 Years*	Every 5 Years*	Each Test	See Section D.4

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Unit	Operation	Equipment Monitored	Characteristic Monitored	Parameter Monitored	Method or Device	Monitoring Frequency	Recording Frequency	Calibration Frequency	Standard Range
F21	Primer-Booth Automatic Zone	VOC Concentrator System (TC05)	Collection Efficiency	Desorption Gas Inlet Temperature	Thermocouple	Continuous*** **	15 Minutes	Annual	Not More Than 8°C Below Desorption Gas Inlet Temperature Limit
F21	Primer-Booth Automatic Zone	VOC Concentrator System (TC05)	Collection Efficiency	Desorption/ Reactivation Fan Operation	Air Flow Monitor	Continuous	Each Occurrence of an Alarm	Annual	2100-2800 FPM
F21	Primer-Booth Automatic Zone	VOC Concentrator System (TC05)	Collection Efficiency	Adsorbent Material Performance	See Section B.4	Annually	Annually	See Section B.4	See Section B.4
F21	Primer-Booth Automatic Zone	VOC Concentrator System (TC05)	Collection Efficiency	VOC In / Out	Stack Test (EPA Method 25A)	Every 5 Years*	Every 5 Years*	Each Test	Collection Efficiency ≥ 85%
F21	Primer-Booth Automatic Zone	VOC Concentrator System (TC05)	Collection Efficiency	Adsorber Pressure Drop Across Trays	Pressure Sensor	Continuous	Each Occurrence of an Alarm	Annual Confirm	>0.7 in. H ₂ O
F21	Primer-Booth Automatic Zone	VOC Concentrator System (TC05)	Incinerator Collection	By-Pass Damper Position	Alarm	Continuous	Each Occurrence of an Alarm	Annual Confirm	No Faults
F21	Primer-Booth Automatic Zone	Thermal Oxidizer (TT14)	Destruction Efficiency	Combustion Chamber Temperature	Thermocouple	Continuous*** **	15 Minutes & Each Occurrence of an Alarm	Annual	Not More Than 28°C Below Combustion Chamber Limit
F21	Primer-Booth Automatic Zone	Thermal Oxidizer (TT14)	Destruction Efficiency	VOC In / Out	Stack Test (EPA Method 25A)	Every 5 Years*	Every 5 Years*	Each Test	DRE ≥ 95%
F21	Primer-Oven	Thermal Oxidizer (TT15)	Destruction Efficiency	Combustion Chamber Temperature	Thermocouple	Continuous*** **	15 Minutes & Each Occurrence of an Alarm	Annual	Not More Than 28°C Below Combustion Chamber Limit

Permit Number: V-20-026 R4

Page: 73 of 273

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Unit	Operation	Equipment Monitored	Characteristic Monitored	Parameter Monitored	Method or Device	Monitoring Frequency	Recording Frequency	Calibration Frequency	Standard Range
F21	Primer-Oven	Thermal Oxidizer (TT15)	Destruction Efficiency	VOC In / Out	Stack Test (EPA Method 25A)	Every 5 Years*	Every 5 Years*	Each Test	DRE ≥ 95%
F22/F21	Topcoat/Primer Booths	Booth Scrubber (TS25)	PM Removal Efficiency	Gaps at Venturi	Visual	Weekly	Weekly	N/A	No Significant Gaps
F22/F21	Topcoat/Primer Booths	Booth Scrubber (TS25)	Control Efficiency	Particulate Emission	Stack Test (EPA Method 17)	Every 5 Years*	Every 5 Years*	Each Test	See Section D.4
F22/F21	Topcoat – Clearcoat/Primer Automatic Zone	VOC Concentrator System (TC04)	Collection Efficiency	Desorption Gas Inlet Temperature	Thermocouple	Continuous*** **	15 Minutes	Annual	Not More Than 8°C Below Desorption Gas Inlet Temperature Limit
F22/F21	Topcoat – Clearcoat/Primer Automatic Zone	VOC Concentrator System (TC04)	Collection Efficiency	Desorption/Reactivation Fan Operation	Visual	Monthly	Monthly	N/A	Operating
F22/F21	Topcoat – Clearcoat/Primer Automatic Zone	VOC Concentrator System (TC04)	Collection Efficiency	Adsorbent Material Performance	See Section B.4	Annually	Annually	See Section B.4	See Section B.4
F22/F21	Topcoat – Clearcoat/Primer Automatic Zone	VOC Concentrator System (TC04)	Collection Efficiency	VOC In / Out	Stack Test (EPA Method 25A)	Every 5 Years*	Every 5 Years*	Each Test	Collection Efficiency ≥ 85%
F22/F21	Topcoat – Clearcoat/Primer Automatic Zone	VOC Concentrator System (TC04)	Collection Efficiency	Adsorber Pressure Drop Across Trays	Pressure Sensor	Continuous	Each Occurrence of an Alarm	Annual Confirm	> 0.7 in. H ₂ O
F22/F21	Topcoat – Clearcoat/Primer Automatic Zone	VOC Concentrator System (TC04)	Incinerator Collection	By-Pass Damper Position	Alarm	Continuous	Each Occurrence of an Alarm	Annual Confirm	No Faults

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Unit	Operation	Equipment Monitored	Characteristic Monitored	Parameter Monitored	Method or Device	Monitoring Frequency	Recording Frequency	Calibration Frequency	Standard Range
F22/F21	Topcoat – Clearcoat/Primer Automatic Zone	Thermal Oxidizer (TT13)	Destruction Efficiency	Combustion Chamber Temperature	Thermocouple	Continuous*** **	15 Minutes & Each Occurrence of an Alarm	Annual	Not More Than 28°C Below Combustion Chamber Limit
F22/F21	Topcoat – Clearcoat/Primer Automatic Zone	Thermal Oxidizer (TT13)	Destruction Efficiency	VOC In / Out	Stack Test (EPA Method 25A)	Every 5 Years*	Every 5 Years*	Each Test	DRE ≥ 95%
F22/F21	Topcoat Oven & Primer Oven	Thermal Oxidizer (TT11)	Destruction Efficiency	Combustion Chamber Temperature	Thermocouple	Continuous*** **	15 Minutes & Each Occurrence of an Alarm	Annual	Not More Than 28°C Below Combustion Chamber Limit
F22/F21	Topcoat Oven & Primer Oven	Thermal Oxidizer (TT11)	Destruction Efficiency	VOC In / Out	Stack Test (EPA Method 25A)	Every 5 Years*	Every 5 Years*	Each Test	DRE ≥ 95%

Alternate Operating Scenario for Emission Unit F21 Primer Booth:

If Thermal Oxidizer (TT14) is utilized to control emissions from Emission Unit F21 Primer Booth instead of VOC Concentrator (TC05)/Thermal Oxidizer (TT14), the permittee shall comply with period monitoring requirements listed below:

Emission Unit	Operation	Equipment Monitored	Characteristic Monitored	Parameter Monitored	Method or Device	Monitoring Frequency	Recording Frequency	Calibration Frequency	Standard Range
F21	Primer-Booth Automatic Zone	Thermal Oxidizer (TT14)	Destruction Efficiency	Combustion Chamber Temperature	Thermocouple	Continuous*** **	15 Minutes & Each Occurrence of an Alarm	Annual	Not More Than 28°C Below Combustion Chamber Limit
F21	Primer-Booth Automatic Zone	Thermal Oxidizer (TT14)	Destruction Efficiency	VOC In / Out	Stack Test (EPA Method 25A)	Every 5 Years*	Every 5 Years*	Each Test	DRE ≥ 81%

* No more than 5 years from the last performance test.

***“Daily” means TMMK production day; A TMMK production day consists of both first and second shifts. F09 Blackout manual booth used as back-up only, daily pressure drop monitoring for exhaust filters applicable only when manual booth is in use.

***** “Continuous” means at least one (1) reading every 15 minutes

***** If this back-up control device operates for more than 30 consecutive days TMMK shall perform a performance test within 90 days.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

PLASTICS - PERIODIC MONITORING REQUIREMENTS

Emission Unit	Operation	Equipment Monitored	Characteristic Monitored	Parameter Monitored	Method or Device	Monitoring Frequency	Recording Frequency	Calibration Frequency	Standard Range
G13	Slush Mold	Fluidized Bed Filters (RF01, RF02, RF03, RF04)	PM Removal Efficiency	Press Drop	Gauge	Weekly	Weekly	Annual	0 – 5 in. H ₂ O
G19/G27	Non-process Cleaning Activities (Purge Recovery)	Solventborne Waste Purge Tank (Line 1, 2 and 3)	VOC Emission Credit	Recovered Purge	Meter	Monthly	Monthly	Annual	See Permit Limit Section B.2
G19/G27	Non-process Cleaning Activities (Purge Usage)	Solventborne Virgin Purge Tank (Line 1, 2 and 3)	VOC Emission	Virgin Purge	Meter	Monthly	Monthly	Annual	See Permit Limit Section B.2
G19	Non-process Cleaning Activities (Purge Usage)	Solventborne Virgin Purge Tank (Injection Parts)	VOC Emission	Virgin Purge	Meter	Monthly	Monthly	Annual	See Permit Limit Section B.2
G21	Ext Part Paint Booth B1	Exhaust Filters (RF14)	PM Removal Efficiency	All Final Filters In Place	Visual Inspection	Monthly	Monthly	N/A	No Visible By-Pass
G21	Ext Part Paint Booth B1	Exhaust Filters (RF14)	PM Removal Efficiency	Press Drop	Gauge	Continuous	Weekly	Annual	0 – 1 in. H ₂ O
G21	Ext Part Paint Booth B1	Booth Scrubbers (RS16)	PM Removal Efficiency	Water Flow	Flow Meter	Continuous	Hourly & Each occurrence of an alarm	Annual	37 - 53 gpm
G21	Ext Part Paint Booth B1	Booth Exhaust	PM Emission Rate	Particulate Emission	Stack Test (EPA Method 17)	Every 5 years*	Every 5 years*	Each Test	See Section B.2
G21	Ext Part Paint Booth B1	Thermal Oxidizers (RT11)	Destruction Efficiency	VOC In / Out	Stack Test (EPA Method 25A)	Every 5 Years*	Every 5 Years*	Each Test	DRE ≥ 95%
G21	Ext Part Paint Booth B1	Thermal Oxidizers (RT11)	Destruction Efficiency	Combustion Chamber Temperature	Thermocouple	Continuous***	15 Minutes	Annual	Not More Than 28°C Below Combustion Chamber Limit

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Unit	Operation	Equipment Monitored	Characteristic Monitored	Parameter Monitored	Method or Device	Monitoring Frequency	Recording Frequency	Calibration Frequency	Standard Range
G21	Ext Part Paint Booth B1	VOC Concentrator System (RC07)	Collection Efficiency	Desorption/ Gas Inlet Temperature	Thermocouple	Continuous***	15 Minutes & Each Occurrence of an Alarm	Annual	Not More Than 8°C Below Desorption Gas Inlet Temperature Limit
G21	Ext Part Paint Booth B1	VOC Concentrator System (RC07)	Collection Efficiency	Desorption/ Reactivation Fan Operation	Visual	Monthly	Monthly	N/A	Operating
G21	Ext Part Paint Booth B1	VOC Concentrator System (RC07)	Collection Efficiency	Adsorbent Material Performance	See Section B.4	Annually	Annually	See Section B.4	See Section B.4
G21	Ext Part Paint Booth B1	VOC Concentrator System (RC07)	Collection Efficiency	VOC In / Out	Stack Test (EPA Method 25A)	Every 5 Years*	Every 5 Years*	Each Test	Collection Efficiency ≥ 85%
G21	Ext Part Paint Booth B1	VOC Concentrator System (RC07)	Collection Efficiency	By-Pass Damper Position	Alarm	Continuous	Each Occurrence of an Alarm	Annual Confirm	No Faults
G21	Ext Part Paint Booth B1	VOC Concentrator System (RC07)	Collection Efficiency	Pressure Drop Across Carbon	Pressure Sensor	Continuous	Each Occurrence of an Alarm	Annual Confirm	0.25-3.0 in H2O
G22	Bumper Paint Booths (G,H)	Booth Scrubbers (RS14, RS15)	PM Removal Efficiency	Water Flow	Flow Meter	Continuous	Hourly & Each occurrence of an alarm	Annual	20 – 44 GPM
G22	Bumper Paint Booths (G,H)	Booth Exhaust	Emission Rate	Particulate Emission	Stack Test (EPA Method 17)	Every 5 Years*	Every 5 Years*	Each Test	See Section B.2
G22	Bumper Paint Booths (G,H)	Thermal Oxidizers (RT12)	Destruction Efficiency	VOC In / Out	Stack Test (EPA Method 25A)	Every 5 Years*	Every 5 Years*	Each Test	Control Efficiency ≥ 81%
G22	Bumper Paint Booths (G,H)	Thermal Oxidizers (RT12)	Destruction Efficiency	Combustion Chamber Temperature	Thermocouple	Continuous***	15 Minutes	Annual	Not More Than 28°C Below Combustion Chamber Limit

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Unit	Operation	Equipment Monitored	Characteristic Monitored	Parameter Monitored	Method Device	Monitoring Frequency	Recording Frequency	Calibration Frequency	Standard Range
G26	Bumper and Rocker Paint Booths	Exhaust Filters (RF11, RF12, RF13)	PM Removal Efficiency	Press Drop	Gauge	Continuous	Weekly	Annual	0 – 1.1 in. H ₂ O
G26	Bumper and Rocker Paint Booths	Exhaust Filters (RF11, RF12, RF13)	PM Removal Efficiency	All Filters In Place	Visual Inspection	Monthly	Monthly	N/A	No Visible By-Pass
G26	Bumper and Rocker Paint Booths	Booth Scrubbers (RS13)	PM Removal Efficiency	Gaps at Venturi	Visual Inspection	Weekly	Weekly	N/A	No Significant Gaps
G26	Bumper and Rocker Paint Booths	Booth Exhaust	Control Efficiency	Particulate Emission	Stack Test (EPA Method 17)	Every 5 Years*	Every 5 Years*	Each Test	See Section D.4
G26	Bumper and Rocker Paint Booths	Thermal Oxidizer (RT12)	Destruction Efficiency	VOC In / Out	Stack Test (EPA Method 25A)	Every 5 Years*	Every 5 Years*	Each Test	Control Efficiency ≥ 81%
G26	Bumper and Rocker Paint Booths	Thermal Oxidizer (RT12)	Destruction Efficiency	Combustion Chamber Temperature	Thermocouple	Continuous***	15 Minutes	Annual	Not More Than 28°C Below Combustion Chamber Limit

* No more than 5 years from the last performance test.

**“Daily” means TMMK production day; A TMMK production day consists of both first and second shifts.

*** “Continuous” means at least one (1) reading every 15 minutes

Alternate Operating Scenario for Emission Units G22 and G26 Bumper Paint Booths VOC Control Equipment:

If Thermal Oxidizers (RT07-10) and Concentrators (RC03-06) are utilized to control emissions from Emission Unit G22 and G26 Bumper Paint Booths instead of Thermal Oxidizer (RT12), the permittee shall comply with period monitoring requirements listed below:

Emission Unit	Operation	Equipment Monitored	Characteristic Monitored	Parameter Monitored	Method Device	Monitoring Frequency	Recording Frequency	Calibration Frequency	Standard Range
G22	Bumper Paint Booths (G,H)	Thermal Oxidizers (RT08, RT09)	Destruction Efficiency	VOC In / Out	Stack Test (EPA Method 25A)	Every 5 Years****	Every 5 Years****	Each Test	DRE ≥ 95%

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Unit	Operation	Equipment Monitored	Characteristic Monitored	Parameter Monitored	Method or Device	Monitoring Frequency	Recording Frequency	Calibration Frequency	Standard Range
G22	Bumper Paint Booths (G,H)	Thermal Oxidizers (RT08, RT09)	Destruction Efficiency	Combustion Chamber Temperature	Thermocouple	Continuous***	15 Minutes	Annual	Not More Than 28°C Below Combustion Chamber Limit
G22	Bumper Paint Booths (G,H)	VOC Concentrator System (RC04, RC05)	Collection Efficiency	Desorption Gas Inlet Temperature	Thermocouple	Continuous***	15 Minutes & Each Occurrence of an Alarm	Annual	Not More Than 8°C Below Desorption Gas Inlet Temperature Limit
G22	Bumper Paint Booths (G,H)	VOC Concentrator System (RC04, RC05)	Collection Efficiency	Desorption/Reactivation Fan Operation	Visual Inspection	Monthly	Monthly	N/A	Operating
G22	Bumper Paint Booths (G,H)	VOC Concentrator System (RC04, RC05)	Collection Efficiency	Adsorbent Material Performance	See Section B.4	Annually	Annually	See Section B.4	See Section B.4
G22	Bumper Paint Booths (G,H)	VOC Concentrator System (RC04, RC05)	Collection Efficiency	VOC In / Out	Stack Test (EPA Method 25A)	Every 5 Years****	Every 5 Years****	Each Test	Collection Efficiency ≥ 85%
G22	Bumper Paint Booths (G,H)	VOC Concentrator System (RC04, RC05)	Collection Efficiency	Adsorber Pressure Drop Across Trays	Pressure Sensor	Continuous	Each Occurrence of an Alarm	Annual Confirm	> 0.5 in. H ₂ O
G26	Bumper and Rocker Paint Booths	Booth Exhaust	Control Efficiency	Particulate Emission	Stack Test (EPA Method 17)	Every 5 Years****	Every 5 Years****	Each Test	See Section D.4
G26	Bumper and Rocker Paint Booths	VOC Concentrator System (RC03, RC06)	Collection Efficiency	Desorption Gas Inlet Temperature	Thermocouple	Continuous***	15 Minutes & Each Occurrence of an Alarm	Annual	Not More Than 8°C Below Desorption Gas Inlet Temperature Limit
G26	Bumper and Rocker Paint Booths	VOC Concentrator System (RC03, RC06)	Collection Efficiency	Desorption/Reactivation Fan Operation	Visual Inspection	Monthly	Monthly	N/A	Operating

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Unit	Operation	Equipment Monitored	Characteristic Monitored	Parameter Monitored	Method or Device	Monitoring Frequency	Recording Frequency	Calibration Frequency	Standard Range
G26	Bumper and Rocker Paint Booths	VOC Concentrator System (RC03, RC06)	Collection Efficiency	Adsorbent Material Performance	See Section B.4	Annually	Annually	See Section B.4	See Section B.4
G26	Bumper and Rocker Paint Booths	VOC Concentrator System (RC03, RC06)	Collection Efficiency	VOC In / Out	Stack Test (EPA Method 25A)	Every 5 Years****	Every 5 Years****	Each Test	Collection Efficiency $\geq 85\%$
G26	Bumper and Rocker Paint Booths	VOC Concentrator System (RC03, RC06)	Collection Efficiency	Adsorbent Pressure Drop Across Trays	Pressure Sensor	Continuous	Each Occurrence of an Alarm	Annual Confirm	> 0.5 in. H ₂ O
G26	Bumper and Rocker Paint Booths	VOC Concentrator System (RC03)	Incinerator Collection	By-Pass Damper Position	Alarm	Continuous	Each Occurrence of an Alarm	Annual Confirm	No Faults
G26	Bumper and Rocker Paint Booths	Thermal Oxidizer (RT07, RT10)	Destruction Efficiency	VOC In / Out	Stack Test (EPA Method 25A)	Every 5 Years****	Every 5 Years****	Each Test	DRE $\geq 95\%$
G26	Bumper and Rocker Paint Booths	Thermal Oxidizer (RT07, RT10)	Destruction Efficiency	Combustion Chamber Temperature	Thermocouple	Continuous***	15 Minutes	Annual	Not More Than 28°C Below Combustion Chamber Limit

**“Daily” means TMMK production day; A TMMK production day consists of both first and second shifts.

*** “Continuous” means at least one (1) reading every 15 minutes

**** If either of the back-up control devices operates for more than 30 consecutive days TMMK shall perform a performance test on the operated device within 90 days.

**SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE
REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

POWERTRAIN

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Description and Applicable Regulations:

401 KAR 59:010 and 401 KAR 51:017 apply to all affected facilities listed in the following table.

POWERTRAIN, 800 BUILDING, Operations include the following processes

EMISSION UNIT	OPERATION	CONSTRUCTION COMMENCED	CONTROL EQUIPMENT	OTHER APPLICABLE REGULATIONS
H01	All Cutting Operations Engine Lines	1988-1999 1988-1999 2007, 2015 2022 Modified June 2023	Filters for PM (MZY 1110-1,2) HVAC Filters for PM	
H02	Coating Application, including hub and shaft	1988-1999	None	401 KAR 63:002
H03	All Honing Operations Engine Lines	1988-1999 2015 2007 2022	All Other - HVAC Filters for PM	
H04	All Grinding Operations Engine Lines	1988-1999 2007, 2015 2022 Modified June 2023	HVAC Filters for PM	
H05	Non Process Solvent Cleaning Operations, including, CIPG and other areas	1988-2013	None	401 KAR 59:185 401 KAR 63:002
H06	Corrosion Inhibitor Application	1988-2013	None	401 KAR 63:002
H07	Source Removed	1988	None	

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EMISSION UNIT	OPERATION	CONSTRUCTION COMMENCED	CONTROL EQUIPMENT	OTHER APPLICABLE REGULATIONS
H08	Quenching Engine Lines	1988-1999 1988, 2015 2007 2022	HVAC Filters for PM	
H09	Washing	1988, 2015 Modified June 2023	HVAC Filters for PM	
H10	Gasket Installation Engine Lines	1988-1999, 2015 2015 2007 2022	None	401 KAR 63:002
H11	Raw Material Storage / Supply Engine Lines	1988-1993 1988-2013 2007-2008 2022	Gasoline Tanks – Conservation Vent for breathing losses, vapor balancing for working losses Two 10,000 gallon engine oil storage tanks are included (OT-08).	401 KAR 59:050 for OT-08
H12 H12-01 H12-02 H12-03 H12-06 H12-04 H12-07 H12-05 H12-08	Sub-Assembly and Final Engine Testing Fuel Day Tanks LLC Coolant Fluid Filing L4 Area: Loaded Dynamometer Test (4) Cells V6 Area: Loaded Dynamometer Test (3) Cells L4 Area: Up/Down Test Cells V6 Area: Up/Down Test Cells L4 Area: Hot Testing V6 Area: Hot Testing	1988, 2015 1988, 2015 2007-2008, 2015 2022	CC System for each cell CC System for each cell	40 CFR 64 40 CFR 64

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EMISSION UNIT	OPERATION	CONSTRUCTION COMMENCED	CONTROL EQUIPMENT	OTHER APPLICABLE REGULATIONS
H13	Operational Support, including material supply systems, scrap material handling, tool regrind and maintenance machining (Insignificant Activities List)	1988, 2015	None	
H14	Block Impregnation	Oct-98 2015	None	401 KAR 63:002
H15/H15b	Process Lubrication Activities (Building 800 for H15, Building 200 for H15b)	1988, 2015	None	
H16	Process Cleaning Operations Engine Lines	1988, 2015 1988, 2019 2007, 2018 2022	L4 & L4-2 Line – Laser Cladding Process Cleaning – Thermal Oxidizer KT01 for VOC (<i>KT01 will be removed December 2023</i>)	401 KAR 63:002
H17	Final Assembly Operations	1988, 2015, 2022	None	

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

APPLICABLE REGULATIONS:

401 KAR 51:017, *Prevention of significant deterioration of air quality*

401 KAR 59:010, *New Process Operations*

401 KAR 59:050, *New storage vessels for petroleum liquids*

401 KAR 59:185, *New solvent metal cleaning equipment*

401 KAR 63:002 Section 2(4)(ooo), **40 C.F.R. 63.3080 to 63.3176, Tables 1 through 4, and Appendix A (Subpart IIII)**, *National Emission Standards for Hazardous Air Pollutants: Surface Coating of Automobiles and Light-Duty Trucks* (Refer to Section B Group Requirements)

40 CFR 64, *Compliance Assurance Monitoring (CAM)*, (See Section E, EU H12-03 and H-06).

401 KAR 63:002 Section 2(4)(tttt) **40 C.F.R. 63.9280 to 63.9375, Tables 1 through 7 (Subpart PPPPP)**, *National Emission Standards for Hazardous Air Pollutants for Engine Test Cells/Standards* (Existing affected sources do not have to meet Subparts A of 40 CFR part 63 except for initial notification requirements).

1. Operating Limitations:

- a. The usage rates of materials used in all affected facilities shall be limited so as not to exceed the emission limitations in Section B.2. Refer to Section B Group Requirements for requirements specific to 40 CFR 63 Subpart IIII.
- b. Wherever practicable, the permittee shall utilize work practices to minimize emissions from non-process cleaning activities.

Specific Operating Limitations for Cold Cleaner in Emission Unit H05:

- c. The permittee shall comply with control equipment and operating requirements specified in 401 KAR 59:185, Section 4 (1) & (2). Refer to Section B Group Requirements.

Specific Operating Limitations for H11 401 KAR 59:050 affected tanks:

- d. If the storage vessel has a storage capacity greater than 2,195 liters (580 gallons), and if the true vapor pressure of the petroleum liquid, as stored, is equal to or greater than ten and three-tenths (10.3) kPa (one and five-tenths (1.5) psia), as a minimum it shall be equipped with a permanent submerged fill pipe [401 KAR 59:050 Section 3.(2)].
- e. There shall be no visible holes, tears, or other opening in the seal, any seal fabric, shoe, or seal envelope [401 KAR 59:050 Section 4.(1)].
- f. All openings, except stub drains, automatic bleeder vents, rim space vents, and leg sleeves, shall be equipped with covers, lids, or seals such that [401 KAR 59:050 Section 4.(2)]:
 - (1) The cover, lid, or seal is in the closed position at all times (i.e., no visible gap) except when in actual use or as described in subsection (3)(f) of section 4 of 401 KAR 59:050;

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- (2) Automatic bleeder vents are closed at all times except when the roof is floated off or landed on the roof leg supports; and
- (3) Rim vents, if provided, are set to open when the roof is being floated off the roof leg supports or at the manufacturer's recommended setting.

Specific Operating Limitations for Emission Unit H12:

- g. Pursuant to 401 KAR 51:017 Section 8(3), the permittee shall install and operate whenever a dynamometer is performing a loaded test pattern in H12(03) or H12(06), the Catalytic Converter System (CC System) required to meet the BACT limitation for control of CO. The timeframe to construct and operate the CC System shall be in compliance with the compliance schedule approved by the Division.

Compliance Demonstration Method:

See subsections **3. Testing Requirements**, **4. Specific Monitoring Requirements**, **5. Specific Recordkeeping Requirements**, and **7. Specific Control Equipment Operating Conditions**.

- h. Pursuant to **401 KAR 51:017**, the permittee shall not exceed the following limits:

Process ID	Operation Description	Short-Term Operational Restrictions	Annual Operational Restrictions
H12(03)	L4 Area: Loaded Dynamometer Test Cells	92.4 gallons of fuel/hour (Calculated as daily average)	170,000 gallons of fuel / 12 rolling months
H12(06)	V6 Area: Loaded Dynamometer Test Cells	69.3 gallons of fuel/hour (Calculated as daily average)	200,000 gallons of fuel / 12 rolling months
H12(04)	L4 Area: Up/Down Test Cell	1.9 gallons of fuel/hour (Calculated as monthly average)	6,000 gallons of fuel / 12 rolling months
H12(07)	V6 Area: Up/Down Test Cell	1.9 gallons of fuel/hour (Calculated as monthly average)	6,000 gallons of fuel / 12 rolling months
H12(05)	L4 Area: Hot Testing	110 engines hot tested/hour (Calculated as monthly average)	338,983 engines hot tested / 12 rolling months
H12(08)	V6 Area: Hot Testing	64.3 engines hot tested/hour (Calculated as monthly average)	342,466 engines hot tested / 12 rolling months

Compliance Demonstration Method:

- (1) See subsections **3. Testing Requirements**, **4. Specific Monitoring Requirements** and **5. Specific Recordkeeping Requirements** for compliance with the control efficiency requirement.
- (2) **Annual Operational Restrictions**: Gallons of fuel usage, hours of operation, and numbers of engines tested shall be recorded as indicated by subsections **4. Specific Monitoring Requirements** and **5. Specific Recordkeeping Requirements**

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(3) Short-Term Operational Restrictions:

H12(03) and H12(06):

Daily gallons of fuel usage and daily hours of operation shall be recorded for H12(03) and H12(06) as indicated by subsection 4. **Specific Monitoring Requirements** and subsection 5. **Specific Recordkeeping Requirements** and shall be used to calculate the hourly usage and shall be compared to the above limit.

Hourly fuel limit (gal/hr) = Daily fuel usage / Daily hours of operation

H12(04), H12(07), H12(05) and H12(08):

Monthly fuel usage/engines tested and monthly hours of operation shall be recorded for H12(04), H12(07), H12(05) and H12(08) as indicated by 4. **Specific Monitoring Requirements** and by 5. **Specific Recordkeeping Requirements** and shall be used to calculate the hourly usage and shall be compared to the above limit.

Hourly fuel or engines tested limit = Monthly fuel or engines tested / Monthly hours of operation

2. Emission Limitations:

- a. **401 KAR 59:010, Section 3 (1):** The opacity of visible emissions from each stack shall not equal or exceed 20 percent.

Compliance Demonstration Method:

See subsection 4. **Specific Monitoring Requirements**.

- b. **401 KAR 59:010, Section 3 (2):**

Emission of particulate matter from a control device or stack of any affected facility up to a process rate of 1000 lbs/hr shall not exceed **2.34** lbs/hr. For processing rates greater than 1000 lbs/hr up to 60,000 lbs/hr, particulate emissions shall not exceed the emission rate calculated by the following equation:

$$E = 3.59(P)^{0.62}$$

E = the PM emissions rate (pounds/hour)

P = the process rate (tons/hour)

Compliance Demonstration Method:

- (1) The total process weight, "P" as defined above must reflect a period that covers a complete operation or an integral number of cycles, divided by the hours of actual process operation during such a period. This period shall not exceed 24 hours. In the case where there are no periodic monitoring requirements associated with the affected facility, continuous compliance shall be assured as long as there are no process or operational changes. The determination of the emission rate "E" in pounds per hour for compliance with 401 KAR 59:010 may also be used to demonstrate compliance with 401 KAR 51:017, except that the period allowed for the determination of "P" shall be one month.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(2) For affected facilities with periodic monitoring requirements for particulate emissions, the source shall demonstrate continuous compliance by adhering to the periodic monitoring requirements table. The source must maintain a record of deviations from “standard ranges” in the periodic monitoring requirements table and determine the particulate emissions from the deviation. The duration of the deviation shall be the period between when the “out of standard condition” was noted and when it is corrected. If an engineering evaluation utilizing a control efficiency is used to determine particulate emissions for the affected facility, the allowed control efficiency shall be zero during the deviation period unless testing is conducted to prove otherwise.

- c. **401 KAR 51:017:** Emissions of VOC and PM shall not exceed the following, as calculated on a monthly basis:

EMISSION UNIT	OPERATION	VOC LIMIT (lb/job)	PM LIMIT (lb/hr)
H01	Cutting Operations	0.13	N/A
H03	Honing Operations	0.030	N/A
H04	Grinding Operations	0.015	N/A
H05	Non-Process Cleaning Activities	0.031	N/A
H08	Quenching Activities	0.016	N/A
ALL POINTS	All Powertrain Operations	N/A	3.69

Compliance Demonstration Method:

$$VOC\ Value = \frac{\sum U_i * V_i * E_i * (1 - C_i * F_i)}{P}$$

U_i = Usage of material “i”,

V_i = Volatile organic compound (VOC) content,

E_i = VOC Emission Factor,

F_i = Control efficiency,

C_i = Collection efficiency,

P = Production rate (total number of engines and axles assembled)

PM Value = Measurement, when prescribed by periodic monitoring requirements table.

Otherwise PM shall be calculated as follows:

$$PM\ Value = \sum \frac{P}{P_m} * E_i, \text{ or equivalent methods approved by Division,}$$

P = Average shop production throughput,

P_m = Maximum vehicle production rate

E_i = PM Emission Factor (controlled) for each stack “i”.

See Compliance Demonstration Method for 401 KAR 59:010, in this Section.

- d. **401 KAR 51:017:** Emissions of VOC shall not exceed 182.4 tons per year, based on a 12-month rolling total.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Compliance Demonstration Method:

$$VOC\ Value = \sum U_i * V_i * E_i * (1 - C_i * F_i)$$

U_i = Usage of material “i”,
 V_i = Volatile organic compound (VOC) content,
 E_i = VOC Emission Factor,
 F_i = Control efficiency,
 C_i = Collection efficiency.

- e. **401 KAR 51:017:** Emissions of PM shall not exceed 16.1 tons per year from Powertrain Operations, based on a 12-month rolling total.

Compliance Demonstration Method:

- (1) Calculated from the following equation, except where testing specified (see item 3)

$$PM\ Value = \sum P * E_i$$

P = Average shop production throughput
 E_i = PM Emission Factor (controlled) for “i”,
 (2) See Compliance Demonstration Method for 401 KAR 59:010, in this Section.
 (3) Testing, see periodic monitoring requirements table.

- f. **401 KAR 51:017:**

Emissions of CO from engine testing shall not exceed the following limits:

EMISSION UNIT	OPERATION	CO LIMIT based on 3-hr average (lb/hr)	Control Requirement
H12 (03)	L4 Area: Loaded Dynamometer 4 Test Cells (4 CC Systems)	6.39 per cell	CC System in each cell to achieve a 96% or greater control efficiency, except during “low inlet loadings of CO*”, idle, or non-loaded test patterns.
H12 (06)	V6 Area: Loaded Dynamometer 3 Test Cells (3 CC Systems)	6.39 per cell	CC System in each cell to achieve a 96% or greater control efficiency, except during “low inlet loadings of CO*”, idle, or non-loaded test patterns.
H12 (04)	L4 Area : Up/Down Test Cells	2.07	None
H12 (07)	V6 Area : Up/Down Test Cells	2.07	None
H12 (05)	L4 Area :Hot Testing	9.30	None
H12 (08)	V6 Area : Hot Testing	6.70	None

* “low inlet loading of CO” refers to test patterns which generate uncontrolled CO emission rates based on a 3-hour average which are lower than the CO BACT limit of 6.39 lb/hr.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Compliance Demonstration Method:

The following equation may be used to calculate CO emissions:

CO Emission lb/hr = Emission factor of CO (lb/gal) as listed in KYEIS X consumption of fuel in gallons/hr-cell)(1-Control Efficiency of Catalytic Converter System) X number of cells

See subsections **3. Testing Requirements**, **4. Specific Monitoring Requirements** and **5. Specific Recordkeeping Requirements** for compliance with CO emissions and control efficiency requirements.

g. **40 CFR 63 Subpart IIII, Section 63.3091 - Emission Limits for Existing Sources**

EMISSION UNITS	NESHAP AFFECTED OPERATIONS	EMISSION LIMIT
H02	Primer-surfacer	Refer to Section B Group Requirements for Group Emission Limits.
H05	Non-Process Cleaning	
H06	Corrosion Inhibitor Application	
H10	Sealer and Adhesives	
H14	Block Impregnation	
H16	Process Cleaning Operations	

Compliance Demonstration Method:

Refer to Section B Group Requirements.

3. **Testing Requirements:**

- Testing shall be conducted at such times as may be requested by the Cabinet [401 KAR 50:045, Section 1].
- The permittee shall perform a stack test for CO each year on a representative loaded dynamometer test cell from the worst case emission scenario (H12(03) or H12(06)) using EPA Method 10. These tests shall be performed on the pattern and engine size used to established the worst-case uncontrolled CO emission factor, which formed the basis of the CO BACT determination. The average of 3 one-hour test runs from these stack tests shall be used to assess compliance with the CO hourly BACT limit and catalyst substrate health.
- If the permittee changes the catalyst manufacturer and type, the permittee shall perform a stack test for CO on a representative loaded dynamometer test cell from H12(03) and H12(06) using EPA Method 10 to ensure compliance with 96% control efficiency. These tests shall be performed on the pattern and engine size used to established the uncontrolled CO emission factor, which formed the basis of the CO BACT determination. The average of 3 one-hour test runs from controlled and uncontrolled stack tests shall be used to assess compliance with the control requirement of 96% and catalyst substrate health.

4. **Specific Monitoring Requirements:**

- See Section F for general monitoring requirements.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- b. The permittee shall install, operate, and maintain a device to measure the fuel usage in H12(03) and H12(06), H12(04) and H12(07).
- c. The permittee shall monitor the daily gallons of fuel usage in H12(03) and H12(06).
- d. The permittee shall monitor the monthly gallons of fuel usage in H12(03), H12(06), H12(04), H12(07).
- e. The permittee shall monitor the number of production engines per month that undergo Hot Testing in H12(05) and H12(08).
- f. The permittee shall monitor the hours of operation while engine testing is being performed for H12(04), H12(07), H12(05), and H12(08) on a monthly basis.
- g. The permittee shall monitor the hours of operation while engine testing using the CC System is being performed for H12(03), and H12(06) on a daily basis.
- h. To demonstrate compliance with the CO BACT Limits for H12(03) and H12(06), the permittee must meet the following monitoring requirements for the CC System:
 - (1) Continuous monitoring of the CC system to ensure it is operational at all times while loaded dynamometer test patterns are being performed for H12(03) and H12(06).
 - (2) The temperature in the catalyst chamber and Air to Fuel ratio (A/F) prior to the catalytic converter chamber shall be monitored continuously and recorded in at least 15-minute block averages during each specific loaded dynamometer test pattern.
 - (3) If the 15-minute block average temperature in the catalytic converter chamber exceeds the manufacturer's maximum recommended temperature specification, corrective actions shall be taken within the subsequent 45-minute period to bring the temperature below the maximum temperature, otherwise the loaded dynamometer test should cease.
 - (4) If the 15-minute block average A/F prior to the catalytic converter chamber is below 14.6, corrective actions shall be taken within the subsequent 45-minute period to bring the A/F above 14.6, otherwise the loaded dynamometer test should cease.
 - (5) Monthly monitoring of each CC System including inspections of the air supply lines, pipe network, and monitoring devices and, as necessary, adjust the equipment to assure proper air-to-fuel mixtures.
 - (6) Annual monitoring of thermocouples serving each CC System consisting of thermocouple validation checks and any subsequent accuracy audits.
 - (7) Semi-annual monitoring of the A/F sensor serving each CC System consisting of A/F validation checks and any subsequent accuracy audits.
 - (8) Monitor the number of hours each catalyst substrate is operated while performing loaded dynamometer test patterns and replace within the timeframe specified by the catalyst's manufacturer.
 - (9) Semi-annual monitoring of each catalyst converter substrate including internal visual inspection to check for leaks, channeling, abrasion, and settling. If problems are found, the permittee shall take corrective action consistent with the manufacturer's recommendations.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- i. The permittee shall conform to the monitoring requirements, as prescribed in the Periodic Monitoring Requirements table.
- j. Refer to Section B Group Requirements for requirements specific to 40 CFR 63 Subpart III.
- k. The permittee shall monitor raw material usages as necessary to demonstrate compliance with all requirements of this permit.
- l. Compliance with the opacity The permittee shall perform a qualitative visual observation of the opacity of emissions at each stack no less than weekly while the affected facility is operating. If visible emissions from the stacks are observed (not including condensed water in the plume), the permittee shall determine the opacity using Reference Method 9. In lieu of determining the opacity using U.S. EPA Method 9, the permittee shall immediately perform a corrective action which results in no visible emissions (not including condensed water in the plume).
- m. Available data on the typical Reid vapor pressure and the maximum expected storage temperatures of the stored product may be used to determine the maximum true vapor pressure as specified by the cabinet, unless the cabinet specifically requests that the liquid be sampled, the actual storage temperature determined, and the Reid vapor pressure determined from the sample(s) [401 KAR 59:050 Section 5.(2)].
- n. The true vapor pressure of each type of crude oil with a Reid vapor pressure less than thirteen and eight-tenths (13.8) kPa (two and zero-tenths (2.0) psia) or whose physical properties preclude determination by the recommended method is to be determined from available data and recorded if the estimated true vapor pressure is greater than six and nine-tenths (6.9) kPa (one and zero-tenths (1.0) psia) [401 KAR 59:050 Section 5.(3)].
- o. The following are exempt from the requirements of section 5 of 401 KAR 59:050 [401 KAR 59:050 Section 5.(4)]:
 - (1) Each owner or operator of each storage vessel storing a petroleum liquid with a Reid vapor pressure of less than six and nine-tenths (6.9) kPa (one and zero-tenths (1.0) psia) provided the maximum true vapor pressure does not exceed six and nine-tenths (6.9) kPa (one and zero-tenths (1.0) psia).
 - (2) Each owner or operator of each storage vessel equipped with a vapor recovery and return or disposal system in accordance with the requirements of Section 3(1)(a) and (b), (3)(c) and (4) of 401 KAR 59:050.

5. Specific Recordkeeping Requirements:

- a. Refer to Section F.
- b. Pursuant to 401 KAR 52:020 Section 26, the permittee shall maintain records of required stack tests, corrective actions, inspections, maintenance activities, throughputs, temperatures, A/F, and operational hours shall be maintained on site.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- c. The permittee shall record the daily gallons of fuel used for the Loaded Dynamometer Test Cells in H12(03) and H12(06).
- d. The permittee shall record the monthly gallons of fuel used for the Up/Down Test Cells in H12(04) and H12(07).
- e. The permittee shall record the number of production engines per month that undergo Hot Testing in H12(05) and H12(08).
- f. The permittee shall record the 12 rolling month summation of the gallons of fuel used for the Up/Down Test Cells in H12(04) and H12(07) on a monthly basis.
- g. The permittee shall record the 12 rolling month summation for the number of production engines per hour that undergo Hot Testing in H12(05) and H12(08) on a monthly basis.
- h. The permittee shall record the hours of operation while engine testing using the CC System is being performed for H12(03), and H12(06) on a daily basis.
- i. The permittee shall record the hours of operation during engine testing for H12(04), H12(07), H12(05), and H12(08) on a monthly basis.
- j. The permittee shall record the calculated hourly gallons of fuel used for the Loaded Dynamometer Test Cells in H12(03) and H12(06) on a daily basis.
- k. The permittee shall record the calculated hourly gallons of fuel used for the Up/Down Test Cells in H12(05) and H12(08) on a monthly basis.
- l. The permittee shall record the calculated number of production engines per hour that undergo Hot Testing in H12(05) and H12(08) on a monthly basis.
- m. To show compliance with 401 KAR 51:017, the following records shall be maintained for each CC System, which are required to demonstrate continuous compliance with each operating limit and emissions limit associated with Loaded Dynamometer Engine Test Cells H12(03) and H12(06):
 - (1) Records of the date, time, and duration of each excursion when the CC System is not operational while performing loaded test patterns. Each occurrence shall be considered a deviation from permit requirements.
 - (2) The temperatures in the catalytic converter chamber and A/F prior to the catalytic converter chamber shall be recorded continuously except for limited downtime during electronic calibration.
 - (3) Tabulate and record the 15-minute blocks of catalytic converter temperature and A/F concurrently measured and recorded while the engine is operating in an electronic database or other appropriate format.
 - (4) Records of the date, time, and duration of each excursion when the 60-minute block average temperature in the catalytic converter chamber exceeds the manufacturer's

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- maximum recommended temperature specification (when the affected facilities are in use). Each occurrence shall be considered a deviation from permit requirements.
- (5) Records of the date, time, and duration of each excursion when the 60-minute block average A/F prior to the catalytic converter chamber is below 14.6 during a loaded test cell pattern. Each occurrence shall be considered a deviation from permit requirements.
 - (6) The records for the number of hours each catalyst substrate is operated while performing loaded dynamometer test patterns.
 - (7) Records of the date, time, and duration of each excursion when the number of hours for each catalyst substrate exceeds the manufacturer's recommended catalyst life when the affected facilities are performing loaded dynamometer test patterns. Each occurrence shall be considered a deviation from permit requirements.
 - (8) The design or manufacturer's specifications or equivalent document.
 - (9) The operational procedures and preventive maintenance records.
 - (10) The monthly inspection records of each CC System for the air supply lines, pipe network, and monitoring devices.
 - (11) The annual calibration records for the temperature monitoring device serving each CC System, consisting of thermocouple validation checks and any subsequent accuracy audits.
 - (12) The semi-annual calibration records for the A/F monitoring device serving each CC System, consisting of A/F sensor validation checks and any subsequent accuracy audits.
 - (13) Records of semi-annual internal visual inspection of each catalyst converter substrate.
- n. The permittee keep all periodic monitoring records associated with the Periodic Monitoring Requirements table. All periodic monitoring records shall be maintained for a period of not less than 5 years.
 - o. The permittee shall maintain a log of the visual observations noting date, time, initials of observers, and records of corrective actions taken as a result of visible emissions from a stack and records of any Reference Method 9 readings performed.
 - p. The permittee shall keep calendar month records of usage of all applicable raw materials and fuel usage. Following the end of each month, VOC emissions, CO emissions, PM emissions, fuel usage, and engines hot tested shall be calculated on a twelve-month rolling basis and recorded. Following the end of each month, pounds per job limits for VOC, pound per hour limits for CO, pounds per hour limits for PM, gallons of fuel usage per hour, and number of engines hot tested per hour shall be calculated and recorded. These records shall represent the most recent year and shall show compliance with VOC emissions, CO emissions, PM emissions, fuel usage, and engines hot tested limitations listed in this permit. These records shall be made available for inspection upon request by any duly authorized representatives of the Division for Air Quality.
 - (1) Records documenting the results of each opacity reading by EPA Reference Method 9 shall be maintained.
 - (2) Records documenting the results of any required inspection and repair, as a result of a recorded opacity over 20%.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- q. H12(03) and H12(06): The permittee shall keep calendar day records of fuel usage for the Loaded Dynamometer Test Cells. Following the end of each day, CO emissions, and fuel usage shall be calculated on an hourly average basis using the daily fuel usage and hours of operation and recorded. These records shall represent the most recent day and shall show compliance with CO emissions, and fuel usage limitations listed in this permit.
- r. These records shall be made available for inspection upon request by any duly authorized representatives of the Division for Air Quality.

Thermal Oxidizer Specific Recordkeeping Requirements:

The permittee shall maintain records of the following information for the thermal oxidizer:

- s. All 3-hour periods (during coating operations) during which the average combustion chamber temperature of the thermal oxidizer is more than 28°C (50°F) below the average combustion chamber temperature of the thermal oxidizer determined during the most recent performance test which demonstrated compliance. Each occurrence shall be considered a deviation from permit requirements. See Section F.6.
- t. During all periods of operation of the thermal oxidizer in which the 3-hour average combustion chamber temperature of the thermal oxidizer is more than 28°C (50°F) below the average combustion chamber temperature of the thermal oxidizer during the most recent performance test which demonstrated compliance, or other malfunction of the thermal oxidizer, a daily log of the following information shall be kept:
 - (1) Whether any air emissions were visible from the facilities associated with the thermal oxidizer.
 - (2) Whether visible emissions were normal for the process.
 - (3) The cause of the visible emissions.
 - (4) Corrective action(s) taken shall be recorded.

6. Specific Reporting Requirements:

- a. See Section F for general reporting requirements.
- b. The permittee shall submit semiannual reports describing any excursions.
- c. Verification of emission rates includes the submittal of a complete report of the test results to the Division within 60 days following the last date of the tests required by subsection 3.

Testing Requirements.

- d. The permittee shall submit summary monitoring reports every 6 months containing monitoring information listed in Section B.4 and B.5 of this permit. Also see Section F.5 for specific reporting dates. The report shall list any “out of standard” conditions or periodic monitoring requirements, as listed in the Periodic Monitoring Requirements table. If no “out of standard” conditions occurred, the permittee shall submit a negative report.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

7. Specific Control Equipment Operating Conditions:

- a. The control equipment listed for these emissions units shall be operated anytime the processes are operating. For HVAC filter systems, “in operation” is defined as “all filters being in place, with no emissions by-pass occurring”. All HVAC systems need not be exhausting air, while the process(es) is operating.
- b. To meet the CO BACT demonstration in a loaded dynamometer test cell, the permittee shall install and maintain the Catalytic Converter System in accordance with manufacturers’ recommendations and good engineering practice all the time when Dynamometer is operational.
- c. While performing a specific loaded test pattern, the permittee shall meet the following operating limits:
H12-CC Catalytic Converter System (CC System): To capture emission from Emission Point H12-03 (4 Cells), and H-12-06 (3 Cells) Loaded Dynamometer Test Cells, One CC System in each cell: For each CC System,
 - (1) The 60-minute block average temperature in the catalytic converter chamber shall not exceed manufacturer's recommended specifications during a loaded test cell pattern.
 - (2) The 60-minute block average A/F prior to the catalytic converter chamber shall be above 14.6 during a loaded test cell pattern.
 - (3) The hours of operation of each catalyst substrate, where it is exposed to loaded dynamometer test patterns, does not exceed manufacturer’s recommendations or timeframe as approved by the Division.

Compliance Demonstration Method:

- (1) For the each CC System:
 - i. Monitoring of calibrations for monitoring devices by subsection 4. Specific Monitoring Requirements h.,
 - ii. Monitoring of inspections of the CC System’s components by subsection 4. Specific Monitoring Requirements h., and
 - iii. Monitoring A/F by subsection 4. Specific Monitoring Requirements h.
- (2) For each catalyst substrate used in the CC System:
 - i. Monitoring temperature in the catalytic converter chamber by 4. Specific Monitoring Requirements h., and
 - ii. Monitoring the number of hours each catalyst substrate is operated and annual inspections of catalyst substrate by 4. Specific Monitoring Requirements h.
- (3) Recordkeeping of the stack testing, temperature, A/F, operational hours, maintenance activities, inspections, etc. by subsection 5. Recordkeeping Requirements b. and m.
- (4) As indicated by subsection 5. Recordkeeping Requirements m., while performing a loaded dynamometer test pattern, records of when:
 - i. The CC System is not operating; or
 - ii. The usage of catalyst substrate exceeds the manufacturer’s specification; or
 - iii. The temperature exceeds the manufacturer’s recommended maximum specification; or
 - iv. The A/F is below 14.6.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

d. Specific Operating Limitations for Thermal Oxidizers:

- (1) The average combustion chamber temperature in any 3-hour period shall not fall more than 28°C (50°F) below the combustion temperature limit established during the most recent performance test, which demonstrated compliance.
- (2) The permittee shall use the data collected during the performance test to calculate and record the average combustion temperature. This average combustion temperature is the minimum set point for the thermal oxidizer. The minimum-operating limit for thermal oxidizers is 28°C (50°F) below the minimum set point temperature.

Compliance Demonstration Method:

The permittee must monitor the temperature in the firebox of the thermal oxidizer or immediately downstream of the firebox before any substantial heat exchange occurs. Compliance shall be demonstrated by monitoring and recording the combustion temperature as required in the Periodic Monitoring Requirements table, averaged over 3 hours.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

POWERTRAIN - PERIODIC MONITORING REQUIREMENTS

Emission Unit	Operation	Equipment Monitored	Characteristic Monitored	Parameter Monitored	Method or Device	Monitoring Frequency	Recording Frequency	Calibration Frequency	Standard Range
H01,H03 H04,H08 H09	HVAC Systems (Powertrain)	HVAC Exhaust Filters	Filter Condition (PM Removal Efficiency)	Pressure Drop	Gauge	Continuous	Intermittent (Problem Log)	Annual	No Alarms
H01	V6 - Block	Filter, MZY 1110-2 (3rd stage)	Filter Condition (PM Removal Efficiency)	Pressure Drop	Gauge	Continuous	Daily**	Annual	0.1 – 4.0 inches H ₂ O
H01	V6 - Block	Filter, MZY 1110-1 (3rd stage)	Filter Condition (PM Removal Efficiency)	Pressure Drop	Gauge	Continuous	Daily**	Annual	0.1 – 4.0 inches H ₂ O
H11	Raw Material Storage	Gasoline Tanks	Conservation Vents	Function	Visual	Annual	Annual	N/A	Functions
H12(03) and (06)	L4/V6 Area: Loaded Dyno Test Cells	CC System	CO Emissions (CO BACT)	Functioning per specifications	Stack Test (Method 10)	Annual	Annual	Each Test	CO emissions less than 6.4 lbs/hr/cell
H12(03) and (06)	L4/V6 Area: Loaded Dynamometer Test Cells	Catalytic Converter Substrate within each CC System	Catalytic Converter Life	Total hours of operation of substrate per CC.	Monitoring the hours	Daily	Daily	N/A	Less than Manufacturer's Recommendation Or timeframe approved by the Division.
H12(03) and (06)	L4/V6 Area: Loaded Dyno Test Cells	Air:Fuel Sensor within each CC System	CO Emissions (CO BACT)	Chamber A/F	Sensor	Continuous ***	15 Minutes	Semi-Annual	Greater than 14.6
H12(03) and (06)	L4/V6 Areas: Loaded Dyno Test Cells	Components of each CC System	Capture (CO BACT)	Air supply lines, pipe network, & monitoring devices	Inspections	Monthly	Monthly	N/A	Operational
H12(03) and (06)	L4/V6 Area: Loaded Dyno Test Cells	Catalytic Converter Substrate within each CC System	Substrate Health (CO BACT)	Chamber Temperature	Thermo-couple	Continuous ***	15 Minutes	Annual	Less than Manufacturer's Recommendation *****

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Unit	Operation	Equipment Monitored	Characteristic Monitored	Parameter Monitored	Method or Device	Monitoring Frequency	Recording Frequency	Calibration Frequency	Standard Range
H16	Laser Cladding Process Cleaning	Thermal Oxidizers (KT01)	Destruction Efficiency	Combustion Chamber Temperature	Thermocouple	Continuous ***	15 Minutes & Each Occurrence of an Alarm	Annual	Not More Than 28°C Below Combustion Chamber Limit
H16	Laser Cladding Process Cleaning	Thermal Oxidizers (KT01)	Destruction Efficiency	VOC In / Out	Stack Test (EPA Method 25A)	Every 5 Years*	Every 5 Years*	Each Test	DRE ≥ 90%

* No more than 5 years from the last performance test.

**“Daily” means TMMK production day; A TMMK production day consists of both first and second shifts.

*** “Continuous” means at least one (1) reading every 15 minutes.

**** Outlet Temperature established per manufacturer’s specifications.

**SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE
REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

PAINT LINE #2 REBORN

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

List of Paint Line #2 Reborn Emission Units:

Emission Unit Identifier	Emission Unit Description	Page Number Requirements Begin
F02R	Electrodeposition Coating System (Replacement F02)	pg. 101
F03R	Body Repair (F03 Replacement)	pg. 101
F04R	Sealer Line (Replacement F04)	pg. 101
F05R	Coating Booth and Oven (Replacement of both F05 and F07, Modification to include Repair Areas, Blackout, and Wax Application)	pg. 102
F13R	Offline Maintenance and Equipment Cleaning/Purge	pg. 105
FHAP	Paint #2 and Paint #2 Reborn HAP emissions, a synthetic emission unit for recordkeeping purposes	pg. 106
D13A	Indirect and Direct Building Heat Combustion Units for Plant #2 Reborn (F02R-F14R)	pg. 153
D13B	Indirect and Direct Shop Process Combustion Units for Plant #2 Reborn (F02R-F14R)	pg. 153
	~~Paint Repair Operations (dedicated repair booths/areas)~~ Emissions from the repair areas will be attributed to other booths depending on the type of repair being applied.	~~pg. 106~~

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Paint #2 Reborn Part 1: Coating Operation Requirements:

Emission Unit Identifier	Emission Unit Description	Listed Processes and Equipment	Construction Date Proposed	Control Equipment	Minimum Capture and Destruction Efficiencies	Applicable Regulations
F02R	Electrodeposition Coating System		4/1/2026			
		Phosphate Bath		None		401 KAR 63:020
		Electrodeposition Bath		None	VOC Carryover to Oven	401 KAR 51:017 40 CFR 60 Subpart MMa
		E-Coat Oven		Regenerative Thermal Oxidizer (RTO) RTO-T2-ED	80% VOC control, 95% PM control	40 CFR 63 Subpart IIII 401 KAR 51:017 401 KAR 59:010 40 CFR 60 Subpart MMa
						40 CFR 63 Subpart IIII
F03R	Body Repair	Welding, Grinding, and Sanding activities	9/1/2025	None		401 KAR 59:010
F04R	Sealer Line	Sealer Application	9/1/2025	None	VOC carryover to Oven	401 KAR 51:017 40 CFR 63 Subpart IIII

[illegible]

[illegible]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

F13R		Line Purge (F05R Booths)	9/1/2025	F05R Primer, Basecoat, and Clearcoat Booth Controls	Refer to F05R Line A and B Primer, Basecoat and Clearcoat Booths	401 KAR 51:017 401 KAR 59:185 40 CFR 63 Subpart IIII
				None		401 KAR 51:017 40 CFR 63 Subpart IIII
F0HAP	Paint #2 and Paint #2 Reborn HAP emissions	This unit is used to record HAP emissions from Paint 2 and Paint 2 Reborn activities.	N/A	N/A	N/A	401 KAR 63:020 40 CFR 63 Subpart IIII

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

APPLICABLE REGULATIONS:

401 KAR 51:017, *Prevention of significant deterioration of air quality* (for PM and VOC)

401 KAR 59:010, *New process operations*

401 KAR 59:185, *New solvent metal cleaning equipment*

40 CFR 60 Subpart MMa, *Standards of Performance for Automobile and Light Duty Truck Surface Coating Operations for which Construction, Modification or Reconstruction Commenced After May 18, 2022*

401 KAR 63:002, Section 2(4)(ooo) 40 C.F.R. 63.3080 through 63.3176, Tables 1 through 5, and Appendix A (Subpart IIII), *National Emission Standards for Hazardous Air Pollutants: Surface Coating of Automobiles and Light-Duty Trucks*

STATE-ORIGIN REQUIREMENTS:

401 KAR 63:020, *Potentially hazardous matter or toxic substances.*

1. Operating Limitations:

General Operating Limitations:

- a. The usage rates of materials used in all affected facilities shall be limited so as not to exceed the emission limitations in Section B.2. [401 KAR 52:020, Section 10]
- b. The permittee shall install, maintain, and operate its control equipment in accordance with manufacturers' recommendations and good engineering practices. [401 KAR 52:020, Section 10]
- c. The permittee shall conform to the operating conditions, as prescribed in Section B, **Paint #2 Reborn Part 2: Coating Operation Periodic Monitoring Requirements** table. [401 KAR 52:020, Section 10]

401 KAR 51:017 Operating Limitations:

- a. Except for applicator nozzles/tips, coating applicator purging solvents shall be collected and retained until such time as they are shipped offsite for disposal or recycled. Waste purge solvent tanks shall be kept closed when not in use. [401 KAR 51:017]
- b. The permittee shall operate the control equipment listed in the Periodic Monitoring Requirements table. [401 KAR 51:017]
- c. The shakedown period involving the simultaneous operation of Paint #2 (Emission Units F01 through F18, D13A and D13B) and Paint 2 Reborn replacement units (Emission Units F01R through F13R, D13A and D13B) shall not exceed 180 days after the last unit in the project becomes operational and begins to emit a particular pollutant. [401 KAR 51:001 Section 1(144)(g) and 40 CFR 52.21(b)(3)(viii)]

401 KAR 59:010 Operating Limitations:

Refer to subsection **1. Operating Limitations**, *General Operating Limitations*.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

401 KAR 59:185 Operating Limitations:

Refer to **Group Requirements**, 401 KAR 59:185 Affected Sources, subsection 1. **Operating Limitations**.

40 CFR 60 Subpart MMA Operating Limitations:

- a. ***Work practices for storage, mixing, and conveying.*** The permittee must develop and implement a work practice plan to minimize VOC 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 emission limits are established under 40 CFR 60.392a(a). The plan must specify practices and procedures to ensure that, at a minimum, the elements specified in 40 CFR 60.392a(b)(1) through (5) are implemented. [40 CFR 60.392a(b)]
 - (1) All VOC-containing coatings, thinners, cleaning materials, and waste materials must be stored in closed containers. [40 CFR 60.392a(b)(1)]
 - (2) The risk of spills of VOC-containing coatings, thinners, cleaning materials, and waste materials must be minimized. [40 CFR 60.392a(b)(2)]
 - (3) VOC-containing coatings, thinners, cleaning materials, and waste materials must be conveyed from one location to another in closed containers or pipes. [40 CFR 60.392a(b)(3)]
 - (4) Mixing vessels, other than day tanks equipped with continuous agitation systems, which contain VOC-containing coatings and other materials must be closed except when adding to, removing, or mixing the contents. [40 CFR 60.392a(b)(4)]
 - (5) Emissions of VOC must be minimized during cleaning of storage, mixing, and conveying equipment. [40 CFR 60.392a(b)(5)]
- b. ***Work practices for cleaning and purging.*** The permittee must develop and implement a work practice plan to minimize VOC emissions from cleaning and from purging of equipment associated with all coating operations for which emission limits are established under 40 CFR 60.392a(a). [40 CFR 60.392a(c)]
 - (1) The plan shall, at a minimum, address each of the operations listed in 40 CFR 60.392a(c)(1)(i) through (viii) in which the permittee uses VOC-containing materials or in which there is a potential for emission of VOC. [40 CFR 60.392a(c)(1)]
 - i. The plan must address vehicle body wipe emissions through one or more of the techniques listed in 40 CFR 60.392a(c)(1)(i)(A) through (D), or an approved alternative. [40 CFR 60.392a(c)(1)(i)]
 - A. Use of solvent-moistened wipes. [40 CFR 60.392a(c)(1)(i)(A)]
 - B. Keeping solvent containers closed when not in use. [40 CFR 60.392a(c)(1)(i)(B)]
 - C. Keeping wipe disposal/recovery containers closed when not in use. [40 CFR 60.392a(c)(1)(i)(C)]
 - D. Use of tack-wipes. [40 CFR 60.392a(c)(1)(i)(D)]
 - ii. The plan must address coating line purging emissions through one or more of the techniques listed in 40 CFR 60.392a(c)(1)(ii)(A) through (D), or an approved alternative. [40 CFR 60.392a(c)(1)(ii)]
 - A. Air/solvent push-out. [40 CFR 60.392a(c)(1)(ii)(A)]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- B. Capture and reclaim or recovery of purge materials (excluding applicator nozzles/tips). [40 CFR 60.392a(c)(1)(ii)(B)]
 - C. Block painting to the maximum extent feasible. [40 CFR 60.392a(c)(1)(ii)(C)]
 - D. Use of low-VOC or no-VOC solvents for purge. [40 CFR 60.392a(c)(1)(ii)(D)]
- iii. The plan must address emissions from flushing of coating systems through one or more of the techniques listed in 40 CFR 60.392a(c)(1)(iii)(A) through (D), or an approved alternative. [40 CFR 60.392a(c)(1)(iii)]
 - A. Keeping solvent tanks closed. [40 CFR 60.392a(c)(1)(iii)(A)]
 - B. Recovering and recycling solvents. [40 CFR 60.392a(c)(1)(iii)(B)]
 - C. Keeping recovered/recycled solvent tanks closed. [40 CFR 60.392a(c)(1)(iii)(C)]
 - D. Use of low-VOC or no-VOC solvents. [40 CFR 60.392a(c)(1)(iii)(D)]
- iv. The plan must address emissions from cleaning of spray booth grates through one or more of the techniques listed in 40 CFR 60.392a(c)(1)(iv)(A) through (E) or an approved alternative. [40 CFR 60.392a(c)(1)(iv)]
 - A. Controlled burn-off. [40 CFR 60.392a(c)(1)(iv)(A)]
 - B. Rinsing with high-pressure water (in place). [40 CFR 60.392a(c)(1)(iv)(B)]
 - C. Rinsing with high-pressure water (off line). [40 CFR 60.392a(c)(1)(iv)(C)]
 - D. Use of spray-on masking or other type of liquid masking. [40 CFR 60.392a(c)(1)(iv)(D)]
 - E. Use of low-VOC or no-VOC content cleaners. [40 CFR 60.392a(c)(1)(iv)(E)]
- v. The plan must address emissions from cleaning of spray booth walls through one or more of the techniques listed in 40 CFR 60.392a(c)(1)(v)(A) through (E), or an approved alternative. [40 CFR 60.392a(c)(1)(v)]
 - A. Use of masking materials (contact paper, plastic sheet, or other similar type of material). [40 CFR 60.392a(c)(1)(v)(A)]
 - B. Use of spray-on masking. [40 CFR 60.392a(c)(1)(v)(B)]
 - C. Use of rags and manual wipes instead of spray application when cleaning walls. [40 CFR 60.392a(c)(1)(v)(C)]
 - D. Use of low-VOC or no-VOC content cleaners. [40 CFR 60.392a(c)(1)(v)(D)]
 - E. Controlled access to cleaning solvents. [40 CFR 60.392a(c)(1)(v)(E)]
- vi. The plan must address emissions from cleaning of spray booth equipment through one or more of the techniques listed in 40 CFR 60.392a(c)(1)(vi)(A) through (E), or an approved alternative. [40 CFR 60.392a(c)(1)(vi)]
 - A. Use of covers on equipment (disposable or reusable). [40 CFR 60.392a(c)(1)(vi)(A)]
 - B. Use of parts cleaners (off-line submersion cleaning). [40 CFR 60.392a(c)(1)(vi)(B)]
 - C. Use of spray-on masking or other protective coatings. [40 CFR 60.392a(c)(1)(vi)(C)]
 - D. Use of low-VOC or no-VOC content cleaners. [40 CFR 60.392a(c)(1)(vi)(D)]
 - E. Controlled access to cleaning solvents. [40 CFR 60.392a(c)(1)(vi)(E)]
- vii. The plan must address emissions from cleaning of external spray booth areas through one or more of the techniques listed in 40 CFR 60.392a(c)(1)(vii)(A) through (F), or an approved alternative. [40 CFR 60.392a(c)(1)(vii)]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- A. Use of removable floor coverings (paper, foil, plastic, or similar type of material). [40 CFR 60.392a(c)(1)(vii)(A)]
- B. Use of manual and/or mechanical scrubbers, rags, or wipes instead of spray application. [40 CFR 60.392a(c)(1)(vii)(B)]
- C. Use of shoe cleaners to eliminate coating track-out from spray booths. [40 CFR 60.392a(c)(1)(vii)(C)]
- D. Use of booties or shoe wraps. [40 CFR 60.392a(c)(1)(vii)(D)]
- E. Use of low-VOC or no-VOC content cleaners. [40 CFR 60.392a(c)(1)(vii)(E)]
- F. Controlled access to cleaning solvents. [40 CFR 60.392a(c)(1)(vii)(F)]
- viii. The plan must address emissions from housekeeping measures not addressed in 40 CFR 60.392a(c)(1)(i) through (vii) through one or more of the techniques listed in 40 CFR 60.392a(c)(1)(viii)(A) through (C), or an approved alternative. [40 CFR 60.392a(c)(1)(viii)]
 - A. Keeping solvent-laden articles (cloths, paper, plastic, rags, wipes, and similar items) in covered containers when not in use. [40 CFR 60.392a(c)(1)(viii)(A)]
 - B. Storing new and used solvents in closed containers. [40 CFR 60.392a(c)(1)(viii)(B)]
 - C. Transferring of solvents in a manner to minimize the risk of spills. [40 CFR 60.392a(c)(1)(viii)(C)]
- (2) Notwithstanding the requirements of 40 CFR 60.392a(c)(1)(i) through (viii), if the type of coatings used in any facility with surface coating operations subject to the requirements of 40 CFR 60.392a are of such a nature that the need for one or more of the practices specified under 40 CFR 60.392a (c)(1)(i) through (viii) is eliminated, then the plan may include approved alternative or equivalent measures that are applicable or necessary during cleaning of storage, conveying, and application equipment. [40 CFR 60.392a(c)(2)]
- c. **Work practice plan revisions.** The work practice plans developed in accordance with 40 CFR 60.392a(b) and (c) are not required to be incorporated in the title V permit. Any revisions to the work practice plans developed in accordance with 40 CFR 60.392a(b) and (c) do not constitute revisions to the title V permit. [40 CFR 60.392a(d)]
- d. **Work practice plan retention time.** Copies of the current work practice plans developed in accordance with 40 CFR 60.392a(b) and (c), as well as plans developed within the preceding 5 years must be available on-site for inspection and copying by the permitting authority. [40 CFR 60.392a(e)]
- e. **Operating limits.** The permittee is not required to meet any operating limits for any coating operation(s) without add-on controls, nor is the permittee required to meet operating limits for any coating operation(s) that do not utilize emission capture systems and add-on controls to comply with the emission limits in 40 CFR 60.392a(a). [40 CFR 60.392a(f)]
- f. **Operating limits for operations with add-on controls.** Except as provided in 40 CFR 60.392a(h), for any controlled coating operation(s), the permittee must meet the operating limits specified in 40 CFR 60 Subpart MMA table 1. These operating limits apply to the emission capture and add-on control systems for affected sources in 40 CFR 60.390a(a)(1),

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

and the permittee must establish the operating limits during performance tests according to the requirements in 40 CFR 60.394a. The permittee must meet the operating limits at all times after they are established. [40 CFR 60.392a(g)]

- (1) Thermal Oxidizer. The average combustion temperature in any 3-hour period must not fall below the combustion temperature limit established according to 40 CFR 60.394a(a). [40 CFR 60 Subpart MMa Table 1(1).(a.)]
 - i. Collecting the combustion temperature data according to 40 CFR 60.394a(i); [40 CFR 60 Subpart MMa Table 1(1).(a)(i)]
 - ii. Reducing the data to 3-hour block averages; and [40 CFR 60 Subpart MMa Table 1(1).(a)(ii)]
 - iii. Maintaining the 3-hour average combustion temperature at or above the temperature limit. [40 CFR 60 Subpart MMa Table 1(1).(a)(iii)]
 - (2) Concentrators, including zeolite wheels and rotary carbon adsorbers. The average desorption gas inlet temperature in any 3-hour period must not fall below the limit established according to 40 CFR 60.394a(e). [40 CFR 60 Subpart MMa Table 1(5).(a.)]
 - i. Collecting the temperature data according to 40 CFR 60.394a(l); [40 CFR 60 Subpart MMa Table 1(5).(a)(i)]
 - ii. Reducing the data to 3-hour block averages; and [40 CFR 60 Subpart MMa Table 1(5).(a)(ii)]
 - iii. maintaining the 3-hour average temperature at or above the temperature limit. [40 CFR 60 Subpart MMa Table 1(5).(a)(iii)]
 - (3) Emission capture system that is a PTE. The direction of the air flow at all times must be into the enclosure; and either, the average facial velocity of air through all natural draft openings in the enclosure must be at least 200 feet per minute; or the pressure drop across the enclosure must be at least 0.007 inch water, as established in Method 204 of appendix M to 40 CFR part 51. [40 CFR 60 Subpart MMa Table 1(6).(a.-c.)]
 - i. Collecting the direction of air flow, and either the facial velocity of air through all natural draft openings according to 40 CFR 60.394a(m)(1) or the pressure drop across the enclosure according to 40 CFR 60.394a(m)(2); and [40 CFR 60 Subpart MMa Table 1(6).(a.-c)(i)]
 - ii. Maintaining the facial velocity of air flow through all natural draft openings or the pressure drop at or above the facial velocity limit or pressure drop limit, and maintaining the direction of air flow into the enclosure at all times. [40 CFR 60 Subpart MMa Table 1(6).(a.-c)(ii)]
- g. **Alternative operating limits.** If the permittee uses an add-on control device other than those listed in 40 CFR 60 Subpart MMa table 1 or wish to monitor an alternative parameter and comply with a different operating limit, the permittee must apply to the Administrator for approval of alternative monitoring under 40 CFR 60.13(i). [40 CFR 60.392a(h)]
- h. **Initial and continuous compliance requirements.** The permittee must conduct an initial performance test in accordance with 40 CFR 60.8(a) and thereafter for each calendar month for each affected facility according to the procedures in 40 CFR 60.393a. The permittee must also conduct periodic performance tests of add-on controls, except for solvent recovery systems for which liquid-liquid material balances are conducted according to 40 CFR 60.393a(l), to reestablish the operating limits required by 40 CFR 60.392a within 5

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

years following the previous performance test. The permittee must meet all the requirements 40 CFR 60.393a to demonstrate initial and continuous compliance. [40 CFR 60.393a(b)]

(1) To demonstrate initial compliance, the VOC emissions from affected source must meet the applicable emission limitation in 40 CFR 60.392a and the work practice standards in 40 CFR 60.392a and the applicable operating limits in 40 CFR 60.392a established during the initial performance test using the procedures in 40 CFR 60.394a and 40 CFR 60 Subpart MMa table 1. [40 CFR 60.393a(b)(1)]

i. The permittee must complete the initial compliance demonstration for the initial compliance period according to the requirements of 40 CFR 60.393a. The initial compliance period begins on the applicable compliance date specified in 40 CFR 60.8 and ends on the last day of the month following the compliance date. If the compliance 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 60.393a(b)(1)(i)]

ii. The permittee must determine the mass of VOC emissions and volume of coating solids deposited in the initial compliance period. The initial compliance demonstration includes the results of emission capture system and add-on control device performance tests conducted according to 40 CFR 60.396a and 60.397a; supporting documentation showing that during the initial compliance period the VOC emission rate was equal to or less than the emission limit in 40 CFR 60.392a; the operating limits established during the performance tests and the results of the continuous parameter monitoring required by 40 CFR 60.394a; and documentation of whether the permittee developed and implemented the work practice plans required by 40 CFR 60.392(b) and (c). [40 CFR 60.393a(b)(1)(ii)]

(2) To demonstrate continuous compliance with the applicable emission limit in 40 CFR 60.392a, the VOC emission rate for each compliance period, determined according to the procedures in 40 CFR 60.393a, must be equal to or less than the applicable emission limit in 40 CFR 60.392a. A compliance period consists of 1 month. Each month after the end of the initial compliance period described in 40 CFR 60.393a(b)(1)(i) is a compliance period consisting of that month. The permittee must perform the calculations in 40 CFR 60.393a on a monthly basis. [40 CFR 60.393a(b)(2)]

(3) If the VOC emission rate for any 1-month compliance period exceeded the applicable emission limit in 40 CFR 60.392a, this is a deviation from the emission limitation for that compliance period and must be reported as specified in 40 CFR 60.395a(h). [40 CFR 60.393a(b)(3)]

i. **Compliance with operating limits.** Except as provided in 40 CFR 60.393a(c)(1), the permittee must establish and demonstrate continuous compliance during the initial compliance period with the operating limits required by 40 CFR 60.392a, using the procedures specified in 40 CFR 60.394a. [40 CFR 60.393a(c)]

(1) The permittee does not need to comply with the operating limits for the emission capture system and add-on control device required by 40 CFR 60.394a until after the permittee has completed the initial performance test specified in 40 CFR 60.393a(b). During the period between the startup date of the affected source and the initial performance test required by 40 CFR 60.8 the permittee must maintain a log detailing

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- the operation and maintenance of the emission capture system, the add-on control device, and the continuous monitoring system (CMS). [40 CFR 60.393a(c)(1)]
- (2) The permittee must demonstrate continuous compliance with each operating limit required by 40 CFR 60.392a that applies to the permittee, as specified in 40 CFR 60 Subpart MMa Table 1, and the permittee must conduct performance tests as specified in 40 CFR 60.393a(c)(4). [40 CFR 60.393a(c)(2)]
 - (3) If an operating parameter is out of the allowed range specified in 40 CFR 60 Subpart MMa table 1, this is a deviation from the operating limit that must be reported as specified in 40 CFR 60.395a(h). [40 CFR 60.393a(c)(3)]
 - (4) If an operating parameter deviates from the operating limit specified in 40 CFR 60 Subpart MMa table 1, then the permittee must assume that the emission capture system and add-on control device were achieving zero efficiency during the time period of the deviation except as provided in 40 CFR 60.393a (m). [40 CFR 60.393a(c)(4)]
 - (5) Except for solvent recovery systems for which the permittee conduct liquid-liquid material balances according to 40 CFR 60.393a(l) for controlled coating operations, the permittee must conduct periodic performance tests of add-on controls and reestablish the operating limits required by 40 CFR 60.392a within 5 years following the previous performance test. The permittee must conduct the first periodic performance test within 5 years following the initial performance test required by 40 CFR 60.8. Thereafter, the permittee must conduct a performance test no later than 5 years following the previous performance test. Operating limits must be confirmed or reestablished during each performance test. If the permittee is using the alternative monitoring option for a catalytic oxidizer according to 40 CFR 60.394a(b)(3) and following the catalyst maintenance procedures in 40 CFR 60.394a(b)(4), the permittee is not required to conduct periodic control device performance testing as specified by 40 CFR 60.393a(c). For any control device for which instruments are used to continuously measure organic compound emissions, the permittee is not required to conduct periodic control device performance testing as specified by 40 CFR 60.393a(c). The requirements of 40 CFR 60.393a(c) do not apply to measuring emission capture system efficiency. [40 CFR 60.393a(c)(5)]
 - (6) The permittee must meet the requirements for bypass lines in 40 CFR 60.394a(h) for control devices other than solvent recovery systems for which the permittee conducts liquid-liquid material balances. If any bypass line is opened and emissions are diverted to the atmosphere when the coating operation is running, this is a deviation that must be reported as specified in 40 CFR 60.395a(h). For the purposes of completing the compliance calculations specified in 40 CFR 60.393a(j), the permittee must assume that the emission capture system and add-on control device were achieving zero efficiency during the time period of the deviation. [40 CFR 60.393a(c)(6)]
- j. ***Compliance with work practice requirements.*** The permittee must develop, implement, and document implementation of the work practice plans required by 40 CFR 60.392a(b) and (c) during the initial compliance period, as specified in 40 CFR 60.395a. [40 CFR 60.393a(d)]
- (1) The permittee must demonstrate continuous compliance with the work practice standards in 40 CFR 60.392a (b) and (c). If the permittee did not develop a work practice plan, if the permittee did not implement the plan, or if the permittee did not

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

keep the records required by 40 CFR 60.395a (k)(11), this is a deviation from the work practice standards that must be reported as specified in 40 CFR 60.395a (k)(4). [40 CFR 60.393a(d)(1)]

- k. ***Compliance with emission limits.*** The permittee must use the following procedures in 40 CFR 60.393a(f) through (m) to determine the monthly volume weighted average mass of VOC emitted per volume of applied coating solids for each affected facility to demonstrate compliance with the applicable emission limitation in 40 CFR 60.392a. The permittee may also use the guidelines presented in “Protocol for Determining the Daily Volatile Organic Compound Emission Rate of Automobile and Light-Duty Truck Primer-Surfacer and Topcoat” EPA-453/R-08-002 (incorporated by reference, *see* 40 CFR 60.17) in making this demonstration. [40 CFR 60.393a(e)]
- l. ***Determine the mass fraction of VOC, density, and volume for each material used.*** The permittee must follow the procedures specified in 40 CFR 60.393a(f)(1) through (3) to determine the mass fraction of VOC, the density, and volume for each coating and thinner used during each month. For the electrodeposition primer operation, the mass fraction of VOC, density, and volume used must be determined for each material added to the tank or system during each month. [40 CFR 60.393a(f)]
- (1) ***Determine the mass fraction of VOC for each material used.*** The permittee must determine the mass fraction of VOC for each material used during the compliance period by using one of the options in 40 CFR 60.393a(f)(1)(i) through (iii). [40 CFR 60.393a(f)(1)]
- i. ***EPA Method 24 (appendix A-7 to 40 CFR part 60).*** For coatings, the permittee may use EPA Method 24 to determine the mass fraction of nonaqueous volatile matter and use that value as a substitute for the mass fraction of VOC. As an alternative to using EPA Method 24, the permittee may use ASTM D2369-20 (incorporated by reference, *see* 40 CFR 60.17). For Method 24, the coating sample must be a 1-liter sample taken in a 1-liter container. [40 CFR 60.393a(f)(1)(i)]
- ii. ***Alternative method.*** The permittee may use an alternative test method for determining the mass fraction of VOC once the Administrator has approved it. The permittee must follow the procedure in 40 CFR 60.8(b)(3) to submit an alternative test method for approval. [40 CFR 60.393a(f)(1)(ii)]
- iii. ***Information from the supplier or manufacturer of the material.*** The permittee may rely on information other than that generated by the test methods specified in 40 CFR 60.393a (f)(1)(i) through (iii), such as manufacturer's formulation data. If there is a disagreement between such information and results of a test conducted according to 40 CFR 60.393a (f)(1)(i) through (iii), then the test method results will take precedence, unless after consultation, the permittee demonstrates to the satisfaction of the enforcement authority that the facility's data are correct. [40 CFR 60.393a(f)(1)(iii)]
- (2) ***Determine the density of each material used.*** Determine the density of each material used during the compliance period from test results using ASTM D1475-13 (incorporated by reference, *see* 40 CFR 60.17) or for powder coatings, test method A or test method B of ASTM D5965-02 (Reapproved 2013) (incorporated by reference,

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- see 40 CFR 60.17), or information from the supplier or manufacturer of the material. If there is disagreement between ASTM D1475-13 test results or ASTM D5965-02 (Reapproved 2013), Test Method A or Test Method B test results and the supplier's or manufacturer's information, the test results will take precedence unless after consultation, the facility demonstrates to the satisfaction of the enforcement authority that the supplier's or manufacturer's data are correct. [40 CFR 60.393a(f)(2)]
- (3) ***Determine the volume of each material used.*** The permittee must determine from company records on a monthly basis the volume of coating consumed, as received, and the mass of solvent used for thinning purposes. [40 CFR 60.393a(f)(3)]
- m. ***Determine the volume fraction of coating solids for each coating.*** The permittee must determine the volume fraction of coating solids for each coating used during the compliance period by a test or by information provided by the supplier or the manufacturer of the material, as specified in 40 CFR 60.393a(g)(1) and (2). For electrodeposition primer operations, the volume fraction of solids must be determined for each material added to the tank or system during each month. If test results obtained according to 40 CFR 60.393a(g)(1) do not agree with the information obtained under 40 CFR 60.393a(g)(2), the test results will take precedence unless, after consultation, the facility demonstrates to the satisfaction of the enforcement authority that the facility's data are correct. [40 CFR 60.393a(g)]
- (1) ***ASTM Method D2697-22 or ASTM Method D6093-97.*** The permittee may use ASTM D2697-22 (incorporated by reference, see 40 CFR 60.17), or ASTM D6093-97 (incorporated by reference, see 40 CFR 60.17), to determine the volume fraction of coating solids for each coating. Divide the nonvolatile volume percent obtained with the methods by 100 to calculate volume fraction of coating solids. [40 CFR 60.393a(g)(1)]
- (2) ***Information from the supplier or manufacturer of the material.*** The permittee may obtain the volume fraction of coating solids for each coating from the supplier or manufacturer. [40 CFR 60.393a(g)(2)]
- n. ***Calculate the volume weighted average mass of VOC emitted per volume of applied coating solids before add-on controls.*** [40 CFR 60.393a(i)]
- (1) Calculate the mass of VOC used in each calendar month for each affected facility using 40 CFR 60.393a Equation 1, where “n” is the total number of coatings used and “m” is the total number of VOC solvents used: [40 CFR 60.393a(i)(1)]

$$M_o + M_d = \sum_{i=1}^n L_{ci} D_{ci} W_{oi} + \sum_{j=1}^m L_{dj} D_{dj} \quad (40 \text{ CFR } 60.393a \text{ Eq. } 1)$$

Where:

M_o = total mass of VOC in coatings as received (kilograms).

M_d = total mass of VOC in dilution solvent (kilograms).

L_{ci} = volume of each coating (i) consumed, as received (liters).

D_{ci} = density of each coating (i) as received (kilograms per liter).

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

W_{oi} = proportion of VOC by weight in each coating (i), as received.

L_{dj} = volume of each type VOC dilution solvent (j) added to the coatings, as received (liters).

D_{dj} = density of each type VOC dilution solvent (j) added to the coatings, as received (kilograms per liter).

[$\sum L_{dj} D_{dj}$ will be zero if no VOC solvent is added to the coatings, as received.]

- (2) Calculate the total volume of coating solids used in each calendar month for each affected facility using 40 CFR 60.393a Equation 2, where “n” is the total number of coatings used: [40 CFR 60.393a(i)(2)]

$$L_s = \sum_{i=1}^n L_{ci} V_{si} \text{ (40 CFR 60.393a Eq. 2)}$$

Where:

L_s = volume of solids in coatings consumed (liters).

L_{ci} = volume of each coating (i) consumed, as received (liters).

V_{si} = proportion of solids by volume in each coating (i) as received.

- (3) Calculate the transfer efficiency (T) for each surface coating operation according to 40 CFR 60.393a(h). [40 CFR 60.393a(i)(3)]

- i. When more than one application method (l) is used on an individual surface coating operation, the permittee must perform an analysis to determine an average transfer efficiency using 40 CFR 60.393a Equation 3, where “n” is the total number of coatings used and “p” is the total number of application methods: [40 CFR 60.393a(i)(3)(i)]

$$T = \frac{\sum_{i=1}^n T_l V_{si} L_{cil}}{\sum_{l=1}^p L_s} \text{ (40 CFR 60.393a Eq. 3)}$$

Where:

T = overall transfer efficiency.

T_l = transfer efficiency for application method (l).

V_{si} = proportion of solids by volume in each coating (i) as received $\frac{\text{Liter Solids}}{\text{Liter Coating}}$,
and

L_{cil} = Volume of each coating (i) consumed by each application method (l), as received (liters).

L_s = volume of solids in coatings consumed (liters).

- (4) Calculate the volume weighted average mass of VOC per volume of applied coating solids (G) during each calendar month for each affected facility using 40 CFR 60.393a Equation 4: [40 CFR 60.393a(i)(4)]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

$$G = \frac{M_o + M_d}{L_s T} \text{ (40 CFR 60.393a Eq. 4)}$$

Where:

G = volume weighted average mass of VOC per volume of applied solids (kilograms per liter).

M_o = total mass of VOC in coatings as received (kilograms).

M_d = total mass of VOC in dilution solvent (kilograms).

L_s = volume of solids in coatings consumed (liters).

T = overall transfer efficiency.

- (5) Select the appropriate limit according to 40 CFR 60.392a. If the volume weighted average mass of VOC per volume of applied coating solids (G), calculated on a calendar month basis, is less than or equal to the applicable emission limit specified in 40 CFR 60.392a, the affected facility is in compliance. Each monthly calculation is a performance test for the purpose of 40 CFR 60 Subpart MMA. [40 CFR 60.393a(i)(5)]

- o. ***Calculate the volume weighted average mass of VOC emitted per volume of applied coating solids after add-on controls.*** The permittee uses the following procedures for each affected facility which uses a capture system and a control device that destroys VOC (*e.g.*, incinerator) to comply with the applicable emission limit specified under 40 CFR 60.392a. Use the procedures in 40 CFR 60.393a(j)(1) through (5) to calculate volume weighted average mass of VOC per volume of applied coating solids for each controlled coating operation using an emission capture system and add-on control device other than a solvent recovery system for which the permittee conducts liquid-liquid material balances. For each controlled coating operation using a solvent recovery system for which the permittee conducts a liquid-liquid material balance, the permittee must use the procedures in 40 CFR 60.393a(l). [40 CFR 60.393a(j)]
- (1) Calculate the volume weighted average mass of VOC per volume of applied coating solids (G) during each calendar month for each affected facility as described under 40 CFR 60.393a(i)(4). [40 CFR 60.393a(j)(1)]
- (2) Calculate the volume weighted average mass of VOC per volume of applied coating solids (N) emitted after the control device 40 CFR 60.393a Equation 5: [40 CFR 60.393a(j)(2)]

$$N = G[1 - CE * DRE] \text{ (40 CFR 60.393a Eq. 5)}$$

Where:

N = volume weighted average mass of VOC per volume of applied coating solids after the control device in units of kilograms of VOC per liter of applied coating solids.

G = volume weighted average mass of VOC per volume of applied coating solids (kilograms per liter).

CE = fraction of total VOC that is emitted by an affected facility that enters the control device.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

DRE = VOC destruction or removal efficiency of the control device.

- (3) The permittee must use the procedures and test methods in section 60.397a to determine the emission capture system efficiency (CE) as part of the initial performance test. [40 CFR 60.393a(j)(3)]
 - i. If the permittee can justify to the Administrator's satisfaction that another method will give comparable results, the Administrator will approve its use on a case-by-case basis. [40 CFR 60.393a(j)(3)(i)]
 - ii. In subsequent months, the permittee must use the most recently determined capture efficiency for the performance test. [40 CFR 60.393a(j)(3)(ii)]
- (4) The permittee must use the procedures and test methods in section 60.396a to determine the add-on control device emission destruction or removal efficiency as part of the initial performance test. [40 CFR 60.393a(j)(4)]
 - i. In subsequent months, the permittee must use the most recently determined VOC destruction efficiency for the performance test. [40 CFR 60.393a(j)(4)(i)]
 - ii. If two or more add-on control devices are used for the same emission stream, the permittee must measure emissions at the outlet of each device in accordance with 40 CFR 60.396a(c). If there is more than one inlet or outlet to the add-on control device, the permittee must calculate the total gaseous organic mass flow rate for each inlet and each outlet and then total all of the inlet emissions and total all of the outlet emissions in accordance with 40 CFR 60.396a(d). The emission destruction or removal efficiency of the add-on control device is the average of the efficiencies determined in the three test runs. The destruction or removal efficiency determined using these data shall be applied to each affected facility served by the control device. [40 CFR 60.393a(j)(4)(ii)]
- (5) Calculate the mass of VOC for each affected facility each calendar month for each period of time in which a deviation, including a deviation during a period of startup, shutdown, or malfunction, from an emission limitation, an operating limit or any CMS requirement for the capture system or control device serving the controlled coating operation occurred. Except as provided in 40 CFR 60.393a(m), for any period of time in which a deviation, including a deviation during a period of startup, shutdown, or malfunction, from an emission limitation or operating limit or from any CMS requirement of the capture system or control device serving the controlled coating operation occurred, the permittee must assume zero efficiency for the emission capture system and add-on control device. During such a deviation the permittee must assume the affected source was uncontrolled for the duration of the deviation using the equation in 40 CFR 60.393a(i)(4). [40 CFR 60.393a(j)(5)]
- (6) Adjust the volume weighted average mass of VOC per volume of applied coating solids emitted after the control device for each affected facility (N) during a calendar month for periods of deviation by adding the mass of VOC for the uncontrolled period of time according to 40 CFR 60.393a(i)(5). [40 CFR 60.393a(j)(6)]
- (7) If the adjusted volume weighted average mass of VOC per volume of applied solids emitted after the control device (N) calculated on a calendar month basis is less than or equal to the applicable emission limit specified in 40 CFR 60.392a, the affected facility is in compliance. Each monthly calculation is a performance test for the purposes of 40 CFR 60 Subpart MMa. [40 CFR 60.393a(j)(7)]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- p. *Calculate the volume weighted average mass of VOC emitted per volume of applied coating solids after add-on recovery devices.* The permittee must use the following procedures for each affected facility which uses a capture system and a control device that recovers the VOC (e.g., carbon adsorber) other than a solvent recovery system for which the permittee conducts a liquid-liquid material balance to comply with the applicable emission limit specified under 40 CFR 60.392a. [40 CFR 60.393a(k)]
- (1) Calculate the mass of VOC ($M_o + M_d$) used during each calendar month for each affected facility as described under 40 CFR 60.393a(i). [40 CFR 60.393a(k)(1)]
 - (2) Calculate the total volume of coating solids (L_s) used in each calendar month for each affected facility as described under 40 CFR 60.393a(i). [40 CFR 60.393a(k)(2)]
 - (3) Calculate the mass of VOC recovered (M_r) each calendar month for each affected facility by the following equation: [40 CFR 60.393a(k)(3)]

$$M_r = L_r * D_r$$

Where:

M_r = total mass of VOC recovered from an affected facility (kilograms).

L_r = volume of VOC recovered from an affected facility (liters).

D_r = density of VOC recovered from an affected facility (kilograms per liter).

- (4) Calculate the volume weighted average mass of VOC per volume of applied coating solids emitted after the control device (N) during a calendar month using 40 CFR 60.393a Equation 6: [40 CFR 60.393a(k)(4)]

$$N = \frac{M_o + M_d - M_r}{L_s T} \text{ (40 CFR 60.393a Eq. 6)}$$

Where:

N = volume weighted average mass of VOC per volume of applied coating solids after the control device in units of kilograms of VOC per liter of applied coating solids.

M_o = total mass of VOC in coatings as received (kilograms).

M_d = total mass of VOC in dilution solvent (kilograms).

M_r = total mass of VOC recovered from an affected facility (kilograms).

L_s = volume of solids in coatings consumed (liters).

T = overall transfer efficiency.

- (5) Adjust the volume weighted average mass of VOC per volume of applied coating solids emitted after the recovery device for each affected facility (N) during a calendar month for periods of deviation by adding the mass of VOC for the uncontrolled periods of time according to 40 CFR 60.393a(i)(6). [40 CFR 60.393a(k)(5)]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- (6) If the adjusted volume weighted average mass of VOC per volume of applied solids emitted after the control device (N) calculated on a calendar month basis is less than or equal to the applicable emission limit specified in 40 CFR 60.392a, the affected facility is in compliance. Each monthly calculation is a performance test for the purposes of 40 CFR 60 Subpart MMA. [40 CFR 60.393a(k)(6)]
- q. ***Calculate the collection and recovery efficiency for solvent recovery systems using liquid-liquid material balances.*** The permittee must use the following procedures for each affected facility which uses a solvent recovery system for which the permittee conducts liquid-liquid material balances to comply with the applicable emission limit specified under 40 CFR 60.392a. [40 CFR 60.393a(l)]
- (1) Calculate the mass of VOC emission reduction for the coating operation controlled by the solvent recovery system using a liquid-liquid material balance for each affected facility by applying the volatile organic matter collection and recovery efficiency to the mass of VOC contained in the coatings and thinners used in the coating operation controlled by the solvent recovery system during each month. Perform a liquid-liquid material balance for each month as specified in 40 CFR 60.393a(l)(1) through (6). [40 CFR 60.393a(l)(1)]
 - (2) For each solvent recovery system, install, calibrate, maintain, and operate according to the manufacturer's specifications, a device that indicates the cumulative amount of volatile organic matter recovered by the solvent recovery system each month. The device must be initially certified by the manufacturer to be accurate to within ± 2.0 percent of the mass of volatile organic matter recovered. [40 CFR 60.393a(l)(2)]
 - (3) For each solvent recovery system, determine the mass of volatile organic matter recovered for the month based on measurement with the device required in 40 CFR 60.393a(l)(1) and (2). [40 CFR 60.393a(l)(3)]
 - (4) For each affected facility, determine the mass of VOC ($M_o + M_d$) of each coating and thinner controlled by the solvent recovery system for each calendar month using the equation in 40 CFR 60.393a(i)(1). [40 CFR 60.393a(l)(4)]
 - (5) Calculate the solvent recovery system's volatile organic matter collection and recovery efficiency (R_v) for each affected facility using 40 CFR 60.393a Equation 7: [40 CFR 60.393a(l)(5)]

$$R_v = 100 \frac{M_{VR}}{\sum_{i=1}^m Vol_i D_i W V_{c,i} + \sum_{j=1}^n Vol_j D_j W V_{t,j}} \quad (40 \text{ CFR } 60.393a \text{ Eq. } 7)$$

Where:

R_v = Volatile organic matter collection and recovery efficiency of the solvent recovery system during the month, percent.

M_{VR} = Mass of volatile organic matter recovered by the solvent recovery system during the month, kg.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Vol_i = Volume of coating, i , used in the coating operation controlled by the solvent recovery system during the month, liters.

D_i = Density of coating, i , kg per liter.

$WV_{c,i}$ = Mass fraction of volatile organic matter for coating, i , kg volatile organic matter per kg coating.

Vol_j = Volume of thinner, j , used in the coating operation controlled by the solvent recovery system during the month, liters.

D_j = Density of thinner, j , kg per liter.

$WV_{t,j}$ = Mass fraction of volatile organic matter for thinner, j , kg volatile organic matter per kg thinner.

m = Number of different coatings used in the coating operation controlled by the solvent recovery system during the month.

n = Number of different thinners used in the coating operation controlled by the solvent recovery system during the month.

- (6) For each affected facility, the permittee may apply the solvent recovery system's volatile organic matter collection and recovery efficiency to the mass of VOC for the coating operation controlled by the solvent recovery system for each calendar month. [40 CFR 60.393a(l)(6)]

r. **Deviations.** The permittee may request approval from the Administrator to use non-zero capture efficiencies and add-on control device efficiencies for any period of time in which a deviation, including a deviation during a period of startup, shutdown, or malfunction, from an emission limitation, operating limit or any CMS requirement for the capture system or add-on control device serving a controlled coating operation occurred. [40 CFR 60.393a(m)]

- (1) If the permittee has manually collected parameter data indicating that a capture system or add-on control device was operating normally during a CMS malfunction, a CMS out-of-control period, or associated repair, then these data may be used to support and document the request to use the normal capture efficiency or add-on control device efficiency for that period of deviation. [40 CFR 60.393a(m)(1)]
- (2) If the permittee has data indicating the actual performance of a capture system or add-on control device (e.g., capture efficiency measured at a reduced flow rate or add-on control device efficiency measured at a reduced thermal oxidizer temperature) during a deviation, including a deviation during a period of startup, shutdown, or malfunction, from an emission limitation or operating limit or from any CMS requirement for the capture system or add-on control device serving a controlled coating operation, then these data may be used to support and document the request to use these values for that period of deviation. [40 CFR 60.393a(m)(1)]
- (3) The permittee may recalculate the adjusted volume weighted average mass of VOC emitted per volume of applied coating solids after add-on controls in 40 CFR 60.393a(j)(6), and the adjusted volume weighted average mass of VOC per volume of applied coating solids emitted after the recovery device in 40 CFR 60.393a(k)(4), based on Administrator approval of the non-zero capture efficiency and add-on control device efficiency values based on data provided in accordance with 40 CFR 60.393a(m)(1) and (2). [40 CFR 60.393a(m)(1)]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

40 CFR 63 Subpart IIII Operating Limitations:

Refer to Group Requirements, 40 CFR 63 Subpart IIII Affected Sources, subsection 1. Operating Limitations.

2. Emission Limitations:

401 KAR 51:017 Emission Limitations:

- a. Emissions of VOC and PM shall not exceed those in the table below, as calculated on a monthly basis (BACT Limits): [401 KAR 51:017]

EMISSION UNIT	OPERATION	VOC LIMIT (lb/job)	PM LIMIT (lb/hr)
Paint #2 Reborn			
F02R	Electrodeposition Dip System	0.19	0.22
F04R	Sealer Line/Oven	1.15	N/A
F05R Primer and Flash/Oven	Primer Application	2.73	1.91
F05R Basecoat and Clearcoat and Flash/Oven	Basecoat and Clearcoat Application	3.86	7.42
F13R	Equipment Cleaning and Maintenance	3.09	1.00

Compliance Demonstration Method:

*Below VOC and PM emission calculations must also account for uncontrolled emissions from unlisted sources such as paint repair and robot testing, in addition to material use in uncontrolled zones.

$$VOC\ Value = \frac{\sum U_i * V_i * E_i * (1 - C_i * F_i)}{P}$$

U_i = Usage of material “i”,
V_i = Volatile organic compound (VOC) content,
E_i = VOC Emission Factor,
F_i = Control efficiency,
C_i = Collection efficiency,
P = Production rate (number of vehicles produced)

PM Value = Measurement, when prescribed by periodic monitoring requirements table.
Otherwise PM shall be calculated as follows:

$$PM\ Value = \sum \frac{P}{P_m} * E_i, \text{ or equivalent method approved by the Division}$$

P = Average shop production throughput,
P_m = Maximum vehicle production rate
E_i = PM Emission Factor (controlled) for each stack “i”.

- b. Emissions of VOC shall not exceed the following, based on a 12-month rolling total (BACT Limit). [401 KAR 51:017]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EMISSION UNIT	VOC LIMIT (tons/year)
Paint #2 (Emission Units F01 through F18) + Paint 2 Reborn (Emission Units F02R through F13R)	1,571

Compliance Demonstration Method:

$$VOC\ Value = \sum U_i * V_i * E_i * (1 - C_i * F_i)$$

U_i = Usage of material “i”,
 V_i = Volatile organic compound (VOC) content,
 E_i = VOC Emission Factor,
 F_i = Control efficiency,
 C_i = Collection efficiency.

- c. Emissions of PM shall not exceed the following, based on a 12-month rolling total (BACT Limit). [401 KAR 51:017]

EMISSION UNIT	PM LIMIT (tons/year)
Paint #2 (Emission Units F01 through F18) Paint 2 Reborn (Emission Units F02R through F13R)	60.62

Compliance Demonstration Method:

Calculated from the following equation, except where testing specified

$$PM\ Value = \sum P * E_i$$

P = Average shop production throughput
 E_i = PM Emission Factor (controlled) for process “i”,

- d. Refer to subsection 4. **Specific Monitoring Requirements**, 401 KAR 51:017 *Specific Monitoring Requirements*, 401 KAR 51:017, Section 16(5)(c). **Source Obligation** for emission limits on VOC to preclude major modification status during the simultaneous operation of Paint #2 and Paint #2 Reborn.

401 KAR 59:010 Emission Limitations:

- a. No person shall cause, suffer, allow, or permit any continuous emission into the open air from a control or stack associated with any affected facility which is equal to or greater than twenty (20) percent opacity. [401 KAR 59:010, Section 3 (1)]

Compliance Demonstration Method:

Refer to 4. **Specific Monitoring Requirements** and 5. **Specific Recordkeeping Requirements** for opacity compliance demonstration.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- b. For emissions from a control device or stack, the permittee shall not cause, suffer, allow or permit the emission into the open air of particulate matter from any affected facility which is in excess of the quantity specified in 401 KAR 59:010, Appendix A. [401 KAR 59:010, Section 3(2)]

(1) For process weight rates ≤ 0.5 tons/hour: $E=2.34$

(2) For process weight rates ≤ 30 tons/hour: $E=3.59P^{0.62}$

(3) For process weight rates > 30 tons/hour: $E=17.31P^{0.16}$

Where:

E = rate of the emission in lb/hr

P = process weight rate in tons/hr

Compliance Demonstration Method:

- (1) For affected facilities that use transfer efficiency in the determination of PM/PM₁₀ emissions the permittee shall:
 - i. Use the transfer efficiency value specified in 40 CFR 60.393 for the application method used; or
 - ii. Use a transfer efficiency value determined through testing approved by the Division.
- (2) The total process weight, "P" as defined above must reflect a period that covers a complete operation or an integral number of cycles, divided by the hours of actual process operation during such a period. This period shall not exceed 24 hours. In the case where there are no periodic monitoring requirements associated with the affected facility, continuous compliance shall be assured as long as there are no process or operational changes. The determination of the emission rate "E" in pounds per hour for compliance with 401 KAR 59:010 may also be used to demonstrate compliance with 401 KAR 51:017, except that the period allowed for the determination of "P" shall be one month.
- (3) For F03R Metal Finishing line, compliance is assumed. However pursuant to 401 KAR 50:045, testing shall be conducted to confirm emission factors upon request by the Cabinet.
- (4) Refer to Section B subsection 3. **Testing Requirements** for testing requirements regarding F02R and F04R. The PM emission factor and destruction efficiency of PM in the F02R and F04R oven shall be confirmed through an initial Method 5 or equivalent test approved by the Division.
- (5) Refer to Section B subsection 3. **Testing Requirements** for testing requirements regarding F05R. The fraction of coating solids leaving the booths ductwork prior CON-T2-BA shall be confirmed through an initial Method 5 or equivalent test approved by the Division.
- (6) For F13R shotblasting activities, the source is assumed to be in compliance when the filters are in place and properly maintained. Refer to 4. **Specific Monitoring Requirements** and 5. **Specific Recordkeeping Requirements**.

40 CFR 60 Subpart MMa Emission Limitations:

- a. **Emission limitations.** On and after the date on which the initial performance test required by 40 CFR 60.8 is completed, the permittee must not discharge or cause the discharge into

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

the atmosphere from any affected facility VOC emissions in excess of the limits in 40 CFR 60.392a(a)(1) through (4). The emission limitations listed in 40 CFR 60.392a(a) shall apply at all times, including periods of startup, shutdown and malfunction. As provided in 40 CFR 60.11(f), this provision supersedes the exemptions for periods of startup, shutdown and malfunction in the part 60 general provisions in 40 CFR 60 subpart A. [40 CFR 60.392a(a)]

- (1) For each EDP prime coat operation: [40 CFR 60.392a(a)(1)]
 - i. 0.027 kilogram of VOC per liter of applied coating solids when RT is 0.16 or greater. [40 CFR 60.392a(a)(1)(i)]
 - ii. $0.027 \times 350(0.160 - RT)$ kg of VOC per liter of applied coating solids when RT is greater than or equal to 0.040 and less than 0.160. [40 CFR 60.392a(a)(1)(ii)]
 - iii. When RT is less than 0.040, there is no emission limit. [40 CFR 60.392a(a)(1)(iii)]
- (2) 0.027 kilograms of VOC per liter of applied coating solids (0.23 pounds per gallon of applied coating solids) from each non-EDP prime coat operation. [40 CFR 60.392a(a)(2)]
- (3) 0.35 kilograms of VOC per liter of applied coating solids (2.92 pounds per gallon of applied coating solids) from each guide coat operation. [40 CFR 60.392a(a)(3)]
- (4) 0.42 kilograms of VOC per liter of applied coating solids (3.53 pounds per gallon of applied coating solids) from each topcoat operation. [40 CFR 60.392a(a)(4)]

401 KAR 63:020 Emission Limitations:

Persons responsible for a source from which hazardous matter or toxic substances may be emitted shall provide the utmost care and consideration, in the handling of these materials, to the potentially harmful effects of the emissions resulting from such activities. No owner or operator shall allow any affected facility to emit potentially hazardous matter or toxic substances in such quantities or duration as to be harmful to the health and welfare of humans, animals and plants. Evaluation of such facilities as to adequacy of controls and/or procedures and emission potential will be made on an individual basis by the cabinet. [401 KAR 63:020, Section 3]

Compliance Demonstration Method:

Based upon the emission rates of toxics and hazardous air pollutants determined by the Cabinet using information provided in the application and supplemental information submitted by the source, the Cabinet determines the affected facility to be in compliance with 401 KAR 63:020.

40 CFR 63 Subpart IIII Emission Limitations:

Refer to **Group Requirements**, 40 CFR 63 Subpart IIII Affected Sources, subsection 2. **Emission Limitations**.

3. **Testing Requirements:**

General Testing Requirements:

- a. Performance testing on F02R and F04R Regenerative Thermal Oxidizer RTO-T2-ED shall be performed according to the methods and requirements of 40 CFR 60 Subpart MMA and 40 CFR 63 Subpart IIII. An initial VOC destruction efficiency test must be performed pursuant to Sections G4. And G5. of this permit (V-20-026 R4), and subsequent VOC destruction efficiency testing must be performed no more than five years from the prior

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

test. A VOC destruction efficiency of at least 80% is required to demonstrate compliance with the project specific limits on the Paint 2 Reborn project. [401 KAR 52:020, Section 10]

- b. F02R E-Coat Oven and F04R Sealer Oven in conjunction with RTO-T2-ED shall perform initial testing of U.S. EPA Reference methods 5 and 202 (or equivalent tests approved by the Division) prior to the oxidizer to determine filterable and condensable particulate matter emission factors per gallon of coating applied sent to the ovens, and after the oxidizer to determine the particulate matter control efficiency of the oxidizer. This data shall be used to determine compliance with 401 KAR 59:010 and 51:017 limits. Subsequent testing after initial testing is not required. Initial testing shall be performed pursuant to Sections G4. And G5. of this permit (V-20-026 R4). [401 KAR 52:020, Section 10]
- c. Performance testing on F05R Regenerative Thermal Oxidizers RTO-T2-B and RTO-T2-OV shall be performed according to the methods and requirements of 40 CFR 60 Subpart MMa and 40 CFR 63 Subpart IIII. An initial destruction efficiency test must be performed pursuant to Sections G4. And G5. of this permit (V-20-026 R4), and subsequent destruction efficiency testing must be performed no more than five years from the prior test. A VOC destruction efficiency of at least 80% is required. [401 KAR 52:020, Section 10]
- d. Performance testing on F05R Rotary Carbon Concentrators CON-T2-BA and CON-T2-BB shall be performed according to the methods and requirements of 40 CFR 60 Subpart MMa and 40 CFR 63 Subpart IIII. An initial capture efficiency test must be performed pursuant to Sections G4. And G5. of this permit (V-20-026 R4), and subsequent capture efficiency testing must be performed no more than five years from the prior test. A VOC capture efficiency of at least 85% is required. [401 KAR 52:020, Section 10]
- e. In F05R, in the merged ductwork prior to the rotary concentrators for either line A or B coating booths and flash ovens, initial U.S. EPA Reference Method 5 Testing (or equivalent approved by the Division) shall be performed to determine emissions of particulate matter in lbs PM emissions per lb of coating solids sprayed. This value combined with the average lbs coating solids per gallon and gallons of coating applied shall be used to determine compliance with 401 KAR 59:010 and 51:017 limits. Subsequent testing after initial testing is not required. Initial testing shall be performed pursuant to Sections G4. And G5. of this permit (V-20-026 R4). [401 KAR 52:020, Section 10]
- f. In F05R, in the blackout and wax coating stack, initial U.S. EPA Reference Method 5 Testing (or equivalent approved by the Division) shall be performed to determine emissions of particulate matter in lbs PM emissions per lb of coating solids sprayed. This value combined with the average lbs coating solids per gallon and gallons of coating applied shall be used to determine compliance with 401 KAR 59:010 and 51:017 limits. Subsequent testing after initial testing is not required. Initial testing shall be performed pursuant to Sections G4. And G5. of this permit (V-20-026 R4). [401 KAR 52:020, Section 10]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- g. The following initial carry over efficiency tests are required via the methods proposed in 40 CFR 63.3165(e) or 40 CFR 60 Subpart MMa Appendix A, or equivalent approved by the Division to confirm carry over efficiencies assumed and determine the fraction of applied coating VOC sent to F05R RTO-T2-OV vs RTO-T2-B.
 - (1) F02R carry over between Electrodeposition Bath and E-Coat Oven
 - (2) F04R carry over between Seam Sealer and Sealer Oven, (carry over for other booths will be assumed equivalent or better)
 - (3) F05R carry over between clearcoat booth and booth oven for one representative line (either A or B).

Subsequent testing after initial testing is not required. Initial testing shall be performed pursuant to Sections G4. And G5. of this permit (V-20-026 R4). [401 KAR 52:020, Section 10]
- h. The permittee shall demonstrate the following units represent permanent total enclosures using U.S. EPA Reference Method 204 or an equivalent approved by the Division. Subsequent testing after initial testing is not required. Initial testing shall be performed pursuant to Sections G4. And G5. of this permit (V-20-026 R4). [401 KAR 52:020, Section 10]
 - (1) F02R E-Coat Oven
 - (2) F04R Sealer Oven
 - (3) F05R line from Primer Booth to Booth Oven

401 KAR 50:045 Testing Requirements:

Testing shall be conducted at such times as may be requested by the Cabinet. [401 KAR 50:045, Section 1]

401 KAR 59:010 Testing Requirements:

Refer to subsection **3. Testing Requirements**, *General Testing Requirements*.

40 CFR 60 Subpart MMa Testing Requirements:

- a. **Representative conditions.** The permittee must conduct performance tests under representative conditions for the affected coating operation according to 40 CFR 60.8(c) and under the conditions in 40 CFR 60.393a unless the permittee obtains a waiver of the performance test according to the provisions in 40 CFR 60.8(b)(4). [40 CFR 60.393a(a)]
 - (1) Operations during periods of startup, shutdown, or nonoperation do not constitute conditions representative of normal operation for purposes of conducting a performance test. The permittee may not conduct performance tests during periods of malfunction. Emissions in excess of the applicable emission limit during periods of startup, shutdown, and malfunction will be considered a violation of the applicable emission limit. [40 CFR 60.393a(a)(1)]
 - (2) The permittee must record the process information that is necessary to document operating conditions during the performance test and explain why the conditions represent normal operation. Upon request, the permittee must make available to the Administrator such records as may be necessary to determine the conditions of performance tests. [40 CFR 60.393a(a)(2)]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- (3) 40 CFR 60.8(d) and (f) do not apply to the performance test procedures required by 40 CFR 60.393a. [40 CFR 60.393a(a)(3)]
- b. ***Determine the transfer efficiency for each coating.*** The permittee must determine the transfer efficiency for each non-electrodeposition prime coat coating, each guide coat coating and each topcoat coating using ASTM Method D5066-91 (Reapproved 2017), “Standard Test Method for Determination of the Transfer Efficiency Under Production Conditions for Spray Application of Automotive Paints—Weight Basis” (incorporated by reference, see 40 CFR 60.17), or the guidelines presented in “Protocol for Determining the Daily Volatile Organic Compound Emission Rate of Automobile and Light-Duty Truck Primer-Surfacer and Topcoat” EPA-453/R-08-002 (incorporated by reference, see 40 CFR 60.17). The permittee may conduct transfer efficiency testing on representative coatings and for representative spray booths as described in “Protocol for Determining the Daily Volatile Organic Compound Emission Rate of Automobile and Light-Duty Truck Primer-Surfacer and Topcoat” EPA-453/R-08-002 (incorporated by reference, see 40 CFR 60.17). The permittee may assume 100 percent transfer efficiency for electrodeposition primer coatings. [40 CFR 60.393a(h)]
- c. The permittee must use the procedures and test methods in 40 CFR 60.396a to determine the add-on control device emission destruction or removal efficiency as part of the performance test required by 40 CFR 60.393a(j)(4), except as provided in 40 CFR 60.8. The permittee must conduct three test runs as specified in 40 CFR 60.8(f) and 60.394a, and each test run must last at least 1 hour. [40 CFR 60.396a]
- (1) For all types of add-on control devices, use the test methods specified in 40 CFR 60.396a (a)(1) through (5). [40 CFR 60.396a(a)]
- Use EPA Method 1 or 1A of appendix A-1 to 40 CFR part 60, as appropriate, to select sampling sites and velocity traverse points. [40 CFR 60.396a(a)(1)]
 - Use EPA Method 2, 2A, 2C, 2D, or 2F of appendix A-1, or 2G of appendix A-2 to 40 CFR part 60, as appropriate, to measure gas volumetric flow rate. [40 CFR 60.396a(a)(2)]
 - Use EPA Method 3, 3A, or 3B of appendix A-2 to 40 CFR part 60, as appropriate, for gas analysis to determine dry molecular weight. The ASME/ANSI PTC 19.10-1981 (incorporated by reference, *see* 40 CFR 60.17), may be used as an alternative to EPA Method 3B. [40 CFR 60.396a(a)(3)]
 - Use EPA Method 4 of appendix A-3 to 40 CFR part 60 to determine stack gas moisture. [40 CFR 60.396a(a)(4)]
 - Methods for determining gas volumetric flow rate, dry molecular weight, and stack gas moisture must be performed, as applicable, during each test run. [40 CFR 60.396a(a)(5)]
- (2) Measure total gaseous organic mass emissions as carbon in the effluent gas leaving each stack not equipped with a control device and at the inlet and outlet of the add-on control device simultaneously, using either EPA Method 25 or 25A of appendix A-7 to 40 CFR part 60, as specified in 40 CFR 60.396a(b)(1) through (4). The permittee must use the same method for both the inlet and outlet measurements. [40 CFR 60.396a(b)]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- i. Use Method 25 if the add-on control device is an oxidizer and the permittee expects the total gaseous organic concentration as carbon to be more than 50 parts per million by volume (ppmv) at the control device outlet. [40 CFR 60.396a(b)(1)]
 - ii. Use Method 25A if the add-on control device is an oxidizer and the permittee expect the total gaseous organic concentration as carbon to be 50 ppmv or less at the control device outlet. [40 CFR 60.396a(b)(2)]
 - iii. Use Method 25A if the add-control device is not an oxidizer. [40 CFR 60.396a(b)(3)]
 - iv. The permittee may use EPA Method 18 of appendix A-6 to 40 CFR part 60 to subtract methane emissions from measured total gaseous organic mass emissions as carbon. [40 CFR 60.396a(b)(4)]
 - v. For Method 25 and 25A, the sampling time for each of three runs must be at least one hour. The minimum sample volume must be 0.003 dscm except that shorter sampling times or smaller volumes, when necessitated by process variables or other factors, may be approved by the Administrator. The Administrator will approve the sampling of representative stacks on a case-by-case basis if the permittee can demonstrate to the satisfaction of the Administrator that the testing of representative stacks would yield results comparable to those that would be obtained by testing all stacks. [40 CFR 60.396a(b)(5)]
- (3) If two or more add-on control devices are used for the same emission stream, then the permittee must measure emissions at the outlet of each device. For example, if one add-on control device is a concentrator with an outlet for the high-volume, dilute stream that has been treated by the concentrator, and a second add-on control device is an oxidizer with an outlet for the low-volume, concentrated stream that is treated with the oxidizer, the permittee must measure emissions at the outlet of the oxidizer and the high-volume dilute stream outlet of the concentrator. [40 CFR 60.396a(c)]
- (4) For each test run, determine the total gaseous organic emissions mass flow rates (M_f) for the inlet and the outlet of the add-on control device, using 40 CFR 60.396a Equation 1. If there is more than one inlet or outlet to the add-on control device, the permittee must calculate the total gaseous organic mass flow rate using 40 CFR 60.396a Equation 1 for each inlet and each outlet and then total all of the inlet emissions and total all of the outlet emissions. [40 CFR 60.396a(d)]

$$M_f = Q_{sd} C_c (12)(0.0416)(10^{-6})(40 \text{ CFR } 60.396a \text{ Eq. 1})$$

Where:

M_f = Total gaseous organic emissions mass flow rate, kg per hour (kg/h).

C_c = Concentration of organic compounds as carbon in the vent gas, as determined by Method 25 or Method 25A, ppmv, dry basis.

Q_{sd} = Volumetric flow rate of gases entering or exiting the add-on control device, as determined by Method 2, 2A, 2C, 2D, 2F, or 2G, dry standard cubic meters per hour (dscm/h). 0.0416 = Conversion factor for molar volume, kg-moles per cubic meter (mol/m^3) (@293 Kelvin (K) and 760 millimeters of mercury (mmHg)).

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- (5) For each test run, determine the add-on control device organic emissions destruction or removal efficiency using 40 CFR 60.396a Equation 2: [40 CFR 60.396a(e)]

$$DRE = \frac{M_{fi} - M_{fo}}{M_{fi}} (100)$$

Where:

DRE = Organic emissions destruction or removal efficiency of the add-on control device, percent.

M_{fi} = Total gaseous organic emissions mass flow rate at the inlet(s) to the add-on control device, using 40 CFR 60.396a Equation 1, kg/h.

M_{fo} = Total gaseous organic emissions mass flow rate at the outlet(s) of the add-on control device, using 40 CFR 60.396a Equation 1, kg/h.

- (6) (Determine the emission destruction or removal efficiency of the add-on control device as the average of the efficiencies determined in the three test runs and calculated in 40 CFR 60.396a Equation 2. [40 CFR 60.396a(f)]

40 CFR 63 Subpart IIII Testing Requirements:

Refer to **Group Requirements**, 40 CFR 63 Subpart IIII Affected Sources, subsection 3. **Testing Requirements**.

4. **Specific Monitoring Requirements:**

General Monitoring Requirements:

- a. The permittee shall conform to the monitoring requirements, as prescribed in the Section B, **Paint #2 Reborn Part 2: Coating Operation Periodic Monitoring Requirements** table. [401 KAR 52:020, Section 10]
- b. The permittee shall comply with the control equipment monitoring requirements of 40 CFR 60 Subpart MMa and 40 CFR 63 Subpart IIII for the Oxidizers and Concentrators. [401 KAR 52:020, Section 10]
- c. The permittee shall monitor VOC and PM emissions monthly for the Paint #2 Reborn emission units. [401 KAR 52:020, Section 10]
- d. The permittee shall monitor the number vehicles processed through Paint #2 Reborn monthly. [401 KAR 52:020, Section 10]
- e. The permittee shall monitor the hours operation for the Paint #2 Reborn units monthly. [401 KAR 52:020, Section 10]

401 KAR 51:017 Specific Monitoring Requirements:

401 KAR 51:017, Section 16(5)(c). Source Obligation

The permittee shall monitor and calculate annual VOC emissions from Paint #2 (Emission Units F01 through F18), Paint 2 Reborn (Emission Units F02R through F13R), Emission Units

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

D03A, D03B, D13A, and D13B maintain a record of the annual emissions, in tons per year on a calendar year basis for five years following resumption of regular operations after the year 2025-2029 Paint #2 Reborn modification. The source shall submit a report to the Division if:

- (1) The annual VOC emissions, in tons per year, from this proposed project exceeds the baseline actual emissions by a significant amount for these pollutants; and
- (2) The VOC emissions exceed the projected actual emissions as submitted in the application for the Paint Line #2 Reborn modification.
- (3) The sum total VOC emissions for the above listed emission units combined shall not exceed 310 tons per year. This limit will be removed when Paint #2 has been removed from operation.

401 KAR 59:010 Specific Monitoring Requirements:

- a. The permittee shall perform a qualitative visual observation of the opacity of emissions at each stack no less than weekly while the affected facility is operating. If visible emissions from the stacks are observed (not including condensed water in the plume), the permittee shall determine the opacity using U.S. EPA Reference Method 9. In lieu of determining the opacity using U.S. EPA Reference Method 9, the permittee shall immediately perform a corrective action which results in no visible emissions (not including condensed water in the plume). [401 KAR 52:020, Section 10]
- b. The permittee shall install, maintain and operate according to manufacturer's specifications a monitoring device (differential pressure gauges or manometers) to determine the pressure drop across the baghouse once a week during the operation of the F13Ra shotblast baghouse. A permanent label displaying the operating range established for each collector shall be posted next to the selected instrument. [401 KAR 52:020, Section 10]

401 KAR 59:185 Specific Monitoring Requirements:

Refer to **Group Requirements**, 401 KAR 59:185 Affected Sources, subsection 4. **Specific Monitoring Requirements**.

40 CFR 60 Subpart MMA Specific Monitoring Requirements:

- a. **Monitoring requirements.** If the permittee uses an add-on control device(s) to comply with the emission limits specified under 40 CFR 60.392a(a) through (c), the permittee must install, operate, and maintain each CMS specified in 40 CFR 60.394a(c), (e), (f), and (g) according to 40 CFR 60.394a(g)(1) through (6). The permittee must install, operate, and maintain each CMS specified in 40 CFR 60.394a(h) and (i) according to 40 CFR 60.394a(g)(3) through (5). [40 CFR 60.394a(g)]
 - (1) The CMS must complete a minimum of one cycle of operation for each successive 15-minute period. The permittee must have a minimum of four equally spaced successive cycles of CMS operation in 1 hour. [40 CFR 60.394a(g)(1)]
 - (2) The permittee must determine the average of all recorded readings for each successive 3-hour period of the emission capture system and add-on control device operation. [40 CFR 60.394a(g)(2)]
 - (3) The permittee must record the results of each inspection, calibration, and validation check of the CMS. [40 CFR 60.394a(g)(3)]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- (4) The permittee must maintain the CMS at all times in accordance with 40 CFR 60.11(d) and have readily available necessary parts for routine repairs of the monitoring equipment. [40 CFR 60.394a(g)(4)]
- (5) The permittee must operate the CMS and collect emission capture system and add-on control device parameter data at all times that a controlled coating operation is operating in accordance with 40 CFR 60.11(d). [40 CFR 60.394a(g)(5)]
- (6) Startups and shutdowns are normal operation for this source category. Emissions from these activities are to be included when determining if the standards specified in 40 CFR 60.392a(a) through (c) are being attained. The permittee must not use emission capture system or add-on control device parameter data recorded during monitoring malfunctions, associated repairs, out-of-control periods, or required quality assurance or control activities when calculating data averages. The permittee must use all the data collected during all other periods in calculating the data averages for determining compliance with the emission capture system and add-on control device operating limits. [40 CFR 60.394a(g)(6)]
- (7) A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the CMS to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions. Except for periods of required quality assurance or control activities, any period during which the CMS fails to operate and record data continuously as required by 40 CFR 60.394a(g)(1) or generates data that cannot be included in calculating averages as specified in 40 CFR 60.394a(g)(7) constitutes a deviation from the monitoring requirements. [40 CFR 60.394a(g)(7)]

40 CFR 63 Subpart IIII Specific Monitoring Requirements:

Refer to **Group Requirements, 40 CFR 63 Subpart IIII Affected Sources**, subsection 4. **Specific Monitoring Requirements**.

5. **Specific Recordkeeping Requirements:**

General Recordkeeping Requirements:

- a. The permittee shall conform to the recordkeeping requirements, as prescribed in the Section B, **Paint #2 Reborn Part 2: Coating Operation Periodic Monitoring Requirements** table. [401 KAR 52:020, Section 10]
- b. The permittee shall comply with the recordkeeping requirements of 40 CFR 60 Subpart MMa and 40 CFR 63 Subpart IIII. [401 KAR 52:020, Section 10]
- c. The permittee shall record the VOC and PM emissions monthly for the Paint #2 Reborn emission units. [401 KAR 52:020, Section 10]
- d. The permittee shall record the number vehicles processed through Paint #2 Reborn monthly. [401 KAR 52:020, Section 10]
- e. The permittee shall record the hours operation for the Paint #2 Reborn units monthly. [401 KAR 52:020, Section 10]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- f. The permittee shall maintain monthly records of all materials used containing VOC and HAP, including the product type, amount used and the weight percentages for VOC and all individual HAPs. [401 KAR 52:020, Section 10]
- g. Individual records shall be kept of materials used in an uncontrolled fashion which have emissions that will be applied to controlled emission units for compliance demonstration purposes. For example, emissions from paint repair operations attributed to F05R must be clearly added to F05R emissions as uncontrolled emissions and there shall be a record of such. [401 KAR 52:020, Section 10]
- h. In addition, for all required emissions control equipment, the permittee shall keep the following records: [401 KAR 52:020, Section 10]
 - (1) Design or manufacturer's specifications.
 - (2) Preventive maintenance records related to performance of control equipment.
 - (3) All periods, during normal operating conditions, where parameters listed in the periodic monitoring requirements table are "out of standard". For thermal oxidizers and VOC wheel concentrators, "out of standard" is defined as a confirmed three-hour period during which the average of the monitored values fails to meet the specified temperature requirements.
 - (4) All periods, during normal operating conditions, where emissions control equipment, required by this permit, is not operating.
 - (5) All periods, during normal operating conditions, where emissions control equipment, required by this permit, is bypassed.
 - (6) Description of operating, temperature-measuring devices (e.g., automatic strip charts, digital data acquisition systems).
 - (7) Data from the temperature-measuring devices (as prescribed by the periodic monitoring requirements table) and any temporary data logged manually as back up.
 - (8) Inspection reports and maintenance performed in response to recommendations in inspection reports.
 - (9) Monitoring system malfunctions.
 - (10) Corrective actions taken in response to "out of standard" conditions as specified in the periodic monitoring requirements table.
 - (11) Calibration records for monitoring equipment specified in the periodic monitoring requirements table.
- i. During all periods of operation of the thermal oxidizers in which the 3-hour average combustion chamber temperature of the thermal oxidizer is below the average combustion chamber temperature of the thermal oxidizer set during the most recent performance test which demonstrated compliance, or other malfunction of the thermal oxidizer, a daily log of the following information shall be kept: [401 KAR 52:020, Section 10]
 - (1) Whether any air emissions were visible from the facilities associated with the thermal oxidizer.
 - (2) Whether visible emissions were normal for the process.
 - (3) The cause of the visible emissions.
 - (4) Corrective action(s) taken shall be recorded.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- j. The permittee shall maintain records of the following information for the VOC concentrator: [401 KAR 52:020, Section 10]
 - (1) All periods (during coating operations) during which the 3-hour average desorption gas inlet temperature is more than 8°C (15°F) below the average desorption gas inlet temperature determined during the most recent performance test, which demonstrated compliance. Each occurrence shall be considered a deviation from permit requirements. See Section F.6.
 - (2) During all periods of operation of the VOC concentrator in which the 3-hour average desorption gas inlet temperature is more than 8°C (15°F) below the average desorption gas temperature determined during the most recent performance test which demonstrated compliance, or other malfunction of the VOC concentrator, a daily log of the following information shall be kept:
 - (3) Whether any air emissions were visible from the facilities associated with the VOC concentrator.
 - (4) Whether visible emissions were normal for the process.
 - (5) The cause of the visible emissions.
 - (6) Corrective action(s) taken shall be recorded.
- k. All records required by this permit shall be kept onsite for a minimum of 5 years. [401 KAR 52:020, Section 10]

401 KAR 51:017 Specific Recordkeeping Requirements:

- a. Following the end of each month, pounds per job limits for VOC and pounds per hour limits for PM shall be calculated and recorded. These records shall represent the most recent year and shall show compliance with VOC and PM emission limitations listed in this permit. These records shall be made available for inspection upon request by any duly authorized representatives of the Division for Air Quality. See Section B Group Requirements. [401 KAR 52:020, Section 10]
- b. Refer to **4. Specific Monitoring Requirements, 401 KAR 51:017 Specific Monitoring Requirements, 401 KAR 51:017, Section 16(5)(c). Source Obligation.**

401 KAR 59:010 Specific Recordkeeping Requirements:

- a. The permittee shall maintain a log of the qualitative visual observations made as specified in **4. Specific Monitoring Requirements, 401 KAR 59:010 Specific Monitoring Requirements** including the date, time, initials of observer, whether any emissions were observed (yes/no), and any U.S. EPA Reference Method 9 readings taken. [401 KAR 52:020, Section 10]
- b. The permittee shall maintain a log of the pressure drop readings across the filters, including the date, and document filter replacements. For any booth that is not in operation on a given date, this fact should also be noted. [401 KAR 52:020, Section 10]
- c. The permittee shall keep manufacturer's control equipment specifications on site. [401 KAR 52:020, Section 10]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

401 KAR 59:185 Specific Recordkeeping Requirements:

Refer to **Group Requirements**, 401 KAR 59:185 Affected Sources, subsection 5. **Specific Recordkeeping Requirements**.

40 CFR 60 Subpart MMA Specific Recordkeeping Requirements:

- a. ***Recordkeeping.*** The permittee must maintain records as specified in 40 CFR 60.395a. [40 CFR 60.393a(o)]
- b. ***Recordkeeping.*** The permittee must collect and keep records of the data and information specified in 40 CFR 60.395a(k)(1) through (12). Failure to collect and keep these records is a deviation from the applicable standard. [40 CFR 60.395a(k)]
 - (1) A copy of each notification and report that the permittee submitted to comply with 40 CFR 60 Subpart MMA, and the documentation supporting each notification and report. [40 CFR 60.395a(k)(1)]
 - (2) A current copy of information provided by materials suppliers or manufacturers, such as manufacturer's formulation data, or test data used to determine the mass fraction of VOC, the density and the volume fraction of coating solids for each coating, and the mass fraction of VOC and the density for each thinner. If the permittee conducted testing to determine mass fraction of VOC, density, or volume fraction of coating solids, the permittee must keep a copy of the complete test report. If the permittee uses information provided to the permittee by the manufacturer or supplier of the material that was based on testing, the permittee must keep the summary sheet of results provided to the permittee by the manufacturer or supplier. If the permittee uses the results of an analysis conducted by an outside testing lab, the permittee must keep a copy of the test report. The permittee is not required to obtain the test report or other supporting documentation from the manufacturer or supplier. [40 CFR 60.395a(k)(2)]
 - (3) For each month, the records specified in 40 CFR 60.395a(k)(3)(i) through (iii). [40 CFR 60.395a(k)(3)]
 - i. For each coating used for the affected source, a record of the volume used in each month, the mass fraction VOC content, the density, and the volume fraction of solids. [40 CFR 60.395a(k)(3)(i)]
 - ii. For each thinner used in coating operations for the affected source, a record of the volume used in each month, the mass fraction VOC content, and the density. [40 CFR 60.395a(k)(3)(ii)]
 - iii. A record of the calculation of the VOC emission rate for the affected source for each month. This record must include all raw data, algorithms, and intermediate calculations. If the guidelines presented in the "Protocol for Determining the Daily Volatile Organic Compound Emission Rate of Automobile and Light-Duty Truck Primer-Surfacer and Topcoat" EPA-453/R-08-002 (incorporated by reference, see 40 CFR 60.17), are used, the permittee must keep records of all data input to this protocol. If these data are maintained as electronic files, the electronic files, as well as any paper copies must be maintained. These data must be provided to the permitting authority on request on paper, and in (if calculations are done electronically) electronic form. [40 CFR 60.395a(k)(3)(iii)]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- (4) For each deviation from an emission limitation, operating limit, or work practice plan reported under 40 CFR 60.395a(h), a record of the information specified in 40 CFR 60.395a(k)(4)(i) through (iv), as applicable. [40 CFR 60.395a(k)(4)]
 - i. The date, time, and duration of the deviation, and for each deviation, the information as reported under 40 CFR 60.395a(h). [40 CFR 60.395a(k)(4)(i)]
 - ii. A list of the affected sources or equipment for which the deviation occurred and the cause of the deviation, as reported under 40 CFR 60.395a(h). [40 CFR 60.395a(k)(4)(ii)]
 - iii. An estimate of the quantity of VOC emitted over any applicable emission limit in 40 CFR 60.392a or any applicable operating limit in 40 CFR 60 Subpart MMA Table 1, and a description of the method used to calculate the estimate, as reported under 40 CFR 60.395a(h). [40 CFR 60.395a(k)(4)(iii)]
 - iv. A record of actions taken to minimize emissions in accordance with 40 CFR 60.11(d) and any corrective actions taken to return the affected unit to its normal or usual manner of operation. [40 CFR 60.395a(k)(4)(iv)]
- (5) The records required by 40 CFR 60.7(b) and (c) related to SSM. [40 CFR 60.395a(k)(5)]
- (6) For each capture system that is a PTE, the data and documentation the permittee used to support a determination that the capture system meets the criteria in Method 204 of appendix M to 40 CFR part 51 for a PTE and has a capture efficiency of 100 percent, as specified in 40 CFR 60.397a(a). [40 CFR 60.395a(k)(6)]
- (7) For each capture system that is not a PTE, the data and documentation the permittee used to determine capture efficiency according to the requirements specified in 40 CFR 60.397a(b) through (g), including the records specified in 40 CFR 60.395a(k)(7)(i) through (iv) that apply to the permittee. [40 CFR 60.395a(k)(7)]
 - i. Records for a liquid-to-uncaptured-gas protocol using a temporary total enclosure or building enclosure. Records of the mass of total VOC, as measured by Method 204A or F of appendix M to 40 CFR part 51, for each material used in the coating operation, and the total VOC for all materials used during each capture efficiency test run, including a copy of the test report. Records of the mass of VOC emissions not captured by the capture system that exited the temporary total enclosure or building enclosure during each capture efficiency test run, as measured by Method 204D or E of appendix M to 40 CFR part 51, including a copy of the test report. Records documenting that the enclosure used for the capture efficiency test met the criteria in Method 204 of appendix M to 40 CFR part 51 for either a temporary total enclosure or a building enclosure. [40 CFR 60.395a(k)(7)(i)]
 - ii. Records for a gas-to-gas protocol using a temporary total enclosure or a building enclosure. Records of the mass of VOC emissions captured by the emission capture system, as measured by Method 204B or C of appendix M to 40 CFR part 51, at the inlet to the add-on control device, including a copy of the test report. Records of the mass of VOC emissions not captured by the capture system that exited the temporary total enclosure or building enclosure during each capture efficiency test run, as measured by Method 204D or E of appendix M to 40 CFR part 51, including a copy of the test report. Records documenting that the enclosure used for the capture efficiency test met the criteria in Method 204 of appendix M to 40 CFR part

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- 51 for either a temporary total enclosure or a building enclosure. [40 CFR 60.395a(k)(7)(ii)]
- iii. Records for panel tests. Records needed to document a capture efficiency determination using a panel test as described in 40 CFR 60.397a(e) and (g), including a copy of the test report and calculations performed to convert the panel test results to percent capture efficiency values. [40 CFR 60.395a(k)(7)(iii)]
- iv. Records for an alternative protocol. Records needed to document a capture efficiency determination using an alternative method or protocol, as specified in 40 CFR 60.397a(f), if applicable. [40 CFR 60.395a(k)(7)(iv)]
- (8) The records specified in 40 CFR 60.395a(k)(8)(i) and (ii) for each add-on control device VOC destruction or removal efficiency determination as specified in 40 CFR 60.393a. [40 CFR 60.395a(k)(8)]
 - i. Records of each add-on control device performance test conducted according to 40 CFR 60.393a. [40 CFR 60.395a(k)(8)(i)]
 - ii. Records of the coating operation conditions during the add-on control device performance test showing that the performance test was conducted under representative operating conditions. [40 CFR 60.395a(k)(8)(ii)]
- (9) Records of the data and calculations the permittee used to establish the emission capture and add-on control device operating limits as specified in 40 CFR 60.394a and to document compliance with the operating limits as specified in 40 CFR 60 Subpart MMA table 1. [40 CFR 60.395a(k)(9)]
- (10) Records of the data and calculations the permittee used to determine the transfer efficiency for guide coat and topcoat coating operations pursuant to 40 CFR 60.393a(h). [40 CFR 60.395a(k)(10)]
- (11) A record of the work practice plans required by 40 CFR 60.392a(b) and (c) and documentation that the permittee is implementing the plans on a continuous basis. Appropriate documentation may include operational and maintenance records, records of documented inspections, and records of internal audits. [40 CFR 60.395a(k)(11)]
- (12) For each add-on control device and for each CMS, a copy of the equipment operating instructions must be maintained on-site for the life of the equipment in a location readily available to plant operators and inspectors. The permittee may prepare their own equipment operating instructions, or they may be provided to the permittee by the equipment supplier or other third party. [40 CFR 60.395a(k)(12)]
- c. **Record form and retention time.** [40 CFR 60.395a(l)]
 - (1) Any records required to be maintained by 40 CFR 60 Subpart MMA that are submitted electronically via the EPA's CEDRI may be maintained in electronic format. This ability to maintain electronic copies does not affect the requirement for facilities to make records, data, and reports available upon request to a delegated air agency or the EPA as part of an on-site compliance evaluation. [40 CFR 60.395a(l)(1)]
 - (2) Except as provided in 40 CFR 60.395a(k)(12), the permittee must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. [40 CFR 60.395a(l)(2)]
 - (3) Except as provided in 40 CFR 60.395a(k)(12), the permittee must keep each record on site for at least 2 years after the date of each occurrence, measurement, maintenance,

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

corrective action, report, or record. The permittee may keep the records off site for the remaining 3 years. [40 CFR 60.395a(1)(3)]

40 CFR 63 Subpart IIII Specific Reporting Requirements:

Refer to **Group Requirements**, 40 CFR 63 Subpart IIII Affected Sources, subsection 5. **Specific Recordkeeping Requirements**.

6. **Specific Reporting Requirements:**

General Reporting Requirements:

- a. Refer to Section F for general reporting requirements. [401 KAR 52:020, Section 10]
- b. The semiannual report required in Section F (5). And (6). shall contain the following information. [401 KAR 52:020, Section 10]
 - (1) Whether there were any out of compliance control equipment excursions, the date of the excursion and the length.
 - (2) A summary of monthly and 12-month rolling VOC and PM emissions. Emissions shall be calculated on a per unit basis. Uncontrolled emissions added to controlled units shall be recorded in the report.
 - (3) The number of vehicles processed on a monthly basis across Paint #2 Reborn (Emission Units F02R through F13R).
 - (4) The monthly hours of operation for the Paint #2 Reborn emission units.
 - (5) The 12-month rolling total sum of VOC and PM emissions across Paint #2 (Emission Unit F01 through F18) and Paint 2 Reborn (Emission Units F02R through F13R) added together.
 - (6) A demonstration of compliance with 401 KAR 51:017, Section 16(5)(c). Source Obligation, Reasonable Possibility that the paint 2 reborn project is not a significant modification for five years after the resumption of normal operations after the change.
 - (7) The permittee shall report the number of gallons of each coating applied and the amount of VOC's and HAP's (lbs/gallon) contained in the coatings for each emission unit.

401 KAR 51:017 Specific Reporting Requirements:

Refer to 6. **Specific Reporting Requirements**, *General Reporting Requirements*.

401 KAR 59:010 Specific Reporting Requirements:

The permittee shall submit a copy of the inspection and repair log for those times when corrective actions are required due to an opacity exceedance and/or records of any U.S. EPA Reference Method 9 opacity observations as noted in 4. **Specific Monitoring Requirements**, 401 KAR 59:010 *Specific Monitoring Requirements*. Copies of these records shall be submitted as a part of the semiannual reporting as required in Section F (5) & (6). [401 KAR 52:020, Section 10]

401 KAR 59:185 Specific Reporting Requirements:

Refer to **Group Requirements**, 401 KAR 59:185 Affected Sources, subsection 6. **Specific Reporting Requirements**.

40 CFR 60 Subpart MMa Specific Reporting Requirements:

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- a. **No deviations.** If there were no deviations from the emission limitations, submit a statement as part of the compliance report that the permittee was in compliance with the emission limitations during the reporting period because the VOC emission rate for each compliance period was less than or equal to the applicable emission limit in 40 CFR 60.392a, the permittee achieved the operating limits required by 40 CFR 60.394a, and the permittee achieved the work practice standards required by 40 CFR 60.392a during each compliance period. [40 CFR 60.393a(n)]
- b. **Notifications.** The permittee must submit all notifications in 40 CFR 60.7, 60.8, and 60.13 that apply to the permittee by the dates specified in those sections and in 40 CFR 60.395a(a)(1) through (5). [40 CFR 60.395a(a)]
 - (1) A notification of the date construction (or reconstruction as defined under 40 CFR 60.15) of an affected facility is commenced no later than 30 days after such date. [40 CFR 60.395a(a)(1)]
 - (2) A notification of the actual date of initial startup of an affected facility within 15 days after such date. [40 CFR 60.395a(a)(2)]
 - (3) A notification of any physical or operational change to an existing facility which may increase the VOC emission rate within 60 days or as soon as practicable before the change is commenced. [40 CFR 60.395a(a)(3)]
 - (4) A notification of the date upon which demonstration of the CMS performance commences in accordance with 40 CFR 60.13(c) not less than 30 days prior to such date. [40 CFR 60.395a(a)(4)]
 - (5) A notification of any performance test at least 30 days prior to afford the Administrator (or delegated State or local agency) the opportunity to have an observer present. [40 CFR 60.395a(a)(5)]
- c. **Initial performance test report.** If the permittee uses add-on control devices, the permittee must submit reports of performance test results for emission capture systems and add-on control devices. Within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of such facility, the permittee is required to conduct performance test(s) and furnish the Administrator a report of the results of such performance test(s) in accordance with 40 CFR 60.8(a). The permittee is also required to conduct transfer efficiency test(s) and submit reports of the results of transfer efficiency tests and furnish the Administrator a report of the results of such transfer efficiency tests. The initial performance test report must include the information specified in 40 CFR 60.8. [40 CFR 60.395a(b)]
- d. **Subsequent performance test reports.** The permittee must conduct periodic performance tests of add-on control devices in accordance with 40 CFR 60.393a(b) within five years of the previous performance test and at such other times as may be required by the Administrator under section 114 of the Act in accordance with 40 CFR 60.8(a). The permittee must furnish the Administrator a written report of the results of such performance test(s) within 60 days of completing the performance test. Periodic testing of transfer efficiency and capture efficiency are not required. [40 CFR 60.395a(c)]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- e. **Compliance reports.** Following the initial performance test, the permittee must submit a quarterly or semiannual compliance report for each affected source required by 40 CFR 60.8 according to the requirements of 40 CFR 60.395a(e) and (f). The permittee must identify, record, and submit a report to the Administrator every calendar quarter each instance a deviation occurred from the emission limits, operating limits, or work practices in 40 CFR 60.392a, 60.393a, and 60.394a, that apply to the permittee. If no such instances have occurred during a particular quarter, a report stating this shall be submitted to the Administrator semiannually. For each affected source that is subject to 40 CFR part 70 or 71 permitting regulations and if the permitting authority has established dates for submitting semiannual compliance reports pursuant to 40 CFR 70.6(a)(3)(iii)(A) or 71.6(a)(3)(iii)(A), the permittee may submit the semiannual compliance reports according to the dates the permitting authority has established. [40 CFR 60.395a(d)]
- f. **Initial compliance report.** The permittee must include the data outlined in 40 CFR 60.395a(e)(1) and (2) in the initial compliance report required by 40 CFR 60.8 and the information required by 40 CFR 60.395a(f) through (h). [40 CFR 60.395a(e)]
 - (1) The volume weighted average mass of VOC per volume of applied coating solids for each affected facility. [40 CFR 60.395a(e)(1)]
 - (2) Where compliance is achieved through the use of a capture or control device, include the following additional data in the initial performance test report required by 40 CFR 60.8(a) specified in 40 CFR 60.395a(e)(2)(i) through (v): [40 CFR 60.395a(e)(2)]
 - i. The data collected to establish the operating limits for the appropriate capture or control device required as by 40 CFR 60.394a and 40 CFR 60 Subpart MMa table 1; [40 CFR 60.395a(e)(2)(i)]
 - ii. The total mass of VOC per volume of applied coating solids before and after the control device as required by 40 CFR 60.396a; [40 CFR 60.395a(e)(2)(ii)]
 - iii. The destruction efficiency of the control device used to attain compliance with the applicable emission limit specified in 40 CFR 60.392a(a); [40 CFR 60.395a(e)(2)(iii)]
 - iv. The capture efficiency as required by 40 CFR 60.397a and a description of the method used to establish the capture efficiency for the affected facility; and [40 CFR 60.395a(e)(2)(iv)]
 - v. The transfer efficiency test results and a description of the method used to establish the transfer efficiency for the affected facility. [40 CFR 60.395a(e)(2)(v)]
- g. **Compliance report content.** Compliance reports must contain the information specified in 40 CFR 60.395a(f)(1) through (4) and paragraph (g) that are applicable to the affected source. [40 CFR 60.395a(f)]
 - (1) Company name and address. [40 CFR 60.395a(f)(1)]
 - (2) Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report. [40 CFR 60.395a(f)(2)]
 - (3) Date of report and beginning and ending dates of the reporting period. [40 CFR 60.395a(f)(3)]
 - (4) Identification of the affected source. [40 CFR 60.395a(f)(4)]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- h. **No deviations.** If there were no deviations from the emission limits, work practices, or operating limits in 40 CFR 60.392a and 60.394a, that apply to the permittee, the compliance report must include a statement that there were no deviations from the applicable emission limitations during the reporting period. If the permittee used control devices to comply with the emission limits, and there were no periods during which the CMS were out of control as specified in 40 CFR 60.394a(g) the compliance report must include a statement that there were no periods during which the CMS were out of control during the reporting period. [40 CFR 60.395a(g)]
- i. **Deviations.** If there was a deviation from the applicable emission limits in 40 CFR 60.392a or the applicable operating limit(s) in 40 CFR 60 Subpart MMa table 1 or the work practice standards in 40 CFR 60.392a, the compliance report must contain the information in 40 CFR 60.395a(h)(1) through (15). [40 CFR 60.395a(h)]
 - (1) The beginning and ending dates of each month during which the volume-weighted average of the total mass of VOC emitted to the atmosphere per volume of applied coating solids (N) for the affected source exceeded the applicable emission limit in 40 CFR 60.392a. [40 CFR 60.395a(h)(1)]
 - (2) The calculation used to determine the volume-weighted average of the total mass of VOC emitted to the atmosphere per volume of applied coating solids (N) in accordance with 40 CFR 60.395a. The permittee does not need to submit the background data supporting these calculations, for example information provided by materials suppliers or manufacturers, or test reports. [40 CFR 60.395a(h)(2)]
 - (3) The date and time that each malfunction of the capture system or add-on control devices used to control emissions from these operations started and stopped. [40 CFR 60.395a(h)(3)]
 - (4) A brief description of the CMS. [40 CFR 60.395a(h)(4)]
 - (5) The date of the latest CMS certification or audit. [40 CFR 60.395a(h)(5)]
 - (6) For each instance that the CMS was inoperative, except for zero (low-level) and high-level checks, the date, time, and duration that the CMS was inoperative; the cause (including unknown cause) for the CMS being inoperative; and descriptions of corrective actions taken. [40 CFR 60.395a(h)(6)]
 - (7) For each instance that the CMS was malfunctioning or out-of-control, as specified in 40 CFR 60.394a(g)(6) or (7), the date, time, and duration that the CMS was malfunctioning or out-of-control; the cause (including unknown cause) for the CMS malfunctioning or being out-of-control; and descriptions of corrective actions taken. [40 CFR 60.395a(h)(7)]
 - (8) The date, time, and duration of each deviation from an operating limit in 40 CFR 60 Subpart MMa table 1; and the date, time, and duration of each bypass of an add-on control device. [40 CFR 60.395a(h)(8)]
 - (9) A summary of the total duration and the percent of the total source operating time of the deviations from each operating limit in 40 CFR 60 Subpart MMa table 1 and the bypass of each add-on control device during the semiannual reporting period. [40 CFR 60.395a(h)(9)]
 - (10) A breakdown of the total duration of the deviations from each operating limit in 40 CFR 60 Subpart MMa Table 1 and bypasses of each add-on control device during the semiannual reporting period into those that were due to control equipment problems,

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- process problems, other known causes, and other unknown causes. [40 CFR 60.395a(h)(10)]
- (11) A summary of the total duration and the percent of the total source operating time of the downtime for each CMS during the semiannual reporting period. [40 CFR 60.395a(h)(11)]
- (12) A description of any changes in the CMS, coating operation, emission capture system, or add-on control devices since the last semiannual reporting period. [40 CFR 60.395a(h)(12)]
- (13) For deviations from the work practice standards, the number of deviations, and, for each deviation, the information in 40 CFR 60.395a(h)(13)(i) and (ii). [40 CFR 60.395a(h)(13)]
- i. A description of the deviation, the date, time, and duration of the deviation; and the actions the permittee took to minimize emissions in accordance with 40 CFR 60.11(d). [40 CFR 60.395a(h)(13)(i)]
 - ii. A list of the affected sources or equipment for which a deviation occurred, the cause of the deviation (including unknown cause, if applicable), and any corrective actions taken to return the affected unit to its normal or usual manner of operation. [40 CFR 60.395a(h)(13)(ii)]
- (14) For deviations from an emission limitation in 40 CFR 60.392a or operating limit in 40 CFR 60 Subpart MMa Table 1, a statement of the cause of each deviation (including unknown cause, if applicable). [40 CFR 60.395a(h)(14)]
- (15) For each deviation from an emission limitation in 40 CFR 60.392a, or operating limit in 40 CFR 60 Subpart MMa Table 1, a list of the affected sources or equipment for which a deviation occurred, an estimate of the quantity of VOC emitted over any emission limit in 40 CFR 60.392a, and a description of the method used to estimate the emissions. [40 CFR 60.395a(h)(15)]
- j. ***Electronic reporting of performance test data.*** Where compliance is achieved through the use of add-on control devices, the owner or operator shall submit control device performance test results for initial and subsequent performance tests according to 40 CFR 60.395a(b) and (c) within 60 days of completing each performance test following the procedures specified in 40 CFR 60.395a(i)(1) through (3). [40 CFR 60.395a(i)]
- (1) ***Supported test methods.*** Data collected using test methods supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT website (<https://www.epa.gov/electronic-reporting-air-emissions/electronic-reporting-tool-ert>) at the time of the test. [40 CFR 60.395a(i)(1)]
- i. Submit the results of the performance test to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI), which can be accessed through the EPA's Central Data Exchange (CDX) (<https://cdx.epa.gov/>). [40 CFR 60.395a(i)(1)(i)]
 - ii. The data must be submitted in a file format generated using the EPA's ERT. Alternatively, the owner or operator may submit an electronic file consistent with the extensible markup language (XML) schema listed on the EPA's ERT website. [40 CFR 60.395a(i)(1)(ii)]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- (2) **Unsupported test methods.** Data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT website at the time of the test. [40 CFR 60.395a(i)(2)]
- i. The results of the performance test must be included as an attachment in the ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT website. [40 CFR 60.395a(i)(2)(i)]
 - ii. Submit the ERT generated package or alternative file to the EPA via CEDRI. [40 CFR 60.395a(i)(2)(ii)]
- (3) **Confidential business information (CBI).** Do not use CEDRI to submit information the permittee claims as CBI. Any information submitted using CEDRI cannot later be claimed CBI. Under CAA section 114(c), emissions data are not entitled to confidential treatment, and the EPA is required to make emissions data available to the public. Thus, emissions data will not be protected as CBI and will be made publicly available. Owners or operators that assert a CBI claim for any information submitted under 40 CFR 60.395a(i)(1) or (i)(2), must submit a complete file, including information claimed to be CBI, to the EPA. The file must be generated using the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT website. Owners or operators can submit CBI according to one of the two procedures in 40 CFR 60.395a(i)(3)(i) or (ii). All CBI claims must be asserted at the time of submission. [40 CFR 60.395a(i)(3)]
- i. If sending CBI through the postal service, submit the file on a compact disc, flash drive, or other commonly used electronic storage medium and clearly mark the medium as CBI. Owners or operators are required to mail the electronic medium to U.S. EPA/OAQPS/CORE CBI Office, Attention: Automobile and Light Duty Truck Surface Coating Operations Sector Lead, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described in 40 CFR 60.395a(i)(1) and (2). [40 CFR 60.395a(i)(3)(i)]
 - ii. The EPA preferred method for CBI submittal is for it to be transmitted electronically using email attachments, File Transfer Protocol (FTP), or other online file sharing services (e.g., Dropbox, OneDrive, Google Drive). Electronic submissions must be transmitted directly to the OAQPS CBI Office at the email address oaqpscbi@epa.gov, and as described above, should be clearly identified as CBI and note Attention: Automobile and Light Duty Truck Surface Coating Operations Sector Lead. If assistance is needed with submitting large electronic files that exceed the file size limit for email attachments, and if the permittee does not have their own file sharing service, the permittee can email oaqpscbi@epa.gov to request a file transfer link. [40 CFR 60.395a(i)(3)(ii)]
- k. **Electronic submittal of reports.** The owner or operator shall submit the reports listed in 40 CFR 60.395a(b) through (e) following the procedures specified in 40 CFR 60.395a(j)(1) through (3). In addition to the information required in 40 CFR 60.395a(b) through (h), owners or operators are required to report excess emissions and a monitoring systems performance report and a summary report to the Administrator according to 40 CFR 60.7(c) and (d). Owners or operators are required by 40 CFR 60.7(c) and (d) to report the date, time, cause, and duration of each exceedance of the applicable emission limit specified in

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

40 CFR 60.392a(a), any malfunction of the air pollution control equipment, and any periods during which the CMS or monitoring device is inoperative, malfunctioning, or out-of-control. For each failure, the report must include a list of the affected sources or equipment and a description of the method used to estimate the emissions. [40 CFR 60.395a(j)]

- (1) **Effective date.** On and after November 6, 2023, or once the reporting template has been available on the CEDRI website for 1-year, whichever date is later, owners or operators must use the appropriate spreadsheet template on the CEDRI website (<https://www.epa.gov/electronic-reporting-air-emissions/cedri>) for 40 CFR 60 Subpart MMA. The date the reporting template for 40 CFR 60 Subpart MMA becomes available will be listed on the CEDRI website. The report must be submitted by the deadline specified in 40 CFR 60 Subpart MMA, regardless of the method by which the report is submitted. Submit all reports to the EPA via CEDRI, which can be accessed through the EPA's CDX (<https://cdx.epa.gov/>). The EPA will make all the information submitted through CEDRI available to the public without further notice to the owner or operator. Do not use CEDRI to submit information the permittee claims as CBI. Any information submitted using CEDRI cannot later be claimed CBI. If the permittee claims CBI, submit the report following the procedure described in 40 CFR 60.395a(i)(3). The same file with the CBI omitted must be submitted to CEDRI as described in this paragraph. [40 CFR 60.395a(j)(1)]
- (2) **System outage.** Owner or operators that are required to submit a report electronically through CEDRI in the EPA's CDX, may assert a claim of EPA system outage for failure to timely comply with that reporting requirement. To assert a claim of EPA system outage, owners or operators must meet the requirements outlined in 40 CFR 60.395a(e)(2)(i) through (vii). [40 CFR 60.395a(j)(2)]
 - i. The permittee must have been or will be precluded from accessing CEDRI and submitting a required report within the time prescribed due to an outage of either the EPA's CEDRI or CDX systems. [40 CFR 60.395a(j)(2)(i)]
 - ii. The outage must have occurred within the period of time beginning five business days prior to the date that the submission is due. [40 CFR 60.395a(j)(2)(ii)]
 - iii. The outage may be planned or unplanned. [40 CFR 60.395a(j)(2)(iii)]
 - iv. The permittee must submit notification to the Administrator in writing as soon as possible following the date the permittee first knew, or through due diligence should have known, that the event may cause or has caused a delay in reporting. [40 CFR 60.395a(j)(2)(iv)]
 - v. The permittee must provide to the Administrator a written description identifying: [40 CFR 60.395a(j)(2)(v)]
 - A. The date(s) and time(s) when CDX or CEDRI was accessed, and the system was unavailable; [40 CFR 60.395a(j)(2)(v)(A)]
 - B. A rationale for attributing the delay in reporting beyond the regulatory deadline to EPA system outage; [40 CFR 60.395a(j)(2)(v)(B)]
 - C. A description of measures taken or to be taken to minimize the delay in reporting; and [40 CFR 60.395a(j)(2)(v)(C)]
 - D. The date by which the permittee proposes to report, or if the permittee has already met the reporting requirement at the time of the notification, the date the permittee reported. [40 CFR 60.395a(j)(2)(v)(D)]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- vi. The decision to accept the claim of EPA system outage and allow an extension to the reporting deadline is solely within the discretion of the Administrator. [40 CFR 60.395a(j)(2)(vi)]
- vii. In any circumstance, the report must be submitted electronically as soon as possible after the outage is resolved. [40 CFR 60.395a(j)(2)(vii)]
- (3) ***Force majeure.*** Owner or operators that are required to submit a report electronically through CEDRI in the EPA's CDX, may assert a claim of force majeure for failure to timely comply with that reporting requirement. To assert a claim of force majeure, the permittee must meet the requirements outlined in 40 CFR 60.395a(j)(3)(i) through (iv). [40 CFR 60.395a(j)(3)]
 - i. The permittee may submit a claim if a force majeure event is about to occur, occurs, or has occurred or there are lingering effects from such an event within the period of time beginning five business days prior to the date the submission is due. For the purposes of 40 CFR 60.395a, a force majeure event is defined as an event that will be or has been caused by circumstances beyond the control of the affected facility, its contractors, or any entity controlled by the affected facility that prevents the permittee from complying with the requirement to submit a report electronically within the time period prescribed. Examples of such events are acts of nature (*e.g.*, hurricanes, earthquakes, or floods), acts of war or terrorism, or equipment failure or safety hazard beyond the control of the affected facility (*e.g.*, large scale power outage). [40 CFR 60.395a(j)(3)(i)]
 - ii. The permittee must submit notification to the Administrator in writing as soon as possible following the date the permittee first knew, or through due diligence should have known, that the event may cause or has caused a delay in reporting. [40 CFR 60.395a(j)(3)(ii)]
 - iii. The permittee must provide to the Administrator: [40 CFR 60.395a(j)(3)(iii)]
 - A. A written description of the force majeure event; [40 CFR 60.395a(j)(3)(iii)(A)]
 - B. A rationale for attributing the delay in reporting beyond the regulatory deadline to the force majeure event; [40 CFR 60.395a(j)(3)(iii)(B)]
 - C. A description of measures taken or to be taken to minimize the delay in reporting; and [40 CFR 60.395a(j)(3)(iii)(C)]
 - D. The date by which the permittee propose to report, or if the permittee has already met the reporting requirement at the time of the notification, the date the permittee reported. [40 CFR 60.395a(j)(3)(iii)(D)]
 - iv. The decision to accept the claim of force majeure and allow an extension to the reporting deadline is solely within the discretion of the Administrator. [40 CFR 60.395a(j)(3)(iv)]

40 CFR 63 Subpart IIII Specific Reporting Requirements:

Refer to **Group Requirements**, 40 CFR 63 Subpart IIII Affected Sources, subsection 6. **Specific Reporting Requirements**.

7. **Specific Control Equipment Operating Conditions:**

General Control Equipment Operating Conditions:

Refer to Section E

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

40 CFR 60 Subpart MMA Control Equipment Operating Conditions:

- a. During the performance tests required by 40 CFR 60.393a, if the permittee uses an add-on control device(s) to comply with the emission limits specified under 40 CFR 60.392a(a) through (c), the permittee must establish add-on control device operating limits required by 40 CFR 60.392a(h) according to 40 CFR 60.394a unless approval has been received for alternative monitoring under 40 CFR 60.13(i) as specified in 40 CFR 60.392a(h). [40 CFR 60.394a]
 - (1) **Thermal oxidizers.** If the add-on control device is a thermal oxidizer, establish the operating limit according to 40 CFR 60.394a(a)(1) and (2). [40 CFR 60.394a(a)]
 - i. During the performance test, the permittee must monitor and record the combustion temperature at least once every 15 minutes during each of the three test runs. The permittee must monitor the temperature in the firebox of the thermal oxidizer or immediately downstream of the firebox before any substantial heat exchange occurs. [40 CFR 60.394a(a)(1)]
 - ii. Use all valid data collected during the performance test to calculate and record the average combustion temperature maintained during the performance test. This average combustion temperature is the minimum 3-hour average operating limit for the thermal oxidizer. [40 CFR 60.394a(a)(2)]
 - (2) **Concentrators.** If the add-on control device includes a concentrator, the permittee must establish operating limits for the concentrator according to 40 CFR 60.394a(e)(1) and (2). [40 CFR 60.394a(e)]
 - i. During the performance test, the permittee must monitor and record the desorption gas inlet temperature at least once every 15 minutes during each of the three runs of the performance test. [40 CFR 60.394a(e)(1)]
 - ii. Use all valid data collected during the performance test to calculate and record the average desorption gas inlet temperature. The minimum operating limit for the concentrator is 8 degrees Celsius (15 degrees Fahrenheit) below the average desorption gas inlet temperature maintained during the performance test for that concentrator. The permittee must keep the set point for the desorption gas inlet temperature no lower than 6 degrees Celsius (10 degrees Fahrenheit) below the lower of that set point during the performance test for that concentrator and the average desorption gas inlet temperature maintained during the performance test for that concentrator. [40 CFR 60.394a(e)(2)]
 - (3) **Capture system bypass line.** The permittee must meet the requirements of 40 CFR 60.394a(h)(1) and (2) for each emission capture system that contains bypass lines that could divert emissions away from the add-on control device to the atmosphere. [40 CFR 60.394a(h)]
 - i. The permittee must monitor or secure the valve or closure mechanism controlling the bypass line in a nondiverting position in such a way that the valve or closure mechanism cannot be opened without creating a record that the valve was opened. The method used to monitor or secure the valve or closure mechanism must meet one of the requirements specified in 40 CFR 60.394a(h)(1)(i) through (iv). [40 CFR 60.394a(h)(1)]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- A. ***Flow control position indicator.*** Install, calibrate, maintain, and operate according to the manufacturer's specifications a flow control position indicator that takes a reading at least once every 15 minutes and provides a record indicating whether the emissions are directed to the add-on control device or diverted from the add-on control device. The time of occurrence and flow control position must be recorded, as well as every time the flow direction is changed. The flow control position indicator must be installed at the entrance to any bypass line that could divert the emissions away from the add-on control device to the atmosphere. [40 CFR 60.394a(h)(1)(i)]
 - B. ***Car-seal or lock-and-key valve closures.*** Secure any bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. The permittee must visually inspect the seal or closure mechanism at least once every month to ensure that the valve is maintained in the closed position, and the emissions are not diverted away from the add-on control device to the atmosphere. [40 CFR 60.394a(h)(1)(ii)]
 - C. ***Valve closure monitoring.*** Ensure that any bypass line valve is in the closed (nondiverting) position through monitoring of valve position at least once every 15 minutes. The permittee must inspect the monitoring system at least once every month to verify that the monitor will indicate valve position. [40 CFR 60.394a(h)(1)(iii)]
 - D. ***Automatic shutdown system.*** Use an automatic shutdown system in which the coating operation is stopped when flow is diverted by the bypass line away from the add-on control device to the atmosphere when the coating operation is running. The permittee must inspect the automatic shutdown system at least once every month to verify that it will detect diversions of flow and shut down the coating operation. [40 CFR 60.394a(h)(1)(iv)]
 - ii. If any bypass line is opened, the permittee must include a description of why the bypass line was opened and the length of time it remained open in the semiannual compliance reports required in 40 CFR 60.395a. [40 CFR 60.394a(h)(2)]
- (4) ***Thermal oxidizers and catalytic oxidizers.*** If the permittee is using a thermal oxidizer or catalytic oxidizer as an add-on control device (including those used to treat desorbed concentrate streams from concentrators or carbon adsorbers), the permittee must comply with the requirements in 40 CFR 60.394a(i)(1) through (3): [40 CFR 60.394a(i)]
- i. For a thermal oxidizer, install a gas temperature monitor in the firebox of the thermal oxidizer or in the duct immediately downstream of the firebox before any substantial heat exchange occurs. [40 CFR 60.394a(i)(1)]
 - ii. For all thermal oxidizers and catalytic oxidizers, the permittee must meet the requirements in 40 CFR 60.394a(g)(1) through (6) and (i)(3)(i) through (vii) for each gas temperature monitoring device, unless approval has been received for alternative monitoring under 40 CFR 60.13(i) as specified in 40 CFR 60.392a(h). For the purposes of 40 CFR 60.394a(i)(3), a thermocouple is part of the temperature sensor. [40 CFR 60.394a(i)(3)]
- A. Locate the temperature sensor in a position that provides a representative temperature. [40 CFR 60.394a(i)(3)(i)]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- B. Use a temperature sensor with a measurement sensitivity of 4 degrees Fahrenheit or 0.75 percent of the temperature value, whichever is larger. [40 CFR 60.394a(i)(3)(ii)]
 - C. Shield the temperature sensor system from electromagnetic interference and chemical contaminants. [40 CFR 60.394a(i)(3)(iii)]
 - D. The gas temperature sensor must be capable of recording the temperature continuously. If a gas temperature chart recorder is used, it must have a measurement sensitivity in the minor division of at least 20 degrees Fahrenheit. [40 CFR 60.394a(i)(3)(iv)]
 - E. Perform an electronic calibration at least semiannually according to the procedures in the manufacturer's owner's manual. Following the electronic calibration, the permittee must conduct a temperature sensor validation check in which a second or redundant temperature sensor placed nearby the process temperature sensor must yield a reading within 30 degrees Fahrenheit of the process temperature sensor reading. [40 CFR 60.394a(i)(3)(v)]
 - F. Conduct calibration and validation checks any time the sensor exceeds the manufacturer's specified maximum operating temperature range or install a new temperature sensor. [40 CFR 60.394a(i)(3)(vi)]
 - G. At least monthly, inspect components for integrity and electrical connections for continuity, oxidation, and galvanic corrosion. [40 CFR 60.394a(i)(3)(vii)]
- (5) **Concentrators.** If the permittee is using a concentrator, such as a zeolite wheel or rotary carbon bed concentrator, the permittee must install a temperature monitor in the desorption gas stream. The temperature monitor must meet the requirements in 40 CFR 60.394a(g)(1) through (6) and (i)(3). [40 CFR 60.394a(l)]
- b. The permittee must use the procedures and test methods in 40 CFR 60.397a to determine capture efficiency as part of the performance test required by 40 CFR 60.393a. For purposes of 40 CFR 60 Subpart MMA, a spray booth air seal is not considered a natural draft opening in a PTE or a temporary total enclosure provided the permittee demonstrates that the direction of air movement across the interface between the spray booth air seal and the spray booth is into the spray booth. For purposes 40 CFR 60 Subpart MMA, a bake oven air seal is not considered a natural draft opening in a PTE or a temporary total enclosure provided the permittee demonstrates that the direction of air movement across the interface between the bake oven air seal and the bake oven is into the bake oven. The permittee may use lightweight strips of fabric or paper, or smoke tubes to make such demonstrations as part of showing that the capture system is a PTE or conducting a capture efficiency test using a temporary total enclosure. The permittee cannot count air flowing from a spray booth air seal into a spray booth as air flowing through a natural draft opening into a PTE or into a temporary total enclosure unless the permittee elects to treat that spray booth air seal as a natural draft opening. The permittee cannot count air flowing from a bake oven air seal into a bake oven as air flowing through a natural draft opening into a PTE or into a temporary total enclosure unless the permittee elects to treat that bake oven air seal as a natural draft opening. [40 CFR 60.397a]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- (1) *Assuming 100 percent capture efficiency.* The permittee may assume the capture system efficiency is 100 percent if both of the conditions in 40 CFR 60.397a(a)(1) and (2) are met: [40 CFR 60.397a(a)]
- i. The capture system meets the criteria in Method 204 of appendix M to 40 CFR part 51 for a PTE and directs all the exhaust gases from the enclosure to an add-on control device. [40 CFR 60.397a(a)(1)]
 - ii. All coatings and thinners used in the coating operation are applied within the capture system, and coating solvent flash-off and coating curing and drying occurs within the capture system. For example, this criterion is not met if parts enter the open shop environment when being moved between a spray booth and a curing oven. [40 CFR 60.397a(a)(2)]

40 CFR 63 Subpart IIII Control Equipment Operating Conditions:

Refer to **Group Requirements, 40 CFR 63 Subpart IIII Affected Sources**, subsection 7. **Specific Control Equipment Operating Conditions.**

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Paint #2 Reborn Part 2: Coating Operation Periodic Monitoring Requirements:

Emission Unit	Operation	Equipment Monitored	Characteristic Monitored	Parameter Monitored	Method or Device	Monitoring Frequency	Recording Frequency	Calibration Frequency	Standard Range
F02R/F04R	ED and Sealer Oven	Thermal Oxidizer (RTO-T2-ED)	Destruction Efficiency	Combustion Chamber Temperature	Thermocouple	Continuous***	15 Minutes & Each Occurrence of an Alarm	Annual	Above Minimum Combustion Chamber Limit
F02R/F04R	ED and Sealer Oven	Thermal Oxidizer (RTO-T2-ED)	Destruction Efficiency	VOC In / Out	Stack Test (EPA Method 25A)	Every 5 Years*	Every 5 Years*	Each Test	Destruction Efficiency $\geq$ 80%
F05R	Booth and Flash Off Zones	Thermal Oxidizer (RTO-T2-BO)	Destruction Efficiency	VOC In / Out	Thermocouple	Continuous***	15 Minutes & Each Occurrence of an Alarm	Annual	Above Minimum Combustion Chamber Limit
F05R	Booth and Flash Off Zones	Thermal Oxidizer (RTO-T2-BO)	Destruction Efficiency	Combustion Chamber Temperature	Stack Test (EPA Method 25A)	Every 5 Years*	Every 5 Years*	Each Test	Destruction Efficiency $\geq$ 80%
F05R	Booth and Flash Off Zones	VOC Concentrator System (TC-T2-BA, BB)	Collection Efficiency	Desorption Gas Inlet Temperature	Thermocouple	Continuous***	15 Minutes	Semi-Annual	Not More Than 8°C Below Desorption Gas Inlet Temperature Limit
F05R	Booth and Flash Off Zones	VOC Concentrator System (TC-T2-BA, BB)	Collection Efficiency	Desorption/Reactivation Fan Operation	Visual	Monthly	Monthly	N/A	Operating
F05R	Booth and Flash Off Zones	VOC Concentrator System (TC-T2-BA, BB)	Collection Efficiency	VOC In / Out	Stack Test (EPA Method 25A)	Every 5 Years*	Every 5 Years*	Each Test	Collection Efficiency $\geq$ 85%
F05R	Booth and Flash Off Zones	VOC Concentrator System (TC-T2-BA, BB)	Collection Efficiency	Wheel Rotation	Proximity Switch	Continuous	Alarm	Annual Confirmation	No Faults

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

F05R	Booth and Flash Off Zones	VOC Concentrator System (TC-T2-BA, BB)	Collection Efficiency	Bypass Damper	Alarm	Continuous	Alarm	Annual Confirmation	No Faults
F05R	Paint Oven	Thermal Oxidizer (RTO-T2-OV)	Destruction Efficiency	VOC In / Out	Thermocouple	Continuous***	15 Minutes & Each Occurrence of an Alarm	Annual	Above Minimum Combustion Chamber Limit
F05R	Paint Oven	Thermal Oxidizer (RTO-T2-OV)	Destruction Efficiency	Combustion Chamber Temperature	Stack Test (EPA Method 25A)	Every 5 Years*	Every 5 Years*	Each Test	DRE ≥ 80%
F05R**	Booth Recirculation	Dry Filters (DF-T2-COAT)	PM removal Efficiency	N/A (Inherent Controls)		N/A	N/A	N/A	Operating
F11R**	Blackout Booth	Filter (DF-T2-BLK)	PM removal Efficiency	N/A (Inherent Controls)		N/A	N/A	N/A	Operating
F13R	Line Purging	Waste and Virgin Purge Tanks	Solvent Reclaimed	Purge Recovered	Totalizer	Monthly	Continuous	Annual	None

* No more than 5 years from the last performance test.

** PM control devices DF-T2-COAT and DF-T2-BLK are required to maintain film build quality and are consider inherent per EPA criteria and periodic monitoring are not required.

*** “Continuous” means at least one (1) reading every 15 minutes

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Paint #2 Reborn Part 3: Natural Gas Combustion Ovens, Heaters, and RTO units**

Emission Unit Identifier	Emission Unit Description	Listed Processes and Equipment	Construction Date Proposed	Applicable Regulations
D13A	Indirect and Direct Building Heat Combustion Units for Plant #2 Reborn (F02R-F14R)	80, 2-MMBtu/hr HVAC Units (indirect heat), Natural Gas Fired	9/1/2025	401 KAR 51:017, 401 KAR 59:015, 40 CFR 63 Subpart DDDDD
		2, 0.7 MMBtu/hr Water heaters (indirect heat), Natural Gas Fired	9/1/2025	401 KAR 51:017 401 KAR 63:020
D13B	Indirect and Direct Shop Process Combustion Units for Plant #2 Reborn (F02R-F14R)	ED Oven Zone heaters 2 units, 5.9 MMBtu/hr (11.8 MMBtu/hr total), (direct heat), Natural Gas Fired (F02R)	9/1/2025	401 KAR 51:017 401 KAR 63:020
		Sealer Oven Zone heaters, 3 burners totaling 18 MMBtu/hr (indirect heat), Natural Gas Fired (F04R)	9/1/2025	401 KAR 51:017 401 KAR 59:015 40 CFR 63 Subpart DDDDD
		Coating Flash Off Zones, 4 burners 5.9 MMBtu/hr each (23.6 MMBtu/hr total), (indirect heat) Natural Gas Fired (F05R)	9/1/2025	401 KAR 51:017 401 KAR 59:015 40 CFR 63 Subpart DDDDD
		Coating Oven Zones, 8 burners totaling 11.8 MMBtu/hr (indirect heat) Natural Gas Fired (F05R)	9/1/2025	401 KAR 51:017 401 KAR 59:015 40 CFR 63 Subpart DDDDD
		RTO-T2-ED, 27 MMBtu/hr, (indirect heat) Natural Gas Fired (F02R/F04R)	9/1/2025	401 KAR 51:017 401 KAR 59:015 40 CFR 60 Subpart Dc 40 CFR 63 Subpart DDDDD

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

		RTO-T2-B, 18 MMBtu/hr, (indirect heat) Natural Gas Fired (F05R)	9/1/2025	401 KAR 51:017 401 KAR 59:015 40 CFR 60 Subpart Dc 40 CFR 63 Subpart DDDDD
		RTO-T2-OV, 18 MMBtu/hr, (indirect heat) Natural Gas Fired (F05R)	9/1/2025	401 KAR 59:015 40 CFR 60 Subpart Dc 40 CFR 63 Subpart DDDDD

APPLICABLE REGULATIONS:

401 KAR 51:017, *Prevention of significant deterioration of air quality* (for PM, SO₂, NO_x, CO, VOC)

401 KAR 59:015, *New indirect heat exchangers*

401 KAR, 60:005 Section 2(2)(d), 40 C.F.R. 60.40c through 60.48c (Subpart Dc), *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*

401 KAR 63:002, Section 2(4)(iiii), 40 C.F.R 63.7480 through 63.7575, Tables 1 through 13, (Subpart DDDDD), *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters*

STATE-ORIGIN REQUIREMENTS:

401 KAR 63:020, *Potentially hazardous matter or toxic substances.*

1. Operating Limitations:

401 KAR 59:015 Operating Limitations:

During a startup period or shutdown period, the permittee shall comply with the work practice standards established in 401 KAR 59:015, Section 7. [401 KAR 59:015, Section 7]

- a. The permittee shall comply with 401 KAR 50:055, Section 2(5); [401 KAR 59:015, Section 7(1)(a)]
- b. The frequency and duration of startup periods or shutdown periods shall be minimized by the affected facility; [401 KAR 59:015, Section 7(1)(b)]
- c. All reasonable steps shall be taken by the permittee to minimize the impact of emissions on ambient air quality from the affected facility during startup periods and shutdown periods; [401 KAR 59:015, Section 7(1)(c)]
- d. The actions, including duration of the startup period, of the permittee during startup and shutdown periods, shall be documented in signed, contemporaneous logs or other relevant evidence; [401 KAR 59:015, Section 7(1)(d)]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- e. Startups and shutdowns shall be conducted according to either: [401 KAR 59:015, Section 7(1)(e)]
 - (1) The manufacturer's recommended procedures; or [401 KAR 59:015, Section 7(1)(e)1.]
 - (2) Recommended procedures for a unit of similar design, for which manufacturer's recommended procedures are available, as approved by the cabinet based on documentation provided by the permittee. [401 KAR 59:015, Section 7(1)(e)2.]

Compliance Demonstration Method:

Compliance shall be demonstrated according to **5. Specific Recordkeeping Requirements** *General Recordkeeping Requirements* c.

40 CFR 63 Subpart DDDDD Operating Limitations:

- a. The permittee shall comply with 40 CFR 63, Subpart DDDDD upon startup of the boiler. [40 CFR 63.7495(a)]
- b. The permittee shall meet the requirements in 40 CFR 63.7500(a)(1) through (3), except as provided in 40 CFR 63.7500(b) through (e). The permittee shall meet these requirements at all times the affected unit is operating, except as provided in 40 CFR 63.7500(f). [40 CFR 63.7500(a)]
 - (1) The permittee shall meet each emission limit and work practice standard in 40 CFR 63, Subpart DDDDD Tables 1 through 3, and 11 through 13 that applies to the boiler or process heater, for each boiler or process heater at the source, except as provided under 40 CFR 63.7522. [40 CFR 63.7500(a)(1)]
 - (2) At all times, the permittee shall operate and maintain any affected source (as defined in 40 CFR 63.7490), including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. [40 CFR 63.7500(a)(3)]
- c. Boilers and process heaters in the units designed to burn gas 1 fuels subcategory with a heat input capacity of less than or equal to 5 million Btu per hour must complete a tune-up every 5 years as specified in 40 CFR 63.7540. Boilers and process heaters in the units designed to burn gas 1 fuels subcategory with a heat input capacity greater than 5 million Btu per hour and less than 10 million Btu per hour must complete a tune-up every 2 years as specified in 40 CFR 63.7540. Boilers and process heaters in the units designed to burn gas 1 fuels subcategory are not subject to the emission limits in 40 CFR 63 Subpart DDDDD Tables 1 and 2 or Tables 11 through 15, or the operating limits in 40 CFR 63 Subpart DDDDD Table 4. [40 CFR 63.7500(e)]
 - (1) A new or existing boiler or process heater without a continuous oxygen trim system and with heat input capacity of 10 million Btu per hour or greater must conduct a tune-up of the boiler or process heater annually as specified in 40 CFR 63.7540. Units in either the Gas 1 or Metal Process Furnace subcategories will conduct this tune-up as a work practice for all regulated emissions under 40 CFR 63 Subpart DDDDD. Units in

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

all other subcategories will conduct this tune-up as a work practice for dioxins/furans.
[40 CFR 63 Subpart DDDDD Table 3(3)]

- d. These standards apply at all times the affected unit is operating, except during periods of startup and shutdown during which time the permittee must comply only with 40 CFR 63 Subpart DDDDD items 5 and 6 of Table 3. [40 CFR 63.7500(e)]
- e. The permittee must be in compliance with the emission limits, work practice standards, and operating limits in 40 CFR 63 Subpart DDDDD. These emission and operating limits apply to the permittee at all times the affected unit is operating except for the periods noted in 40 CFR 63.7500(f). [40 CFR 63.7505(a)]
- f. The permittee shall demonstrate initial compliance with the applicable work practice standards in 40 CFR 63, Subpart DDDDD, Table 3 within the applicable annual, biennial, or 5-year schedule as specified in 40 CFR 63.7515(d) following the initial compliance date specified in 40 CFR 63.7495(a). Thereafter, the permittee is required to complete the annual, biennial, or 5-year tune-up as specified in 40 CFR 63.7515(d). [40 CFR 63.7510(g)]
- g. The permittee must conduct an annual, biennial, or 5-year performance tune-up according to 40 CFR 63.7540(a)(10), (11), or (12), respectively. Each annual tune-up specified in 40 CFR 63.7540(a)(10) must be no more than 13 months after the previous tune-up. Each biennial tune-up specified in 40 CFR 63.7540(a)(11) must be conducted no more than 25 months after the previous tune-up. Each 5-year tune-up specified in 40 CFR 63.7540(a)(12) must be conducted no more than 61 months after the previous tune-up. For a new or reconstructed affected source (as defined in 40 CFR 63.7490), the first annual, biennial, or 5-year tune-up must be no later than 13 months, 25 months, or 61 months, respectively, after April 1, 2013 or the initial startup of the new or reconstructed affected source, whichever is later. [40 CFR 63.7515(d)]
- h. The permittee shall conduct an annual or 5-year tune-up of the boiler to demonstrate continuous compliance as specified in 40 CFR 63.7540(a)(10)(i) through (vi). The permittee shall conduct the tune-up while burning the type of fuel (or fuels in the case of units that routinely burn a mixture) that provided the majority of the heat input to the boiler or process heater over the 12 months prior to the tune-up. [40 CFR 63.7540(a)(10)]
 - (1) As applicable, inspect the burner, and clean or replace any components of the burner as necessary (the permittee may perform the burner inspection any time prior to the tune-up or delay the burner inspection until next scheduled unit shutdown). At units where entry into a piece of process equipment or into a storage vessel is required to complete the tune-up inspections, inspections are required only during planned entries into the storage vessel or process equipment [40 CFR 63.7540(a)(10)(i)];
 - (2) Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available [40 CFR 63.7540(a)(10)(ii)];
 - (3) Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (the permittee may delay the inspection until the next scheduled unit shutdown) [40 CFR 63.7540(a)(10)(iii)];

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- (4) Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any NOx requirement to which the units are subject [40 CFR 63.7540(a)(10)(iv)];
- (5) Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer; and [40 CFR 63.7540(a)(10)(v)]
- (6) Maintain on-site and submit, if requested by the Administrator, a report containing the information in 40 CFR 63.7540(a)(10)(vi)(A) through (C) [40 CFR 63.7540(a)(10)(vi)],
 - i. The concentrations of CO in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler or process heater [40 CFR 63.7540(a)(10)(vi)(A)];
 - ii. A description of any corrective actions taken as part of the tune-up; and [40 CFR 63.7540(a)(10)(vi)(B)]
 - iii. The type and amount of fuel used over the 12 months prior to the tune-up, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel used by each unit [40 CFR 63.7540(a)(10)(vi)(C)].
- i. If the boiler or process heater has a heat input capacity of less than 10 million Btu per hour (except as specified in 40 CFR 63.7540(a)(12)), the permittee must conduct a biennial tune-up of the boiler or process heater as specified in paragraphs 40 CFR 63.7540(a)(10)(i) through (vi) to demonstrate continuous compliance. [40 CFR 63.7540(a)(11)]
- j. If the boiler or process heater has a continuous oxygen trim system that maintains an optimum air to fuel ratio, or a heat input capacity of less than or equal to 5 million Btu per hour and the unit is in the units designed to burn gas 1 the permittee must conduct a tune-up of the boiler or process heater every 5 years as specified in 40 CFR 63.7540(a)(10)(i) through (vi) to demonstrate continuous compliance. The permittee may delay the burner inspection specified in 40 CFR 63.7540(a)(10)(i) until the next scheduled or unscheduled unit shutdown, but the permittee must inspect each burner at least once every 72 months. If an oxygen trim system is utilized on a unit without emission standards to reduce the tune-up frequency to once every 5 years, set the oxygen level no lower than the oxygen concentration measured during the most recent tune-up. [40 CFR 63.7540(a)(12)]
- k. If the unit is not operating on the required date for a tune-up, the tune-up shall be conducted within 30 calendar days of startup. [40 CFR 63.7540(a)(13)]

2. **Emission Limitations:**

401 KAR 51:017 Emission Limitations:

The permittee shall not exceed the limits in tons of pollutants per year listed in the table below for both D03A and D13A combined. [401 KAR 51:017]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

<i>401 KAR 51:017, D03A and D13A, Indirect / Direct Bldg Heat Combustion Units (Plant 2) and Plant 2 Reborn</i>	
Pollutants	Allowable Emission Rate (Tons pollutant/year)
PM	10.6
SO ₂	0.8
NO _x	139.3
CO	117.0
VOC	7.7

Compliance Demonstration Method:

Compliance with annual limits is based on a rolling 12-month total. Emissions shall be calculated on a monthly basis and shall be added to previous eleven months emissions to get the total actual emissions for each consecutive 12-month period. Refer to subsections **5. Specific Recordkeeping Requirements**, *401 KAR 51:017 Specific Recordkeeping Requirements* and **6. Specific Reporting Requirements**, *401 KAR 51:017 Specific Reporting Requirements*. Upon the removal of D03A from operation, compliance with 401 KAR 51:017 will be assumed while burning natural gas.

401 KAR 59:015 Emission Limitations:

- a. The permittee shall not cause emissions of particulate matter in excess of 0.10 lb/MMBtu actual heat input. [401 KAR 59:015, Section 4(1)(b)]
- b. The permittee shall not cause emissions of particulate matter in excess of 20 percent opacity, except: [401 KAR 59:015, Section 4(2)]
 - (1) A maximum of 27 percent opacity shall be allowed for a maximum of one (1) six (6) minute period in any 60 consecutive minutes; [401 KAR 59:015, Section 4(2)(a)]
 - (2) For emissions from an affected facility caused by building a new fire, emissions during the period required to bring the boiler up to operating conditions shall be allowed, if the method used is recommended by the manufacturer and the time does not exceed the manufacturer's recommendations. [401 KAR 59:015, Section 4(2)(c)]
- c. The permittee shall not cause emissions of gases that contain sulfur dioxide in excess of 0.8 lb/MMBtu actual heat input. [401 KAR 59:015, Section 5(1)(b)1.]

Compliance Demonstration Method:

Compliance with the 401 KAR 59:015 emission standards is assumed. [401 KAR 50:045, Section 4(3)(c)1.]

401 KAR 63:020 Emission Limitations:

Persons responsible for a source from which hazardous matter or toxic substances may be emitted shall provide the utmost care and consideration, in the handling of these materials, to the potentially harmful effects of the emissions resulting from such activities. No owner or operator shall allow any affected facility to emit potentially hazardous matter or toxic substances in such quantities or duration as to be harmful to the health and welfare of humans, animals and plants. Evaluation of such facilities as to adequacy of controls and/or procedures

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

and emission potential will be made on an individual basis by the cabinet. [401 KAR 63:020, Section 3]

Compliance Demonstration Method:

Based upon the emission rates of toxics and hazardous air pollutants determined by the Cabinet using information provided in the application and supplemental information submitted by the source, the Cabinet determines the affected facility to be in compliance with 401 KAR 63:020.

3. Testing Requirements:

401 KAR 50:045 Testing Requirements:

Testing shall be conducted at such times as may be requested by the Cabinet. [401 KAR 50:045, Section 1]

4. Specific Monitoring Requirements:

General Monitoring Requirements:

- a. Refer to Section F – Monitoring, Recordkeeping, and Reporting Requirements.
- b. The permittee shall monitor the amount of natural gas combusted, in MMscf, on a monthly basis. [401 KAR 52:020, Section 10]

401 KAR 51:017 Specific Monitoring Requirements:

The permittee shall monitor the throughput of natural gas fuel used at emission units D03A and D13A.

40 CFR 60 Subpart Dc Specific Monitoring Requirements:

The permittee shall monitor fuel usage (MMscf) on a monthly basis [401 KAR 52:020, Section 10 and 40 CFR 60.48c(g)(2)].

5. Specific Recordkeeping Requirements:

General Recordkeeping Requirements:

- a. Refer to Section F – Monitoring, Recordkeeping, and Reporting Requirements.
- b. The permittee shall maintain records of the amount of natural gas combusted, in MMscf, on a monthly basis. [401 KAR 52:020, Section 10]
- c. The permittee shall keep records of the manufacturer's recommended procedures for startup and shutdown, any instance in which the recommended procedures were not followed, and any corrective action taken. [401 KAR 52:020, Section 10]

401 KAR 51:017 Specific Recordkeeping Requirements:

The permittee shall maintain monthly records of natural gas fuel used at emission units D03A and D13A and records of the monthly sum total and 12-month rolling PM, SO₂, NO_x, CO, and VOC emissions from these facilities.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

40 CFR 60 Subpart Dc Specific Recordkeeping Requirements:

- a. The permittee shall maintain records of fuel usage (MMscf) on a monthly basis [401 KAR 52:020, Section 10 and 40 CFR 60.48c(g)(2)].
- b. All records required under 40 CFR 60.48c shall be maintained by the permittee for a period of two years following the date of such record. [40 CFR 60.48c(i)]

40 CFR 63 Subpart DDDDD Specific Recordkeeping Requirements:

- a. The permittee shall keep records according to 40 CFR 63.7555(a)(1) and (2). [40 CFR 63.7555(a)]
 - (1) A copy of each notification and report that was submitted to comply with 40 CFR 63, Subpart DDDDD, including all documentation supporting any Initial Notification of Compliance Status or semiannual compliance report submitted, according to the requirements in 40 CFR 63.10(b)(2)(xiv). [40 CFR 63.7555(a)(1)]
 - (2) Records of performance tests, fuel analyses, or other compliance demonstrations and performance evaluations as required in 40 CFR 63.10(b)(2)(viii). [40 CFR 63.7555(a)(2)]
- b. Records shall be in a form suitable and readily available for expeditious review, according to 40 CFR 63.10(b)(1). [40 CFR 63.7560(a)]
- c. As specified in 40 CFR 63.10(b)(1), the permittee shall keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. [40 CFR 63.7560(b)]
- d. The permittee shall keep each record on site, or they shall be accessible from on site (for example, through a computer network), for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 CFR 63.10(b)(1). The permittee can keep the records off site for the remaining 3 years. [40 CFR 63.7560(c)]

6. Specific Reporting Requirements:

General Reporting Requirements:

Refer to Section F – Monitoring, Recordkeeping, and Reporting Requirements.

401 KAR 51:017 Specific Reporting Requirements:

At the end of each month, the permittee shall monitor the monthly throughput of fuel to D03A and D13A and calculate a monthly sum total of PM, SO₂, NO_x, CO, and VOC emissions from these facilities and the 12-month rolling total emissions. The 12-month rolling total emissions shall be submitted in the semiannual reporting as required in Section F(5) & (6).

40 CFR 60 Subpart Dc Specific Reporting Requirements:

The permittee shall submit notification of the date of construction or reconstruction and actual startup, as provided in 40 CFR 60.7. This notification shall include: [40 CFR 60.48c(a)]

- a. The design heat input capacity of the affected facility and identification of fuels to be combusted in the affected facility. [40 CFR 60.48c(a)(1)]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- b. If applicable, a copy of any federally enforceable requirement that limits the annual capacity factor for any fuel or mixture of fuels under 40 CFR 60.42c, or 60.43c. [40 CFR 60.48c(a)(2)]
- c. The annual capacity factor at which the permittee anticipates operating the affected facility based on all fuels fired and based on each individual fuel fired. [40 CFR 60.48c(a)(3)]

40 CFR 63 Subpart DDDDD Specific Reporting Requirements:

- a. The permittee shall meet the notification requirements in 40 CFR 63.7545 according to the schedule in 40 CFR 63.7545 and in 40 CFR 63, Subpart A. Some of the notifications shall be submitted before the permittee is required to comply with the emission limits and work practice standards in 40 CFR 63, Subpart DDDDD. [40 CFR 63.7495(d)]
- b. The permittee shall submit to the Administrator all of the notifications in 40 CFR 63.7(b) and (c), 63.8(e), (f)(4) and (6), and 63.9(b) through (h) that apply by the dates specified. [40 CFR 63.7545(a)]
- c. As specified in 40 CFR 63.9(b)(4) and (5), for startup of a new or reconstructed affected source on or after January 31, 2013, the permittee shall submit an Initial Notification not later than 15 days after the actual date of startup of the affected source. [40 CFR 63.7545(c)]
- d. The permittee shall submit a Notification of Compliance Status according to 40 CFR 63.9(h)(2)(ii). For the initial compliance demonstration for each boiler or process heater, the permittee shall submit the Notification of Compliance Status, including all performance test results and fuel analyses, before the close of business on the 60th day following the completion of all performance test and/or other initial compliance demonstrations for all boiler or process heaters at the facility according to 40 CFR 63.10(d)(2). The Notification of Compliance Status report shall contain all the information specified in 40 CFR 63.7545(e)(1) through (8), as applicable. If an initial compliance demonstration as specified in 40 CFR 63.7530(a) is not required, the Notification of Compliance Status shall only contain the information in 40 CFR 63.7545(e)(1) and (8) and shall be submitted within 60 days of the compliance date specified at 40 CFR 63.7495(b). [40 CFR 63.7545(e)]
 - (1) A description of the affected unit(s) including identification of which subcategories the unit is in, the design heat input capacity of the unit, a description of the add-on controls used on the unit to comply with 40 CFR 63, Subpart DDDDD, description of the fuel(s) burned, including whether the fuel(s) were a secondary material determined by the permittee or EPA through a petition process to be non-waste under 40 CFR 241.3, whether the fuel(s) were a secondary material processed from discarded non-hazardous secondary materials within the meaning of 40 CFR 241.3, and justification for the selection of fuel(s) burned during the compliance demonstration. [40 CFR 63.7545(e)(1)]
 - (2) In addition to the information required in 40 CFR 63.9(h)(2), the notification of compliance status shall include the following certification(s) of compliance, as applicable, and signed by a responsible official: [40 CFR 63.7545(e)(8)]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- i. “This facility completed the required initial tune-up for all the boilers and process heaters covered by 40 CFR Part 63 Subpart DDDDD at this site according to the procedures in 40 CFR 63.7540(a)(10)(i) through (vi).” [40 CFR 63.7545(e)(8)(i)]
- e. The permittee shall submit each report in 40 CFR 63, Subpart DDDDD, Table 9 that applies. [40 CFR 63.7550(a)]
- f. Unless the EPA Administrator has approved a different schedule for submission of reports under 40 CFR 63.10(a), the permittee shall submit each report, according to 40 CFR 63.7550(h), by the date in 40 CFR 63, Subpart DDDDD, Table 9 and according to the requirements in 40 CFR 63.7550(b)(1) through (4). For units that are subject only to a requirement to conduct subsequent annual, biennial, or 5-year tune-up according to 40 CFR 63.7540(a)(10), (11), or (12), respectively, and not subject to emission limits or 40 CFR 63, Subpart DDDDD, Table 4 operating limits, the permittee may submit only annual, biennial, or 5-year compliance report, as applicable, as specified in 40 CFR 63.7550(b)(1) through (4), instead of a semi-annual compliance report. For each affected source that is subject to permitting regulations pursuant to 40 CFR Part 70 or Part 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6(a)(3)(iii)(A) or 71.6(a)(3)(iii)(A), the permittee may submit the first and subsequent compliance reports according to the dates the permitting authority has established in the permit instead of according to the dates in 40 CFR 63.7550(b)(1) through (4). [40 CFR 63.7550(b) and (b)(5)]
- g. A compliance report shall contain the following information depending on how the facility chooses to comply with the limits set in this rule. If the facility is subject to the requirements of a tune up, the permittee shall submit a compliance report with the information in 40 CFR 63.7550(c)(5)(i) through (iii), (xiv), and (xvii). [40 CFR 63.7550(c) and (c)(1)]
 - (1) Company and Facility name and address. [40 CFR 63.7550(c)(5)(i)]
 - (2) Process unit information, emissions limitations, and operating parameter limitations. [40 CFR 63.7550(c)(5)(ii)]
 - (3) Date of report and beginning and ending dates of the reporting period. [40 CFR 63.7550(c)(5)(iii)]
 - (4) Include the date of the most recent tune-up for each unit subject to only the requirement to conduct an annual, biennial, or 5-year tune-up according to 40 CFR 63.7540(a)(10), (11), or (12) respectively. Include the date of the most recent burner inspection if it was not done annually, biennially, or on a 5-year period and was delayed until the next scheduled or unscheduled unit shutdown. [40 CFR 63.7550(c)(5)(xiv)]
 - (5) Statement by a responsible official with that official’s name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report. [40 CFR 63.7550(c)(5)(xvii)]
- h. The permittee shall submit the reports according to the procedures specified in 40 CFR 63.7550(h)(1) through (3). The permittee shall submit all reports required by 40 CFR 63, Subpart DDDDD, Table 9 electronically to the EPA via the CEDRI. (CEDRI can be accessed through the EPA’s CDX.) The permittee shall use the appropriate electronic report in CEDRI for 40 CFR 63, Subpart DDDDD. Instead of using the electronic report

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

in CEDRI for 40 CFR 63, Subpart DDDDD, the permittee may submit an alternate electronic file consistent with the XML schema listed on the CEDRI Web site (<http://www.epa.gov/ttn/chief/cedri/index.html>) , once the XML schema is available. If the reporting form specific to 40 CFR 63, Subpart DDDDD is not available in CEDRI at the time that the report is due, the permittee shall submit the report to the Administrator at the appropriate address listed in 40 CFR 63.13. The permittee shall begin submitting reports via CEDRI no later than 90 days after the form becomes available in CEDRI. [40 CFR 63.7550(h) and (h)(3)]

**SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE
REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Group Requirements

40 CFR 60 Subpart MM Affected Sources

LIST of POINTS

C09- Electro deposition – Prime Coat
 E02R, F02 & F19 - Electro deposition – Prime Coat
 E04R, F04 & F20 – Sealer – Guide Coat
 E05R, F05 & F21 - Soft Chip, Interior, Exterior – Guide Coat
 E12R, F12 & F24 – Repair – Guide Coat
 E05R & F05 – Door sash and Rocker Panel Black - Topcoat
 E07R, F07 & F22 - Topcoat Solid, Base, Clear - Topcoat
 E09R & F09 – Blackouts - Topcoat
 E12R, F12 & F24 – Repair - Topcoat

APPLICABLE REGULATIONS:

401 KAR 60:005 Section 2(2)(tt) 40 C.F.R. 60.390 through 60.398 (Subpart MM), *Standards of Performance for Automobile and Light Duty Truck Surface Coating Operations*

1. Operating Limitations:

The usage rates of materials used in all affected facilities shall be limited so as not to exceed the emission limitations in Section B.2.

2. Emission Limitations:

- a. On and after the date on which the initial performance test required by 40 CFR 60.8 is completed, no owner or operator subject to the provisions of 40 CFR 60 subpart MM shall discharge or cause the discharge into the atmosphere from any affected facility VOC emissions in excess of:

(1) Prime Coat Operation.

- i. For each EDP prime coat operation:

- A. 0.17 kilogram of VOC per liter of applied coating solids when the Solids Turnover Ratio (R_T) is 0.16 or greater [40 CFR 60.392(a)(1)(i)].
- B. $0.17 \times 350 (0.160 - R_T)$ kg of VOC per liter of applied coating solids when R_T is greater than or equal to 0.040 and less than 0.160 [40 CFR 60.392(a)(1)(ii)].
- C. When R_T is less than 0.040, there is no emission limit [40 CFR 60.392(a)(1)(iii)].

$$R_T = \frac{L_s}{L_g} \text{ truncated after 3 decimal places}$$

Where;

L_s = volume of solids in coatings consumed (liters),
 L_E = the total volume of the EDP system (liters),

- ii. For each nonelectrodeposition prime coat operation: 0.17 kilogram of VOC per liter of applied coating solids [40 CFR 60.392(a)(2)].

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- (2) 1.40 kilograms of VOC per liter of applied coating solids from each guide coat operation [40 CFR 60.392(b)].
- (3) 1.47 kilograms of VOC per liter of applied coating solids from each topcoat operation [40 CFR 60.392(c)].

Compliance Demonstration Method:

- (1) The owner or operator shall use the following procedures for each affected facility which uses a capture system and a control device that destroys VOC (e.g., incinerator) to comply with the applicable emission limit specified under 40 CFR 60.392 [40 CFR 60.393(c)(2)].
 - i. Calculate the volume weighted average mass of VOC per volume of applied coating solids (G) during each calendar month for each affected facility as described under 40 CFR 60.393(c)(1)(i) [40 CFR 60.393(c)(2)(i)].

$$M_o + M_d = \sum_{i=1}^n L_{ci} D_{ci} W_{oi} + \sum_{j=1}^m L_{dj} D_{dj}$$

$$L_s = \sum_{i=1}^n L_{ci} V_{si}$$

$$T = \frac{\sum_{i=1}^n T_l V_{si} L_{cil}}{\sum_{l=1}^p L_s}$$

$$G = \frac{M_o M_d}{L_s T}$$

Where;

- D_{ci} = density of each coating (i) as received (kilograms per liter),
- D_{dj} = density of each type VOC dilution solvent (j) added to the coatings, as received (kilograms per liter),
- D_r = density of VOC recovered from an affected facility (kilograms per liter),
- G = volume weighted average mass of VOC per volume of applied solids (kilograms per liter),
- L_{ci} = volume of each coating (i) consumed, as received (liters),
- L_{cil} = Volume of each coating (i) consumed by each application method (l), as received (liters),
- L_{dj} = volume of each type VOC dilution solvent (j) added to the coatings, as received (liters),
- L_s = volume of solids in coatings consumed (liters),
- M_d = total mass of VOC in dilution solvent (kilograms),
- M_o = total mass of VOC in coatings as received (kilograms),
- T = overall transfer efficiency,
- T_l = transfer efficiency for application method (l),
- V_{si} = proportion of solids by volume in each coating (i) as received (liter solids/liter coating)
- W_{oi} = proportion of VOC by weight in each coating (i), as received (kilogram VOC/kilogram coating)

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- ii. (Calculate the volume weighted average mass of VOC per volume of applied solids emitted after the control device, by the following equation [40 CFR 60.393(c)(2)(ii)]:

$$N = G[1 - FE]$$

Where;

E = VOC destruction or removal efficiency of the control device,

F = fraction of total VOC which is emitted by an affected facility that enters the control device,

G = volume weighted average mass of VOC per volume of applied solids (kilograms per liter),

N = volume weighted average mass of VOC per volume of applied coating solids after the control device (kilograms VOC / liter of applied solids)

- A. Determine the fraction of total VOC which is emitted by an affected facility that enters the control device by using the following equation where “n” is the total number of stacks entering the control device and “p” is the total number of stacks not connected to the control device. If the owner can justify to the Administrator's satisfaction that another method will give comparable results, the Administrator will approve its use on a case-by-case basis [40 CFR 60.393(c)(2)(ii)(A)].

$$\sum_{i=1}^n$$

- 1) In subsequent months, the owner or operator shall use the most recently determined capture fraction for the performance test [40 CFR 60.393(a)(c)(2)(ii)(a)(I)].
- B. Determines the destruction efficiency of the control device using values of the volumetric flow rate of the gas streams and the VOC content (as carbon) of each of the gas streams in and out of the device by the following equation where “n” is the total number of stacks entering the control device and “m” is the total number of stacks leaving the control device[40 CFR 60.393(a)(c)(2)(ii)(B)]:

$$E = \frac{\sum_{i=1}^n Q_{bi}C_{bi} - \sum_{j=1}^m Q_{aj}C_{aj}}{\sum_{i=1}^n Q_{bi}C_{bi}}$$

Where;

C_{aj} = concentration of VOC (as carbon) in the effluent gas flowing through stack (j) leaving the control device (parts per million by volume),

C_{bi} = concentration of VOC (as carbon) in the effluent gas flowing through stack (i) entering the control device (parts per million by volume),

E = VOC destruction or removal efficiency of the control device,

Q_{aj} = volumetric flow rate of the effluent gas flowing through stack (j) leaving the control device (dry standard cubic meters per hour),

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Q_{bi} = volumetric flow rate of the effluent gas flowing through stack (i) entering the control device (dry standard cubic meters per hour),

- 1) In subsequent months, the owner or operator shall use the most recently determined VOC destruction efficiency for the performance test [40 CFR 60.393(c)(2)(ii)(B)(I)].
- C. If an emission control device controls the emissions from more than one affected facility, the owner or operator shall measure the VOC concentration (C_{bi}) in the effluent gas entering the control device (in parts per million by volume) and the volumetric flow rate (Q_{bi}) of the effluent gas (in dry standard cubic meters per hour) entering the device through each stack. The destruction or removal efficiency determined using these data shall be applied to each affected facility served by the control device [40 CFR 60.393(c)(2)(ii)(C)].
 - i. If the volume weighted average mass of VOC per volume of applied solids emitted after the control device (N) calculated on a calendar month basis is less than or equal to the applicable emission limit specified in 40 CFR 60.392, the affected facility is in compliance. Each monthly calculation is a performance test for the purposes of 40 CFR 60 subpart MM [40 CFR 60.393(c)(2)(iii)].

3. Testing Requirements:

- a. Testing shall be Testing shall be conducted at such times as may be requested by the Cabinet [401 KAR 50:045, Section 1].
- b. The owner or operator of an affected facility shall conduct an initial performance test in accordance with 40 CFR 60.8(a) and thereafter for each calendar month for each affected facility according to the procedures in 40 CFR 60.393 [40 CFR 60.393(b)].

4. Specific Monitoring Requirements:

- a. The owner or operator of an affected facility which uses an incinerator to comply with the emission limits specified under 40 CFR 60.392 shall install, calibrate, maintain, and operate temperature measurement devices as prescribed below [40 CFR 60.394]:
 - (1) Where thermal incineration is used, a temperature measurement device shall be installed in the firebox.
 - (2) Each temperature measurement device shall be installed, calibrated, and maintained according to accepted practice and the manufacturer's specifications. The device shall have an accuracy of the greater of ± 5 percent of the temperature being measured expressed in degrees Celsius or ± 2.5 °C.
 - (3) Each temperature measurement device shall be equipped with a recording device so that a permanent record is produced.

5. Specific Recordkeeping Requirements:

See subsection 6. Specific Reporting Requirements.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

6. Specific Reporting Requirements:

- a. Each owner or operator of an affected facility shall include the data outlined in paragraphs (a)(1) and (2) in the initial compliance report required by 40 CFR 60.8 [40 CFR 60.395(a)].
 - (1) The owner or operator shall report the volume weighted average mass of VOC per volume of applied coating solids for each affected facility [40 CFR 60.395(a)(1)].
 - (2) Where compliance is achieved through the use of incineration, the owner or operator shall include the following additional data in the control device initial performance test required by 40 CFR 60.8(a) or subsequent performance tests at which destruction efficiency is determined: the combustion temperature (or the gas temperature upstream and downstream of the catalyst bed), the total mass of VOC per volume of applied coating solids before and after the incinerator, capture efficiency, the destruction efficiency of the incinerator used to attain compliance with the applicable emission limit specified in 40 CFR 60.392 and a description of the method used to establish the fraction of VOC captured and sent to the control device [[40 CFR 60.395(a)(2)].
- b. Following the initial performance test, the owner or operator of an affected facility shall identify, record, and submit a written report to the Administrator every calendar quarter of each instance in which the volume-weighted average of the total mass of VOC's emitted to the atmosphere per volume of applied coating solids (N) is greater than the limit specified under 40 CFR 60.392. If no such instances have occurred during a particular quarter, a report stating this shall be submitted to the Administrator semiannually. Where compliance is achieved through the use of a capture system and control device, the volume-weighted average after the control device should be reported [40 CFR 60.395(b)].
- c. Where compliance with 40 CFR 60.392 is achieved through the use of incineration, the owner or operator shall continuously record the incinerator combustion temperature during coating operations for thermal incineration or the gas temperature upstream and downstream of the incinerator catalyst bed during coating operations for catalytic incineration. The owner or operator shall submit a written report at the frequency specified in 40 CFR 60.7(c) and as defined below [40 CFR 60.395(c)].
 - (1) For thermal incinerators, every three-hour period shall be reported during which the average temperature measured is more than 28 °C less than the average temperature during the most recent control device performance test at which the destruction efficiency was determined as specified under 40 CFR 60.393 [40 CFR 60.395(c)(1)].

7. Specific Control Equipment Operating Conditions:

N/A

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Group Requirements

40 CFR 63 Subpart IIII Affected Sources

LIST of POINTS

C06 Sealer and Adhesive Application

C09 Small Parts Electro deposition System, Including Rinse Tanks, Dip Tank, and Oven (Line 1)

C10 Fuel Tank Antichip Coating (Line 1 & 2),

C12 Non-Process Cleaning

C16 Bodyweld Sealers and Adhesives

A02, B02, M01 Miscellaneous Wax Coating Operations

A03, B03, M02 Glass Bonding Primer, Glass Bonding Adhesive

A04, B04, M06 Adhesives and sealers other than glass bonding adhesive

A06, B06, M07 Non -Process Cleaning

A07, B07, M05 Process Cleaning

A10, B10 Final Repair

A14, Battery Assembly

L01 Final Repair

L04 Non-Process Cleaning Activities

E02R, F02 & F19 Electro deposition primer

E04R, F04 & F20 Primer-surfacer, Deadener

E04R, F04, F20 Adhesives and sealers

E05R, F05 & F21 Primer-surfacer

E07R, F07 & F22 Topcoat

E09R, F09 Blackout

E11R, F11 & F23 Wax Coating

E12R, F12 & F24 Final Repair

G04, G26 Coatings and repair painting

G21, G22 Coating, process cleaning and repair painting

E13R, F13, F25, G19 & G27 Non-Process Cleaning

E04R, E05R, E07R, F04, F05, F07, F26 & G28 Process Cleaning

H02 Primer-surfacer

H05 Non-Process Cleaning

H06 Corrosion Inhibitor Application

H10 Sealer and Adhesives

H14 Block Impregnation

H16 Process Cleaning Operations

F02R Electrodeposition Bath, and Oven

F04R Sealer Booth, and Oven

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

F05R Coating Booths, Flash zones and Ovens for lines A and B. Blackout Booth. Wax Coating Booth.

F13R Solvent Cleaning activities, Line Purge, Autobody Cleaning, Mix Room, and Solvent Recovery.

APPLICABLE REGULATIONS:

401 KAR 63:002 Section 2(4)(ooo), 40 C.F.R. 63.3080 through 63.3176, Tables 1 through 4, and Appendix A (Subpart IIII), *National Emission Standards for Hazardous Air Pollutants: Surface Coating of Automobiles and Light-Duty Trucks*

1. Operating Limitations:

- a. The usage rates of materials used in all affected facilities shall be limited so as not to exceed the emission limitations in Section B.2.
- b. The permittee may choose to include in their affected source, and thereby make subject to the requirements of 40 CFR 63 subpart IIII, any coating operations, as defined in 40 CFR 63.3176, which would otherwise be subject to the National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products (subpart MMMM of 40 CFR Part 63) or the National Emission Standards for Hazardous Air Pollutants for Surface Coating of Plastic Parts and Products (subpart PPPP of 40 CFR Part 63) which apply coatings to new other motor vehicle bodies or body parts for new other motor vehicles, parts intended for use in new automobiles, new light-duty trucks, or new other motor vehicles, or aftermarket repair or replacement parts for automobiles, light-duty trucks, or other motor vehicles [40 CFR 63.3082(c)].
- c. For all coating operations which the permittee chooses to add to their affected source pursuant to paragraph (c) of 40 CFR 63.3082 [40 CFR 63.3082(d)]:
 - (1) All associated storage containers and mixing vessels in which coatings, thinners, and cleaning materials are stored or mixed; manual and automated equipment and containers used for conveying coatings, thinners, and cleaning materials; and storage containers and manual and automated equipment and containers used for conveying waste materials are also included in the permittee's affected source and are subject to the requirements of 40 CFR 63 subpart IIII.
 - (2) All cleaning and purging of equipment associated with the added surface coating operations is subject to the requirements of 40 CFR 63 subpart IIII.
 - (3) The permittee must identify and describe all additions to the affected source made pursuant to 40 CFR 63.3082(d).
- d. (*Existing Affected Source*) If the permittee's facility has multiple paint lines (e.g., two or more totally distinct paint lines each serving a distinct assembly line, or a facility with two or more paint lines sharing the same paint kitchen or mix room), then for the operations addressed in paragraphs (a) and (b) of 40 CFR 63.3091 [40 CFR 63.3091(f)]:
 - (1) The permittee may choose to use a single grouping under paragraph (a) of 40 CFR 63.3091 for all of their electrodeposition primer, primer-surfacer, topcoat, final repair, glass bonding primer, and glass bonding adhesive operations.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- (2) The permittee may choose to use a single grouping under paragraph (b) of 40 CFR 63.3091 for all of their primer-surfacer, topcoat, final repair, glass bonding primer, and glass bonding adhesive operations as long as each of their electrodeposition primer systems meets the operating limits of 40 CFR 63.3092(a) or (b).
 - (3) The permittee may choose to use one or more groupings under paragraph (a) of 40 CFR 63.3091 for the electrodeposition primer, primer-surfacer, topcoat, final repair, glass bonding primer, and glass bonding adhesive operations from one or more of their paint lines; and one or more groupings under paragraph (b) of 40 CFR 63.3091 for the primer-surfacer, topcoat, final repair, glass bonding primer, and glass bonding adhesive operations from the remainder of their paint lines, as long as each electrodeposition primer system associated with each paint line the permittee includes in a grouping under paragraph (b) of 40 CFR 63.3091 meets the operating limits of 40 CFR 63.3092(a) or (b). For example, if the facility has three paint lines, the permittee may choose to use one grouping under paragraph (a) of 40 CFR 63.3091 for two of the paint lines; and a separate grouping under paragraph (b) of 40 CFR 63.3091 for the third paint line, as long as the electrodeposition primer system associated with the paint line the permittee includes in the grouping under paragraph (b) of 40 CFR 63.3091 meets the operating limits of 40 CFR 63.3092(a) or (b). Alternatively, the permittee may choose to use one grouping for two of the paint lines and a separate grouping of the same type for the third paint line. Again, each electrodeposition primer system associated with each paint line the permittee includes in a grouping under paragraph (b) of 40 CFR 63.3091 must meet the operating limits of 40 CFR 63.3092(a) or (b).
 - (4) The permittee may choose to consider the electrodeposition primer, primer-surfacer, topcoat, final repair, glass bonding primer, and glass bonding adhesive operations from each of their paint lines as a separate grouping under either paragraph (a) or paragraph (b) of 40 CFR 63.3091. The electrodeposition primer system associated with each paint line the permittee chooses to consider in a grouping under paragraph (b) of 40 CFR 63.3091 must meet the operating limits of 40 CFR 63.3092(a) or (b). For example, if the facility has two paint lines, the permittee may choose to use the grouping under paragraph (a) of 40 CFR 63.3091 for one paint line and the grouping under paragraph (b) of 40 CFR 63.3091 for the other paint line.
- e. The permittee not required to meet any operating limits for any coating operation(s) without add-on controls, nor are they required to meet operating limits for any coating operation(s) that do not utilize emission capture systems and add-on controls to comply with the emission limits in 40 CFR 63.3090 or 40 CFR 63.3091 [40 CFR 63.3093(a)].
 - f. Except as provided in paragraph (d) of 40 CFR 63.3093, for any controlled coating operation(s), the permittee must meet the operating limits specified in table 1 to 40 CFR 63 subpart IIII. These operating limits apply to the emission capture and add-on control systems on the coating operation(s) for which the permittee uses this option, and the permittee must establish the operating limits during performance tests according to the requirements in 40 CFR 63.3167. The permittee must meet the operating limits at all times after the permittee establishes them [40 CFR 63.3093(b)].
 - (1) For Thermal Oxidizers [Table 1 to 40 CFR 63 subpart IIII]:

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

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)

Compliance Demonstration Method:

- i. Collecting the combustion temperature data according to 40 CFR 63.3168(c);
- ii. Reducing the data to 3-hour block averages; and
- iii. Maintaining the 3-hour average combustion temperature at or above temperature limit.

- (2) For Concentrators, including zeolite wheels and rotary carbon adsorbers [Table 1 to 40 CFR 63 subpart III]:

The average desorption gas inlet temperature in any 3-hour period must not fall below the limit established according to 40 CFR 63.3167(e)

Compliance Demonstration Method:

- i. Collecting the temperature data according to 40 CFR 63.3168(f);
- ii. Reducing the data to 3-hour block averages; and
- iii. Maintaining the 3-hour average temperature at or above the temperature limit.

- (3) For Emission capture systems that are a PTE [Table 1 to 40 CFR 63 subpart III]:

- i. The direction of the air flow at all times must be into the enclosure; and either
- ii. The average facial velocity of air through all natural draft openings in the enclosure must be at least 200 feet per minute; or
- iii. The pressure drop across the enclosure must be at least 0.007 inch water, as established in Method 204 of appendix M to 40 CFR part 51

Compliance Demonstration Method:

- i. Collecting the direction of air flow, and either the facial velocity of air through all natural draft openings according to 40 CFR 63.3168(g)(1) or the pressure drop across the enclosure according to 40 CFR 63.3168(g)(2); and
- ii. Maintaining the facial velocity of air flow through all natural draft openings or the pressure drop at or above the facial velocity limit or pressure drop limit, and maintaining the direction of air flow into the enclosure at all times.

- (4) For Emission capture systems that are not a PTE [Table 1 to 40 CFR 63 subpart III]:

The average gas volumetric flow rate or duct static pressure in each duct between a capture device and add-on control device inlet in any 3-hour period must not fall below the average volumetric flow rate or duct static pressure limit established for that capture device according to 40 CFR 63.3167(f). This applies only to capture devices that are not part of a PTE that meets the criteria of 40 CFR 63.3165(a) and that are not capturing emissions from a downdraft spray booth or from a flashoff area or bake oven associated with a downdraft spray booth

Compliance Demonstration Method:

- i. Collecting the gas volumetric flow rate or duct static pressure for each capture device according to 40 CFR 63.3168(g);
- ii. Reducing the data to 3-hour block averages; and
- iii. Maintaining the 3-hour average gas volumetric flow rate or duct static pressure for each capture device at or above the gas volumetric flow rate or duct static pressure limit.

- g. If the permittee chooses to meet the emission limitations of 40 CFR 63.3092(b) and the emission limits of 40 CFR 63.3090(b) or 40 CFR 63.3091(b), then except as provided in

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

paragraph (d) of 40 CFR 63.3093, the permittee must operate the capture system and add-on control device used to capture and control emissions from their electrodeposition primer bake oven(s) so that they meet the operating limits specified in Table 1 to 40 CFR 63 subpart IIII [40 CFR 63.3093(c)].

- h. If the permittee uses an add-on control device other than those listed in Table 1 to 40 CFR 63 subpart IIII, or wish to monitor an alternative parameter and comply with a different operating limit, the permittee must apply to the Administrator for approval of alternative monitoring under 40 CFR 63.8(f) [40 CFR 63.3093(d)].
- i. The permittee must develop and implement 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 emission limits are established under 40 CFR 63.3090(a) through (d) or 40 CFR 63.3091(a) through (d). The plan must specify practices and procedures to ensure that, at a minimum, the elements specified in paragraphs (b)(1) through (5) of 40 CFR 63.3094 are implemented [40 CFR 63.3094(b)].
 - (1) All organic-HAP-containing coatings, thinners, cleaning materials, and waste materials must be stored in closed containers.
 - (2) The risk of spills of organic-HAP-containing coatings, thinners, cleaning materials, and waste materials must be minimized.
 - (3) Organic-HAP-containing coatings, thinners, cleaning materials, and waste materials must be conveyed from one location to another in closed containers or pipes.
 - (4) 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.
 - (5) Emissions of organic HAP must be minimized during cleaning of storage, mixing, and conveying equipment.
- j. The permittee must develop and implement a work practice plan to minimize organic HAP emissions from cleaning and from purging of equipment associated with all coating operations for which emission limits are established under 40 CFR 63.3090(a) through (d) or 40 CFR 63.3091(a) through (d) [40 CFR 63.3094(c)].
 - (1) The plan shall, at a minimum, address each of the operations listed in paragraphs (c)(1)(i) through (viii) of 40 CFR 63.3094 in which the permittee uses organic-HAP-containing materials or in which there is a potential for emission of organic HAP.
 - i. The plan must address vehicle body wipe emissions through one or more of the techniques listed in paragraphs (c)(1)(i)(A) through (E) of 40 CFR 63.3094, or an approved alternative.
 - A. Use of solvent-moistened wipes.
 - B. Keeping solvent containers closed when not in use.
 - C. Keeping wipe disposal/recovery containers closed when not in use.
 - D. Use of tack-wipes.
 - E. Use of solvents containing less than 1 percent organic HAP by weight.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- ii. The plan must address coating line purging emissions through one or more of the techniques listed in paragraphs (c)(1)(ii)(A) through (D) of 40 CFR 63.3094, or an approved alternative.
 - A. Air/solvent push-out.
 - B. Capture and reclaim or recovery of purge materials (excluding applicator nozzles/tips).
 - C. Block painting to the maximum extent feasible.
 - D. Use of low-HAP or no-HAP solvents for purge.
- iii. The plan must address emissions from flushing of coating systems through one or more of the techniques listed in paragraphs (c)(1)(iii)(A) through (D) of 40 CFR 63.3094, or an approved alternative.
 - A. Keeping solvent tanks closed.
 - B. Recovering and recycling solvents.
 - C. Keeping recovered/recycled solvent tanks closed.
 - D. Use of low-HAP or no-HAP solvents.
- iv. The plan must address emissions from cleaning of spray booth grates through one or more of the techniques listed in paragraphs (c)(1)(iv)(A) through (E) of 40 CFR 63.3094, or an approved alternative.
 - A. Controlled burn-off.
 - B. Rinsing with high-pressure water (in place).
 - C. Rinsing with high-pressure water (off line).
 - D. Use of spray-on masking or other type of liquid masking.
 - E. Use of low-HAP or no-HAP content cleaners.
- v. The plan must address emissions from cleaning of spray booth walls through one or more of the techniques listed in paragraphs (c)(1)(v)(A) through (E) of 40 CFR 63.3094, or an approved alternative.
 - A. Use of masking materials (contact paper, plastic sheet, or other similar type of material).
 - B. Use of spray-on masking.
 - C. Use of rags and manual wipes instead of spray application when cleaning walls.
 - D. Use of low-HAP or no-HAP content cleaners.
 - E. Controlled access to cleaning solvents.
- vi. The plan must address emissions from cleaning of spray booth equipment through one or more of the techniques listed in paragraphs (c)(1)(vi)(A) through (E) of 40 CFR 63.3094, or an approved alternative.
 - A. Use of covers on equipment (disposable or reusable).
 - B. Use of parts cleaners (off-line submersion cleaning).
 - C. Use of spray-on masking or other protective coatings.
 - D. Use of low-HAP or no-HAP content cleaners.
 - E. Controlled access to cleaning solvents.
- vii. The plan must address emissions from cleaning of external spray booth areas through one or more of the techniques listed in paragraphs (c)(1)(vii)(A) through (F) of 40 CFR 63.3094, or an approved alternative.
 - A. Use of removable floor coverings (paper, foil, plastic, or similar type of material).

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- B. Use of manual and/or mechanical scrubbers, rags, or wipes instead of spray application.
 - C. Use of shoe cleaners to eliminate coating track-out from spray booths.
 - D. Use of booties or shoe wraps.
 - E. Use of low-HAP or no-HAP content cleaners.
 - F. Controlled access to cleaning solvents.
- viii. The plan must address emissions from housekeeping measures not addressed in paragraphs (c)(1)(i) through (vii) of 40 CFR 63.3094 through one or more of the techniques listed in paragraphs (c)(1)(viii)(A) through (C) of 40 CFR 63.3094 or an approved alternative.
- A. Keeping solvent-laden articles (cloths, paper, plastic, rags, wipes, and similar items) in covered containers when not in use.
 - B. Storing new and used solvents in closed containers.
 - C. Transferring of solvents in a manner to minimize the risk of spills.
- (2) Notwithstanding the requirements of paragraphs (c)(1)(i) through (viii) of 40 CFR 63.3094, if the type of coatings used in any facility with surface coating operations subject to the requirements of 40 CFR 63.3094 are of such a nature that the need for one or more of the practices specified under paragraphs (c)(1)(i) through (viii) is eliminated, then the plan may include approved alternative or equivalent measures that are applicable or necessary during cleaning of storage, conveying, and application equipment.
- k. As provided in 40 CFR 63.6(g), the Environmental Protection Agency (EPA), may choose to grant the permittee permission to use an alternative to the work practice standards in 40 CFR 63.3094 [40 CFR 63.3094(d)].
- l. The work practice plans developed in accordance with paragraphs (b) and (c) of 40 CFR 63.3094 are not required to be incorporated in the permittee's title V permit. Any revisions to the work practice plans developed in accordance with paragraphs (b) and (c) of 40 CFR 63.3094 do not constitute revisions to the permittee's title V permit [40 CFR 63.3094(e)].
- m. On and after January 5, 2021, the coating operations must be in compliance with the operating limits for emission capture systems and add-on control devices required by 40 CFR 63.3093 at all times [40 CFR 63:3100(b)].
- n. The permittee must be in compliance with the work practice standards in 40 CFR 63.3094 at all times [40 CFR 63:3100(c)].
- o. On and after January 5, 2021, at all times, the owner or operator must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require the owner or operator to make any further efforts to reduce emissions if levels required by the applicable standard have been achieved. Determination of whether a source is operating in compliance with operation and maintenance requirements will be

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the affected source [40 CFR 63.3100(d)].

- p. The permittee must maintain a log detailing the operation and maintenance of the emission capture systems, add-on control devices, and continuous parameter monitoring systems (CPMS) during the period between the compliance date specified for the permittee's affected source 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)].

2. Emission Limitations:

- a. (*Existing affected source*) Except as provided in paragraph (b) of 40 CFR 63.3091, the permittee must limit combined organic HAP emissions to the atmosphere from electrodeposition primer, primer-surfacer, topcoat, final repair, 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 added to the affected source pursuant to 40 CFR 63.3082(c) to no more than 0.072 kilogram (kg)/liter (0.60 pound lb/gal) of coating solids deposited during each month, determined according to the requirements in 40 CFR 63.3161 [40 CFR 63.3091(a)].

Compliance Demonstration Method for 40 CFR 63.3091(a) [Combined Electrodeposition Primer, Primer-Surfacer, Topcoat, Final Repair, Glass Bonding Primer, and Glass Bonding Adhesive]:

- (1) *Existing affected sources*. For an existing affected source, the permittee must meet the requirements of paragraphs (b)(1) through (3) of 40 CFR 63.3160 [40 CFR 63.3160(b)].
 - i. All emission capture systems, add-on control devices, and CPMS must be installed and operating no later than the applicable compliance date specified in 40 CFR 63.3083. The permittee must conduct an initial performance test of each capture system and add-on control device according to the procedures in 40 CFR 63.3164 through 63.3166 and establish the operating limits required by 40 CFR 63.3093 no later than the compliance date specified in 40 CFR 63.3083.
 - ii. The permittee must develop and begin implementing the work practice plans required by 40 CFR 63.3094(b) and (c) no later than the compliance date specified in 40 CFR 63.3083.
 - iii. The permittee must complete the initial compliance demonstration for the initial compliance period according to the requirements of 40 CFR 63.3161. 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 compliance 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. The permittee must determine the mass of organic HAP emissions and volume of coating solids deposited during the initial compliance period. The initial

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

compliance demonstration includes the results of emission capture system and add-on control device performance tests conducted according to 40 CFR 63.3164 through 63.3166; supporting documentation showing that during the initial compliance period the organic HAP emission rate was equal to or less than the emission limits in 40 CFR 63.3091(a); the operating limits established during the performance tests and the results of the continuous parameter monitoring required by 40 CFR 63.3168; and documentation of whether the permittee developed and implemented the work practice plans required by 40 CFR 63.3094(b) and (c).

- (2) The permittee is not required to conduct an initial performance test to determine capture efficiency or destruction efficiency of a capture system or control device if the permittee receives approval to use the results of a performance test that has been previously conducted on that capture system (either a previous stack test or a previous panel test) or control device. The permittee is not required to conduct an initial test to determine transfer efficiency if the permittee receives approval to use the results of a test that has been previously conducted. Any such previous tests must meet the conditions described in paragraphs (c)(1) through (3) of 40 CFR 63.3160 [40 CFR 63.3160(c)].
 - i. The previous test must have been conducted using the methods and conditions specified in 40 CFR 63 subpart III.
 - ii. Either no process or equipment changes have been made since the previous test was performed or the owner or operator must be able to demonstrate that the results of the performance test reliably demonstrate compliance despite process or equipment changes.
 - iii. Either the required operating parameters were established in the previous test or sufficient data were collected in the previous test to establish the required operating parameters.
- (3) The permittee must meet all of the requirements of 40 CFR 63.3161 to demonstrate initial compliance. To demonstrate initial compliance, the organic HAP emissions from the combined electrodeposition primer, primer-surfacer, topcoat, final repair, 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 added to the affected source pursuant to 40 CFR 63.3082(c) must meet the applicable emission limitation in 40 CFR 63.3090(a) or 40 CFR 63.3091(a) and the applicable operating limits and work practice standards in 40 CFR 63.3093 and 63.3094 [40 CFR 63.3161(a)].
- (4) *Compliance with operating limits.* Except as provided in 40 CFR 63.3160(a)(4), the permittee must establish and demonstrate continuous compliance during the initial compliance period with the operating limits required by 40 CFR 63.3093, using the procedures specified in 40 CFR 63.3167 and 63.3168 [40 CFR 63.3161(b)].
- (5) *Compliance with work practice requirements.* The permittee must develop, implement, and document their implementation of the work practice plans required by 40 CFR 63.3094(b) and (c) during the initial compliance period, as specified in 40 CFR 63.3130 [40 CFR 63.3161(c)].
- (6) *Compliance with emission limits.* The permittee must follow the procedures in paragraphs (e) through (o) of 40 CFR 63.3161 to demonstrate compliance with the applicable emission limit in 40 CFR 63.3090(a) or 40 CFR 63.3091(a). The permittee

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

may also use the guidelines presented in “Protocol for Determining the Daily Volatile Organic Compound Emission Rate of Automobile and Light-Duty Truck Primer-Surfacer and Topcoat” EPA-453/R-08-002 (incorporated by reference, *see* 40 CFR 63.14), in making this demonstration [40 CFR 63.3161(d)].

- (7) *Determine the mass fraction of organic HAP, density, and volume used.* Follow the procedures specified in 40 CFR 63.3151(a) through (c) to determine the mass fraction of organic HAP and the density and volume of each coating and thinner used during each month. For electrodeposition primer operations, the mass fraction of organic HAP, density, and volume used must be determined for each material added to the tank or system during each month [40 CFR 63.3161(e)].
- (8) *Calculate the total mass of organic HAP emissions before add-on controls.* Calculate the total mass of organic HAP emissions before consideration of add-on controls from all coatings and thinners used during each month in the combined electrodeposition primer, primer-surfacer, topcoat, final repair, 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 added to the affected source pursuant to 40 CFR 63.3082(c) using Equation 1 of 40 CFR 63.3161 [40 CFR 63.3161(h)]:

$$H_{BC} = A + B \quad (\text{Eq. 1})$$

Where:

H_{BC} = Total mass of organic HAP emissions before consideration of add-on controls during the month, kg.

A = Total mass of organic HAP in the coatings used during the month, kg, as calculated in Equation 1A of 40 CFR 63.3161.

B = Total mass of organic HAP in the thinners used during the month, kg, as calculated in Equation 1B of 40 CFR 63.3161.

- i. Calculate the kg organic HAP in the coatings used during the month using Equation 1A of 40 CFR 63.3161:

$$A = \sum_{i=1}^m (Vol_{c,i})(D_{c,i})(W_{c,i}) \quad (\text{Eq. 1A})$$

Where:

A = Total mass of organic HAP in the coatings used during the month, kg.

$Vol_{c,i}$ = Total volume of coating, i, used during the month, liters.

$D_{c,i}$ = Density of coating, i, kg coating per liter coating.

$W_{c,i}$ = Mass fraction of organic HAP in coating, i, kg organic HAP per kg coating.

m = Number of different coatings used during the month.

- ii. Calculate the kg of organic HAP in the thinners used during the month using Equation 1B of 40 CFR 63.3161:

$$B = \sum_{j=1}^n (Vol_{t,j})(D_{t,j})(W_{t,j}) \quad (\text{Eq. 1B})$$

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Where:

B = Total mass of organic HAP in the thinners used during the month, kg.

V_{t, j} = Total volume of thinner, j, used during the month, liters.

D_{t, j} = Density of thinner, j, kg per liter.

W_{t, j} = Mass fraction of organic HAP in thinner, j, kg organic HAP per kg thinner.

n = Number of different thinners used during the month.

- (9) *Calculate the organic HAP emission reduction for each controlled coating operation.* Determine the mass of organic HAP emissions reduced for each controlled coating operation during each month. The emission reduction determination quantifies the total organic HAP emissions captured by the emission capture system and destroyed or removed by the add-on control device. Use the procedures in paragraph (j) of 40 CFR 63.3161 to calculate the mass of organic HAP emission reduction for each controlled coating operation using an emission capture system and add-on control device other than a solvent recovery system for which the permittee conducts liquid-liquid material balances. For each controlled coating operation using a solvent recovery system for which the permittee conducts a liquid-liquid material balance, use the procedures in paragraph (k) of 40 CFR 63.3161 to calculate the organic HAP emission reduction [40 CFR 63.3161(i)].
- (10) *Calculate the organic HAP emission reduction for each controlled coating operation not using liquid-liquid material balances.* For each controlled coating operation using an emission capture system and add-on control device other than a solvent recovery system for which the permittee conducts liquid-liquid material balances, calculate the mass of organic HAP emission reduction for the controlled coating operation, excluding all periods of time in which a deviation, including a deviation during a period of startup, shutdown, or malfunction, from an operating limit or from any CPMS requirement for the capture system or control device serving the controlled coating operation occurred, during the month using Equation 2 of 40 CFR 63.3161. The calculation of mass of organic HAP emission reduction for the controlled coating operation during the month applies the emission capture system efficiency and add-on control device efficiency to the mass of organic HAP contained in the coatings and thinners that are used in the coating operation served by the emission capture system and add-on control device during each month. Except as provided in paragraph (p) of 40 CFR 63.3161, for any period of time in which a deviation, including a deviation during a period of startup, shutdown, or malfunction, from an operating limit or from any CPMS requirement of the capture system or control device serving the controlled coating operation occurred, the permittee must assume zero efficiency for the emission capture system and add-on control device. Equation 2 of 40 CFR 63.3161 treats the materials used during such a deviation as if they were used on an uncontrolled coating operation for the time period of the deviation [40 CFR 63.3161(j)].

$$H_{Cn} = (A_C + B_C - A_{unc} - B_{unc}) \left(\frac{CE}{100} \times \frac{DRE}{100} \right) \quad (\text{Eq. 2})$$

Where:

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

H_{Cn} = Mass of organic HAP emission reduction, excluding all periods of time in which a deviation, including a deviation during a period of startup, shutdown, or malfunction, from an operating limit or from any CPMS requirement for the capture system or control device serving the controlled coating operation occurred, for the controlled coating operation during the month, kg.

A_C = Total mass of organic HAP in the coatings used in the controlled coating operation during the month, kg, as calculated in Equation 2A of 40 CFR 63.3161.

B_C = Total mass of organic HAP in the thinners used in the controlled coating operation during the month, kg, as calculated in Equation 2B of 40 CFR 63.3161.

A_{unc} = Total mass of organic HAP in the coatings used during all periods of time in which a deviation, including a deviation during a period of startup, shutdown, or malfunction, from an operating limit or from any CPMS requirement for the capture system or control device serving the controlled coating operation occurred for the controlled coating operation during the month, kg, as calculated in Equation 2C of 40 CFR 63.3161.

B_{unc} = Total mass of organic HAP in the thinners used during all periods of time in which a deviation, including a deviation during a period of startup, shutdown, or malfunction, from an operating limit or from any CPMS requirement for the capture system or control device serving the controlled coating operation occurred for the controlled coating operation during the month, kg, as calculated in Equation 2D of 40 CFR 63.3161.

CE = Capture efficiency of the emission capture system vented to the add-on control device, percent. Use the test methods and procedures specified in 40 CFR 63.3164 and 63.3165 to measure and record capture efficiency.

DRE = Organic HAP destruction or removal efficiency of the add-on control device, percent. Use the test methods and procedures in 40 CFR 63.3164 and 63.3166 to measure and record the organic HAP destruction or removal efficiency.

- i. Calculate the mass of organic HAP in the coatings used in the controlled coating operation, kg, using Equation 2A of 40 CFR 63.3161.

$$A_C = \sum_{i=1}^m (Vol_{c,i})(D_{c,i})(W_{c,i}) \quad (\text{Eq. 2A})$$

Where:

A_C = Total mass of organic HAP in the coatings used in the controlled coating operation during the month, kg.

$Vol_{c,i}$ = Total volume of coating, i, used during the month, liters.

$D_{c,i}$ = Density of coating, i, kg per liter.

$W_{c,i}$ = Mass fraction of organic HAP in coating, i, kg per kg.

m = Number of different coatings used.

- ii. Calculate the mass of organic HAP in the thinners used in the controlled coating operation, kg, using Equation 2B of 40 CFR 63.3161.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

$$B_C = \sum_{j=1}^n (Vol_{t,j})(D_{t,j})(W_{t,j}) \quad (\text{Eq. 2B})$$

Where:

B_C = Total mass of organic HAP in the thinners used in the controlled coating operation during the month, kg.

$Vol_{t,j}$ = Total volume of thinner, j, used during the month, liters.

$D_{t,j}$ = Density of thinner, j, kg per liter.

$W_{t,j}$ = Mass fraction of organic HAP in thinner, j, kg per kg.

n = Number of different thinners used.

- iii. Calculate the mass of organic HAP in the coatings used in the controlled coating operation during deviations specified in 40 CFR 63.3163(c) and (d), using Equation 2C of 40 CFR 63.3161:

$$A_{unc} = \sum_{i=1}^m (VOLD_i)(D_i)(W_i) \quad (\text{Eq. 2C})$$

Where:

A_{unc} = Total mass of organic HAP in the coatings used during all periods of time in which a deviation, including a deviation during a period of startup, shutdown, or malfunction, from an operating limit or from any CPMS requirement for the capture system or control device serving the controlled coating operation occurred for the controlled coating operation during the month, kg.

$VOLD_i$ = Total volume of coating, i, used in the controlled coating operation during deviations, liters.

D_i = Density of coating, i, kg per liter.

W_i = Mass fraction of organic HAP in coating, i, kg organic HAP per kg coating.

m = Number of different coatings.

- iv. Calculate the mass of organic HAP in the thinners used in the controlled coating operation during deviations specified in 40 CFR 63.3163(c) and (d), using Equation 2D of 40 CFR 63.3161:

$$B_{unc} = \sum_{j=1}^n (VOLD_j)(D_j)(W_j) \quad (\text{Eq. 2D})$$

Where:

B_{unc} = Total mass of organic HAP in the thinners used during all periods of time in which a deviation, including a deviation during a period of startup, shutdown, or malfunction, from an operating limit or from any CPMS requirement for the capture system or control device serving the controlled

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

coating operation occurred for the controlled coating operation during the month, kg.

VOLD_j = Total volume of thinner, j, used in the controlled coating operation during deviations, liters.

D_j = Density of thinner, j, kg per liter.

W_h = Mass fraction of organic HAP in thinner, j, kg organic HAP per kg coating.

n = Number of different thinners.

- (11) *Calculate the total volume of coating solids deposited.* Determine the total volume of coating solids deposited, liters, in the combined electrodeposition primer, primer-surfacer, topcoat, final repair, 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 added to the affected source pursuant to 40 CFR 63.3082(c) using Equation 5 of 40 CFR 63.3161 [40 CFR 63.3161(l)]:

$$V_{sdep} = \sum_{i=1}^m (Vol_{c,i}) (V_{s,i}) (TE_{c,i}) / 100 \quad (\text{Eq. 5})$$

Where:

V_{sdep} = Total volume of coating solids deposited during the month, liters.

Vol_{c,i} = Total volume of coating, i, used during the month, liters.

V_{s,i} = Volume fraction of coating solids for coating, i, liter solids per liter coating, determined according to 40 CFR 63.3161(f).

TE_{c,i} = Transfer efficiency of coating, i, determined according to 40 CFR 63.3161(g), expressed as a decimal, for example 60 percent must be expressed as 0.60.

M = Number of coatings used during the month.

- (12) *Calculate the mass of organic HAP emissions for each month.* Determine the mass of organic HAP emissions, kg, during each month, using Equation 6 of 40 CFR 63.3161 [40 CFR 63.3161(m)].

$$H_{HAP} = H_{BC} - \sum_{i=1}^q (H_{Cn,i}) - \sum_{j=1}^r (H_{CSR,j}) - \sum_{k=1}^q \sum_{m=1}^{Sk} (H_{DEV,k,m}) \quad (\text{Eq. 6})$$

Where:

H_{HAP} = Total mass of organic HAP emissions for the month, kg.

H_{BC} = Total mass of organic HAP emissions before add-on controls from all the coatings and thinners used during the month, kg, determined according to paragraph (h) of 40 CFR 63.3161.

H_{Cn, i} = Total mass of organic HAP emission reduction for controlled coating operation, i, not using a liquid-liquid material balance, excluding all periods of time in which a deviation, including a deviation during a period of startup, shutdown, or malfunction, from an operating limit or from any CPMS requirement for the capture system or control device serving the controlled coating operation

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

occurred, for the controlled coating operation during the month, from Equation 2 of 40 CFR 63.3161.

$H_{CSR, j}$ = Total mass of organic HAP emission reduction for coating operation, j , controlled by a solvent recovery system using a liquid-liquid material balance, during the month, kg, from Equation 4 of 40 CFR 63.3161.

$H_{DEV, k, m}$ = Mass of organic HAP emission reduction, based on the capture system and control device efficiency approved under paragraph (p) of 40 CFR 63.3161 for period of deviation, m , for controlled coating operation, k , kg, as determined using Equation 8 of 40 CFR 63.3161.

q = Number of controlled coating operations not using a liquid-liquid material balance.

r = Number of coating operations controlled by a solvent recovery system using a liquid-liquid material balance.

S_k = Number of periods of deviation in the month for which non-zero capture and control device efficiencies have been approved for controlled coating operation, k .

- (13) *Calculate the organic HAP emission rate for the month.* Determine the organic HAP emission rate for the month, kg organic HAP per liter coating solids deposited, using Equation 7 of 40 CFR 63.3161 [40 CFR 63.3161(n)]:

$$H_{rate} = (H_{HAP}) / (V_{sdep}) \quad (\text{Eq. 7})$$

Where:

H_{rate} = Organic HAP emission rate for the month compliance period, kg organic HAP per liter coating solids deposited.

H_{HAP} = Mass of organic HAP emissions for the month, kg, determined according to Equation 6 of 40 CFR 63.3161.

V_{sdep} = Total volume of coating solids deposited during the month, liters, from Equation 5 of 40 CFR 63.3161.

- (14) *Compliance demonstration.* To demonstrate initial compliance, the organic HAP emissions from the combined electrodeposition primer, primer-surfacer, topcoat, final repair, 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 added to the affected source pursuant to 40 CFR 63.3082(c) must be less than or equal to the applicable emission limitation in 40 CFR 63.3090(a) or 40 CFR 63.3091(a). The permittee must keep all records as required by 40 CFR 63.3130 and 63.3131. As part of the Notification of Compliance Status required by 40 CFR 63.3110, the permittee must submit a statement that the coating operation(s) was (were) in compliance with the emission limitations during the initial compliance period because the organic HAP emission rate was less than or equal to the applicable emission limit in 40 CFR 63.3090(a) or 40 CFR 63.3091(a) and the permittee achieved the operating limits required by 40 CFR 63.3093 and the work practice standards required by 40 CFR 63.3094 [40 CFR 63.3161(o)].

- (15) The permittee may request approval from the Administrator to use non-zero capture efficiencies and add-on control device efficiencies for any period of time in which a

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

deviation, including a deviation during a period of startup, shutdown, or malfunction, from an operating limit or from any CPMS requirement for the capture system or add-on control device serving a controlled coating operation occurred [40 CFR 63.3161(p)].

- i. If the permittee has manually collected parameter data indicating that a capture system or add-on control device was operating normally during a CPMS malfunction, a CPMS out-of-control period, or associated repair, then these data may be used to support and document the permittee's request to use the normal capture efficiency or add-on control device efficiency for that period of deviation.
- ii. If the permittee has data indicating the actual performance of a capture system or add-on control device (*e.g.*, capture efficiency measured at a reduced flow rate or add-on control device efficiency measured at a reduced thermal oxidizer temperature) during a deviation, including a deviation during a period of startup, shutdown, or malfunction, from an operating limit or from any CPMS requirement for the capture system or add-on control device serving a controlled coating operation, then these data may be used to support and document the permittee's request to use these values for that period of deviation.
- iii. The organic HAP emission reduction achieved during each period of deviation, including a deviation during a period of startup, shutdown, or malfunction, from an operating limit or from any CPMS requirement for the capture system or add-on control device serving a controlled coating operation for which the Administrator has approved the use of non-zero capture efficiency and add-on control device efficiency values is calculated using Equation 8 of 40 CFR 63.3161.

$$H_{DEV} = (A_{DEV} + B_{DEV}) \left(\frac{CE_{DEV}}{100} \right) \left(\frac{DRE_{DEV}}{100} \right) \text{ (Eq. 8)}$$

Where:

H_{DEV} = Mass of organic HAP emission reduction achieved during a period of deviation for the controlled coating operation, kg.

A_{DEV} = Total mass of organic HAP in the coatings used in the controlled coating operation during the period of deviation, kg, as calculated in Equation 8A of 40 CFR 63.3161.

B_{DEV} = Total mass of organic HAP in the thinners used in the controlled coating operation during the period of deviation, kg, as calculated in Equation 8B of 40 CFR 63.3161.

CE_{DEV} = Capture efficiency of the emission capture system vented to the add-on control device, approved for the period of deviation, percent.

DRE_{DEV} = Organic HAP destruction or removal efficiency of the add-on control device approved for the period of deviation, percent.

- iv. Calculate the total mass of organic HAP in the coatings used in the controlled coating operation during the period of deviation using equation 8A of 40 CFR 63.3161:

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

$$A_{DEV} = \sum_{i=1}^m (VOL_{CDEV,i}) (D_{c,i}) (W_{c,i}) \quad (\text{Eq. 8A})$$

Where:

A_{DEV} = Total mass of organic HAP in the coatings used in the controlled coating operation during the period of deviation, kg.

$VOL_{CDEV, i}$ = total volume of coating, i, used in the controlled coating operation during the period of deviation, liters.

$D_{c, i}$ = Density of coating, i, kg per liter.

$W_{c, i}$ = Mass fraction of organic HAP in coating, i, kg per kg.

m = Number of different coatings used.

- v. Calculate the total mass of organic HAP in the thinners used in the controlled coating operation during the period of deviation using equation 8B of 40 CFR 63.3161:

$$B_{DEV} = \sum_{j=1}^n (VOL_{TDEV,j}) (D_{t,j}) (W_{t,j}) \quad (\text{Eq. 8B})$$

Where:

B_{DEV} = Total mass of organic HAP in the thinners used in the controlled coating operation during the period of deviation, kg.

$VOL_{TDEV, j}$ = Total volume of thinner, j, used in the controlled coating operation during the period of deviation, liters.

$D_{t, j}$ = Density of thinner, j, kg per liter.

$W_{t, j}$ = Mass fraction of organic HAP in thinner, j, kg per kg.

n = Number of different thinners used.

- (16) To demonstrate continuous compliance with the applicable emission limit in 40 CFR 63.3090(a) or 40 CFR 63.3091(a), the organic HAP emission rate for each compliance period, determined according to the procedures in 40 CFR 63.3161, must be equal to or less than the applicable emission limit in 40 CFR 63.3090(a) or 40 CFR 63.3091(a). A compliance period consists of 1 month. Each month after the end of the initial compliance period described in 40 CFR 63.3160 is a compliance period consisting of that month. The permittee must perform the calculations in 40 CFR 63.3161 on a monthly basis [40 CFR 63.3163(a)].
- (17) If the organic HAP emission rate for any 1 month compliance period exceeded the applicable emission limit in 40 CFR 63.3090(a) or 40 CFR 63.3091(a), this is a deviation from the emission limitation for that compliance period and must be reported as specified in 40 CFR 63.3110(c)(6) and 63.3120(a)(6) [40 CFR 63.3163(b)].
- (18) The permittee must meet the requirements for bypass lines in 40 CFR 63.3168(b) for control devices other than solvent recovery systems for which the permittee conducts liquid-liquid material balances. If any bypass line is opened and emissions are diverted to the atmosphere when the coating operation is running, this is a deviation that must be reported as specified in 40 CFR 63.3110(c)(6) and 63.3120(a)(6). For the purposes of completing the compliance calculations specified in 40 CFR 63.3161(k), the

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- permittee must assume that the emission capture system and add-on control device were achieving zero efficiency during the time period of the deviation [40 CFR 63.3163(d)].
- (19) The permittee must demonstrate continuous compliance with the work practice standards in 40 CFR 63.3094. If the permittee did not develop a work practice plan, if the permittee did not implement the plan, or if the permittee did not keep the records required by 40 CFR 63.3130(n), this is a deviation from the work practice standards that must be reported as specified in 40 CFR 63.3110(c)(6) and 63.3120(a)(6) [40 CFR 63.3163(e)].
- (20) If there were no deviations from the emission limitations, submit a statement as part of the semiannual compliance report that the permittee was in compliance with the emission limitations during the reporting period because the organic HAP emission rate for each compliance period was less than or equal to the applicable emission limit in 40 CFR 63.3090(a) or 40 CFR 63.3091(a), 40 CFR 63.3090(b) or 40 CFR 63.3091(b), or 40 CFR 63.3092(a) or 40 CFR 63.3092(b), the permittee achieved the operating limits required by 40 CFR 63.3093, and the permittee achieved the work practice standards required by 40 CFR 63.3094 during each compliance period [40 CFR 63.3163(f)].
- (21) The permittee must maintain records as specified in 40 CFR 63.3130 and 63.3131 [40 CFR 63.3163(j)].
- (22) *General.* The permittee must install, operate, and maintain each CPMS specified in paragraphs (c), (e), (f), and (g) of 40 CFR 63.3168 according to paragraphs (a)(1) through (6) of 40 CFR 63.3168. The permittee must install, operate, and maintain each CPMS specified in paragraphs (b) and (d) of 40 CFR 63.3168 according to paragraphs (a)(3) through (5) of 40 CFR 63.3168 [40 CFR 63.3168(a)].
- i. The CPMS must complete a minimum of one cycle of operation for each successive 15-minute period. The permittee must have a minimum of four equally-spaced successive cycles of CPMS operation in 1 hour.
 - ii. The permittee must determine the average of all recorded readings for each successive 3-hour period of the emission capture system and add-on control device operation.
 - iii. The permittee must record the results of each inspection, calibration, and validation check of the CPMS.
 - iv. The permittee must maintain the CPMS at all times in accordance with 40 CFR 63.3100(d) and have readily available necessary parts for routine repairs of the monitoring equipment.
 - v. On and after January 5, 2021, the permittee must operate the CPMS and collect emission capture system and add-on control device parameter data at all times that a controlled coating operation is operating in accordance with 40 CFR 63.3100(d).
 - vi. On and after January 5, 2021, startups and shutdowns are normal operation for this source category. Emissions from these activities are to be included when determining if the standards specified in 40 CFR 63.3090, 63.3091, 63.3092, 63.4292, and 63.4293 are being attained. The permittee must not use emission capture system or add-on control device parameter data recorded during monitoring malfunctions, associated repairs, out-of-control periods, or required quality assurance or control activities when calculating data averages. The permittee must

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

use all the data collected during all other periods in calculating the data averages for determining compliance with the emission capture system and add-on control device operating limits.

- vii. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the CPMS to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions. On and after January 5, 2021, except for periods of required quality assurance or control activities, any period during which the CPMS fails to operate and record data continuously as required by paragraph (a)(1) of 40 CFR 63.3168, or generates data that cannot be included in calculating averages as specified in this paragraph (a)(7) constitutes a deviation from the monitoring requirements.
- (23) *Capture system bypass line.* The permittee must meet the requirements of paragraphs (b)(1) and (2) of 40 CFR 63.3168 for each emission capture system that contains bypass lines that could divert emissions away from the add-on control device to the atmosphere [40 CFR 63.3168(b)].
- i. The permittee must monitor or secure the valve or closure mechanism controlling the bypass line in a nondiverting position in such a way that the valve or closure mechanism cannot be opened without creating a record that the valve was opened. The method used to monitor or secure the valve or closure mechanism must meet one of the requirements specified in paragraphs (b)(1)(i) through (iv) of 40 CFR 63.3168.
 - A. *Flow control position indicator.* Install, calibrate, maintain, and operate according to the manufacturer's specifications a flow control position indicator that takes a reading at least once every 15 minutes and provides a record indicating whether the emissions are directed to the add-on control device or diverted from the add-on control device. The time of occurrence and flow control position must be recorded, as well as every time the flow direction is changed. The flow control position indicator must be installed at the entrance to any bypass line that could divert the emissions away from the add-on control device to the atmosphere.
 - B. *Car-seal or lock-and-key valve closures.* Secure any bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. The permittee must visually inspect the seal or closure mechanism at least once every month to ensure that the valve is maintained in the closed position, and the emissions are not diverted away from the add-on control device to the atmosphere.
 - C. *Valve closure monitoring.* Ensure that any bypass line valve is in the closed (nondiverting) position through monitoring of valve position at least once every 15 minutes. The permittee must inspect the monitoring system at least once every month to verify that the monitor will indicate valve position.
 - D. *Automatic shutdown system.* Use an automatic shutdown system in which the coating operation is stopped when flow is diverted by the bypass line away from the add-on control device to the atmosphere when the coating operation is running. The permittee must inspect the automatic shutdown system at least once every month to verify that it will detect diversions of flow and shut down the coating operation.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- ii. If any bypass line is opened, The permittee must include a description of why the bypass line was opened and the length of time it remained open in the semiannual compliance reports required in 40 CFR 63.3120.
- (24) *Thermal oxidizers and catalytic oxidizers.* If the permittee is using a thermal oxidizer or catalytic oxidizer as an add-on control device (including those used to treat desorbed concentrate streams from concentrators or carbon adsorbers), the permittee must comply with the requirements in paragraphs (c)(1) through (3) of 40 CFR 63.3168 [40 CFR 63.3168(c)]:
- i. For a thermal oxidizer, install a gas temperature monitor in the firebox of the thermal oxidizer or in the duct immediately downstream of the firebox before any substantial heat exchange occurs.
 - ii. For all thermal oxidizers and catalytic oxidizers, the permittee must meet the requirements in paragraphs (a)(1) through (6) and (c)(3)(i) through (vii) of 40 CFR 63.3168 for each gas temperature monitoring device. For the purposes of this paragraph (c)(3), a thermocouple is part of the temperature sensor.
 - A. Locate the temperature sensor in a position that provides a representative temperature.
 - B. Use a temperature sensor with a measurement sensitivity of 4 degrees Fahrenheit or 0.75 percent of the temperature value, whichever is larger.
 - C. Shield the temperature sensor system from electromagnetic interference and chemical contaminants.
 - D. If a gas temperature chart recorder is used, it must have a measurement sensitivity in the minor division of at least 20 degrees Fahrenheit.
 - E. Perform an electronic calibration at least semiannually according to the procedures in the manufacturer's owners manual. Following the electronic calibration, the permittee must conduct a temperature sensor validation check in which a second or redundant temperature sensor placed nearby the process temperature sensor must yield a reading within 30 degrees Fahrenheit of the process temperature sensor reading.
 - F. Conduct calibration and validation checks any time the sensor exceeds the manufacturer's specified maximum operating temperature range or install a new temperature sensor.
 - G. At least monthly, inspect components for integrity and electrical connections for continuity, oxidation, and galvanic corrosion.
- (25) *Concentrators.* If the permittee is using a concentrator, such as a zeolite wheel or rotary carbon bed concentrator, the permittee must install a temperature monitor in the desorption gas stream. The temperature monitor must meet the requirements in paragraphs (a)(1) through (6) and (c)(3) of 40 CFR 63.3168 [40 CFR 63.3168(f)].
- (26) *Emission capture systems.* The capture system monitoring system must comply with the applicable requirements in paragraphs (g)(1) and (2) of 40 CFR 63.3168 [40 CFR 63.3168(g)].
- i. For each flow measurement device, the permittee must meet the requirements in paragraphs (a)(1) through (6) and (g)(1)(i) through (iv) of 40 CFR 63.3168.
 - A. Locate a flow sensor in a position that provides a representative flow measurement in the duct from each capture device in the emission capture system to the add-on control device.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- B. Reduce swirling flow or abnormal velocity distributions due to upstream and downstream disturbances.
 - C. Conduct a flow sensor calibration check at least semiannually.
 - D. At least monthly, inspect components for integrity, electrical connections for continuity, and mechanical connections for leakage.
 - ii. For each pressure drop measurement device, the permittee must comply with the requirements in paragraphs (a)(1) through (6) and (g)(2)(i) through (vi) of 40 CFR 63.3168.
 - A. Locate the pressure tap(s) in a position that provides a representative measurement of the pressure drop across each opening the permittee is monitoring.
 - B. Minimize or eliminate pulsating pressure, vibration, and internal and external corrosion.
 - C. Check pressure tap pluggage daily.
 - D. Using an inclined manometer with a measurement sensitivity of 0.0002 inch water, check gauge calibration quarterly and transducer calibration monthly.
 - E. Conduct calibration checks any time the sensor exceeds the manufacturer's specified maximum operating pressure range or install a new pressure sensor.
 - F. At least monthly, inspect components for integrity, electrical connections for continuity, and mechanical connections for leakage.
- (27) The permittee may have capture systems or add-on control devices which the permittee chooses not to take into account when demonstrating compliance with the applicable emission limitations. For any such capture system or add-on control device, the permittee is not required to comply with the requirements of 40 CFR 63.3093, 63.3100, 63.3110, 63.3120, 63.3130, 63.3131, and 63.3160 through 63.3168 with regard to notification, reporting, recordkeeping, performance tests, monitoring, operating parameters, capture efficiency, add-on control device efficiency, destruction efficiency, or removal efficiency. If, at a later date, the permittee decides to take any such capture system or add-on control device into account when demonstrating compliance with the emission limitations, then at that time the permittee must comply with the requirements of 40 CFR 63.3093, 63.3100, 63.3110, 63.3120, 63.3130, 63.3131, and 63.3160 through 63.3168 with regard to notification, recordkeeping, performance tests, monitoring, operating parameters, capture efficiency, add-on control device efficiency, destruction efficiency, and removal efficiency, as applicable, for that capture system or add-on control device [40 CFR 63.3169].
- b. *(Existing affected source)* If the permittee meets the operating limits of 40 CFR 63.3092(a) or (b), they must either meet the emission limits of paragraph (a) of 40 CFR 63.3091 or limit combined organic HAP emissions to the atmosphere from primer-surfacer, topcoat, final repair, 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 added to the affected source pursuant to 40 CFR 63.3082(c) to no more than 0.132 kg/liter (1.10 lb/gal) of coating solids deposited during each month, determined according to the requirements in 40 CFR 63.3171. If the permittee does not have an electrodeposition primer system, the permittee must limit combined organic HAP emissions to the atmosphere from primer-

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

surfacers, topcoat, final repair, 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 added to the affected source pursuant to 40 CFR 63.3082(c) to no more than 0.132 kg/liter (1.10 lb/gal) of coating solids deposited during each month, determined according to the requirements in 40 CFR 63.3171 [40 CFR 63.3091(b)].

Compliance Demonstration Method for 40 CFR 63.3090(b) and 63.3091(b) [Combined Primer-Surfacer, Topcoat, Final Repair, Glass Bonding Primer, and Glass Bonding Adhesive and Separate Electrodeposition Primer]:

- (1) *Existing affected sources.* For an existing affected source, the permittee must meet the requirements of paragraphs (b)(1) through (3) of 40 CFR 63.3160 [40 CFR 63.3170(b)].
- (2) The permittee must meet all of the requirements of 40 CFR 63.3171 to demonstrate initial compliance. To demonstrate initial compliance, the organic HAP emissions from the combined primer-surfacer, topcoat, final repair, 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 added to the affected source pursuant to 40 CFR 63.3082(c) must meet the applicable emission limitation in 40 CFR 63.3090(b) or 40 CFR 63.3091(b); the organic HAP emissions from the electrodeposition primer operation must meet the applicable emissions limitations in 40 CFR 63.3092(a) or (b); and the permittee must meet the applicable operating limits and work practice standards in 40 CFR 63.3093 and 63.3094 [40 CFR 63.3171(a)].
- (3) *Compliance with operating limits.* Except as provided in 40 CFR 63.3160(a)(4), the permittee must establish and demonstrate continuous compliance during the initial compliance period with the operating limits required by 40 CFR 63.3093, using the procedures specified in 40 CFR 63.3167 and 63.3168 [40 CFR 63.3171(b)].
- (4) *Compliance with work practice requirements.* The permittee must develop, implement, and document their implementation of the work practice plans required by 40 CFR 63.3094(b) and (c) during the initial compliance period, as specified in 40 CFR 63.3130 [40 CFR 63.3171(c)].
- (5) *Compliance with emission limits.* The permittee must follow the procedures in 40 CFR 63.3161(e) through (n), excluding materials used in electrodeposition primer operations, to demonstrate compliance with the applicable emission limit in 40 CFR 63.3090(b) or 40 CFR 63.3091(b). The permittee must follow the procedures in paragraph (e) of 40 CFR 63.3171 to demonstrate compliance with the emission limit in 40 CFR 63.3092(a), or paragraphs (f) through (g) of 40 CFR 63.3171 to demonstrate compliance with the emission limitations in 40 CFR 63.3092(b) [40 CFR 63.3171(d)].
- (6) *Determine the mass fraction of each organic HAP in each material used in the electrodeposition primer operation.* The permittee must determine the mass fraction of each organic HAP for each material used in the electrodeposition primer operation during the compliance period by using one of the options in paragraphs (e)(1) through (3) of 40 CFR 63.3171 [40 CFR 63.3171(e)].

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- i. *Method 311 (appendix A to 40 CFR part 63).* The permittee may use Method 311 for determining the mass fraction of each organic HAP.
 - ii. *Alternative method.* The permittee may use an alternative test method for determining the mass fraction of organic HAP once the Administrator has approved it. The permittee must follow the procedure in 40 CFR 63.7(f) to submit an alternative test method for approval.
 - iii. *Information from the supplier or manufacturer of the material.* The permittee may rely on information other than that generated by the test methods specified in paragraphs (e)(1) and (2) of 40 CFR 63.3171, such as manufacturer's formulation data, if it represents each organic HAP in Table 5 to 40 CFR 63 subpart IIII that is present at 0.1 percent by mass, and at 1.0 percent by mass or more for other compounds. If there is a disagreement between such information and results of a test conducted according to paragraph (e)(1) or (2) of 40 CFR 63.3171, then the test method results will take precedence unless after consultation, the facility demonstrates to the satisfaction of the enforcement authority that the facility's data are correct.
- (7) *Compliance demonstration.* To demonstrate initial compliance, the organic HAP emissions from the combined primer-surfacer, topcoat, final repair, 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 added to the affected source pursuant to 40 CFR 63.3082(c) must meet the applicable emission limitation in 40 CFR 63.3090(b) or 40 CFR 63.3091(b); the organic HAP emissions from the electrodeposition primer operation must meet the applicable emissions limitations in 40 CFR 63.3092(a) or (b). The permittee must keep all records as required by 40 CFR 63.3130 and 63.3131. As part of the Notification of Compliance Status required by 40 CFR 63.3110, the permittee must submit a statement that the coating operation(s) was (were) in compliance with the emission limitations during the initial compliance period because the organic HAP emission rate from the combined primer-surfacer, topcoat, final repair, 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 added to the affected source pursuant to 40 CFR 63.3082(c) was less than or equal to the applicable emission limit in 40 CFR 63.3090(b) or 40 CFR 63.3091(b), and the organic HAP emissions from the electrodeposition primer operation met the applicable emissions limitations in 40 CFR 63.3092(a) or (b), and the permittee achieved the operating limits required by 40 CFR 63.3093 and the work practice standards required by 40 CFR 63.3094 [40 CFR 63.3171(h)].
- (8) To demonstrate continuous compliance with the applicable emission limit in 40 CFR 63.3090(b) or 40 CFR 63.3091(b), the organic HAP emission rate for each compliance period determined according to the procedures in 40 CFR 63.3171 must be equal to or less than the applicable emission limit in 40 CFR 63.3090(b) or 40 CFR 63.3091(b). A compliance period consists of 1 month. Each month after the end of the initial compliance period described in 40 CFR 63.3170 is a compliance period consisting of that month. The permittee must perform the calculations in 40 CFR 63.3171 on a monthly basis [40 CFR 63.3173(a)].

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- (9) If the organic HAP emission rate for any 1 month compliance period exceeded the applicable emission limit in 40 CFR 63.3090(b) or 40 CFR 63.3091(b), this is a deviation from the emission limitation for that compliance period and must be reported as specified in 40 CFR 63.3110(c)(6) and 63.3120(a)(6) [40 CFR 63.3173(b)].
- (10) The permittee may have capture systems or add-on control devices which the permittee chooses not to take into account when demonstrating compliance with the applicable emission limitations. For any such capture system or add-on control device, the permittee is not required to comply with the requirements of 40 CFR 63.3093, 63.3100, 63.3110, 63.3120, 63.3130, 63.3131, and 63.3160 through 63.3168 with regard to notification, reporting, recordkeeping, performance tests, monitoring, operating parameters, capture efficiency, add-on control device efficiency, destruction efficiency, or removal efficiency. If, at a later date, the permittee decides to take any such capture system or add-on control device into account when demonstrating compliance with the emission limitations, then at that time the permittee must comply with the requirements of 40 CFR 63.3093, 63.3100, 63.3110, 63.3120, 63.3130, 63.3131, and 63.3160 through 63.3168 with regard to notification, reporting, recordkeeping, performance tests, monitoring, operating parameters, capture efficiency, add-on control device efficiency, destruction efficiency, and removal efficiency, as applicable, for that capture system or add-on control device [40 CFR 63.3174].
- c. *(Existing affected source)* The permittee must limit average organic HAP emissions from all adhesive and sealer materials other than materials used as components of glass bonding systems to no more than 0.010 kg/kg (lb/lb) of adhesive and sealer material used during each month [40 CFR 63.3091(c)].
- d. *(Existing affected source)* The permittee must limit average organic HAP emissions from all deadener materials to no more than 0.010 kg/kg (lb/lb) of deadener material used during each month [40 CFR 63.3091(d)].
- e.

Compliance Demonstration Method for 40 CFR 63.3090 (c) and (d), and 40 CFR 63.3091 (c) and (d) [Adhesive, Sealers and Deadeners]:

- (1) The permittee must complete the initial compliance demonstration for the initial compliance period according to the requirements of 40 CFR 63.3151. 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 compliance 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. The permittee must determine the mass average organic HAP content of the materials used each month for each group of materials for which an emission limitation is established in 40 CFR 63.3090(c) and (d) or 40 CFR 63.3091(c) and (d). The initial compliance demonstration includes the calculations according to 40 CFR 63.3151 and supporting documentation showing that during the initial compliance period, the mass average organic HAP content for each group of materials was equal to or less than the applicable

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

emission limits in 40 CFR 63.3090(c) and (d) or 40 CFR 63.3091(c) and (d) [40 CFR 63.3150].

- (2) The permittee must separately calculate the mass average organic HAP content of the materials used during the initial compliance period for each group of materials for which an emission limit is established in 40 CFR 63.3090(c) and (d) or 40 CFR 63.3091(c) and (d). If every individual material used within a group of materials meets the emission limit for that group of materials, the permittee may demonstrate compliance with that emission limit by documenting the name and the organic HAP content of each material used during the initial compliance period. If any individual material used within a group of materials exceeds the emission limit for that group of materials, the permittee must determine the mass average organic HAP content according to the procedures of paragraph (d) of 40 CFR 63.3151 [40 CFR 63.3151].
- i. *Determine the mass fraction of organic HAP for each material used.* The permittee must determine the mass fraction of organic HAP for each material used during the compliance period by using one of the options in paragraphs (a)(1) through (5) of 40 CFR 63.3151 [40 CFR 63.3151(a)].
- A. *Method 311 (appendix A to 40 CFR part 63).* The permittee may use Method 311 for determining the mass fraction of organic HAP. Use the procedures specified in paragraphs (a)(1)(i) and (ii) of 40 CFR 63.3151 when performing a Method 311 test.
- 1) Count each organic HAP in table 5 to 40 CFR 63 subpart IIII that is present at 0.1 percent by mass or more and at 1.0 percent by mass or more for other compounds. For example, if toluene (not listed in table 5 to 40 CFR 63 subpart IIII) is measured to be 0.5 percent of the material by mass, the permittee does not have to count it. Express the mass fraction of each organic HAP the permittee counts as a value truncated to four places after the decimal point (e.g., 0.3791).
 - 2) Calculate the total mass fraction of organic HAP in the test material by adding up the individual organic HAP mass fractions and truncating the result to three places after the decimal point (e.g., 0.7638 truncates to 0.763).
- B. *EPA Method 24 (appendix A-7 to 40 CFR part 60).* For coatings, the permittee may use EPA Method 24 to determine the mass fraction of nonaqueous volatile matter and use that value as a substitute for mass fraction of organic HAP. As an alternative to using EPA Method 24, the permittee may use ASTM D2369-10 (Reapproved 2015)^e (incorporated by reference, *see* 40 CFR 63.14).
- C. *Alternative method.* The permittee may use an alternative test method for determining the mass fraction of organic HAP once the Administrator has approved it. The permittee must follow the procedure in 40 CFR 63.7(f) to submit an alternative test method for approval.
- D. *Information from the supplier or manufacturer of the material.* The permittee may rely on information other than that generated by the test methods specified in paragraphs (a)(1) through (3) of 40 CFR 63.3151, such as manufacturer's formulation data, if it represents each organic HAP in table 5 to 40 CFR 63 subpart IIII that is present at 0.1 percent by mass or more and at 1.0 percent by mass or more for other compounds. For example, if toluene (not listed in table

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

5 of 40 CFR 63 subpart IIII) is 0.5 percent of the material by mass, the permittee does not have to count it. If there is a disagreement between such information and results of a test conducted according to paragraphs (a)(1) through (3) of 40 CFR 63.3151, then the test method results will take precedence, unless after consultation, the facility demonstrates to the satisfaction of the enforcement authority that the facility's data are correct.

- E. *Solvent blends*. Solvent blends may be listed as single components for some materials in data provided by manufacturers or suppliers. Solvent blends may contain organic HAP which must be counted toward the total organic HAP mass fraction of the materials. When neither test data nor manufacturer's data for solvent blends are available, the permittee may use the default values for the mass fraction of organic HAP in the solvent blends listed in Table 3 or 4 to 40 CFR 63 subpart IIII. If the permittee uses the tables, the permittee must use the values in Table 3 for all solvent blends that match Table 3 entries, and the permittee may only use Table 4 if the solvent blends in the materials the permittee uses do not match any of the solvent blends in Table 3 and the permittee only knows whether the blend is aliphatic or aromatic. However, if the results of a Method 311 test indicate higher values than those listed on Table 3 or 4 to 40 CFR 63 subpart IIII, the Method 311 results will take precedence, unless after consultation, the facility demonstrates to the satisfaction of the enforcement authority that the data from Table 3 or 4 are correct.
- ii. *Determine the density of each material used*. Determine the density of each material used during the compliance period from test results using ASTM D1475-13 (incorporated by reference, *see* 40 CFR 63.14) or for powder coatings, test method A or test method B of ASTM D5965-02 (Reapproved 2013) (incorporated by reference, *see* 40 CFR 63.14), or information from the supplier or manufacturer of the material. If there is disagreement between ASTM D1475-13 test results or ASTM D5965-02 (Reapproved 2013), test method A or test method B test results and the supplier's or manufacturer's information, the test results will take precedence unless after consultation, the facility demonstrates to the satisfaction of the enforcement authority that the facility's data are correct [40 CFR 63.3151(b)].
- iii. *Determine the volume of each material used*. Determine the volume (liters) of each material used during each month by measurement or usage records [40 CFR 63.3151(c)].
- iv. *Determine the mass average organic HAP content for each group of materials*. Determine the mass average organic HAP content of the materials used during the initial compliance period for each group of materials for which an emission limit is established in 40 CFR 63.3090(c) and (d) or 40 CFR 63.3091(c) and (d), using Equations 1 and 2 of 40 CFR 63.3151 [40 CFR 63.3151(d)].
- A. Calculate the mass average organic HAP content of adhesive and sealer materials other than components of the glass bonding system used in the initial compliance period using Equation 1 of 40 CFR 63.3151:

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

$$C_{avg,as} = \frac{\sum_{j=1}^r (Vol_{as,j})(D_{as,j})(W_{as,j})}{\sum_{j=1}^r (Vol_{as,j})(D_{as,j})} \quad (\text{Eq. 1})$$

Where:

$C_{avg,as}$ = Mass average organic HAP content of adhesives and sealer materials used, kg/kg.

$Vol_{as,j}$ = Volume of adhesive or sealer material, j, used, liters.

$D_{as,j}$ = Density of adhesive or sealer material, j, used, kg per liter.

$W_{as,j}$ = Mass fraction of organic HAP in adhesive or sealer material, j, kg/kg.

r = Number of adhesive and sealer materials used.

- B. Calculate the mass average organic HAP content of deadener materials used in the initial compliance period using Equation 2 of 40 CFR 63.3151:

$$C_{avg,d} = \frac{\sum_{m=1}^s (Vol_{d,m})(D_{d,m})(W_{d,m})}{\sum_{m=1}^s (Vol_{d,m})(D_{d,m})} \quad (\text{Eq. 2})$$

Where:

$C_{avg,d}$ = Mass average organic HAP content of deadener material used, kg/kg.

$Vol_{d,m}$ = Volume of deadener material, m, used, liters.

$D_{d,m}$ = Density of deadener material, m, used, kg per liter.

$W_{d,m}$ = Mass fraction of organic HAP in deadener material, m, kg/kg.

s = Number of deadener materials used.

- v. *Compliance demonstration.* The mass average organic HAP content for the compliance period must be less than or equal to the applicable emission limit in 40 CFR 63.3090(c) and (d) or 40 CFR 63.3091(c) and (d). The permittee must keep all records as required by 40 CFR 63.3130 and 63.3131. As part of the Notification of Compliance Status required by 40 CFR 63.3110, the permittee must submit a statement that the coating operations were in compliance with the emission limitations during the initial compliance period because the mass average organic HAP content was less than or equal to the applicable emission limits in 40 CFR 63.3090(c) and (d) or 40 CFR 63.3091(c) and (d), determined according to 40 CFR 63.3151 [40 CFR 63.3151(e)].
- (3) To demonstrate continuous compliance, the mass average organic HAP content for each compliance period, determined according to 40 CFR 63.3151(a) through (d), must be less than or equal to the applicable emission limit in 40 CFR 63.3090(c) and (d) or 40 CFR 63.3091(c) and (d). A compliance period consists of 1 month. Each month after the end of the initial compliance period described in 40 CFR 63.3150 is a compliance period consisting of that month [40 CFR 63.3152(a)].
 - (4) If the mass average organic HAP emission content for any compliance period exceeds the applicable emission limit in 40 CFR 63.3090(c) and (d) or 40 CFR 63.3091(c) and (d), this is a deviation from the emission limitations for that compliance period and

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

must be reported as specified in 40 CFR 63.3110(c)(6) and 63.3120(a)(5) [40 CFR 63.3152(b)].

- f. *(Existing affected source)* For coatings and thinners used in coating operations added to the affected source pursuant to 40 CFR 63.3082(c) [40 CFR 63.3091(e)]:
 - (1) Adhesive and sealer materials that are not components of glass bonding systems are subject to and must be included in the demonstration of compliance for paragraph (c) of 40 CFR 63.3091.
 - (2) Deadener materials are subject to and must be included in the demonstration of compliance for paragraph (d) of 40 CFR 63.3091.
 - (3) All other coatings and thinners are subject to and must be included in the demonstration of compliance for paragraphs (a) or (b) of 40 CFR 63.3091.
- g. If the permittee's electrodeposition primer system meets the requirements of either paragraph (a) or (b) of 40 CFR 63.3092, the permittee may choose to comply with the emission limits of 40 CFR 63.3090(b) or 40 CFR 63.3091(b) instead of the emission limits of 40 CFR 63.3090(a) or 40 CFR 63.3091(a) [40 CFR 63.3092].
 - (1) Each individual material added to the electrodeposition primer system contains no more than [40 CFR 63.3092(a)]:
 - i. 1.0 percent by weight of any organic HAP; and
 - (2) Emissions from all bake ovens used to cure electrodeposition primers must be captured and ducted to a control device having a destruction or removal efficiency of at least 95 percent [40 CFR 63.3092(b)].
- h. The permittee shall be in compliance with the emission limitations in 40 CFR 63.3090 and 63.3091 at all times, as determined on a monthly basis [40 CFR 63.3100(a)].

3. Testing Requirements:

Compliance Demonstration Method for 40 CFR 63.3091(a) [Combined Electrodeposition Primer, Primer-Surfacer, Topcoat, Final Repair, Glass Bonding Primer, and Glass Bonding Adhesive]:

- a. *Determine the volume fraction of coating solids for each coating.* The permittee must determine the volume fraction of coating solids (liter of coating solids per liter of coating) for each coating used during the compliance period by a test or by information provided by the supplier or the manufacturer of the material, as specified in paragraphs (f)(1) and (2) of 40 CFR 63.3161. For electrodeposition primer operations, the volume fraction of solids must be determined for each material added to the tank or system during each month. If test results obtained according to paragraph (f)(1) of 40 CFR 63.3161 do not agree with the information obtained under paragraph (f)(2) of 40 CFR 63.3161, the test results will take precedence unless, after consultation, the facility demonstrates to the satisfaction of the enforcement authority that the facility's data are correct [40 CFR 63.3161(f)].
 - (1) *ASTM Method D2697-03 (Reapproved 2014) or ASTM Method D6093-97 (Reapproved 2016).* The permittee may use ASTM D2697-03 (Reapproved 2014) (incorporated by reference, see 40 CFR 63.14), or ASTM D6093-97 (Reapproved 2016) (incorporated

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- by reference, *see* 40 CFR 63.14), to determine the volume fraction of coating solids for each coating. Divide the nonvolatile volume percent obtained with the methods by 100 to calculate volume fraction of coating solids.
- (2) *Information from the supplier or manufacturer of the material.* The permittee may obtain the volume fraction of coating solids for each coating from the supplier or manufacturer.
- b. *Determine the transfer efficiency for each coating.* The permittee must determine the transfer efficiency for each primer-surfacer and topcoat coating, and for all coatings, except for deadener and for adhesive and sealer that are not components of glass bonding systems, used in coating operations added to the affected source pursuant to 40 CFR 63.3082(c) using ASTM Method D5066-91 (Reapproved 2017), “Standard Test Method for Determination of the Transfer Efficiency Under Production Conditions for Spray Application of Automotive Paints-Weight Basis” (incorporated by reference, *see* 40 CFR 63.14), or the guidelines presented in “Protocol for Determining the Daily Volatile Organic Compound Emission Rate of Automobile and Light-Duty Truck Primer-Surfacer and Topcoat,” EPA-453/R-08-002 (incorporated by reference, *see* 40 CFR 63.14). The permittee may conduct transfer efficiency testing on representative coatings and for representative spray booths as described in “Protocol for Determining the Daily Volatile Organic Compound Emission Rate of Automobile and Light-Duty Truck Primer Surfacer and Topcoat,” EPA-453/R-08-002 (incorporated by reference, *see* 40 CFR 63.14). The permittee may assume 100-percent transfer efficiency for electrodeposition primer coatings, glass bonding primers, and glass bonding adhesives. For final repair coatings, the permittee may assume 40 percent transfer efficiency for air atomized spray and 55 percent transfer efficiency for electrostatic spray and high volume, low pressure spray. For blackout, chip resistant edge primer, interior color, in-line repair, lower body anti-chip coatings, or underbody anti-chip coatings, the permittee may assume 40 percent transfer efficiency for air atomized spray, 55 percent transfer efficiency for electrostatic spray and high volume-low pressure spray, and 80 percent transfer efficiency for airless spray [40 CFR 63.3161(g)].
- c. The permittee must demonstrate continuous compliance with each operating limit required by 40 CFR 63.3093 that applies to the permittee, as specified in table 1 to 40 CFR 63 subpart IIII, and the permittee must conduct performance tests as specified in paragraph (c)(3) of 40 CFR 63.3163 [40 CFR 63.3163(c)].
- (1) If an operating parameter is out of the allowed range specified in Table 1 to 40 CFR 63 subpart IIII, this is a deviation from the operating limit that must be reported as specified in 40 CFR 63.3110(c)(6) and 63.3120(a)(6).
- (2) If an operating parameter deviates from the operating limit specified in Table 1 to 40 CFR 63 subpart IIII, then the permittee must assume that the emission capture system and add-on control device were achieving zero efficiency during the time period of the deviation except as provided in 40 CFR 63.3161(p).
- (3) Except for solvent recovery systems for which the permittee conducts liquid-liquid material balances according to 40 CFR 63.3161(k) for controlled coating operations, the permittee must conduct periodic performance tests of add-on controls and establish the operating limits required by 40 CFR 63.3093 within 5 years following the previous

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- performance test. The permittee must conduct the first periodic performance test before July 8, 2023, unless the permittee has already required to complete periodic performance tests as a requirement of renewing the facility's operating permit under 40 CFR part 70 or 40 CFR part 71 and have conducted a performance test on or after July 8, 2022. Thereafter the permittee must conduct a performance test no later than 5 years following the previous performance test. Operating limits must be confirmed or reestablished during each performance test. For any control device for which the permittee is using the catalytic oxidizer control option at 40 CFR 63.3167(b) and following the catalyst maintenance procedures in 40 CFR 63.3167(b)(6), the permittee is not required to conduct periodic control device performance testing as specified by this paragraph. For any control device for which instruments are used to continuously measure organic compound emissions, the permittee is not required to conduct periodic control device performance testing as specified by this paragraph. The requirements of this paragraph do not apply to measuring emission capture system efficiency.
- d. The permittee must conduct each applicable performance test required by 40 CFR 63.3160, 63.3163, and 63.3171 according to the requirements in 40 CFR 63.7(e)(1) and under the conditions in 40 CFR 63.3164 unless the permittee obtains a waiver of the performance test according to the provisions in 40 CFR 63.7(h) [40 CFR 63.3164(a)].
- (1) *Representative coating operation operating conditions.* The permittee must conduct the performance test under representative operating conditions for the coating operation. On and after January 5, 2021, operations during periods of startup, shutdown, or nonoperation do not constitute representative conditions for purposes of conducting a performance test. The owner or operator may not conduct performance tests during periods of malfunction. The permittee must record the process information that is necessary to document operating conditions during the test and explain why the conditions represent normal operation. Upon request, the permittee must make available to the Administrator such records as may be necessary to determine the conditions of performance tests.
- (2) *Representative emission capture system and add-on control device operating conditions.* The permittee must conduct the performance test when the emission capture system and add-on control device are operating at a representative flow rate, and the add-on control device is operating at a representative inlet concentration. The permittee must record information that is necessary to document emission capture system and add-on control device operating conditions during the test and explain why the conditions represent normal operation.
- e. The permittee must conduct each performance test of an emission capture system according to the requirements in 40 CFR 63.3165. The permittee must conduct each performance test of an add-on control device according to the requirements in 40 CFR 63.3166 [40 CFR 63.3164(b)].
- f. The permittee must use the procedures and test methods in 40 CFR 63.3165 to determine capture efficiency as part of the performance test required by 40 CFR 63.3160 and 63.3163. For purposes of 40 CFR 63 subpart IIII, a spray booth air seal is not considered a natural draft opening in a PTE or a temporary total enclosure provided the permittee demonstrates

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

that the direction of air movement across the interface between the spray booth air seal and the spray booth is into the spray booth. For purposes of 40 CFR 63 subpart IIII, a bake oven air seal is not considered a natural draft opening in a PTE or a temporary total enclosure provided the permittee demonstrates that the direction of air movement across the interface between the bake oven air seal and the bake oven is into the bake oven. The permittee may use lightweight strips of fabric or paper, or smoke tubes to make such demonstrations as part of showing that the permittee's capture system is a PTE or conducting a capture efficiency test using a temporary total enclosure. The permittee cannot count air flowing from a spray booth air seal into a spray booth as air flowing through a natural draft opening into a PTE or into a temporary total enclosure unless the permittee elects to treat that spray booth air seal as a natural draft opening. The permittee cannot count air flowing from a bake oven air seal into a bake oven as air flowing through a natural draft opening into a PTE or into a temporary total enclosure unless the permittee elects to treat that bake oven air seal as a natural draft opening [40 CFR 63.3165].

- (1) *Assuming 100 percent capture efficiency.* The permittee may assume the capture system efficiency is 100 percent if both of the conditions in paragraphs (a)(1) and (2) of 40 CFR 63.3165 are met [40 CFR 63.3165(a)]:
 - i. The capture system meets the criteria in Method 204 of appendix M to 40 CFR part 51 for a PTE and directs all the exhaust gases from the enclosure to an add-on control device.
 - ii. All coatings and thinners used in the coating operation are applied within the capture system, and coating solvent flash-off and coating curing and drying occurs within the capture system. For example, this criterion is not met if parts enter the open shop environment when being moved between a spray booth and a curing oven.
- (2) *Measuring capture efficiency.* If the capture system does not meet both of the criteria in paragraphs (a)(1) and (2) of 40 CFR 63.3165, then the permittee must use one of the five procedures described in paragraphs (c) through (g) of 40 CFR 63.3165 to measure capture efficiency. The capture efficiency measurements use TVH capture efficiency as a surrogate for organic HAP capture efficiency. For the protocols in paragraphs (c) and (d) of 40 CFR 63.3165, the capture efficiency measurement must consist of three test runs. Each test run must be at least 3 hours duration or the length of a production run, whichever is longer, up to 8 hours. For the purposes of this test, a production run means the time required for a single part to go from the beginning to the end of production, which includes surface preparation activities and drying or curing time [40 CFR 63.3165(b)].
- (3) *Liquid-to-uncaptured-gas protocol using a temporary total enclosure or building enclosure.* The liquid-to-uncaptured-gas protocol compares the mass of liquid TVH in materials used in the coating operation to the mass of TVH emissions not captured by the emission capture system. Use a temporary total enclosure or a building enclosure and the procedures in paragraphs (c)(1) through (6) of 40 CFR 63.3165 to measure emission capture system efficiency using the liquid-to-uncaptured-gas protocol [40 CFR 63.3165(c)].
 - i. Either use a building enclosure or construct an enclosure around the coating operation where coatings and thinners are applied, and all areas where emissions from these applied coatings and thinners subsequently occur, such as flash-off,

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

curing, and drying areas. The areas of the coating operation where capture devices collect emissions for routing to an add-on control device, such as the entrance and exit areas of an oven or spray booth, must also be inside the enclosure. The enclosure must meet the applicable definition of a temporary total enclosure or building enclosure in Method 204 of appendix M to 40 CFR part 51.

- ii. Use Method 204A or F of appendix M to 40 CFR part 51 to determine the mass fraction of TVH liquid input from each coating and thinner used in the coating operation during each capture efficiency test run. To make the determination, substitute TVH for each occurrence of the term volatile organic compounds (VOC) in the methods.
- iii. Use Equation 1 of 40 CFR 63.3165 to calculate the total mass of TVH liquid input from all the coatings and thinners used in the coating operation during each capture efficiency test run.

$$TVH_{used} = \sum_{i=1}^n (TVH_i)(Vol_i)(D_i) \quad (Eq. 1)$$

Where:

TVH_i = Mass fraction of TVH in coating or thinner, i, used in the coating operation during the capture efficiency test run, kg TVH per kg material.

Vol_i = Total volume of coating or thinner, i, used in the coating operation during the capture efficiency test run, liters.

D_i = Density of coating or thinner, i, kg material per liter material.

n = Number of different coatings and thinners used in the coating operation during the capture efficiency test run.

- iv. Use Method 204D or E of appendix M to 40 CFR part 51 to measure the total mass, kg, of TVH emissions that are not captured by the emission capture system; they are measured as they exit the temporary total enclosure or building enclosure during each capture efficiency test run. To make the measurement, substitute TVH for each occurrence of the term VOC in the methods.
 - A. Use Method 204D if the enclosure is a temporary total enclosure.
 - B. Use Method 204E if the enclosure is a building enclosure. During the capture efficiency measurement, all organic compound emitting operations inside the building enclosure, other than the coating operation for which capture efficiency is being determined, must be shut down, but all fans and blowers must be operating normally.
- v. For each capture efficiency test run, determine the percent capture efficiency of the emission capture system using Equation 2 of 40 CFR 63.3165:

$$CE = \frac{(TVH_{used} - TVH_{uncaptured})}{TVH_{used}} \times 100 \quad (Eq. 2)$$

Where:

CE = Capture efficiency of the emission capture system vented to the add-on control device, percent.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

TVH_{used} = Total mass of TVH liquid input used in the coating operation during the capture efficiency test run, kg.

TVH_{uncaptured} = Total mass of TVH that is not captured by the emission capture system and that exits from the temporary total enclosure or building enclosure during the capture efficiency test run, kg.

- vi. Determine the capture efficiency of the emission capture system as the average of the capture efficiencies measured in the three test runs.
- (4) *Gas-to-gas protocol using a temporary total enclosure or a building enclosure.* The gas-to-gas protocol compares the mass of TVH emissions captured by the emission capture system to the mass of TVH emissions not captured. Use a temporary total enclosure or a building enclosure and the procedures in paragraphs (d)(1) through (5) of 40 CFR 63.3165 to measure emission capture system efficiency using the gas-to-gas protocol [40 CFR 63.3165(d)].
- i. Either use a building enclosure or construct an enclosure around the coating operation where coatings and thinners are applied, and all areas where emissions from these applied coatings and thinners subsequently occur, such as flash-off, curing, and drying areas. The areas of the coating operation where capture devices collect emissions generated by the coating operation for routing to an add-on control device, such as the entrance and exit areas of an oven or a spray booth, must also be inside the enclosure. The enclosure must meet the applicable definition of a temporary total enclosure or building enclosure in Method 204 of appendix M to 40 CFR part 51.
 - ii. Use Method 204B or C of appendix M to 40 CFR part 51 to measure the total mass, kg, of TVH emissions captured by the emission capture system during each capture efficiency test run as measured at the inlet to the add-on control device. To make the measurement, substitute TVH for each occurrence of the term VOC in the methods.
 - A. The sampling points for the Method 204B or C measurement must be upstream from the add-on control device and must represent total emissions routed from the capture system and entering the add-on control device.
 - B. If multiple emission streams from the capture system enter the add-on control device without a single common duct, then the emissions entering the add-on control device must be simultaneously or sequentially measured in each duct, and the total emissions entering the add-on control device must be determined.
 - iii. Use Method 204D or E of appendix M to 40 CFR part 51 to measure the total mass, kg, of TVH emissions that are not captured by the emission capture system; they are measured as they exit the temporary total enclosure or building enclosure during each capture efficiency test run. To make the measurement, substitute TVH for each occurrence of the term VOC in the methods.
 - A. Use Method 204D if the enclosure is a temporary total enclosure.
 - B. Use Method 204E if the enclosure is a building enclosure. During the capture efficiency measurement, all organic compound emitting operations inside the building enclosure, other than the coating operation for which capture efficiency is being determined, must be shut down, but all fans and blowers must be operating normally.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- iv. For each capture efficiency test run, determine the percent capture efficiency of the emission capture system using Equation 3 of 40 CFR 63.3165:

$$CE = \frac{TVH_{\text{captured}}}{(TVH_{\text{captured}} + TVH_{\text{uncaptured}})} \times 100 \quad (\text{Eq. 3})$$

Where:

CE = Capture efficiency of the emission capture system vented to the add-on control device, percent.

TVH_{captured} = Total mass of TVH captured by the emission capture system as measured at the inlet to the add-on control device during the emission capture efficiency test run, kg.

TVH_{uncaptured} = Total mass of TVH that is not captured by the emission capture system and that exits from the temporary total enclosure or building enclosure during the capture efficiency test run, kg.

- v. Determine the capture efficiency of the emission capture system as the average of the capture efficiencies measured in the three test runs.
- (5) *Panel testing to determine the capture efficiency of flash-off or bake oven emissions.* The permittee may conduct panel testing to determine the capture efficiency of flash-off or bake oven emissions using ASTM Method D5087-02, “Standard Test Method for Determining Amount of Volatile Organic Compound (VOC) Released from Solventborne Automotive Coatings and Available for Removal in a VOC Control Device (Abatement)” (incorporated by reference, *see* 40 CFR 63.14), ASTM Method D6266-00a (2017), “Test Method for Determining the Amount of Volatile Organic Compound (VOC) Released from Waterborne Automotive Coatings and Available for Removal in a VOC Control Device (Abatement)” (incorporated by reference, *see* 40 CFR 63.14), or the guidelines presented in “Protocol for Determining the Daily Volatile Organic Compound Emission Rate of Automobile and Light-Duty Truck Primer-Surfacer and Topcoat,” EPA-453/R-08-002 (incorporated by reference, *see* 40 CFR 63.14). The permittee may conduct panel testing on representative coatings as described in “Protocol for Determining the Daily Volatile Organic Compound Emission Rate of Automobile and Light-Duty Truck Primer-Surfacer and Topcoat,” EPA-453/R-8-002 (incorporated by reference, *see* 40 CFR 63.14). [40 CFR 63.3165(e)].
- i. Calculate the volume of coating solids deposited per volume of coating used for coating, i, or the composite volume of coating solids deposited per volume of coating used for the group of coatings including coating, i, used during the month in the spray booth(s) preceding the flash-off area or bake oven for which the panel test is conducted using Equation 5 of 40 CFR 63.3165:

$$V_{\text{dep},i} = (V_{s,i})(TE_{c,i}) \quad (\text{Eq. 5})$$

Where:

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

$V_{sdep, i}$ = Volume of coating solids deposited per volume of coating used for coating, i, or composite volume of coating solids deposited per volume of coating used for the group of coatings including coating, i, in the spray booth(s) preceding the flash-off area or bake oven for which the panel test is conducted, liter of coating solids deposited per liter of coating used.

$V_{s, i}$ = Volume fraction of coating solids for coating, i, or average volume fraction of coating solids for the group of coatings including coating, i, liter coating solids per liter coating, determined according to 40 CFR 63.3161(f).

$TE_{c, i}$ = Transfer efficiency of coating, i, or average transfer efficiency for the group of coatings including coating, i, in the spray booth(s) for the flash-off area or bake oven for which the panel test is conducted determined according to 40 CFR 63.3161(g), expressed as a decimal, for example 60 percent must be expressed as 0.60. (Transfer efficiency also may be determined by testing representative coatings. The same coating groupings may be appropriate for both transfer efficiency testing and panel testing. In this case, all of the coatings in a panel test grouping would have the same transfer efficiency.)

- ii. Calculate the mass of VOC per volume of coating for coating, i, or the composite mass of VOC per volume of coating for the group of coatings including coating, i, used during the month in the spray booth(s) preceding the flash-off area or bake oven for which the panel test is conducted, kg, using Equation 6 of 40 CFR 63.3165:

$$VOC_i = (D_{c, i}) (W_{voc, i}) \quad (Eq. 6)$$

Where:

VOC_i = Mass of VOC per volume of coating for coating, i, or composite mass of VOC per volume of coating for the group of coatings including coating, i, used during the month in the spray booth(s) preceding the flash-off area or bake oven for which the panel test is conducted, kg VOC per liter coating.

$D_{c, i}$ = Density of coating, i, or average density of the group of coatings, including coating, i, kg coating per liter coating, density determined according to 40 CFR 63.3151(b).

$W_{voc, i}$ = Mass fraction of VOC in coating, i, or average mass fraction of VOC for the group of coatings, including coating, i, kg VOC per kg coating, determined by EPA Method 24 (appendix A-7 to 40 CFR part 60) or the guidelines for combining analytical VOC content and formulation solvent content presented in Section 9 of "Protocol for Determining the Daily Volatile Organic Compound Emission Rate of Automobile and Light-Duty Truck Primer-Surfacer and Topcoat," EPA-453/R-08-002 (incorporated by reference, *see* 40 CFR 63.14).

- iii. As an alternative, the permittee may choose to express the results of their panel tests in units of mass of VOC per mass of coating solids deposited and convert such results to a percent using Equation 7 of 40 CFR 63.3165. If the permittee panel tests

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

representative coatings, then the permittee may convert the panel test result for each representative coating either to a unique percent capture efficiency for each coating grouped with that representative coating by using coating specific values for the mass of coating solids deposited per mass of coating used, mass fraction VOC, transfer efficiency, and mass fraction solids in Equations 7 and 8 of 40 CFR 63.3165; or to a composite percent capture efficiency for the group of coatings by using composite values for the group of coatings for the mass of coating solids deposited per mass of coating used and average values for the mass of VOC per volume of coating, average values for the group of coatings for mass fraction VOC, transfer efficiency, and mass fraction solids in Equations 7 and 8 of 40 CFR 63.3165. If the permittee panel tests each coating, then the permittee must convert the panel test result for each coating to a unique percent capture efficiency for that coating by using coating specific values for the mass of coating solids deposited per mass of coating used, mass fraction VOC, transfer efficiency, and mass fraction solids in Equations 7 and 8 of 40 CFR 63.3165. Panel test results expressed in units of mass of VOC per mass of coating solids deposited must be converted to percent capture efficiency using Equation 7 of 40 CFR 63.3165:

$$CE_i = (P_{m,i})(W_{sdep,i})(100)/(W_{voc,i}) \quad (Eq. 7)$$

Where:

CE_i = Capture efficiency for coating, i, or for the group of coatings including coating, i, for the flash-off area or bake oven for which the panel test is conducted, percent.

$P_{m,i}$ = Panel test result for coating, i, or for the coating representing coating, i, in the panel test, kg of VOC per kg of coating solids deposited.

$W_{sdep,i}$ = Mass of coating solids deposited per mass of coating used for coating, i, or composite mass of coating solids deposited per mass of coating used for the group of coatings, including coating, i, in the spray booth(s) preceding the flash-off area or bake oven for which the panel test is conducted, kg of solids deposited per kg of coating used, from Equation 8 of 40 CFR 63.3165.

$W_{voc,i}$ = Mass fraction of VOC in coating, i, or average mass fraction of VOC for the group of coatings, including coating, i, kg VOC per kg coating, determined by EPA Method 24 (appendix A-7 to 40 CFR part 60) or the guidelines for combining analytical VOC content and formulation solvent content presented in Section 9 of "Protocol for Determining the Daily Volatile Organic Compound Emission Rate of Automobile and Light-Duty Truck Primer-Surfacer and Topcoat," EPA-453/R-08-002 (incorporated by reference, *see* 40 CFR 63.14).

- iv. Calculate the mass of coating solids deposited per mass of coating used for each coating or the composite mass of coating solids deposited per mass of coating used for each group of coatings used during the month in the spray booth(s) preceding the flash-off area or bake oven for which the panel test is conducted using Equation 8 of 40 CFR 63.3165:

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

$$W_{\text{dep},i} = (W_{s,i})(TE_{c,i}) \quad (\text{Eq. 8})$$

Where:

$W_{\text{dep},i}$ = Mass of coating solids deposited per mass of coating used for coating, i , or composite mass of coating solids deposited per mass of coating used for the group of coatings including coating, i , in the spray booth(s) preceding the flash-off area or bake oven for which the panel test is conducted, kg coating solids deposited per kg coating used.

$W_{s,i}$ = Mass fraction of coating solids for coating, i , or average mass fraction of coating solids for the group of coatings including coating, i , kg coating solids per kg coating, determined by EPA Method 24 (appendix A-7 to 40 CFR part 60) or the guidelines for combining analytical VOC content and formulation solvent content presented in “Protocol for Determining the Daily Volatile Organic Compound Emission Rate of Automobile and Light-Duty Truck Primer-Surfacer and Topcoat,” EPA-453/R-08-002 (incorporated by reference, *see* 40 CFR 63.14).

$TE_{c,i}$ = Transfer efficiency of coating, i , or average transfer efficiency for the group of coatings including coating, i , in the spray booth(s) for the flash-off area or bake oven for which the panel test is conducted determined according to 40 CFR 63.3161(g), expressed as a decimal, for example 60 percent must be expressed as 0.60. (Transfer efficiency also may be determined by testing representative coatings. The same coating groupings may be appropriate used for both transfer efficiency testing and panel testing. In this case, all of the coatings in a panel test grouping would have the same transfer efficiency.)

(6) *Alternative capture efficiency procedure.* As an alternative to the procedures specified in paragraphs (c) through (e) and (g) of 40 CFR 63.3165, the permittee may determine capture efficiency using any other capture efficiency protocol and test methods that satisfy the criteria of either the DQO or LCL approach as described in appendix A to subpart KK of 40 CFR Part 63 [40 CFR 63.3165(f)].

(7) *Panel testing to determine the capture efficiency of spray booth emissions from solvent-borne coatings.* The permittee may conduct panel testing to determine the capture efficiency of spray booth emissions from solvent-borne coatings using the procedure in appendix A to 40 CFR 63 subpart IIII [40 CFR 63.3165(g)].

g. The permittee must use the procedures and test methods in 40 CFR 63.3166 to determine the add-on control device emission destruction or removal efficiency as part of the performance test required by 40 CFR 63.3160, 40 CFR 63.3163, or 40 CFR 63.3171. The permittee must conduct three test runs as specified in 40 CFR 63.7(e)(3), and each test run must last at least 1 hour [40 CFR 63.3166].

(1) For all types of add-on control devices, use the test methods specified in paragraphs (a)(1) through (5) of 40 CFR 63.3166 [40 CFR 63.3166(a)].

i. Use EPA Method 1 or 1A of appendix A-1 to 40 CFR part 60, as appropriate, to select sampling sites and velocity traverse points.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- ii. Use EPA Method 2, 2A, 2C, 2D, or 2F of appendix A-1, or 2G of appendix A-2 to 40 CFR part 60, as appropriate, to measure gas volumetric flow rate.
 - iii. Use EPA Method 3, 3A, or 3B of appendix A-2 to 40 CFR part 60, as appropriate, for gas analysis to determine dry molecular weight. The ANSI/ASME PTC 19.10-1981 (incorporated by reference, *see* 40 CFR 63.14), may be used as an alternative to EPA Method 3B.
 - iv. Use EPA Method 4 of appendix A-3 to 40 CFR part 60 to determine stack gas moisture.
 - v. Methods for determining gas volumetric flow rate, dry molecular weight, and stack gas moisture must be performed, as applicable, during each test run.
- (2) Measure total gaseous organic mass emissions as carbon at the inlet and outlet of the add-on control device simultaneously, using either EPA Method 25 or 25A of appendix A-7 to 40 CFR part 60, as specified in paragraphs (b)(1) through (4) of 40 CFR 63.3166. The permittee must use the same method for both the inlet and outlet measurements [40 CFR 63.3166(b)].
- i. Use Method 25 if the add-on control device is an oxidizer and the permittee expects the total gaseous organic concentration as carbon to be more than 50 parts per million by volume (ppmv) at the control device outlet.
 - ii. Use Method 25A if the add-on control device is an oxidizer and the permittee expects the total gaseous organic concentration as carbon to be 50 ppmv or less at the control device outlet.
 - iii. Use Method 25A if the add-on control device is not an oxidizer.
 - iv. The permittee may use EPA Method 18 of appendix A-6 to 40 CFR part 60 to subtract methane emissions from measured total gaseous organic mass emissions as carbon.
- (3) If two or more add-on control devices are used for the same emission stream, then the permittee must measure emissions at the outlet of each device. For example, if one add-on control device is a concentrator with an outlet for the high-volume, dilute stream that has been treated by the concentrator, and a second add-on control device is an oxidizer with an outlet for the low-volume, concentrated stream that is treated with the oxidizer, the permittee must measure emissions at the outlet of the oxidizer and the high volume dilute stream outlet of the concentrator [40 CFR 63.3166(c)].
- (4) For each test run, determine the total gaseous organic emissions mass flow rates for the inlet and the outlet of the add-on control device, using Equation 1 of 40 CFR 63.3166. If there is more than one inlet or outlet to the add-on control device, the permittee must calculate the total gaseous organic mass flow rate using Equation 1 of 40 CFR 63.3166 for each inlet and each outlet and then total all of the inlet emissions and total all of the outlet emissions [40 CFR 63.3166(d)].

$$M_f - Q_{sd} C_c (12)(0.0416)(10^{-6}) \quad (\text{Eq. 1})$$

Where:

M_f = Total gaseous organic emissions mass flow rate, kg per hour (kg/h).

C_c = Concentration of organic compounds as carbon in the vent gas, as determined by Method 25 or Method 25A, ppmv, dry basis.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Q_{sd} = Volumetric flow rate of gases entering or exiting the add-on control device, as determined by Method 2, 2A, 2C, 2D, 2F, or 2G, dry standard cubic meters per hour (dscm/h).

0.0416 = Conversion factor for molar volume, kg-moles per cubic meter (mol/m^3) (@ 293 Kelvin (K) and 760 millimeters of mercury (mmHg)).

- (5) For each test run, determine the add-on control device organic emissions destruction or removal efficiency using Equation 2 of 40 CFR 63.3166 [40 CFR 63.3166(e)]:

$$DRE = \frac{M_{fi} - M_{fo}}{M_{fi}} (100) \quad (\text{Eq. 2})$$

Where:

DRE = Organic emissions destruction or removal efficiency of the add-on control device, percent.

M_{fi} = Total gaseous organic emissions mass flow rate at the inlet(s) to the add-on control device, using Equation 1 of 40 CFR 63.3166, kg/h.

M_{fo} = Total gaseous organic emissions mass flow rate at the outlet(s) of the add-on control device, using Equation 1 of 40 CFR 63.3166, kg/h.

- (6) Determine the emission destruction or removal efficiency of the add-on control device as the average of the efficiencies determined in the three test runs and calculated in Equation 2 of 40 CFR 63.3166 [40 CFR 63.3166(f)].
- h. During the performance tests required by 40 CFR 63.3160, 63.3163, and 63.3171 (and described in 40 CFR 63.3164 and 63.3166), the permittee must establish the operating limits required by 40 CFR 63.3093 according to 40 CFR 63.3167, unless the permittee has received approval for alternative monitoring and operating limits under 40 CFR 63.8(f) as specified in 40 CFR 63.3093 [40 CFR 63.3167].
- (1) *Thermal oxidizers*. If the permittee's add-on control device is a thermal oxidizer, establish the operating limit according to paragraphs (a)(1) through (3) of 40 CFR 63.3167 [40 CFR 63.3167(a)].
- During the performance test, the permittee must monitor and record the combustion temperature at least once every 15 minutes during each of the three test runs. The permittee must monitor the temperature in the firebox of the thermal oxidizer or immediately downstream of the firebox before any substantial heat exchange occurs.
 - Use all valid data collected during the performance test to calculate and record the average combustion temperature maintained during the performance test. This average combustion temperature is the minimum 3-hour average operating limit for the permittee's thermal oxidizer.
 - As an alternative, if the latest operating permit issued before April 26, 2007, for the thermal oxidizer at the permittee's facility contains recordkeeping and reporting requirements for the combustion temperature that are consistent with the requirements for thermal oxidizers in 40 CFR 60.395(c), then the permittee may set the minimum operating limit for the combustion temperature for each such thermal oxidizer at the affected source at 28 degrees Celsius (50 degrees Fahrenheit) below

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

the average combustion temperature during the performance test of that thermal oxidizer. If the permittee does not have an operating permit for the thermal oxidizer at the facility and the latest construction permit issued before April 26, 2007, for the thermal oxidizer at the facility contains recordkeeping and reporting requirements for the combustion temperature that are consistent with the requirements for thermal oxidizers in 40 CFR 60.395(c), then the permittee may set the minimum operating limit for the combustion temperature for each such thermal oxidizer at the affected source at 28 degrees Celsius (50 degrees Fahrenheit) below the average combustion temperature during the performance test of that thermal oxidizer. If the permittee uses 28 degrees Celsius (50 degrees Fahrenheit) below the combustion temperature maintained during the performance test as the minimum operating limit for a thermal oxidizer, then the permittee must keep the combustion temperature set point on that thermal oxidizer no lower than 14 degrees Celsius (25 degrees Fahrenheit) below the lower of that set point during the performance test for that thermal oxidizer and the average combustion temperature maintained during the performance test for that thermal oxidizer.

- (2) *Concentrators*. If the permittee's add-on control device includes a concentrator, the permittee must establish operating limits for the concentrator according to paragraphs (e)(1) and (2) of 40 CFR 63.3167 [40 CFR 63.3167(e)].
 - i. During the performance test, the permittee must monitor and record the desorption gas inlet temperature at least once every 15 minutes during each of the three runs of the performance test.
 - ii. Use all valid data collected during the performance test to calculate and record the average desorption gas inlet temperature. The minimum operating limit for the concentrator is 8 degrees Celsius (15 degrees Fahrenheit) below the average desorption gas inlet temperature maintained during the performance test for that concentrator. The permittee must keep the set point for the desorption gas inlet temperature no lower than 6 degrees Celsius (10 degrees Fahrenheit) below the lower of that set point during the performance test for that concentrator and the average desorption gas inlet temperature maintained during the performance test for that concentrator.
- (3) *Emission capture systems*. For each capture device that is not part of a PTE that meets the criteria of 40 CFR 63.3165(a) and that is not capturing emissions from a downdraft spray booth or from a flash-off area or bake oven associated with a downdraft spray booth, establish an operating limit for either the gas volumetric flow rate or duct static pressure, as specified in paragraphs (f)(1) and (2) of 40 CFR 63.3167. The operating limit for a PTE is specified in Table 1 to 40 CFR 63 subpart IIII [40 CFR 63.3167(f)].
 - i. During the capture efficiency determination required by 40 CFR 63.3160 and 63.3163 and described in 40 CFR 63.3164 and 63.3165, the permittee must monitor and record either the gas volumetric flow rate or the duct static pressure for each separate capture device in the permittee's emission capture system at least once every 15 minutes during each of the three test runs at a point in the duct between the capture device and the add-on control device inlet.
 - ii. Calculate and record the average gas volumetric flow rate or duct static pressure for the three test runs for each capture device, using all valid data. This average gas

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

volumetric flow rate or duct static pressure is the minimum operating limit for that specific capture device.

Compliance Demonstration Method for 40 CFR 63.3090(b) and 63.3091(b) [Combined Primer-Surfacer, Topcoat, Final Repair, Glass Bonding Primer, and Glass Bonding Adhesive and Separate Electrodeposition Primer]:

- a. *Capture of electrodeposition bake oven emissions.* The permittee must show that the electrodeposition bake oven meets the criteria in sections 5.3 through 5.5 of Method 204 of appendix M to 40 CFR part 51 and directs all of the exhaust gases from the bake oven to an add-on control device. For purposes of this showing, an electrodeposition bake oven air seal is not considered a natural draft opening provided the permittee demonstrate that the direction of air movement across the interface between the bake oven air seal and the bake oven is into the bake oven. The permittee may use lightweight strips of fabric or paper, or smoke tubes to make such demonstrations. The permittee cannot count air flowing from an electrodeposition bake oven air seal into an electrodeposition bake oven as air flowing through a natural draft opening unless the permittee elects to treat that electrodeposition bake oven air seal as a natural draft opening [40 CFR 63.3171(f)].
- b. *Control of electrodeposition bake oven emissions.* Determine the efficiency of each control device on each electrodeposition bake oven using the procedures in 40 CFR 63.3164 and 63.3166 [40 CFR 63.3171(g)].

4. Specific Monitoring Requirements:

See Subsection 2. Emission Limitations Compliance Demonstration Methods.

5. Specific Recordkeeping Requirements:

- a. Copies of the current work practice plans developed in accordance with paragraphs (b) and (c) of 40 CFR 63.3094, as well as plans developed within the preceding 5 years must be available on-site for inspection and copying by the permitting authority [40 CFR 63.3094(f)].
- b. The permittee must collect and keep records of the data and information specified in 40 CFR 63.3130. Failure to collect and keep these records is a deviation from the applicable standard.
 - (1) A copy of each notification and report that the permittee submitted to comply with 40 CFR 63 subpart IIII, and the documentation supporting each notification and report [40 CFR 63.3130(a)].
 - (2) A current copy of information provided by materials suppliers or manufacturers, such as manufacturer's formulation data, or test data used to determine the mass fraction of organic HAP, the density and the volume fraction of coating solids for each coating, the mass fraction of organic HAP and the density for each thinner, and the mass fraction of organic HAP for each cleaning material. If the permittee conducted testing to determine mass fraction of organic HAP, density, or volume fraction of coating solids, the permittee must keep a copy of the complete test report. If the permittee uses information provided to the permittee by the manufacturer or supplier of the material

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- that was based on testing, the permittee must keep the summary sheet of results provided to the permittee by the manufacturer or supplier. If the permittee uses the results of an analysis conducted by an outside testing lab, the permittee must keep a copy of the test report. The permittee is not required to obtain the test report or other supporting documentation from the manufacturer or supplier [40 CFR 63.3130(b)].
- (3) For each month, the records specified in paragraphs (c)(1) through (6) of 40 CFR 63.3130 [40 CFR 63.3130(c)].
- i. For each coating used for electrodeposition primer, primer-surfacer, topcoat, final repair, glass bonding primer, and glass bonding adhesive operations and for each coating, except for deadener and for adhesive and sealer that are not components of glass bonding systems, used in coating operations added to the affected source pursuant to 40 CFR 63.3082(c), a record of the volume used in each month, the mass fraction organic HAP content, the density, and the volume fraction of solids.
 - ii. For each thinner used for electrodeposition primer, primer-surfacer, topcoat, final repair, glass bonding primer, and glass bonding adhesive operations and for each thinner, except for thinner used for deadener and for adhesive and sealer that are not components of glass bonding systems, used in coating operations added to the affected source pursuant to 40 CFR 63.3082(c), a record of the volume used in each month, the mass fraction organic HAP content, and the density.
 - iii. For each deadener material and for each adhesive and sealer material, a record of the mass used in each month and the mass organic HAP content.
 - iv. A record of the calculation of the organic HAP emission rate for electrodeposition primer, primer-surfacer, topcoat, final repair, glass bonding primer, and glass bonding adhesive 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 added to the affected source pursuant to 40 CFR 63.3082(c) for each month if subject to the emission limit of 40 CFR 63.3090(a) or 40 CFR 63.3091(a). This record must include all raw data, algorithms, and intermediate calculations. If the guidelines presented in the “Protocol for Determining the Daily Volatile Organic Compound Emission Rate of Automobile and Light-Duty Truck Primer-Surfacer and Topcoat,” EPA-453/R-08-002 (incorporated by reference, *see* 40 CFR 63.14), are used, the permittee must keep records of all data input to this protocol. If these data are maintained as electronic files, the electronic files, as well as any paper copies must be maintained. These data must be provided to the permitting authority on request on paper, and in (if calculations are done electronically) electronic form.
 - v. A record of the calculation of the organic HAP emission rate for primer-surfacer, topcoat, final repair, glass bonding primer, and glass bonding adhesive 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 added to the affected source pursuant to 40 CFR 63.3082(c) for each month if subject to the emission limit of 40 CFR 63.3090(b) or 40 CFR 63.3091(b), and a record of the weight fraction of each organic HAP in each material added to the electrodeposition primer system if subject to the limitations of 40 CFR 63.3092(a). This record must include all raw data, algorithms, and intermediate calculations. If the guidelines presented in the “Protocol for Determining the Daily

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Volatile Organic Compound Emission Rate of Automobile and Light-Duty Truck Primer-Surfacer and Topcoat” EPA-453/R-08-002 (incorporated by reference, *see* 40 CFR 63.14), are used, the permittee must keep records of all data input to this protocol. If these data are maintained as electronic files, the electronic files, as well as any paper copies must be maintained. These data must be provided to the permitting authority on request on paper, and in (if calculations are done electronically) electronic form.

- vi. A record, for each month, of the calculation of the average monthly mass organic HAP content of:
 - A. Sealers and adhesives; and
 - B. Deadeners.
- (4) A record of the name and volume of each cleaning material used during each month [40 CFR 63.3130(d)].
- (5) A record of the mass fraction of organic HAP for each cleaning material used during each month [40 CFR 63.3130(e)].
- (6) A record of the density for each cleaning material used during each month [40 CFR 63.3130(f)].
- (7) Before January 5, 2021, a record of the date, time, and duration of each deviation, and for each deviation, a record of whether the deviation occurred during a period of SSM. On and after January 5, 2021, for each deviation from an emission limitation, operating limit, or work practice plan reported under 40 CFR 63.3120(a)(5) through (9), a record of the information specified in paragraphs (g)(1) through (4) of 40 CFR 63.3130, as applicable [40 CFR 63.3130(g)].
 - i. The date, time, and duration of the deviation, and for each deviation, the information as reported under 40 CFR 63.3120(a)(5) through (9).
 - ii. A list of the affected sources or equipment for which the deviation occurred and the cause of the deviation, as reported under 40 CFR 63.3120(a)(5) through (9).
 - iii. An estimate of the quantity of each regulated pollutant emitted over any applicable emission limit in 40 CFR 63.3090(a) through (d) or 40 CFR 63.3091(a) through (d) or any applicable operating limit in table 1 to 40 CFR 63 subpart III, and a description of the method used to calculate the estimate, as reported under 40 CFR 63.3120(a)(5) through (9).
 - iv. A record of actions taken to minimize emissions in accordance with 40 CFR 63.3100(d) and any corrective actions taken to return the affected unit to its normal or usual manner of operation.
- (8) Before January 5, 2021, the records required by 40 CFR 63.6(e)(3)(iii) through (v) related to SSM. On and after January 5, 2021, the provisions of this paragraph no longer apply [40 CFR 63.3130(h)].
- (9) For each capture system that is a PTE, the data and documentation the permittee used to support a determination that the capture system meets the criteria in Method 204 of appendix M to 40 CFR part 51 for a PTE and has a capture efficiency of 100 percent, as specified in 40 CFR 63.3165(a) [40 CFR 63.3130(i)].
- (10) For each capture system that is not a PTE, the data and documentation the permittee used to determine capture efficiency according to the requirements specified in 40 CFR 63.3164 and 63.3165(b) through (g), including the records specified in paragraphs (j)(1) through (4) of 40 CFR 63.3130 that apply to the permittee [40 CFR 63.3130(j)].

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- i. *Records for a liquid-to-uncaptured-gas protocol using a temporary total enclosure or building enclosure.* Records of the mass of total volatile hydrocarbon (TVH), as measured by Method 204A or F of appendix M to 40 CFR part 51, for each material used in the coating operation, and the total TVH for all materials used during each capture efficiency test run, including a copy of the test report. Records of the mass of TVH emissions not captured by the capture system that exited the temporary total enclosure or building enclosure during each capture efficiency test run, as measured by Method 204D or E of appendix M to 40 CFR part 51, including a copy of the test report. Records documenting that the enclosure used for the capture efficiency test met the criteria in Method 204 of appendix M to 40 CFR part 51 for either a temporary total enclosure or a building enclosure.
 - ii. *Records for a gas-to-gas protocol using a temporary total enclosure or a building enclosure.* Records of the mass of TVH emissions captured by the emission capture system, as measured by Method 204B or C of appendix M to 40 CFR part 51, at the inlet to the add-on control device, including a copy of the test report. Records of the mass of TVH emissions not captured by the capture system that exited the temporary total enclosure or building enclosure during each capture efficiency test run, as measured by Method 204D or E of appendix M to 40 CFR part 51, including a copy of the test report. Records documenting that the enclosure used for the capture efficiency test met the criteria in Method 204 of appendix M to 40 CFR part 51 for either a temporary total enclosure or a building enclosure.
 - iii. *Records for panel tests.* Records needed to document a capture efficiency determination using a panel test as described in 40 CFR 63.3165(e) and (g), including a copy of the test report and calculations performed to convert the panel test results to percent capture efficiency values.
 - iv. *Records for an alternative protocol.* Records needed to document a capture efficiency determination using an alternative method or protocol, as specified in 40 CFR 63.3165(f), if applicable.
- (11) The records specified in paragraphs (k)(1) and (2) of 40 CFR 63.3130 for each add-on control device organic HAP destruction or removal efficiency determination as specified in 40 CFR 63.3166[40 CFR 63.3130(k)].
- i. Records of each add-on control device performance test conducted according to 40 CFR 63.3164 and 63.3166.
 - ii. Records of the coating operation conditions during the add-on control device performance test showing that the performance test was conducted under representative operating conditions.
- (12) Records of the data and calculations the permittee used to establish the emission capture and add-on control device operating limits as specified in 40 CFR 63.3167 and to document compliance with the operating limits as specified in Table 1 to 40 CFR 63 subpart IIII [40 CFR 63.3130(l)].
- (13) Records of the data and calculations the permittee used to determine the transfer efficiency for primer-surfacer and topcoat coatings and for all coatings, except for deadener and for adhesive and sealer that are not components of glass bonding systems, used in coating operations added to the affected source pursuant to 40 CFR 63.3082(c) [40 CFR 63.3130(m)].

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- (14) A record of the work practice plans required by 40 CFR 63.3094(b) and (c) and documentation that the permittee is implementing the plans on a continuous basis. Appropriate documentation may include operational and maintenance records, records of documented inspections, and records of internal audits [40 CFR 63.3130(n)].
 - (15) For each add-on control device and for each continuous parameter monitoring system, a copy of the equipment operating instructions must be maintained on-site for the life of the equipment in a location readily available to plant operators and inspectors. The permittee may prepare their own equipment operating instructions, or they may be provided to the permittee by the equipment supplier or other third party [40 CFR 63.3130(o)].
 - (16) On and after January 5, 2021, any records required to be maintained by 40 CFR 63 subpart IIII that are submitted electronically via the EPA's CEDRI may be maintained in electronic format. This ability to maintain electronic copies does not affect the requirement for facilities to make records, data, and reports available upon request to a delegated air agency or the EPA as part of an on-site compliance evaluation [40 CFR 63.3130(p)].
- c. The permittee's records must be in a form suitable and readily available for expeditious review according to 40 CFR 63.10(b)(1). Where appropriate, the records may be maintained as electronic spreadsheets or as a database. On and after January 5, 2021, any records required to be maintained by 40 CFR 63 subpart IIII that are submitted electronically via the EPA's CEDRI may be maintained in electronic format. This ability to maintain electronic copies does not affect the requirement for facilities to make records, data, and reports available upon request to a delegated air agency or the EPA as part of an on-site compliance evaluation [40 CFR 63.3131(a)].
 - d. Except as provided in 40 CFR 63.3130(o), the permittee must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record, as specified in 40 CFR 63.10(b)(1) [40 CFR 63.3131(b)].
 - e. Except as provided in 40 CFR 63.3130(o), the permittee must keep each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record according to 40 CFR 63.10(b)(1). The permittee may keep the records off site for the remaining 3 years [40 CFR 63.3131(c)].

6. Specific Reporting Requirements:

- a. ***Notification of compliance status.*** If the permittee has an existing source, the permittee must submit the Notification of Compliance Status required by 40 CFR 63.9(h) no later than 30 days following the end of the initial compliance period described in 40 CFR 63.3160. If the permittee has a new source, the permittee must submit the Notification of Compliance Status required by 40 CFR 63.9(h) no later than 60 days after the first day of the first full month following completion of all applicable performance tests. The Notification of Compliance Status must contain the information specified in paragraphs (c)(1) through (12) of 40 CFR 63.3110 and in 40 CFR 63.9(h) [40 CFR 63.3110(c)].
 - (1) Company name and address.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- (2) Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report.
- (3) Date of the report and beginning and ending dates of the reporting period. The reporting period is the initial compliance period described in 40 CFR 63.3160 that applies to the permittee's affected source.
- (4) Identification of the compliance option specified in 40 CFR 63.3090(a) or (b) or 40 CFR 63.3091(a) or (b) that the permittee used for electrodeposition primer, primer-surfacer, topcoat, final repair, 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 added to the affected source pursuant to 40 CFR 63.3082(c) in the affected source during the initial compliance period.
- (5) Statement of whether or not the affected source achieved the emission limitations for the initial compliance period.
- (6) If the permittee had a deviation, include the information in paragraphs (c)(6)(i) and (ii) of 40 CFR 63.3110.
 - i. A description and statement of the cause of the deviation.
 - ii. If the permittee failed to meet any of the applicable emission limits in 40 CFR 63.3090 or 40 CFR 63.3091, include all the calculations the permittee used to determine the applicable emission rate or applicable average organic HAP content for the emission limit(s) that the permittee failed to meet. The permittee does not need to submit information provided by the materials suppliers or manufacturers, or test reports.
- (7) All data and calculations used to determine the monthly average mass of organic HAP emitted per volume of applied coating solids from:
 - i. The combined primer-surfacer, topcoat, final repair, 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 added to the affected source pursuant to 40 CFR 63.3082(c) if the permittee was eligible for and chose to comply with the emission limits of 40 CFR 63.3090(b) or 40 CFR 63.3091(b); or
 - ii. The combined electrodeposition primer, primer-surfacer, topcoat, final repair, 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 added to the affected source pursuant to 40 CFR 63.3082(c).
- (8) All data and calculations used to determine compliance with the separate limits for electrodeposition primer in 40 CFR 63.3092(a) or (b) if the permittee was eligible for and chose to comply with the emission limits of 40 CFR 63.3090(b) or 40 CFR 63.3091(b).
- (9) All data and calculations used to determine the monthly mass average HAP content of materials subject to the emission limits of 40 CFR 63.3090(c) or (d) or the emission limits of 40 CFR 63.3091(c) or (d).
- (10) All data and calculations used to determine the transfer efficiency for primer-surfacer and topcoat coatings, and for all coatings, except for deadener and for adhesive and

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- sealer that are not components of glass bonding systems, used in coating operations added to the affected source pursuant to 40 CFR 63.3082(c).
- (11) The permittee must include the information specified in paragraphs (c)(11)(i) through (iii) of 40 CFR 63.3110.
- i. For each emission capture system, a summary of the data and copies of the calculations supporting the determination that the emission capture system is a permanent total enclosure (PTE) or a measurement of the emission capture system efficiency. Include a description of the procedure followed for measuring capture efficiency, summaries of any capture efficiency tests conducted, and any calculations supporting the capture efficiency determination. If the permittee uses the data quality objective (DQO) or lower confidence limit (LCL) approach, the permittee must also include the statistical calculations to show they meet the DQO or LCL criteria in appendix A to subpart KK of 40 CFR Part 63. The permittee does not need to submit complete test reports.
 - ii. A summary of the results of each add-on control device performance test. The permittee does not need to submit complete test reports unless requested.
 - iii. A list of each emission capture system's and add-on control device's operating limits and a summary of the data used to calculate those limits.
- (12) A statement of whether or not the permittee developed and implemented the work practice plans required by 40 CFR 63.3094(b) and (c).
- b. ***Semiannual compliance reports.*** The permittee must submit semiannual compliance reports for each affected source according to the requirements of paragraphs (a)(1) through (9) of 40 CFR 63.3120. The semiannual compliance reporting requirements may be satisfied by reports required under other parts of the CAA, as specified in paragraph (a)(2) of 40 CFR 63.3120 [40 CFR 63.3120(a)].
- (1) ***Dates.*** Unless the Administrator has approved a different schedule for submission of reports under 40 CFR 63.10(a), the permittee must prepare and submit each semiannual compliance report according to the dates specified in paragraphs (a)(1)(i) through (iv) of 40 CFR 63.3120.
- i. The first semiannual compliance report must cover the first semiannual reporting period which begins the day after the end of the initial compliance period described in 40 CFR 63.3160 that applies to the permittee's affected source and ends on June 30 or December 31, whichever occurs first following the end of the initial compliance period.
 - ii. Each subsequent semiannual compliance report must cover the subsequent semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.
 - iii. Each semiannual compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.
 - iv. For each affected source that is subject to permitting regulations pursuant to 40 CFR part 70 or 40 CFR part 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), the permittee may submit the first and subsequent compliance

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

reports according to the dates the permitting authority has established instead of according to the date specified in paragraph (a)(1)(iii) of 40 CFR 63.3120.

- (2) *Inclusion with title V report.* If the permittee has obtained a title V operating permit pursuant to 40 CFR part 70 or 40 CFR part 71, the permittee must report all deviations as defined in 40 CFR 63 subpart IIII in the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A). If the permittee submits a semiannual compliance report pursuant to 40 CFR 63.3120 along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), and the semiannual compliance report includes all required information concerning deviations from any emission limit, operating limit, or work practice in 40 CFR 63 subpart IIII, its submission shall be deemed to satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submission of a semiannual compliance report shall not otherwise affect any obligation the permittee may have to report deviations from permit requirements to the permitting authority.
- (3) *General requirements.* The semiannual compliance report must contain the information specified in paragraphs (a)(3)(i) through (iv) of 40 CFR 63.3120, and the information specified in paragraphs (a)(4) through (9) and (c)(1) of 40 CFR 63.3120 that are applicable to the permittee's affected source.
- i. Company name and address.
 - ii. Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report.
 - iii. Date of report and beginning and ending dates of the reporting period. The reporting period is the 6-month period ending on June 30 or December 31.
 - iv. Identification of the compliance option specified in 40 CFR 63.3090(b) or 40 CFR 63.3091(b) that the permittee used for electrodeposition primer, primer-surfacer, topcoat, final repair, 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 added to the affected source pursuant to 40 CFR 63.3082(c) in the affected source during the initial compliance period.
- (4) *No deviations.* If there were no deviations from the emission limits, operating limits, or work practices in 40 CFR 63.3090, 63.3091, 63.3092, 63.3093, and 63.3094 that apply to the permittee, the semiannual compliance report must include a statement that there were no deviations from the applicable emission limitations during the reporting period. If the permittee used control devices to comply with the emission limits, and there were no periods during which the CPMS were out of control as specified in 40 CFR 63.8(c)(7), the semiannual compliance report must include a statement that there were no periods during which the CPMS were out of control during the reporting period.
- (5) *Deviations: adhesive, sealer, and deadener.* On and after January 5, 2021, if there was a deviation from the applicable emission limits in 40 CFR 63.3090(c) and (d) or 40 CFR 63.3091(c) and (d), the semiannual compliance report must contain the information in paragraphs (a)(5)(i) through (v) of 40 CFR 63.3120.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- i. The beginning and ending dates of each month during which the monthly average organic HAP content exceeded the applicable emission limit in 40 CFR 63.3090(c) and (d) or 40 CFR 63.3091(c) and (d).
 - ii. The volume and organic HAP content of each material used that is subject to the applicable organic HAP content limit.
 - iii. The calculation used to determine the average monthly organic HAP content for the month in which the deviation occurred.
 - iv. The reason for the deviation (including unknown cause, if applicable).
 - v. On and after January 5, 2021, the number of deviations and, for each deviation, a list of the affected source or equipment, an estimate of the quantity of each regulated pollutant emitted over the applicable emission limit in 40 CFR 63.3090(c) and (d) or 40 CFR 63.3091(c) and (d), and a description of the method used to estimate the emissions.
- (6) *Deviations*: combined electrodeposition primer, primer-surfacer, topcoat, final repair, glass bonding primer and glass bonding adhesive, or combined primer-surfacer, topcoat, final repair, glass bonding primer, and glass bonding adhesive 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 added to the affected source pursuant to 40 CFR 63.3082(c). On and after January 5, 2021, if there was a deviation from the applicable emission limits in 40 CFR 63.3090(a) or (b) or 40 CFR 63.3091(a) or (b) or the applicable operating limit(s) in table 1 to 40 CFR 63 subpart IIII, the semiannual compliance report must contain the information in paragraphs (a)(6)(i) through (xv) of 40 CFR 63.3120.
 - i. The beginning and ending dates of each month during which the monthly organic HAP emission rate from combined electrodeposition primer, primer-surfacer, topcoat, final repair, glass bonding primer, and glass bonding adhesive 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 added to the affected source pursuant to 40 CFR 63.3082(c) exceeded the applicable emission limit in 40 CFR 63.3090(a) or 40 CFR 63.3091(a); or the monthly organic HAP emission rate from combined primer-surfacer, topcoat, final repair, glass bonding primer, and glass bonding adhesive 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 added to the affected source pursuant to 40 CFR 63.3082(c) exceeded the applicable emission limit in 40 CFR 63.3090(b) or 40 CFR 63.3091(b).
 - ii. The calculation used to determine the monthly organic HAP emission rate in accordance with 40 CFR 63.3161 or 40 CFR 63.3171. The permittee does not need to submit the background data supporting these calculations, for example information provided by materials suppliers or manufacturers, or test reports.
 - iii. The date and time that each malfunction of the capture system or add-on control devices used to control emissions from these operations started and stopped.
 - iv. A brief description of the CPMS.
 - v. The date of the latest CPMS certification or audit.
 - vi. On and after January 5, 2021, for each instance that the CPMS was inoperative, except for zero (low-level) and high-level checks, the date, time, and duration that

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- the CPMS was inoperative; the cause (including unknown cause) for the CPMS being inoperative; and descriptions of corrective actions taken.
- vii. On and after January 5, 2021, for each instance that the CPMS was out of control, as specified in 40 CFR 63.8(c)(7), the date, time, and duration that the CPMS was out-of-control; the cause (including unknown cause) for the CPMS being out-of-control; and descriptions of corrective actions taken.
 - viii. On and after January 5, 2021, the date, time, and duration of each deviation from an operating limit in table 1 to 40 CFR 63 subpart IIII; and the date, time, and duration of each bypass of an add-on control device.
 - ix. A summary of the total duration and the percent of the total source operating time of the deviations from each operating limit in Table 1 to 40 CFR 63 subpart IIII and the bypass of each add-on control device during the semiannual reporting period.
 - x. On and after January 5, 2021, a breakdown of the total duration of the deviations from each operating limit in table 1 to 40 CFR 63 subpart IIII and bypasses of each add-on control device during the semiannual reporting period into those that were due to control equipment problems, process problems, other known causes, and other unknown causes.
 - xi. A summary of the total duration and the percent of the total source operating time of the downtime for each CPMS during the semiannual reporting period.
 - xii. A description of any changes in the CPMS, coating operation, emission capture system, or add-on control devices since the last semiannual reporting period.
 - xiii. On and after January 5, 2021, for deviations from the work practice standards, the number of deviations, and, for each deviation, the information in paragraphs (a)(6)(xiii)(A) and (B) of 40 CFR 63.3120.
 - A. A description of the deviation, the date, time, and duration of the deviation; and the actions the permittee took to minimize emissions in accordance with 40 CFR 63.3100(d).
 - B. A list of the affected sources or equipment for which a deviation occurred, the cause of the deviation (including unknown cause, if applicable), and any corrective actions taken to return the affected unit to its normal or usual manner of operation.
 - xiv. On and after January 5, 2021, for deviations from an emission limitation in 40 CFR 63.3090(a) or (b) or 40 CFR 63.3091(a) or (b) or operating limit in table 1 of 40 CFR 63 subpart IIII, a statement of the cause of each deviation (including unknown cause, if applicable).
 - xv. On and after January 5, 2021, for each deviation from an emission limitation in 40 CFR 63.3090(a) or (b), or 40 CFR 63.3091(a) or (b), or operating limit in table 1 to 40 CFR 63 subpart IIII, a list of the affected sources or equipment for which a deviation occurred, an estimate of the quantity of each regulated pollutant emitted over any emission limit in 40 CFR 63.3090(a) or (b) or 40 CFR 63.3091(a) or (b), and a description of the method used to estimate the emissions.
- (7) *Deviations: Separate electrodeposition primer organic HAP content limit.* On and after January 5, 2021, if the permittee used the separate electrodeposition primer organic HAP content limits in 40 CFR 63.3092(a), and there was a deviation from these limits, the semiannual compliance report must contain the information in paragraphs (a)(7)(i) through (iv) of 40 CFR 63.3120.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- i. Identification of each material used that deviated from the emission limit, and the date, time, and duration each was used.
 - ii. The determination of mass fraction of each organic HAP for each material identified in paragraph (a)(7)(i) of 40 CFR 63.3120. The permittee does not need to submit background data supporting this calculation, for example, information provided by material suppliers or manufacturers, or test reports.
 - iii. A statement of the cause of each deviation (including unknown case, if applicable).
 - iv. On and after January 5, 2021, the number of deviations, a list of the affected source or equipment, an estimate of the quantity of each regulated pollutant emitted over any emission limit in 40 CFR 63.3092(a), and a description of the method used to estimate the emissions.
- (8) *Deviations: Separate electrodeposition primer bake oven capture and control limitations.* On and after January 5, 2021, if the permittee used the separate electrodeposition primer bake oven capture and control limitations in 40 CFR 63.3092(b), and there was a deviation from the limitations in 40 CFR 63.3092(b) or the applicable operating limit in table 1 to 40 CFR 63 subpart IIII, the semiannual compliance report must contain the information in paragraphs (a)(8)(i) through (xiv) of 40 CFR 63.3120.
- i. The beginning and ending dates of each month during which there was a deviation from the separate electrodeposition primer bake oven capture and control limitations in 40 CFR 63.3092(b).
 - ii. The date and time that each malfunction of the capture systems or control devices used to control emissions from the electrodeposition primer bake oven started and stopped.
 - iii. A brief description of the CPMS.
 - iv. The date of the latest CPMS certification or audit.
 - v. On and after January 5, 2021, for each instance that the CPMS was inoperative, except for zero (low-level) and high-level checks, the date, time, and duration that the CPMS was inoperative; the cause (including unknown cause) for the CPMS being inoperative; and descriptions of corrective actions taken.
 - vi. On and after January 5, 2021, for each instance that the CPMS was out of control, as specified in 40 CFR 63.8(c)(7), the date, time, and duration that the CPMS was out-of-control; the cause (including unknown cause) for the CPMS being out-of-control; and descriptions of corrective actions taken.
 - vii. On and after January 5, 2021, the date, time, and duration of each deviation from an operating limit in table 1 to 40 CFR 63 subpart IIII; and the date, time, and duration of each bypass of an add-on control device.
 - viii. A summary of the total duration and the percent of the total source operating time of the deviations from each operating limit in Table 1 to 40 CFR 63 subpart IIII and the bypasses of each add-on control device during the semiannual reporting period.
 - ix. On and after January 5, 2021, a breakdown of the total duration of the deviations from each operating limit in table 1 to 40 CFR 63 subpart IIII and bypasses of each add-on control device during the semiannual reporting period into those that were due to control equipment problems, process problems, other known causes, and other unknown causes.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- x. A summary of the total duration and the percent of the total source operating time of the downtime for each CPMS during the semiannual reporting period.
 - xi. A description of any changes in the CPMS, coating operation, emission capture system, or add-on control devices since the last semiannual reporting period.
 - xii. A statement of the cause of each deviation (including unknown cause, if applicable).
- (9) *Deviations: Work practice plans.* On and after January 5, 2021, if there were deviations from an applicable work practice plan developed in accordance with 40 CFR 63.3094(b) or (c), the semiannual compliance report must contain the number of deviations, and, for each deviation, the information in paragraphs (a)(9)(i) through (iii) of 40 CFR 63.3120.
- i. On and after January 5, 2021, the date, time, and duration of the deviation.
 - ii. On and after January 5, 2021, the nature of the deviation, including a list of the affected sources or equipment for which the deviation occurred, and the cause of the deviation (including unknown cause, if applicable).
 - iii. The corrective action(s) taken to bring the applicable work practices into compliance with the work practice plan.
- c. ***Performance test reports.*** If the permittee uses add-on control devices, the permittee must submit reports of performance test results for emission capture systems and add-on control devices no later than 60 days after completing the tests as specified in 40 CFR 63.10(d)(2). the permittee must submit reports of transfer efficiency tests no later than 60 days after completing the tests as specified in 40 CFR 63.10(d)(2) [40 CFR 63.3120(b)].
- d. ***Performance test reports.*** On and after January 5, 2021, the permittee must submit the results of the performance test required in paragraph (b) of 40 CFR 63.3120 following the procedure specified in paragraphs (d)(1) through (3) of 40 CFR 63.3120 [40 CFR 63.3120(d)].
- (1) For data collected using test methods supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT website (<https://www.epa.gov/electronic-reporting-air-emissions/electronic-reporting-tool-ert>) at the time of the test, the permittee must submit the results of the performance test to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI). (CEDRI can be accessed through the EPA's Central Data Exchange (CDX) (<https://cdx.epa.gov/>)). Performance test data must be submitted in a file format generated through the use of the EPA's ERT or an alternate electronic file format consistent with the extensible markup language (XML) schema listed on the EPA's ERT website.
 - (2) For data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT website at the time of the test, the permittee must submit the results of the performance test to the Administrator at the appropriate address listed in 40 CFR 63.13, unless the Administrator agrees to or specifies an alternate reporting method.
 - (3) If the permittee claims that some of the performance test information being submitted under paragraph (c)(1) of 40 CFR 63.3120 is Confidential Business Information (CBI), the permittee must submit a complete file generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT website, including information claimed to be CBI, on a compact disc, flash drive, or

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

other commonly used electronic storage medium to the EPA. The electronic medium must be clearly marked as CBI and mailed to U.S. EPA/OAPQS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT or alternate file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described in paragraph (c)(1) of 40 CFR 63.3120.

- e. ***Initial notification reports.*** On and after January 5, 2021, the owner or operator shall submit the initial notifications required in 40 CFR 63.9(b) and the notification of compliance status required in 40 CFR 63.9(h) and 63.3110(c) to the EPA via the CEDRI. The CEDRI interface can be accessed through the EPA's CDX (<https://cdx.epa.gov/>). The owner or operator must upload to CEDRI an electronic copy of each applicable notification in portable document format (PDF). The applicable notification must be submitted by the deadline specified in 40 CFR 63 subpart IIII, regardless of the method in which the reports are submitted. Owners or operators who claim that some of the information required to be submitted via CEDRI is CBI shall submit a complete report generated using the appropriate form in CEDRI or an alternate electronic file consistent with the XML schema listed on the EPA's CEDRI website, including information claimed to be CBI, on a compact disc, flash drive, or other commonly used electronic storage medium to the EPA. The electronic medium shall be clearly marked as CBI and mailed to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same file with the CBI omitted shall be submitted to the EPA via the EPA's CDX as described earlier in this paragraph [40 CFR 63.3120(e)].
- f. ***Semiannual compliance reports.*** On and after January 5, 2021, or once the reporting template has been available on the CEDRI website for 1 year, whichever date is later, the owner or operator shall submit the semiannual compliance report required in paragraph (a) of 40 CFR 63.3120 to the EPA via the CEDRI. The CEDRI interface can be accessed through the EPA's CDX (<https://cdx.epa.gov/>). The owner or operator must use the appropriate electronic template on the CEDRI Web for 40 CFR 63 subpart IIII or an alternate electronic file format consistent with the XML schema listed on the CEDRI website (<https://www.epa.gov/electronic-reporting-air-emissions/compliance-and-emissions-data-reporting-interface-cedri>). If the reporting form for the semiannual compliance report specific to 40 CFR 63 subpart IIII is not available in CEDRI at the time that the report is due, the permittee must submit the report to the Administrator at the appropriate addresses listed in 40 CFR 63.13. Once the form has been available in CEDRI for 1 year, the permittee must begin submitting all subsequent reports via CEDRI. The reports must be submitted by the deadlines specified in 40 CFR 63 subpart IIII, regardless of the method in which the reports are submitted. Owners or operators who claim that some of the information required to be submitted via CEDRI is CBI shall submit a complete report generated using the appropriate form in CEDRI or an alternate electronic file consistent with the XML schema listed on the EPA's CEDRI website, including information claimed to be CBI, on a compact disc, flash drive, or other commonly used electronic storage medium to the EPA. The electronic medium shall be clearly marked as CBI and mailed to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

same file with the CBI omitted shall be submitted to the EPA via the EPA's CDX as described earlier in this paragraph [40 CFR 63.3120(f)].

- g. ***Reporting during EPA system outages.*** If the permittee is required to electronically submit a report through the CEDRI in the EPA's CDX, and due to a planned or actual outage of either the EPA's CEDRI or CDX systems within the period of time beginning 5 business days prior to the date that the submission is due, the permittee will be or are precluded from accessing CEDRI or CDX and submitting a required report within the time prescribed, the permittee may assert a claim of the EPA system outage for failure to timely comply with the reporting requirement. The permittee must submit notification to the Administrator in writing as soon as possible following the date the permittee first knew, or through due diligence should have known, that the event may cause or caused a delay in reporting. The permittee must provide to the Administrator a written description identifying the date, time and length of the outage; a rationale for attributing the delay in reporting beyond the regulatory deadline to the EPA system outage; describe the measures taken or to be taken to minimize the delay in reporting; and identify a date by which the permittee proposes to report, or if the permittee has already met the reporting requirement at the time of the notification, the date the permittee reported. In any circumstance, the report must be submitted electronically as soon as possible after the outage is resolved. The decision to accept the claim of the EPA system outage and allow an extension to the reporting deadline is solely within the discretion of the Administrator [40 CFR 63.3120(g)].
- h. ***Reporting during force majeure events.*** If the permittee is required to electronically submit a report through CEDRI in the EPA's CDX and a force majeure event is about to occur, occurs, or has occurred or there are lingering effects from such an event within the period of time beginning 5 business days prior to the date the submission is due, the owner or operator may assert a claim of force majeure for failure to timely comply with the reporting requirement. For the purposes of 40 CFR 63.3120, a force majeure event is defined as an event that will be or has been caused by circumstances beyond the control of the affected facility, its contractors, or any entity controlled by the affected facility that prevents the permittee from complying with the requirement to submit a report electronically within the time period prescribed. Examples of such events are acts of nature (e.g., hurricanes, earthquakes, or floods), acts of war or terrorism, or equipment failure or safety hazard beyond the control of the affected facility (e.g., large scale power outage). If the permittee intends to assert a claim of force majeure, the permittee must submit notification to the Administrator in writing as soon as possible following the date the permittee first knew, or through due diligence should have known, that the event may cause or caused a delay in reporting. The permittee must provide to the Administrator a written description of the force majeure event and a rationale for attributing the delay in reporting beyond the regulatory deadline to the force majeure event; describe the measures taken or to be taken to minimize the delay in reporting; and identify a date by which the permittee propose to report, or if the permittee has already met the reporting requirement at the time of the notification, the date the permittee reported. In any circumstance, the reporting must occur as soon as possible after the force majeure event occurs. The decision to accept the claim of force majeure and allow an extension to the reporting deadline is solely within the discretion of the Administrator [40 CFR 63.3120(h)].

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

7. Specific Control Equipment Operating Conditions:

Refer to subsections **1. Operating Limitations**, **2. Emission Limitations**, and **3. Testing Requirements**.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Group Requirements

401 KAR 59:185 Affected Sources

LIST of POINTS

A06 Non-Process Cleaning Activities

B06 Non-Process Cleaning Activities

M07 Non-Process Cleaning Activities

K07 Non-Process Cleaning Activities

J04 Non-Process Cleaning Activities

L04 Non-Process Cleaning Activities

C12 Non-Process Cleaning Activities

D09 Non-Process Cleaning

E13R Non-Process Cleaning Activities, including caustic stripping, grate coating, water blasting, line purging, shot blasting, cold cleaner and surface cleaning

F13 Non-Process Cleaning Activities, including, grate coating, water blasting, line purging, cold cleaner and surface cleaning

F13R, Cleaning and Purge activities, Autobody wiping.

G19 Non-Process Cleaning Activities, including paint stripping, water blasting, line purging, surface cleaning cold cleaner, jig cleaning and chemical honing

H05 Non Process Solvent Cleaning Operations, including, CIPG and other areas

APPLICABLE REGULATIONS:

401 KAR 59:185, *New solvent metal cleaning equipment*

1. Operating Limitations:

- a. The cleaner shall be equipped with a cover. If the solvent volatility is greater than fifteen (15) mm Hg measured at 100°F or if the solvent is agitated or heated, then the cover shall be designed so that it can be easily operated with one (1) hand [401 KAR 59:185 Section 4(1)(a)].
- b. The cleaner shall be equipped with a drainage facility so that solvent that drains off parts removed from the cleaner will return to the cleaner. If the solvent volatility is greater than thirty-two (32) mm Hg measured at 100°F then the drainage facility shall be internal so that parts are enclosed under the cover while draining. The drainage facility may be external if the Cabinet determines that an internal type cannot fit into the cleaning system [401 KAR 59:185 Section 4(1)(b)].
- c. A permanent, conspicuous label, summarizing the operating requirements specified in 401 KAR 59:185 Section 4(2) shall be installed on or near the cleaner [401 KAR 59:185 Section 4(1)(c)].
 - (1) Waste solvent shall not be disposed of or transferred to another party so that greater than twenty (20) percent by weight of the waste solvent can evaporate into the atmosphere. Waste solvent shall be stored only in covered containers [401 KAR 59:185, Section 4(2)(a)].
 - (2) The degreaser cover shall be closed if not handling parts in the cleaner [401 KAR

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

59:185 Section 4(2)(b)].

- (3) Cleaned parts shall be drained for a minimum of fifteen (15) seconds, or until dripping ceases, whichever is longer [401 KAR 59:185, Section 4(2)(c)].
 - (4) The flushing of parts with a flexible hose or other flushing device shall be performed only within the freeboard area of the cold cleaner. The solvent flow shall be directed downward to avoid turbulence at the air-solvent interface so as to prevent the solvent from splashing outside of the cold cleaner [401 KAR 59:185, Section 4(2)(d)].
 - (5) Work area fans shall be positioned so that air is not directed across the opening of the cold cleaner [401 KAR 59:185, Section 4(2)(e)].
 - (6) The use of an air-agitated solvent bath is prohibited. A pump-agitated solvent bath shall be operated so as to produce no observable splashing of the solvent against either the tank wall or the parts that are being cleaned [401 KAR 59:185, Section 4(2)(f)].
 - (7) The cold cleaner shall be free of all liquid leaks. Auxiliary cleaning equipment such as pumps, water separators, steam traps, or distillation units shall not have any visible leaks, tears, or cracks [401 KAR 59:185, Section 4(2)(g)].
 - (8) Spills that occur during solvent transfer shall be cleaned immediately. Wipe rags, or other absorbent equipment and materials, used to clean the spill shall be stored in a covered container for disposal unless storage of these items is prohibited by fire protection authorities [401 KAR 59:185, Section 4(2)(h)].
- d. The solvent spray shall be a fluid stream, not a fine, atomized or shower type spray, and at a pressure that does not cause excessive splashing [401 KAR 59:185, Section 4(1)(d)].
- e. Each cold cleaner shall not use a solvent with a vapor pressure that exceeds one (1.0) mm Hg (0.019 psi) measured at 20° C (68°F) [401 KAR 59:185, Section 4(3)(b)].
- f. If the solvent volatility is greater than thirty-two (32) mm Hg measured at 100°F or if the solvent is heated above 120°F, then one (1) of the following control devices shall be used: [401 KAR 59:185 Section 4(1)(e)]
- (1) Freeboard height that gives a freeboard ratio greater than or equal to seven-tenths (0.7) [401 KAR 59:185 Section 4(1)(e)1.]
 - (2) Water cover, solvent shall be insoluble in and heavier than water [401 KAR 59:185 Section 4(1)(e)2.]
 - (3) Other systems of equivalent control, such as a refrigerated chiller or carbon adsorption. [401 KAR 59:185 Section 4(1)(e)3.]

2. Emission Limitations:

None

3. Testing Requirements:

Testing shall be conducted at such times as may be requested by the Cabinet [401 KAR 50:045, Section 1].

4. Specific Monitoring Requirements:

The permittee shall monitor the amount of makeup solvent added to the parts washers.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

5. Specific Recordkeeping Requirements:

- a. Any individual or entity subject to the provisions of Section 4(3)(b) of 401 KAR 59:185 shall maintain records for a minimum of five (5) years that include the following information for each solvent purchase: [401 KAR 59:185 Section 4(4)(b)]
 - (1) The name and address of the solvent supplier; [401 KAR 59:185 Section 4(4)(b)1.]
 - (2) The date of the purchase; [401 KAR 59:185 Section 4(4)(b)2.]
 - (3) The type of solvent; and [401 KAR 59:185 Section 4(4)(b)3.]
 - (4) The vapor pressure of the solvent measured in mm Hg at 20°C (68°F). [401 KAR 59:185 Section 4(4)(b)4.]

6. Specific Reporting Requirements:

The permittee shall report the amount of make-up solvent added to the parts washers, as a part of the semiannual reporting as required in Section F (5) & (6).

SECTION C - INSIGNIFICANT ACTIVITIES

The following listed activities have been determined to be insignificant activities for this source pursuant to 401 KAR 52:020, Section 6. Although these activities are designated as insignificant the permittee must comply with the applicable regulation. Process and emission control equipment at each insignificant activity subject to an opacity standard shall be inspected monthly and a qualitative visible emissions evaluation made. Results of the inspection, evaluation, and any corrective action shall be recorded in a log.

No.	SHOP	EMISSION UNIT	DESCRIPTION	Applicable Regulations
1	Assembly #1	A05	Fluid Filling Operations	401 KAR 59:010
2		A08	Process Lubrication	401 KAR 59:010
3		A12	Miscellaneous Assembly Operations	401 KAR 59:010
4	Assembly #2	B05	Fluid Filling Operations	401 KAR 59:010
5		B08	Process Lubrication	401 KAR 59:010
6		B12	Miscellaneous Assembly Operations	401 KAR 59:010
7	Body Operations	C01	Die Construction	401 KAR 59:010
8		C11	Process Lubrication	401 KAR 59:010
9		C13	Fuel Tank Cleaning	401 KAR 59:010
10	Facilities Control	D02	Wastewater Pretreatment	401 KAR 59:010
11		D05	Cooling Towers	401 KAR 59:010
12		D08	Combustion Process <1 MMBtu/hr (combined 100.7597 MMBtu/hr total)	N/A
13	Paint #1	E03R	Metal Finishing Line	401 KAR 59:010
14		E08R	Inspection Lines	401 KAR 59:010
15		E10R	Moon Roof Installation	401 KAR 59:010
16		E16R	Robot Teaching Booth	401 KAR 59:010
17		E17R	Masking Booth	401 KAR 59:010
18	Paint #2	F03	Metal Finishing Line	401 KAR 59:010
19		F08	Inspection Lines	401 KAR 59:010
20		F10	Moon Roof Installation	401 KAR 59:010
21		F15	Water/Wastewater Treatment Operations	401 KAR 59:010
22		F16	Robot Teaching Booth	401 KAR 59:010
23		F17	Two Tone Masking Booths	401 KAR 59:010
24		F27	Dry Sand Booths	401 KAR 59:010
25	Plastics	G25	Manifold Assembly Operation	401 KAR 59:010
26		G29	Four Plasma Robots	N/A
27	Power Train	H13	Operational Support	401 KAR 59:010
28		H18	Plasma Cleaning Activities	401 KAR 59:010
29		H19	Laser Cladding Process with two integral dust collectors	401 KAR 59:010
30	Production Control	K01	Dock Unloading Areas	401 KAR 59:010
31		K02	Parts Conveyance	401 KAR 59:010
32		K03	Shipping Preparation	401 KAR 59:010
33		K04	Fork Truck Repair Painting	401 KAR 59:010
34		K05	Cross Dock	401 KAR 59:010
35		K06	Battery Charging Stations	401 KAR 59:010
36	Quality Control	J01	Audit Lab	401 KAR 59:010
37		J02	Raw Material Test Lab	401 KAR 59:010
38		J03	Test Track Operations	401 KAR 59:010
39		J05	Team Member Training Activities: Injection Molding Welding Machining	401 KAR 59:010 401 KAR 63:020

SECTION C - INSIGNIFICANT ACTIVITIES (CONTINUED)

No.	SHOP	EMISSION UNIT	DESCRIPTION	Applicable Regulations
40	Toyota Logistics	L02	Accessory Installation	401 KAR 59:010
41		L03	Shipping Preparation	401 KAR 59:010
42	Assembly #3	M10	Miscellaneous Assembly Operations	401 KAR 59:010

SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS

1. As required by Section 1b of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26; compliance with annual emissions and processing limitations contained in this permit, shall be based on emissions and processing rates for any twelve (12) consecutive months.
2. Emissions, measured by applicable reference methods, or an equivalent or alternative method specified in 40 C.F.R. Chapter I, or by a test method specified in the state implementation plan shall not exceed the respective limitations specified herein.
3. **Compliance Demonstration Method for Transfer Efficiency Testing:**
 - (1) For affected facilities that use transfer efficiency in the determination of kilograms of VOC per liter of applied solids the permittee shall:
 - i. Use the transfer efficiency value specified in 40 CFR 60.393 for the application method used; or
 - ii. Use a transfer efficiency value determined through engineering evaluations¹ or representative testing approved by the Division. Previous transfer efficiency tests may be accepted if the following conditions are met:
 - A. The previous test must have been conducted using methods and conditions approved by the Division.
 - B. Either no process or equipment changes have been made since the previous test was performed or the owner or operator must be able to demonstrate that the results of the performance test, reliably demonstrate compliance despite process or equipment changes.
 - C. Either the required operating parameters were established in the previous test or sufficient data were collected in the previous test to establish the operating parameters.

Compliance Demonstration Method for Carry Over Efficiency Testing:

- (2) For affected facilities that use carry over efficiency in the determination of VOC emissions the permittee shall:
 - i. Use a carryover efficiency value determined through engineering evaluations¹ or representative testing approved by the Division. Previous carry over efficiency tests may be accepted if the following conditions are met:
 - A. The previous test must have been conducted using methods and conditions approved by the Division.
 - B. Either no process or equipment changes have been made since the previous test was performed or the owner or operator must be able to demonstrate that the results of the performance test, reliably demonstrate compliance despite process or equipment changes.
 - C. Either the required operating parameters were established in the previous test or sufficient data were collected in the previous test to establish the operating parameters.

SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS (CONTINUED)

Compliance Demonstration Method for Capture Efficiency Testing:

- (3) For affected facilities that use capture efficiency in the determination of VOC emissions the permittee shall:
- i. Use a capture efficiency value determined through engineering evaluations¹ or representative testing approved by the Division. Previous capture efficiency tests may be accepted if the following conditions are met:
 - A. The previous test must have been conducted using methods and conditions approved by the Division.
 - B. Either no process or equipment changes have been made since the previous test was performed or the owner or operator must be able to demonstrate that the results of the performance test, reliably demonstrate compliance despite process or equipment changes.
 - C. Either the required operating parameters were established in the previous test or sufficient data were collected in the previous test to establish the operating parameters.

Compliance Demonstration Method for Standard Gallons per Job Calculation:

- (4) The permittee shall notify the Division of any changes to the methodology for determining the standard gallons of material per job for the purposes of calculating emissions.

¹Engineering Evaluations shall be submitted to the permit review branch of the Division.

SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS (CONTINUED)

4. Synthetic Minor Limits on PM_{2.5}, NO_x and CO_{2e} Emissions to preclude applicability of 401 KAR 51:017

- (a) PM_{2.5} emissions from Line 3 Operations shall not exceed 9.0 tons per year based on a 12-month rolling total.

Compliance Demonstration Method:

PM_{2.5} emissions from Line 3 Operations = $\sum$ [Welding Operations, C15] + $\sum$ [Surface Coating Operations, Paint #2, F19 through F26 & Plastics, G26] + $\sum$ [Natural Gas Combustion Units, D11A & D11B] + $\sum$ [Assembly #3] + $\sum$ [Insignificant Activities, IA #24]

PM_{2.5} emissions are calculated as follows:

$$[M_{\text{wire}} \rho_{\text{wire}} \times (1 - \text{C.E.})] + [M_{\text{coating}} \rho_{\text{coating}} \times (1 - \text{T.E.}) \times (1 - \text{C.E.*})] + [M_{\text{N.G.}} \times \rho_{\text{N.G.}}] + [V \times \text{EF}_{\text{PM}}]$$

Where;

- M_{wire} = Pounds of welding wire used
- ρ_{wire} = PM_{2.5} emission factor of welding wire, (lb/lb)
- C.E. = Control efficiency of the PM/PM₁₀/PM_{2.5} control equipment
- M_{coating} = Gallons of coating material used
- ρ_{coating} = PM_{2.5} content of coating material, (lbs/gallon)
- T.E. = Transfer efficiency of the application equipment
- M_{N.G.} = Natural gas used (10⁶scf)
- ρ_{N.G.} = The most recent finalized AP-42 PM_{2.5} emission factor (lb/10⁶scf)
- V = Number of vehicles tested
- EF_{PM} = PM_{2.5} emission factor (lb/test)

*Control efficiency for scrubber shall be calculated using the following equation:

$$\text{C.E. of scrubber} = 1 - \{ \text{PM emission rate} / [M_{\text{coating}} \rho_{\text{coating}} \times (1 - \text{T.E.})] \}$$

PM emission rate shall be obtained from stack test every five years. See Periodic Monitoring Table in Section B.

Transfer efficiency shall be obtained from initial performance demonstration.

- (b) NO_x emissions from Line 3 Operations shall not exceed 39.8 tons per year based on a 12-month rolling total.

Compliance Demonstration Method:

NO_x emissions from Line 3 Operations = $\sum$ [Natural Gas Combustion Units, D11A & D11B] + $\sum$ [Assembly #3, M04]

NO_x emissions are calculated as follows:

$$[M_{\text{N.G.}} \times \rho_{\text{NO}_x}] + [V \times \text{EF}_{\text{NO}_x}]$$

SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS (CONTINUED)

4. Synthetic Minor Limits on PM_{2.5}, NO_x and CO₂e Emissions to preclude applicability of 401 KAR 51:017 (continued)

Where;

- M_{N.G.} = Natural gas used (10⁶scf)
- ρ_{NO_x} = The most recent finalized AP-42 NO_x emission factor (lb/10⁶scf)
- V = Number of vehicles tested
- EF_{NO_x} = NO_x emission factor (lb/test)

(c) **CO₂e** emissions from Line 3 Operations shall not exceed 47,570 tons per year based on a 12-month rolling total.

Compliance Demonstration Method:

CO₂e emissions from Line 3 Operations = Σ [Welding Operations, C15] + Σ [Natural Gas Combustion Units, D11A & D11B] + Σ [Assembly #3, M04]

CO₂e –based emissions are calculated as follows:

[Carbon Dioxide (tons) x GWP for CO₂] + [Nitrous Oxide (tons) x GWP for N₂O] + [Methane (tons) x GWP for CH₄]

The most recent finalized emission factors for greenhouse gas (GHG) listed in AP-42 or 40 CFR Part 98 *Mandatory Greenhouse Gas Reporting*, Subpart C shall be used for natural gas combustion units.

<u>GHG</u>	<u>Global Warming Potential (GWP)</u>
Carbon Dioxide (CO ₂)	1
Nitrous Oxide (N ₂ O)	298
Methane (CH ₄)	25

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS

Pursuant to 401 KAR 50:055, Section 2(5), at all times, including periods of startup, shutdown and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Division which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

40 CFR 64, Compliance Assurance Monitoring (CAM) is applicable to a pollutant-specific emissions unit (PSEU) at a major source that uses a control device to achieve compliance with an applicable emission limitation and has potential pre-control device emissions of the applicable regulated air pollutant that are equal to or greater than 100 percent of the amount, in tons per year, required for a source to be classified as a major source.

a. MONITORING APPROACH FOR PAINT # 1, Primer Booth (EP# E05R) and TOPCOAT (EP# E07R)

1. PM/PM₁₀ Background for Emission Point E05R and E07R (Line D and E)

Emission Unit

Emission point E05R Primer Line (Lines D & E) & E07R Topcoat Lines (Lines D & E)

Description:

Wet on Wet Painting system used to paint metal vehicle bodies. System will apply Primer, Basecoat and Clearcoat. Paint Curing will occur from the Heated Flash zones following Primer and Basecoat spray booths and the systems curing oven that will follow the Clearcoat Spray booths. Overspray emissions from the coating applicators in the booths are routed to the tower wet scrubber.

Pollutant: PM/PM₁₀

Applicable Regulations:

401 KAR 51:017:

Emission Limitations:

The permittee shall not cause the discharge into the atmosphere of more than 4.02 lbs of PM per hour for E05R Primer Lines and 7.43 lbs of PM per hour for E07R Topcoat Lines.

401 KAR 59:010 Section 3

Emission Limitations: Particulate emissions shall not exceed the emission rate determined by the process weight rule. (The emissions limitations required by BACT are more stringent, therefore compliance with the BACT limit ensures compliance with the 401 KAR 59:010.)

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS (CONTINUED)

i. Continuous Assurance Monitoring Approach Summary for the Tower Wet Scrubbers TS11 and TS12 Controlling PM/PM₁₀ Emissions from Emissions Point E05R and E07R (Line D and E):

Indicator

Parameter:

Water flow in the tower

Measurement Approach:

Continuous water flow meter with an alarm will ensure the tower is in the proper operating range of particulate removal.

Indicator Range: The water flow alarm will be set based upon ratio of water flow to exhaust gas flow rate by weight, determined by manufacturer specification.

Performance Criteria:

Data Representativeness:

The particulate emissions by coating applicators are forced through the water scrubber before venting to the atmosphere. The degree to which the wet scrubber is able to control particulate emissions is largely dependent upon the rate of water flow being sprayed in the tower in relation to the exhaust gas weight. The flow rate of water being within manufacturer's specifications demonstrates that the tower is operating properly.

Verification of Operational Status:

The permittee shall maintain Status Records of water flow rate and the 5-year stack test are maintained on site.

QA and QC Practices and Criteria:

The permittee shall follow the manufacturer's recommendations for installation, operation, and maintenance of the wet scrubber system and flow meter. Stack testing equipment is calibrated every 5 years

Monitoring Frequency and Data Collection Procedures:

The permittee shall record water flow (hourly) and alarms and maintain logs of such inspections on site.

Corrective Action:

When an alarm is activated, the site operators take corrective actions to adjust the flow to the correct rate. If the flow rate cannot be rectified, the site operator shall remedy the malfunction as soon as is practicable.

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS (CONTINUED)

2. VOC Background for Emission Point E05R and E07R (Line D and E)

Emission Unit

Emission point E05R Primer Line (Lines D & E) & E07R Topcoat Lines (Lines D and E)

Description:

Wet on Wet Painting system used to paint metal vehicle bodies. System will apply Primer, Basecoat and Clearcoat. Paint Curing will occur from the Heated Flash zones that following Primer and Basecoat spray booths and the systems curing oven that will follow the Clearcoat Spray booths. Thermal oxidizer is utilized to control the VOC exhaust gas streams from the Primer/Basecoat Heated Flash zones, Clearcoat Booths and Bake Oven. The alternate operating scenario for VOC abatement is a combination of a VOC concentrator and Thermal oxidizer.

Pollutant: VOC

Applicable Regulations:

401 KAR 51:017:

Emission Limitations: The permittee shall not cause the discharge into the atmosphere of more than 2.11 lbs of VOC per job for E05R Primer Lines and 3.86 lbs of VOC per job for E07R Topcoat Lines.

i. Continuous Assurance Monitoring Approach Summary for the Thermal Oxidizers (RTO-05 and RTO-06) Controlling VOC Emissions from Emissions Point E05R and E07R (Line D and E):

Indicator

Parameter: Combustion chamber temperature

Measurement Approach:

The permittee shall continuously monitor the temperature of the combustion chamber using a thermocouple to ensure that it does not fall more than 28 °C below the average combustion chamber temperature maintained during the performance test. The permittee shall also conduct a stack test every 5 years according to USEPA Method 25A to verify that the destruction efficiency has not fallen below 95%.

Indicator Range: The temperature must be maintained at no more than 28 °C below the combustion chamber temperature limit. Any 3-hour block average combustion temperature reading outside this range shall be considered an excursion.

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS (CONTINUED)

Performance Criteria:

Data Representativeness: The temperature monitoring device shall be located in the combustion zone. The tolerance of the thermocouple and the sensitivity of the recordkeeping system shall be determined based on manufacturer's recommendations.

Verification of Operational Status: The permittee shall keep records of continuous combustion temperature readings onsite and made available for inspection.

QA/QC Practices and Criteria: The permittee shall follow the manufacturer's recommendations for installation, operation, maintenance, and calibration of the temperature monitoring device. The permittee shall calibrate the thermocouple on an annual basis. To ensure that monitoring device malfunctions do not prevent the collection of accurate combustion temperature data, spare thermocouples shall be kept onsite and operators shall replace malfunctioning thermocouples if necessary as soon as is practicable once a malfunction is recognized.

Monitoring Frequency and Data Collection Procedures: The combustion temperature shall be monitored continuously and recorded in 15-minute periods. The consecutive 15-minute blocks shall be utilized to determine the 3-hour block average for compliance purposes. The permittee shall tabulate and maintain these temperature measurements in an electronic database. Records of the stack tests will be maintained on site.

Procedures Corrective Action: When an out-of-range temperature reading occurs, operators shall check the oxidizer system to ensure proper operation. If any of these checks indicate abnormal operation, the permittee shall inspect all potentially malfunctioning components of the offending system. Once the source of the malfunction is determined, the problem shall be remedied as soon as practicable after the malfunction is recognized by repairing or replacing the malfunctioning component of the system.

**SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS
(CONTINUED)**

b. MONITORING APPROACH FOR PAINT # 2, TOPCOAT A AND B (EP# F07)

1. PM/PM₁₀ Background for Emission Point F07

Emission Unit:

Emission Point F07: Topcoat Lines A and B

Description:

Topcoats are applied to autobodies in two paint booths. Each booth uses a total enclosure to capture overspray emissions, and each is equipped with a curing oven. Overspray emissions from the coating applicators in Booths A and B are routed to Wet Scrubbers TS23 and TS24, respectively. Particulate emissions from Booths A and B are also controlled by Filters TF27 and TF28.

Pollutant:

PM/PM₁₀

Applicable Regulations

401 KAR 51:017

Emission Limitations: The permittee shall not cause the discharge into the atmosphere of more than 7.42 lbs of PM per hour.

401 KAR 59:010 Section 3

Emission Limitations: Particulate emissions shall not equal or exceed the emission rate determined by the process weight rule. (The emissions limitations required by BACT are more stringent than the PWR, therefore compliance with the BACT limit ensures compliance with the 401 KAR 59:010)

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS (CONTINUED)

i. Compliance Assurance Monitoring Approach Summary for the Filter (Final Stage) Controlling PM/PM₁₀ Emissions from F07

Indicator:

Parameter: Pressure drop across final stage filter

Measurement Approach:

1. The permittee shall display pressure drop across the final stage filter using a differential pressure gauge.
2. Each week, an operator shall visually observe the monitoring devices while recording pressure drop readings.
3. Inspection and maintenance of the differential gauge shall be performed annually in accordance with manufacturer's specifications. In addition, operators shall conduct a monthly visual inspection to verify that all final filters are in place.

Indicator Range:

The differential pressure reading must remain between TBD millimeters of H₂O. Excursions trigger an inspection and potentially corrective action and reporting. Maintaining the pressure drop above 0 millimeter of H₂O indicates the absence of channeling, whereas the upper end of the pressure drop ensures that the collection efficiency of the system is operating as suggested by the manufacturer.

Performance Criteria:

Data Representativeness:

Pressure drop across the filters is an indicator of control device performance and thus can be used to ensure compliance with applicable emission limitations.

Verification of Operational Status:

Records of the weekly gauge readings, monthly filter inspections, and annual calibrations shall be maintained on site.

QA and QC Practices and Criteria:

Annual calibration of the pressure drop gauges provides verification of accurate measurements.

Monitoring Frequency and Data Collection Procedures:

The pressure drop is monitored weekly and the operator records an instantaneous measurement of pressure drop once per week.

Corrective Action:

When an out-of-range pressure drop reading occurs, operators will check the pressure gauge and filter equipment to ensure proper operation. If any of these checks indicate abnormal operation, The permittee will inspect all potentially malfunctioning components of the offending system. Once the source of the malfunction is determined, the problem will be remedied as soon as is practicable after the malfunction is recognized by repairing or replacing the malfunctioning component of the system.

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS (CONTINUED)

ii. Continuous Assurance Monitoring Approach Summary for the Wet Scrubbers Controlling PM/PM₁₀ Emissions from Emissions Point F07

Indicator:

Parameter:

Significant gaps in the water-wall coverage

Measurement Approach:

Once per week visual inspection will be made of the water-wall coverage to ensure that there are no significant gaps. The permittee shall perform stack tests every five years according to USEPA Method 17 to quantify the particulate emission rate.

Indicator Range:

No “significant” gap in the water wall is indicative of proper operation. The permittee has established with the Division the definition of a significant gap.

Performance Criteria

Data Representativeness:

All particulate emissions (i.e., overspray) generated by coating applicators are forced through the water wash system before venting through the filters for additional PM control. The degree to which the wet scrubber is able to control particulate emissions is largely dependent upon the water-wall coverage. The absence of significant gaps in the water wall demonstrates that the venturi water wall is operating properly

Verification of Operational Status:

The permittee shall maintain Status Records of weekly visual inspections for significant gaps.

QA and QC Practices and Criteria:

The permittee shall follow the manufacturer’s recommendations for installation, operation, and maintenance of the wet scrubber system. Each operator shall be trained by the permittee to recognize a significant gap in the water-wall coverage.

Monitoring Frequency and Data Collection Procedures:

The permittee shall perform weekly visual inspections to identify any significant gaps in the water-wall coverage and maintain logs of such inspections on site.

Corrective Action:

When a significant gap is found, the site operators shall take corrective actions to clear the blockage. If the blockage cannot be rectified, the site operator shall remedy the malfunction as soon as is practicable to clear the blockage.

**SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS
(CONTINUED)**

**c. MONITORING APPROACH FOR PLASTIC EXTERIOR PART PAINTING
OPERATIONS (EP# G21)**

1. PM/PM₁₀ Background for Emission Point G21 (Line B1)

Emission Unit Emission point G21: Exterior Part Painting Operations (Line B1) Description: Exterior automotive plastic components (rocker panels) are painted in the paint booth (Line B1). The booths are equipped with a pair of curing ovens. Emissions from the booths are routed to Filters RF14 (Line B1) and Wet Scrubbers RS16 for particulate control. Pollutant: PM/PM₁₀
Applicable Regulations: 401 KAR 51:017: Emission Limitations: The permittee shall not cause the discharge into the atmosphere of more than 0.99 lbs of PM per hour. 401 KAR 59:010 Section 3 Emission Limitations: Particulate emissions shall not exceed the emission rate determined by the process weight rule. (The emissions limitations required by BACT are more stringent, therefore compliance with the BACT limit ensures compliance with the 401 KAR 59:010.)

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS (CONTINUED)

i. Compliance Assurance Monitoring Approach Summary for the Filters RF14 (Line B1) Controlling PM/PM₁₀ emissions from Emission Point # G21:

Indicator: Parameter:

Pressure drop across final stage filters

Measurement Approach:

1. The permittee shall display pressure drop across the final stage filter using a differential pressure gauge.
2. Each week, an operator shall visually observe the monitoring device while recording pressure drop readings.
3. Inspection and maintenance of the differential gauge shall be performed annually in accordance with manufacturer's specifications. Visible observations of the opacity of emissions from the rooftop shall be performed by an operator on a weekly basis and logged. Every five years, The permittee shall perform a stack test according to USEPA Method 17 to measure the PM emission rate. Operators shall conduct a monthly visual inspection to verify that filter is in place. Filters are changed based on a permittee established pressure drop.

Indicator Range: The differential pressure reading must not exceed 1.1 and must be greater than 0 inches of H₂O. Excursions trigger an inspection and potentially corrective action and reporting.

Maintaining the pressure drop above TBD inches of H₂O indicates the filters are in place, whereas the upper end of the pressure drop ensures that collection efficiency of the system is operating as suggested by the manufacturer.

Performance Criteria:

Data Representativeness: Pressure drop across the filters is an indicator of control device performance and thus can be used to ensure compliance with applicable emission limitations.

Verification of Operational Status: Records of the weekly gauge readings, weekly observations, annual calibrations, 5-year stack tests, and monthly filter inspections are maintained on site.

QA/QC Practices and Criteria: Annual calibration of the pressure drop gauges provides verification of accurate measurements. Visual observations are performed weekly, and the stack test equipment is calibrated every 5 years.

Monitoring Frequency and Data Collection Procedures: The pressure drop shall be displayed continuously and the operator records an instantaneous measurement of pressure drop once per week.

Corrective Action: When an out-of-range pressure drop reading occurs, operators shall check the pressure gauge and filter equipment to ensure proper operation. If any of these checks indicate abnormal operation, The permittee shall inspect all potentially malfunctioning components of the offending system. Once the source of the malfunction is determined, the problem shall be remedied as soon as is practicable after the malfunction is recognized by repairing or replacing the malfunctioning component of the system.

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS (CONTINUED)

ii. Continuous Assurance Monitoring Approach Summary for the Tower Wet Scrubbers RS16 Controlling PM/PM₁₀ Emissions from Emissions Point G21 (Line B1):

Indicator

Parameter:

Water flow in the tower

Measurement Approach:

Continuous water flow meter with an alarm will ensure the tower is in the proper operating range of particulate removal.

Indicator Range: The water flow alarm will be set based upon ratio of water flow to exhaust gas flow rate by weight, determined by manufacturer specification.

Performance Criteria:

Data Representativeness:

The particulate emissions by coating applicators are forced through the water scrubber before venting to the atmosphere. The degree to which the wet scrubber is able to control particulate emissions is largely dependent upon the rate of water flow being sprayed in the tower in relation to the exhaust gas weight. The flow rate of water being within manufacturer's specifications demonstrates that the tower is operating properly.

Verification of Operational Status:

The permittee shall maintain Status Records of water flow rate and the 5-year stack test are maintained on site.

QA and QC Practices and Criteria:

The permittee shall follow the manufacturer's recommendations for installation, operation, and maintenance of the wet scrubber system and flow meter. Stack testing equipment is calibrated every 5 years

Monitoring Frequency and Data Collection Procedures:

The permittee shall record water flow (hourly) and alarms and maintain logs of such inspections on site.

Corrective Action:

When an alarm is activated, the site operators take corrective actions to adjust the flow to the correct rate. If the flow rate cannot be rectified, the site operator shall remedy the malfunction as soon as is practicable.

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS (CONTINUED)

2. VOC Background for Emission Point G21 (Line B1)

Emission Unit

Emission point G21: Exterior Part Painting Operations (Line B1)

Description:

Exterior automotive plastic components (rocker panels) are painted in the paint booths, Line B1. Each booth employs a capture system and each one is equipped with a curing oven. Emissions from Booths are routed to VOC Wheels RC07 and Thermal Oxidizers RT11 for VOC control.

Pollutant: VOC

Applicable Regulations:

401 KAR 51:017:

Emission Limitations: The permittee shall not cause the discharge into the atmosphere of more than 0.21 lbs of VOC per job.

i. Continuous Assurance Monitoring Approach Summary for the VOC Concentrators (RC07) Controlling VOC Emissions from G21

Indicator: Parameter:

Desorption gas inlet temperature

Measurement Approach:

The Permittee shall continuously monitor the thermocouple temperature of the desorption gas inlet to ensure that it does not fall more than 8°C below the average desorption gas inlet temperature established during the performance test. The Permittee shall keep the set point for the desorption gas inlet temperature no lower than 6°C below the lower of that set point during the performance test and the average desorption gas inlet temperature established during the performance test. Operators shall perform a monthly visual inspection to verify that the Desorption / Reactivation Fan is operating properly. Another pressure sensor with an alarm will continuously monitor the pressure drop across the adsorber trays to ensure carbon is properly flowing through the system. To test the VOC concentrator's performance, representative samples and the adsorbent activity shall be tested according to the manufacturer's recommendations on an annual basis; alternatively, portable ionization detectors may be used to conduct this annual performance test. An alarm shall alert operators of any periods during which the by-pass damper diverts flow from the VOC concentrator.

**SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS
(CONTINUED)****Indicator Range:**

The minimum operating limit for the concentrator is 8°C below the average desorption gas inlet temperature maintained during the last performance test. The set point for the desorption gas inlet temperature is no lower than 6°C below the lower of that set point during the performance test and the average desorption gas inlet temperature maintained during the performance test. Any 3-hour block average combustion temperature reading below the minimum operating limit will be considered an excursion.

Performance Criteria:**Data Representativeness:**

The tolerance of the thermocouple and the sensitivity of the recordkeeping system shall be determined based on manufacturer's recommendations.

Verification of Operational Status:

The permittee shall keep records of continuous desorption gas inlet temperature readings onsite and made available for inspection.

QA and QC Practices and Criteria:

The permittee shall follow the manufacturer's recommendations for installation, operation, maintenance, and calibration of the temperature monitoring device. The permittee shall calibrate the thermocouple on an annual basis. To ensure that monitoring device malfunctions do not prevent the collection of accurate desorption gas inlet temperature data, spare thermocouples shall be kept onsite and the permittee shall replace malfunctioning thermocouples if necessary as soon as is practicable once a malfunction is recognized.

Monitoring Frequency and Data Collection Procedures:

The desorption gas inlet temperature shall be monitored continuously and recorded in 15-minute periods. The consecutive 15-minute blocks shall be utilized to determine the 3-hour block average for compliance purposes. The permittee shall tabulate and maintain these temperature measurements in an electronic database. Records of the annual performance tests will be maintained on site.

Corrective Action:

When an out-of-range temperature reading occurs, the permittee shall check the VOC concentrator to ensure proper operation. If any of these checks indicate abnormal operation, the permittee shall inspect all potentially malfunctioning components of the offending system. Once the source of the malfunction is determined, the problem shall be remedied as soon as practicable after the malfunction is recognized by repairing or replacing the malfunctioning component of the system.

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS (CONTINUED)

ii. Continuous Assurance Monitoring Approach Summary for the Thermal Oxidizers (RT11) Controlling VOC Emissions from G21 (Line B1):

Indicator Parameter: Combustion chamber temperature Measurement Approach: The permittee shall continuously monitor the temperature of the combustion chamber using a thermocouple to ensure that it does not fall more than 28 °C below the average combustion chamber temperature maintained during the performance test. The permittee shall also conduct a stack test every 5 years according to USEPA Method 25A to verify that the destruction efficiency has not fallen below 95%.
Indicator Range: The temperature must be maintained at no more than 28 °C below the combustion chamber temperature limit. Any 3-hour block average combustion temperature reading outside this range shall be considered an excursion.
Performance Criteria: Data Representativeness: The temperature monitoring device shall be located in the combustion zone. The tolerance of the thermocouple and the sensitivity of the recordkeeping system shall be determined based on manufacturer's recommendations. Verification of Operational Status: The permittee shall keep records of continuous combustion temperature readings onsite and made available for inspection. QA/QC Practices and Criteria: The permittee shall follow the manufacturer's recommendations for installation, operation, maintenance, and calibration of the temperature monitoring device. The permittee shall calibrate the thermocouple on an annual basis. To ensure that monitoring device malfunctions do not prevent the collection of accurate combustion temperature data, spare thermocouples shall be kept onsite and operators shall replace malfunctioning thermocouples if necessary as soon as is practicable once a malfunction is recognized. Monitoring Frequency and Data Collection Procedures: The combustion temperature shall be monitored continuously and recorded in 15-minute periods. The consecutive 15-minute blocks shall be utilized to determine the 3-hour block average for compliance purposes. The permittee shall tabulate and maintain these temperature measurements in an electronic database. Records of the stack tests will be maintained on site. Procedures Corrective Action: When an out-of-range temperature reading occurs, operators shall check the oxidizer system to ensure proper operation. If any of these checks indicate abnormal operation, the permittee shall inspect all potentially malfunctioning components of the offending system. Once the source of the malfunction is determined, the problem shall be remedied as soon as practicable after the malfunction is recognized by repairing or replacing the malfunctioning component of the system.

**SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS
(CONTINUED)**

**d. MONITORING APPROACH FOR PLASTIC BUMPER PAINTING OPERATIONS
(EP# G22)**

1. PM/PM₁₀ Background for Emission Point G22

Emission Unit Emission point G22: Bumper Painting Operations Description: Plastic automotive bumpers are painted in four booths (G & H). Overspray emissions are captured in the booth and each one is equipped with a curing oven. Emissions from the booths are routed to Wet Scrubbers RS14 (Booth G) and RS15 (Booth H) for particulate control. Pollutant: PM/PM₁₀
Applicable Regulations: 401 KAR 51:017: Emission Limitations: The permittee shall not cause the discharge into the atmosphere of more than 5.42 lbs of PM per hour. 401 KAR 59:010 Section 3 Emission Limitations: Particulate emissions shall not exceed the emission rate determined by the process weight rule. (The emissions limitations required by BACT are more stringent than the FWR, therefore compliance with the BACT limit ensures compliance with the 401 KAR 59:010.)

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS (CONTINUED)

i. Continuous Assurance Monitoring Approach Summary for the Tower Wet Scrubbers RS14 (Booth G) and RS15 (Booth H) Controlling PM/PM₁₀ Emissions from Emissions Point G22:

Indicator

Parameter:

Water flow in the tower

Measurement Approach:

Continuous water flow meter with an alarm will ensure the tower is in the proper operating range of particulate removal.

Indicator Range: The water flow alarm will be set based upon ratio of water flow to exhaust gas flow rate by weight, determined by manufacturer specification.

Performance Criteria:

Data Representativeness:

The particulate emissions by coating applicators are forced through the water scrubber before venting to the atmosphere. The degree to which the wet scrubber is able to control particulate emissions is largely dependent upon the rate of water flow being sprayed in the tower in relation to the exhaust gas weight. The flow rate of water being within manufacturer's specifications demonstrates that the tower is operating properly.

Verification of Operational Status:

The permittee shall maintain Status Records of water flow rate and the 5-year stack test are maintained on site.

QA and QC Practices and Criteria:

The permittee shall follow the manufacturer's recommendations for installation, operation, and maintenance of the wet scrubber system and flow meter. Stack testing equipment is calibrated every 5 years

Monitoring Frequency and Data Collection Procedures:

The permittee shall record water flow (hourly) and alarms and maintain logs of such inspections on site.

Corrective Action:

When an alarm is activated, the site operators take corrective actions to adjust the flow to the correct rate. If the flow rate cannot be rectified, the site operator shall remedy the malfunction as soon as is practicable.

**SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS
(CONTINUED)**

2. VOC Background for Emission Point G22

Emission Unit Emission point G22: Bumper Painting Operations Description: Plastic automotive bumpers are painted in four booths. All booths employ a capture system and each one is equipped with a curing oven. Emissions from Booths G and H are routed to Regenerative Thermal Oxidizer RT12 for VOC Control. VOC concentrators RC04 and RC05 and Thermal Oxidizers RT08 and RT09 are used for VOC control as Alternative Operating Scenarios Only. Ovens G & H are uncontrolled. Pollutant: VOC
Applicable Regulations: 401 KAR 51:017: Emission Limitations: The permittee shall not cause the discharge into the atmosphere of more than 1.04 lbs of VOC per job.

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS (CONTINUED)

i. Continuous Assurance Monitoring Approach Summary for the VOC Concentrators (RC04 and RC05) Controlling VOC Emissions from G22 (Alternative Operating Scenario Only):

Indicator: Parameter:

Desorption gas inlet temperature

Measurement Approach:

The Permittee shall continuously monitor the thermocouple temperature of the desorption gas inlet to ensure that it does not fall more than 8°C below the average desorption gas inlet temperature established during the performance test. The Permittee shall keep the set point for the desorption gas inlet temperature no lower than 6°C below the lower of that set point during the performance test and the average desorption gas inlet temperature established during the performance test. Operators shall perform a monthly visual inspection to verify that the Desorption / Reactivation Fan is operating properly. Another pressure sensor with an alarm will continuously monitor the pressure drop across the adsorber trays to ensure carbon is properly flowing through the system. To test the VOC concentrator's performance, representative samples and the adsorbent activity shall be tested according to the manufacturer's recommendations on an annual basis; alternatively, portable ionization detectors may be used to conduct this annual performance test. An alarm shall alert operators of any periods during which the by-pass damper diverts flow from the VOC concentrator.

Indicator Range:

The minimum operating limit for the concentrator is 8°C below the average desorption gas inlet temperature maintained during the last performance test. The set point for the desorption gas inlet temperature is no lower than 6°C below the lower of that set point during the performance test and the average desorption gas inlet temperature maintained during the performance test. Any 3-hour block average combustion temperature reading below the minimum operating limit will be considered an excursion.

Performance Criteria:

Data Representativeness:

The tolerance of the thermocouple and the sensitivity of the recordkeeping system shall be determined based on manufacturer's recommendations.

Verification of Operational Status:

The permittee shall keep records of continuous desorption gas inlet temperature readings onsite and made available for inspection.

QA and QC Practices and Criteria:

The permittee shall follow the manufacturer's recommendations for installation, operation, maintenance, and calibration of the temperature monitoring device. The permittee shall calibrate the thermocouple on an annual basis. To ensure that monitoring device malfunctions do not prevent the collection of accurate desorption gas inlet temperature data, spare thermocouples shall be kept onsite and the permittee shall replace malfunctioning thermocouples if necessary as soon as is practicable once a malfunction is recognized.

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS (CONTINUED)

Monitoring Frequency and Data Collection Procedures:

The desorption gas inlet temperature shall be monitored continuously and recorded in 15-minute periods. The consecutive 15-minute blocks shall be utilized to determine the 3-hour block average for compliance purposes. The permittee shall tabulate and maintain these temperature measurements in an electronic database. Records of the annual performance tests will be maintained on site.

Corrective Action:

When an out-of-range temperature reading occurs, the permittee shall check the VOC concentrator to ensure proper operation. If any of these checks indicate abnormal operation, the permittee shall inspect all potentially malfunctioning components of the offending system. Once the source of the malfunction is determined, the problem shall be remedied as soon as practicable after the malfunction is recognized by repairing or replacing the malfunctioning component of the system.

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS (CONTINUED)

ii. Continuous Assurance Monitoring Approach Summary for the Regenerative Thermal Oxidizer (RT12) Controlling VOC Emissions from G22:

Indicator Parameter: Combustion chamber temperature Measurement Approach: The permittee shall continuously monitor the temperature of the combustion chamber using a thermocouple to ensure that it does not fall more than 28 °C below the average combustion chamber temperature maintained during the performance test. The permittee shall also conduct a stack test every 5 years according to USEPA Method 25A to verify that the destruction efficiency has not fallen below 81%.
Indicator Range: The temperature must be maintained at no more than 28 °C below the combustion chamber temperature limit. Any 3-hour block average combustion temperature reading outside this range shall be considered an excursion.
Performance Criteria: Data Representativeness: The temperature monitoring device shall be located in the combustion zone. The tolerance of the thermocouple and the sensitivity of the recordkeeping system shall be determined based on manufacturer's recommendations. Verification of Operational Status: The permittee shall keep records of continuous combustion temperature readings onsite and made available for inspection. QA/QC Practices and Criteria: The permittee shall follow the manufacturer's recommendations for installation, operation, maintenance, and calibration of the temperature monitoring device. The permittee shall calibrate the thermocouple on an annual basis. To ensure that monitoring device malfunctions do not prevent the collection of accurate combustion temperature data, spare thermocouples shall be kept onsite and operators shall replace malfunctioning thermocouples if necessary as soon as is practicable once a malfunction is recognized. Monitoring Frequency and Data Collection Procedures: The combustion temperature shall be monitored continuously and recorded in 15-minute periods. The consecutive 15-minute blocks shall be utilized to determine the 3-hour block average for compliance purposes. The permittee shall tabulate and maintain these temperature measurements in an electronic database. Records of the stack tests will be maintained on site. Procedures Corrective Action: When an out-of-range temperature reading occurs, operators shall check the oxidizer system to ensure proper operation. If any of these checks indicate abnormal operation, the permittee shall inspect all potentially malfunctioning components of the offending system. Once the source of the malfunction is determined, the problem shall be remedied as soon as practicable after the malfunction is recognized by repairing or replacing the malfunctioning component of the system.

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS (CONTINUED)

iii. Continuous Assurance Monitoring Approach Summary for the Thermal Oxidizers (RT08 and RT09) Controlling VOC Emissions from G22 (Alternative Operating Scenario Only):

Indicator Parameter: Combustion chamber temperature Measurement Approach: The permittee shall continuously monitor the temperature of the combustion chamber using a thermocouple to ensure that it does not fall more than 28 °C below the average combustion chamber temperature maintained during the performance test. The permittee shall also conduct a stack test every 5 years according to USEPA Method 25A to verify that the destruction efficiency has not fallen below 95%.
Indicator Range: The temperature must be maintained at no more than 28 °C below the combustion chamber temperature limit. Any 3-hour block average combustion temperature reading outside this range shall be considered an excursion.
Performance Criteria: Data Representativeness: The temperature monitoring device shall be located in the combustion zone. The tolerance of the thermocouple and the sensitivity of the recordkeeping system shall be determined based on manufacturer's recommendations. Verification of Operational Status: The permittee shall keep records of continuous combustion temperature readings onsite and made available for inspection. QA/QC Practices and Criteria: The permittee shall follow the manufacturer's recommendations for installation, operation, maintenance, and calibration of the temperature monitoring device. The permittee shall calibrate the thermocouple on an annual basis. To ensure that monitoring device malfunctions do not prevent the collection of accurate combustion temperature data, spare thermocouples shall be kept onsite and operators shall replace malfunctioning thermocouples if necessary as soon as is practicable once a malfunction is recognized. Monitoring Frequency and Data Collection Procedures: The combustion temperature shall be monitored continuously and recorded in 15-minute periods. The consecutive 15-minute blocks shall be utilized to determine the 3-hour block average for compliance purposes. The permittee shall tabulate and maintain these temperature measurements in an electronic database. Records of the stack tests will be maintained on site. Procedures Corrective Action: When an out-of-range temperature reading occurs, operators shall check the oxidizer system to ensure proper operation. If any of these checks indicate abnormal operation, the permittee shall inspect all potentially malfunctioning components of the offending system. Once the source of the malfunction is determined, the problem shall be remedied as soon as practicable after the malfunction is recognized by repairing or replacing the malfunctioning component of the system.

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS (CONTINUED)

e. Monitoring Approach for Each Loaded Dynamometer Engine Testing L4 Area (EP # H12-03) and V6 Area (EP # H12-06)

1. CO Background for Emission Unit H12-03 (L4 Area) and H12-06 (V6 Area)

Emission Unit ID: H12-03 (L4) and H12-06 (V6): Loaded Dynamometer Engine Testing
Pollutant: CO

Applicable Regulations 401 KAR 51:017 Section 8(3) - BACT

Emission Limitations: The permittee shall not discharge into the atmosphere during engine testing operations, any gases that contain CO in concentrations that exceed the following limits:

1. L4 Area: Loaded Dynamometer Test Cells: 6.39lb/hr/cell, based on a 3-hour average;
and
2. V6 Area: Loaded Dynamometer Test Cells: 6.39lb/hr/cell, based on a 3-hour average

i. Continuous Assurance Monitoring Approach Summary for Catalytic Converter (CC) System Controlling CO Emissions from H12-03 and H12-06

Indicator Parameter # 1: Temperature in Catalytic Converter Chamber, which is part of the CC System

Indicator Parameter # 2: Air/Fuel Ratio Prior to Catalytic Converter Chamber, which is part of the CC System

Indicator Parameter # 3: Total Hours Each Catalyst Converter Substrate is Exposed to Loaded Dynamometer Test Patterns

Rationale:

The permittee will conduct performance stack tests annually according to U.S. EPA Reference Method 10 to verify that the CC System is meeting the CO BACT limits and operating limits. Continuous assurance is provided by three (3) monitored parameters:

- 1) Continuous monitoring to ensure the maximum operating temperature of the catalyst converter does not exceed its manufacturer's recommended specification,
- 2) Continuous monitoring to ensure the air to fuel ratio is above 14.6, and
- 3) Continuous monitoring to ensure the cumulative hours of operation for each catalyst converter substrate does not exceed its manufacturer's recommended specification.

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS (CONTINUED)

ii. Continuous Assurance Monitoring Approach for Indicator #1 for each CC System Controlling CO Emissions from H12-03 and H12-06

Indicator

Parameter # 1: Temperature in Catalytic Converter Chamber of the CC System

Measurement Approach:

The permittee shall continuously monitor the temperature in each catalytic converter chamber using a thermocouple monitoring device.

Indicator Range:

The 60-minute average temperature in each catalytic converter chamber shall be maintained below the maximum temperature recommended by the manufacturer.

Performance Criteria:

Data Representativeness:

The temperature monitoring device shall be located in the catalytic converter. The tolerance of the thermocouple and the sensitivity of the recordkeeping system shall be determined based on manufacturer's recommendations.

Verification of Operational Status:

The permittee shall keep records of catalytic converter temperature readings onsite and made available for inspection.

QA/QC Practices and Criteria:

The permittee shall follow the manufacturer's recommendations for installation, operation, maintenance, and calibration of the temperature monitoring device. The permittee shall calibrate the thermocouple on an annual basis. To ensure that monitoring device malfunctions do not prevent the collection of accurate combustion temperature data, spare thermocouples shall be kept onsite and operators shall replace malfunctioning thermocouples if necessary as soon as is practicable once a malfunction is recognized.

Monitoring Frequency and Data Collection Procedures:

The catalytic converter outlet temperature shall be monitored continuously and recorded during each specific loaded dynamometer test pattern. The consecutive 15-minute blocks of temperature readings shall be recorded. The permittee shall tabulate and maintain these temperature measurements in an electronic database. Records of the annual stack test, internal inspection, and monthly external inspection shall be maintained on site.

Corrective Action:

When an out-of-range temperature reading occurs, the permittee shall check the CC System to ensure proper operation. If any of these checks indicate abnormal operation, the permittee shall inspect all potentially malfunctioning components of the offending system. Once the source of the malfunction is determined, the problem shall be remedied as soon as practicable after the malfunction is recognized by repairing or replacing the malfunctioning component of the system. If corrective actions are not successful within the subsequent 45-minute period, the loaded dynamometer test pattern shall cease.

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS (CONTINUED)

iii. Continuous Assurance Monitoring Approach for Indicator #2 for each CC System Controlling CO Emissions from H12-03 and H12-06

Indicator

Parameter # 2: Air to Fuel Ratio Prior to Each Catalytic Converter Chamber of the CC System

Measurement Approach:

The permittee shall continuously monitor the Air to Fuel ratio (A/F) prior to each catalytic converter chamber using an A/F monitoring device.

Indicator Range:

The 60-minute average A/F prior to each catalytic converter chamber shall be maintained above 14.6. The value of 14.6 was chosen because this value represents the stoichiometric ratio for complete combustion. For every pound of gasoline (or the combustion by-products which have the same mass exiting the tested engine), the CC System will supply at least 14.6 pounds of air to assist in the conversion of CO to CO₂ on the catalyst substrate.

Performance Criteria:

Data Representativeness:

The A/F monitoring device shall be located after the air blower and prior to the catalytic converter chamber. The tolerance of the A/F sensor and the sensitivity of the recordkeeping system shall be determined based on manufacturer's recommendations.

Verification of Operational Status:

The permittee shall keep records of A/F readings onsite and made available for inspection.

QA/QC Practices and Criteria:

The permittee shall follow the manufacturer's recommendations for installation, operation, maintenance, and calibration of the A/F sensor. The permittee shall calibrate the A/F sensor on a semi-annual basis. To ensure that monitoring device malfunctions do not prevent the collection of accurate air to fuel ratios, spare A/F sensors shall be kept onsite and operators shall replace malfunctioning sensors if necessary as soon as is practicable once a malfunction is recognized.

Monitoring Frequency and Data Collection Procedures:

The A/F shall be monitored continuously and recorded during each specific loaded dynamometer test pattern. The consecutive 15-minute blocks of A/F readings shall be recorded. The permittee shall tabulate and maintain these A/F measurements in an electronic database. Records of the annual stack test, internal inspection, and monthly external inspection shall be maintained on site.

Corrective Action:

When an out-of-range A/F reading occurs, the permittee shall check the CC System to ensure proper operation. If any of these checks indicate abnormal operation, the permittee shall inspect all potentially malfunctioning components of the offending system. Once the source of the malfunction is determined, the problem shall be remedied as soon as practicable after the malfunction is recognized by repairing or replacing the malfunctioning component of the system. If corrective actions are not successful within the subsequent 45-minute period, the loaded dynamometer test pattern shall cease.

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS (CONTINUED)

iv. Continuous Assurance Monitoring Approach for Indicator #3 for each CC System Controlling CO Emissions from H12-03 and H12-06

Indicator

Parameter # 3: Total Hours Each Catalytic Converter Substrate Operates While Performing Loaded Dynamometer Test Patterns

Measurement Approach:

The permittee shall continuously monitor the number of hours each catalyst converter substrate is operated while performing loaded dynamometer test patterns.

Indicator Range:

The hours of operation of each catalyst converter substrate when it is exposed to loaded dynamometer test patterns shall not exceed the total time recommended by the catalyst manufacturer or timeframe as approved by the Division. This type of threshold is necessary because each manufacturer provides specific catalyst life guarantees by which effectiveness of the catalyst converter substrate maybe reduced.

Performance Criteria:

Data Representativeness:

The hours of operation for each catalyst converter substrate will be tracked by an electronic system associated with each CC System. Prior to starting operation, an operator with administrative privileges must enter the serial number of the catalyst converter substrate used in the CC System into the electronic panel. Operation of the catalyst converter substrate is defined as any time when the engine is in operation above 200 rpm. Given that 200 rpm is well below typical idle engine speed, an engine speed of 200 rpm and greater will represent engine operation and subsequently CC System operation. The total time while the catalyst converter substrate is in operation will be monitored and recorded on a cumulative basis.

Verification of Operational Status:

The readout showing total time of operation will be clearly shown on the electronic screen on each CC System. Records of total hours shall be kept onsite and can be made available for inspection.

QA/QC Practices and Criteria:

To ensure that operator cannot alter the time allowed, it will be protected by password provided by the Administrator of the CC Systems within Powertrain. In addition, once the total time recommend by the catalyst manufacturer (e.g., 8,000 hours) has been entered into the electronic system, it serves as an upper limit. Moreover, since this upper limit will be programmed as an interlock with the dynamometer, it will prevent an operator from running loaded test patterns above it. While the total time of catalyst converter substrate operation is based on overly conservative manufacturer's recommendations/guarantees; if the catalyst converter is still fully functional and still able to achieve the required control efficiency (i.e., > 96% for CO) well past the 8,000 hours, the permittee is allowed to make a demonstration to the Division to request more hours of operation.

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS (CONTINUED)

During the change out, an operator with administrative privileges will enter the serial number of the new catalyst converter substrate into the electronic panel, thereby starting the next cumulative period for the catalytic converter substrate.

Monitoring Frequency and Data Collection Procedures:

The cumulative hours of operation shall be monitored continuously and recorded during all loaded dynamometer test patterns that have been specified. The permittee shall tabulate and maintain these cumulative operational hours by serial number in an electronic database. Records of total hours are kept onsite and can be made available for inspection.

Corrective Action:

When the total hours of operation are out-of-range, the permittee shall replace the catalytic catalyst converter substrate unless they have prior written authorization from the Division to keep operating the catalyst converter substrate for longer periods. This out-of-range value will be programmed into the electronic system as an interlock preventing the operator from running loaded test patterns.

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS (CONTINUED)

f. MONITORING APPROACH FOR PAINT # 2, TOPCOAT BOOTHS (EP# F22)

VOC Background for Emission Point F22

Emission Unit Emission point F22: Topcoat Booths Description: Topcoats are applied to autobodies in the basecoat and clearcoat booths. All booths employ a capture system and equip with a curing oven. Emissions from clearcoat booth automatic zone are routed to VOC concentrator TC04 and Thermal Oxidizer TT13 for VOC control. Additionally, emissions from the booths are carried over to the oven; VOC emissions from Oven are controlled by Thermal Oxidizers TT11. Pollutant: VOC
Applicable Regulations: 401 KAR 51:017: Emission Limitations: The permittee shall not cause the discharge into the atmosphere of more than 3.54 lbs of VOC per job.

i. Continuous Assurance Monitoring Approach Summary for the VOC Concentrators (TC04) Controlling VOC Emissions from F22

Indicator: Parameter: Desorption gas inlet temperature Measurement Approach: The Permittee shall continuously monitor the thermocouple temperature of the desorption gas inlet to ensure that it does not fall more than 8°C below the average desorption gas inlet temperature established during the performance test. The Permittee shall keep the set point for the desorption gas inlet temperature no lower than 6°C below the lower of that set point during the performance test and the average desorption gas inlet temperature established during the performance test. Operators shall perform a monthly visual inspection to verify that the Desorption / Reactivation Fan is operating properly. Another pressure sensor with an alarm will continuously monitor the pressure drop across the adsorber trays to ensure carbon is properly flowing through the system. To test the VOC concentrator's performance, representative samples and the adsorbent activity shall be tested according to the manufacturer's recommendations on an annual basis; alternatively, portable ionization detectors may be used to conduct this annual performance test. An alarm shall alert operators of any periods during which the by-pass damper diverts flow from the VOC concentrator.
Indicator Range: The minimum operating limit for the concentrator is 8°C below the average desorption gas inlet temperature maintained during the last performance test. The set point for the desorption gas inlet temperature is no lower than 6°C below the lower of that set point during the performance test and the average desorption gas inlet temperature maintained during the performance test. Any 3-hour block average combustion temperature reading below the minimum operating limit will be considered an excursion.

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS (CONTINUED)

Performance Criteria:

Data Representativeness:

The tolerance of the thermocouple and the sensitivity of the recordkeeping system shall be determined based on manufacturer's recommendations.

Verification of Operational Status:

The permittee shall keep records of continuous desorption gas inlet temperature readings onsite and made available for inspection.

QA and QC Practices and Criteria:

The permittee shall follow the manufacturer's recommendations for installation, operation, maintenance, and calibration of the temperature monitoring device. The permittee shall calibrate the thermocouple on an annual basis. To ensure that monitoring device malfunctions do not prevent the collection of accurate desorption gas inlet temperature data, spare thermocouples shall be kept onsite and the permittee shall replace malfunctioning thermocouples if necessary as soon as is practicable once a malfunction is recognized.

Monitoring Frequency and Data Collection Procedures:

The desorption gas inlet temperature shall be monitored continuously and recorded in 15-minute periods. The consecutive 15-minute blocks shall be utilized to determine the 3-hour block average for compliance purposes. The permittee shall tabulate and maintain these temperature measurements in an electronic database. Records of the annual performance tests will be maintained on site.

Corrective Action:

When an out-of-range temperature reading occurs, the permittee shall check the VOC concentrator to ensure proper operation. If any of these checks indicate abnormal operation, the permittee shall inspect all potentially malfunctioning components of the offending system. Once the source of the malfunction is determined, the problem shall be remedied as soon as practicable after the malfunction is recognized by repairing or replacing the malfunctioning component of the system.

ii. Continuous Assurance Monitoring Approach Summary for the Thermal Oxidizers (TT11 and TT13) Controlling VOC Emissions from F22:

Indicator

Parameter: Combustion chamber temperature

Measurement Approach:

The permittee shall continuously monitor the temperature of the combustion chamber using a thermocouple to ensure that it does not fall more than 28 °C below the average combustion chamber temperature maintained during the performance test. The permittee shall also conduct a stack test every 5 years according to USEPA Method 25A to verify that the destruction efficiency has not fallen below 95%.

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS (CONTINUED)

Indicator Range: The temperature must be maintained at no more than 28 °C below the combustion chamber temperature limit. Any 3-hour block average combustion temperature reading outside this range shall be considered an excursion.

Performance Criteria:

Data Representativeness: The temperature monitoring device shall be located in the combustion zone. The tolerance of the thermocouple and the sensitivity of the recordkeeping system shall be determined based on manufacturer's recommendations.

Verification of Operational Status: The permittee shall keep records of continuous combustion temperature readings onsite and made available for inspection.

QA/QC Practices and Criteria: The permittee shall follow the manufacturer's recommendations for installation, operation, maintenance, and calibration of the temperature monitoring device. The permittee shall calibrate the thermocouple on an annual basis. To ensure that monitoring device malfunctions do not prevent the collection of accurate combustion temperature data, spare thermocouples shall be kept onsite and operators shall replace malfunctioning thermocouples if necessary as soon as is practicable once a malfunction is recognized.

Monitoring Frequency and Data Collection Procedures: The combustion temperature shall be monitored continuously and recorded in 15-minute periods. The consecutive 15-minute blocks shall be utilized to determine the 3-hour block average for compliance purposes. The permittee shall tabulate and maintain these temperature measurements in an electronic database. Records of the stack tests will be maintained on site.

Procedures Corrective Action: When an out-of-range temperature reading occurs, operators shall check the oxidizer system to ensure proper operation. If any of these checks indicate abnormal operation, the permittee shall inspect all potentially malfunctioning components of the offending system. Once the source of the malfunction is determined, the problem shall be remedied as soon as practicable after the malfunction is recognized by repairing or replacing the malfunctioning component of the system.

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS (CONTINUED)

g. MONITORING APPROACH FOR PLASTIC BUMPER AND ROCKER PAINT BOOTH (EP# G26)

VOC Background for Emission Point G26

Emission Unit Emission point G26 Plastic Bumper and Rocker Painting Operations Description: Plastic bumpers and rockers are painted in three booths. There are heated flash off zones after the primer and basecoat booths and a curing oven after the clearcoat booth. All booths employ a capture system. Emissions from primer booth, basecoat booth and heated flash offs are routed to RT12 RTO as primary control and VOC Concentrator RC06 and Thermal Oxidizers RT10 for VOC control as backup control. Emissions from the clearcoat booth are routed to RT12 RTO as primary control and VOC Concentrator RC03 and Thermal Oxidizer RT07 for VOC control as backup control devices.
Pollutant: VOC Applicable Regulations: 401 KAR 51:017: Emission Limitations: The permittee shall not cause the discharge into the atmosphere of more than 0.88 lbs of VOC per job.

i. Continuous Assurance Monitoring Approach Summary for the VOC Concentrators (RC03 & RC06) Controlling VOC Emissions from G26 (Alternate Operating Scenario Only)

Indicator: Parameter: Desorption gas inlet temperature Measurement Approach: The Permittee shall continuously monitor the thermocouple temperature of the desorption gas inlet to ensure that it does not fall more than 8°C below the average desorption gas inlet temperature established during the performance test. The Permittee shall keep the set point for the desorption gas inlet temperature no lower than 6°C below the lower of that set point during the performance test and the average desorption gas inlet temperature established during the performance test. Operators shall perform a monthly visual inspection to verify that the Desorption / Reactivation Fan is operating properly. Another pressure sensor with an alarm will continuously monitor the pressure drop across the adsorber trays to ensure carbon is properly flowing through the system. To test the VOC concentrator's performance, representative samples and the adsorbent activity shall be tested according to the manufacturer's recommendations on an annual basis; alternatively, portable ionization detectors may be used to conduct this annual performance test. An alarm shall alert operators of any periods during which the by-pass damper diverts flow from the VOC concentrator.

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS (CONTINUED)

Indicator Range:

The minimum operating limit for the concentrator is 8°C below the average desorption gas inlet temperature maintained during the last performance test. The set point for the desorption gas inlet temperature is no lower than 6°C below the lower of that set point during the performance test and the average desorption gas inlet temperature maintained during the performance test. Any 3-hour block average combustion temperature reading below the minimum operating limit will be considered an excursion.

Performance Criteria:

Data Representativeness:

The tolerance of the thermocouple and the sensitivity of the recordkeeping system shall be determined based on manufacturer's recommendations.

Verification of Operational Status:

The permittee shall keep records of continuous desorption gas inlet temperature readings onsite and made available for inspection.

QA and QC Practices and Criteria:

The permittee shall follow the manufacturer's recommendations for installation, operation, maintenance, and calibration of the temperature monitoring device. The permittee shall calibrate the thermocouple on an annual basis. To ensure that monitoring device malfunctions do not prevent the collection of accurate desorption gas inlet temperature data, spare thermocouples shall be kept onsite and the permittee shall replace malfunctioning thermocouples if necessary as soon as is practicable once a malfunction is recognized.

Monitoring Frequency and Data Collection Procedures:

The desorption gas inlet temperature shall be monitored continuously and recorded in 15-minute periods. The consecutive 15-minute blocks shall be utilized to determine the 3-hour block average for compliance purposes. The permittee shall tabulate and maintain these temperature measurements in an electronic database. Records of the annual performance tests will be maintained on site.

Corrective Action:

When an out-of-range temperature reading occurs, the permittee shall check the VOC concentrator to ensure proper operation. If any of these checks indicate abnormal operation, the permittee shall inspect all potentially malfunctioning components of the offending system. Once the source of the malfunction is determined, the problem shall be remedied as soon as practicable after the malfunction is recognized by repairing or replacing the malfunctioning component of the system.

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS (CONTINUED)

ii. Continuous Assurance Monitoring Approach Summary for the Thermal Oxidizers (RT07 and RT10) Controlling VOC Emissions from G26 (Alternate Operating Scenario Only):

Indicator

Parameter: Combustion chamber temperature

Measurement Approach:

The permittee shall continuously monitor the temperature of the combustion chamber using a thermocouple to ensure that it does not fall more than 28 °C below the average combustion chamber temperature maintained during the performance test. The permittee shall also conduct a stack test every 5 years according to USEPA Method 25A to verify that the destruction efficiency has not fallen below 95%.

Indicator Range: The temperature must be maintained at no more than 28 °C below the combustion chamber temperature limit. Any 3-hour block average combustion temperature reading outside this range shall be considered an excursion.

Performance Criteria:

Data Representativeness: The temperature monitoring device shall be located in the combustion zone. The tolerance of the thermocouple and the sensitivity of the recordkeeping system shall be determined based on manufacturer's recommendations.

Verification of Operational Status: The permittee shall keep records of continuous combustion temperature readings onsite and made available for inspection.

QA/QC Practices and Criteria: The permittee shall follow the manufacturer's recommendations for installation, operation, maintenance, and calibration of the temperature monitoring device. The permittee shall calibrate the thermocouple on an annual basis. To ensure that monitoring device malfunctions do not prevent the collection of accurate combustion temperature data, spare thermocouples shall be kept onsite and operators shall replace malfunctioning thermocouples if necessary as soon as is practicable once a malfunction is recognized.

Monitoring Frequency and Data Collection Procedures: The combustion temperature shall be monitored continuously and recorded in 15-minute periods. The consecutive 15-minute blocks shall be utilized to determine the 3-hour block average for compliance purposes. The permittee shall tabulate and maintain these temperature measurements in an electronic database. Records of the stack tests will be maintained on site.

Procedures Corrective Action: When an out-of-range temperature reading occurs, operators shall check the oxidizer system to ensure proper operation. If any of these checks indicate abnormal operation, the permittee shall inspect all potentially malfunctioning components of the offending system. Once the source of the malfunction is determined, the problem shall be remedied as soon as practicable after the malfunction is recognized by repairing or replacing the malfunctioning component of the system.

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS (CONTINUED)

iii. Continuous Assurance Monitoring Approach Summary for the Regenerative Thermal Oxidizers (RT12) Controlling VOC Emissions from G26:

Indicator Parameter: Combustion chamber temperature Measurement Approach: The permittee shall continuously monitor the temperature of the combustion chamber using a thermocouple to ensure that it does not fall more than 28 °C below the average combustion chamber temperature maintained during the performance test. The permittee shall also conduct a stack test every 5 years according to USEPA Method 25A to verify that the destruction efficiency has not fallen below 81%.
Indicator Range: The temperature must be maintained at no more than 28 °C below the combustion chamber temperature limit. Any 3-hour block average combustion temperature reading outside this range shall be considered an excursion.
Performance Criteria: Data Representativeness: The temperature monitoring device shall be located in the combustion zone. The tolerance of the thermocouple and the sensitivity of the recordkeeping system shall be determined based on manufacturer's recommendations. Verification of Operational Status: The permittee shall keep records of continuous combustion temperature readings onsite and made available for inspection. QA/QC Practices and Criteria: The permittee shall follow the manufacturer's recommendations for installation, operation, maintenance, and calibration of the temperature monitoring device. The permittee shall calibrate the thermocouple on an annual basis. To ensure that monitoring device malfunctions do not prevent the collection of accurate combustion temperature data, spare thermocouples shall be kept onsite and operators shall replace malfunctioning thermocouples if necessary as soon as is practicable once a malfunction is recognized. Monitoring Frequency and Data Collection Procedures: The combustion temperature shall be monitored continuously and recorded in 15-minute periods. The consecutive 15-minute blocks shall be utilized to determine the 3-hour block average for compliance purposes. The permittee shall tabulate and maintain these temperature measurements in an electronic database. Records of the stack tests will be maintained on site. Procedures Corrective Action: When an out-of-range temperature reading occurs, operators shall check the oxidizer system to ensure proper operation. If any of these checks indicate abnormal operation, the permittee shall inspect all potentially malfunctioning components of the offending system. Once the source of the malfunction is determined, the problem shall be remedied as soon as practicable after the malfunction is recognized by repairing or replacing the malfunctioning component of the system.

SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS

1. Pursuant to Section 1b-IV-1 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26, when continuing compliance is demonstrated by periodic testing or instrumental monitoring, the permittee shall compile records of required monitoring information that include:
 - a. Date, place as defined in this permit, and time of sampling or measurements;
 - b. Analyses performance dates;
 - c. Company or entity that performed analyses;
 - d. Analytical techniques or methods used;
 - e. Analyses results; and
 - f. Operating conditions during time of sampling or measurement.
2. Records of all required monitoring data and support information, including calibrations, maintenance records, and original strip chart recordings, and copies of all reports required by the Division for Air Quality, shall be retained by the permittee for a period of 5 years and shall be made available for inspection upon request by any duly authorized representative of the Division for Air Quality [Sections 1b-IV-2 and 1a-8 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
3. In accordance with the requirements of 401 KAR 52:020, Section 3(1)h, the permittee shall allow authorized representatives of the Cabinet to perform the following during reasonable times:
 - a. Enter upon the premises to inspect any facility, equipment (including air pollution control equipment), practice, or operation;
 - b. To access and copy any records required by the permit;
 - c. Sample or monitor, at reasonable times, substances or parameters to assure compliance with the permit or any applicable requirements.

Reasonable times are defined as during all hours of operation, during normal office hours; or during an emergency.
4. No person shall obstruct, hamper, or interfere with any Cabinet employee or authorized representative while in the process of carrying out official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.
5. Summary reports of any monitoring required by this permit shall be submitted to the Regional Office listed on the front of this permit at least every 6 months during the life of this permit, unless otherwise stated in this permit. For emission units that were still under construction or which had not commenced operation at the end of the 6-month period covered by the report and are subject to monitoring requirements in this permit, the report shall indicate that no monitoring was performed during the previous six months because the emission unit was not in operation [Sections 1b-V-1 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

6. The semi-annual reports are due by January 30th and July 30th of each year. All reports shall be certified by a responsible official pursuant to 401 KAR 52:020, Section 23. If continuous emission and opacity monitors are required by regulation or this permit, data shall be reported in accordance with the requirements of 401 KAR 59:005, General Provisions, Section 3(3). All deviations from permit requirements shall be clearly identified in the reports.
7. In accordance with the provisions of 401 KAR 50:055, Section 1, the owner or operator shall notify the Regional Office listed on the front of this permit concerning startups, shutdowns, or malfunctions as follows:
 - a. When emissions during any planned shutdowns and ensuing startups will exceed the standards, notification shall be made no later than three (3) days before the planned shutdown, or immediately following the decision to shut down, if the shutdown is due to events which could not have been foreseen three (3) days before the shutdown.
 - b. When emissions due to malfunctions, unplanned shutdowns and ensuing startups are or may be in excess of the standards, notification shall be made as promptly as possible by telephone (or other electronic media) and shall be submitted in writing upon request.
8. The permittee shall promptly report deviations from permit requirements, including those attributable to upset conditions as defined in the permit, the probable cause of such deviations, and any corrective actions or preventive measures taken shall be submitted to the Regional Office listed on the front of this permit. Where the underlying applicable requirement contains a definition of prompt or otherwise specifies a time frame for reporting deviations, that definition or time frame shall govern. Where the underlying applicable requirement does not identify a specific time frame for reporting deviations, prompt reporting, as required by Sections 1b-V, 3 and 4 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26, shall be defined as follows:
 - a. For emissions of a hazardous air pollutant or a toxic air pollutant (as identified in an applicable regulation) that continue for more than an hour in excess of permit requirements, the report must be made within 24 hours of the occurrence.
 - b. For emissions of any regulated air pollutant, excluding those listed in F.8.a., that continue for more than two hours in excess of permit requirements, the report must be made within 48 hours.
 - c. All deviations from permit requirements, including those previously reported, shall be included in the semiannual report required by F.6.
9. Pursuant to 401 KAR 52:020, Title V permits, Section 21, the permittee shall annually certify compliance with the terms and conditions contained in this permit, by completing and returning a Compliance Certification Form (DEP 7007CC) (or an alternative approved by the regional office) to the Regional Office listed on the front of this permit and the U.S. EPA in accordance with the following requirements:
 - a. Identification of the term or condition;
 - b. Compliance status of each term or condition of the permit;
 - c. Whether compliance was continuous or intermittent;

SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

- d. The method used for determining the compliance status for the source, currently and over the reporting period.
- e. For an emissions unit that was still under construction or which has not commenced operation at the end of the 12-month period covered by the annual compliance certification, the permittee shall indicate that the unit is under construction and that compliance with any applicable requirements will be demonstrated within the timeframes specified in the permit.
- f. The certification shall be submitted by January 30th of each year. Annual compliance certifications shall be sent to the following addresses:

Division for Air Quality
Frankfort Regional Office
300 Sower Boulevard, 1st Floor
Frankfort, KY 40601

U.S. EPA Region 4
Air Enforcement Branch
Atlanta Federal Center
61 Forsyth St. SW
Atlanta, GA 30303-8960

- 10. In accordance with 401 KAR 52:020, Section 22, the permittee shall provide the Division with all information necessary to determine its subject emissions within 30 days of the date the Kentucky Emissions Inventory System (KYEIS) emissions survey is mailed to the permittee.

SECTION G - GENERAL PROVISIONS

1. General Compliance Requirements

- a. The permittee shall comply with all conditions of this permit. Noncompliance shall be a violation of 401 KAR 52:020, Section 3(1)(b), and a violation of Federal Statute 42 USC 7401 through 7671q (the Clean Air Act). Noncompliance with this permit is grounds for enforcement action including but not limited to termination, revocation and reissuance, revision or denial of a permit [Section 1a-3 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
- b. The filing of a request by the permittee for any permit revision, revocation, reissuance, or termination, or of a notification of a planned change or anticipated noncompliance, shall not stay any permit condition [Section 1a-6 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
- c. This permit may be revised, revoked, reopened and reissued, or terminated for cause in accordance with 401 KAR 52:020, Section 19. The permit will be reopened for cause and revised accordingly under the following circumstances:
 - (1) If additional applicable requirements become applicable to the source and the remaining permit term is three (3) years or longer. In this case, the reopening shall be completed no later than eighteen (18) months after promulgation of the applicable requirement. A reopening shall not be required if compliance with the applicable requirement is not required until after the date on which the permit is due to expire, unless this permit or any of its terms and conditions have been extended pursuant to 401 KAR 52:020, Section 12;
 - (2) The Cabinet or the United States Environmental Protection Agency (U. S. EPA) determines that the permit must be revised or revoked to assure compliance with the applicable requirements;
 - (3) The Cabinet or the U. S. EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit;
 - (4) New requirements become applicable to a source subject to the Acid Rain Program.

Proceedings to reopen and reissue a permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists. Reopenings shall be made as expeditiously as practicable. Reopenings shall not be initiated before a notice of intent to reopen is provided to the source by the Division, at least thirty (30) days in advance of the date the permit is to be reopened, except that the Division may provide a shorter time period in the case of an emergency.

- d. The permittee shall furnish information upon request of the Cabinet to determine if cause exists for modifying, revoking and reissuing, or terminating the permit; or to determine compliance with the conditions of this permit [Sections 1a- 7 and 8 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
- e. Emission units described in this permit shall demonstrate compliance with applicable requirements if requested by the Division [401 KAR 52:020, Section 3(1)(c)].

SECTION G - GENERAL PROVISIONS (CONTINUED)

- f. The permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to the permitting authority [401 KAR 52:020, Section 7(1)].
- g. Any condition or portion of this permit which becomes suspended or is ruled invalid as a result of any legal or other action shall not invalidate any other portion or condition of this permit [Section 1a-14 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
- h. The permittee shall not use as a defense in an enforcement action the contention that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance [Section 1a-4 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
- i. All emission limitations and standards contained in this permit shall be enforceable as a practical matter. All emission limitations and standards contained in this permit are enforceable by the U.S. EPA and citizens except for those specifically identified in this permit as state-origin requirements. [Section 1a-15 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
- j. This permit shall be subject to suspension if the permittee fails to pay all emissions fees within 90 days after the date of notice as specified in 401 KAR 50:038, Section 3(6) [Section 1a-10 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
- k. Nothing in this permit shall alter or affect the liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance [401 KAR 52:020, Section 11(3) b].
- l. This permit does not convey property rights or exclusive privileges [Section 1a-9 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
- m. Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by the Cabinet or any other federal, state, or local agency.
- n. Nothing in this permit shall alter or affect the authority of U.S. EPA to obtain information pursuant to Federal Statute 42 USC 7414, Inspections, monitoring, and entry [401 KAR 52:020, Section 11(3) d.].
- o. Nothing in this permit shall alter or affect the authority of U.S. EPA to impose emergency orders pursuant to Federal Statute 42 USC 7603, Emergency orders [401 KAR 52:020, Section 11(3) a.].

SECTION G - GENERAL PROVISIONS (CONTINUED)

- p. This permit consolidates the authority of any previously issued PSD, NSR, or Synthetic Minor source preconstruction permit terms and conditions for various emission units and incorporates all requirements of those existing permits into one single permit for this source.
- q. Pursuant to 401 KAR 52:020, Section 11, a permit shield shall not protect the owner or operator from enforcement actions for violating an applicable requirement prior to or at the time of permit issuance. Compliance with the conditions of this permit shall be considered compliance with:
 - (1) Applicable requirements that are included and specifically identified in this permit; and
 - (2) Non-applicable requirements expressly identified in this permit.

2. Permit Expiration and Reapplication Requirements

- a. This permit shall remain in effect for a fixed term of 5 years following the original date of issue. Permit expiration shall terminate the source's right to operate unless a timely and complete renewal application has been submitted to the Division at least 6 months prior to the expiration date of the permit. Upon a timely and complete submittal, the authorization to operate within the terms and conditions of this permit, including any permit shield, shall remain in effect beyond the expiration date, until the renewal permit is issued or denied by the Division [401 KAR 52:020, Section 12].
- b. The authority to operate granted shall cease to apply if the source fails to submit additional information requested by the Division after the completeness determination has been made on any application, by whatever deadline the Division sets [401 KAR 52:020, Section 8(2)].

3. Permit Revisions

- a. A minor permit revision procedure may be used for permit revisions involving the use of economic incentive, marketable permit, emission trading, and other similar approaches, to the extent that these minor permit revision procedures are explicitly provided for in the State Implementation Plan (SIP) or in applicable requirements and meet the relevant requirements of 401 KAR 52:020, Section 14(2).
- b. This permit is not transferable by the permittee. Future owners and operators shall obtain a new permit from the Division for Air Quality. The new permit may be processed as an administrative amendment if no other change in this permit is necessary, and provided that a written agreement containing a specific date for transfer of permit responsibility coverage and liability between the current and new permittee has been submitted to the permitting authority within ten (10) days following the transfer.

SECTION G - GENERAL PROVISIONS (CONTINUED)

4. Construction, Start-Up, and Initial Compliance Demonstration Requirements

Pursuant to a duly submitted application the Kentucky Division for Air Quality hereby authorizes the construction of the equipment described herein, emission units F02R, F03R, F04R, F05R, F11R, F13Ra, F13Rb Paint #2 Reborn emission units, the Paint #2 Reborn Paint Repair Operations and Robot Teaching booth,, and D13A and D13B Combustion Units in accordance with the terms and conditions of this permit (V-20-026 R4).

- a. Construction of any process and/or air pollution control equipment authorized by this permit shall be conducted and completed only in compliance with the conditions of this permit.
- b. Within thirty (30) days following commencement of construction and within fifteen (15) days following start-up and attainment of the maximum production rate specified in the permit application, or within fifteen (15) days following the issuance date of this permit, whichever is later, the permittee shall furnish to the Regional Office listed on the front of this permit in writing, notification of the following:
 - (1) The date when construction commenced.
 - (2) The date of start-up of the affected facilities listed in this permit.
 - (3) The date when the maximum production rate specified in the permit application was achieved.
- c. Pursuant to 401 KAR 52:020, Section 3(2), unless construction is commenced within eighteen (18) months after the permit is issued, or begins but is discontinued for a period of eighteen (18) months or is not completed within a reasonable timeframe then the construction and operating authority granted by this permit for those affected facilities for which construction was not completed shall immediately become invalid. Upon written request, the Cabinet may extend these time periods if the source shows good cause.
- d. Pursuant to 401 KAR 50:055, Section 2(1)(a), an owner or operator of any affected facility subject to any standard within the administrative regulations of the Division for Air Quality shall demonstrate compliance with the applicable standard(s) within sixty (60) days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial start-up of such facility. Pursuant to 401 KAR 52:020, Section 3(3)(c), sources that have not demonstrated compliance within the timeframes prescribed in 401 KAR 50:055, Section 2(1)(a), shall operate the affected facility only for purposes of demonstrating compliance unless authorized under an approved compliance plan or an order of the cabinet.
- e. This permit shall allow time for the initial start-up, operation, and compliance demonstration of the affected facilities listed herein. However, within sixty (60) days after achieving the maximum production rate at which the affected facilities will be operated but not later than 180 days after initial start-up of such facilities, the permittee shall conduct a performance demonstration on the affected facilities in accordance with 401 KAR 50:055, General compliance requirements. Testing must also be conducted in accordance with General Provisions G.5 of this permit.

SECTION G - GENERAL PROVISIONS (CONTINUED)

5. Testing Requirements

- a. Pursuant to 401 KAR 50:045, Section 2, a source required to conduct a performance test shall submit a completed Compliance Test Protocol form, DEP form 6028, or a test protocol a source has developed for submission to other regulatory agencies, in a format approved by the cabinet, to the Division's Frankfort Central Office a minimum of sixty (60) days prior to the scheduled test date. Pursuant to 401 KAR 50:045, Section 7, the Division shall be notified of the actual test date at least thirty (30) days prior to the test.
- b. Pursuant to 401 KAR 50:045, Section 5, in order to demonstrate that a source is capable of complying with a standard at all times, any required performance test shall be conducted under normal conditions that are representative of the source's operations and create the highest rate of emissions. If [When] the maximum production rate represents a source's highest emissions rate and a performance test is conducted at less than the maximum production rate, a source shall be limited to a production rate of no greater than 110 percent of the average production rate during the performance tests. If and when the facility is capable of operation at the rate specified in the application, the source may retest to demonstrate compliance at the new production rate. The Division for Air Quality may waive these requirements on a case-by-case basis if the source demonstrates to the Division's satisfaction that the source is in compliance with all applicable requirements.
- c. Results of performance test(s) required by the permit shall be submitted to the Division by the source or its representative within forty-five days or sooner if required by an applicable standard, after the completion of the fieldwork.

6. Acid Rain Program Requirements

- a. If an applicable requirement of Federal Statute 42 USC 7401 through 7671q (the Clean Air Act) is more stringent than an applicable requirement promulgated pursuant to Federal Statute 42 USC 7651 through 7651o (Title IV of the Act), both provisions shall apply, and both shall be state and federally enforceable.
- b. The permittee shall comply with all applicable requirements and conditions of the Acid Rain Permit and the Phase II permit application (including the Phase II NOx compliance plan and averaging plan, if applicable) incorporated into the Title V permit issued for this source. The source shall also comply with all requirements of any revised or future acid rain permit(s) issued to this source.

7. Emergency Provisions

- a. Pursuant to 401 KAR 52:020, Section 24(1), an emergency shall constitute an affirmative defense to an action brought for the noncompliance with the technology-based emission limitations if the permittee demonstrates through properly signed contemporaneous operating logs or relevant evidence that:
 - (1) An emergency occurred and the permittee can identify the cause of the emergency;
 - (2) The permitted facility was at the time being properly operated;

SECTION G - GENERAL PROVISIONS (CONTINUED)

- (3) During an emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and
 - (4) Pursuant to 401 KAR 52:020, 401 KAR 50:055, and KRS 224.1-400, the permittee notified the Division as promptly as possible and submitted written notice of the emergency to the Division when emission limitations were exceeded due to an emergency. The notice shall include a description of the emergency, steps taken to mitigate emissions, and corrective actions taken.
 - (5) This requirement does not relieve the source of other local, state or federal notification requirements.
 - b. Emergency conditions listed in General Condition G.7.a above are in addition to any emergency or upset provision(s) contained in an applicable requirement [401 KAR 52:020, Section 24(3)].
 - c. In an enforcement proceeding, the permittee seeking to establish the occurrence of an emergency shall have the burden of proof [401 KAR 52:020, Section 24(2)].
8. Ozone Depleting Substances
- a. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B:
 - (1) Persons opening appliances for maintenance, service, repair, or disposal shall comply with the required practices contained in 40 CFR 82.156.
 - (2) Equipment used during the maintenance, service, repair, or disposal of appliances shall comply with the standards for recycling and recovery equipment contained in 40 CFR 82.158.
 - (3) Persons performing maintenance, service, repair, or disposal of appliances shall be certified by an approved technician certification program pursuant to 40 CFR 82.161.
 - (4) Persons disposing of small appliances, MVACs, and MVAC-like appliances (as defined at 40 CFR 82.152) shall comply with the recordkeeping requirements pursuant to 40 CFR 82.166
 - (5) Persons owning commercial or industrial process refrigeration equipment shall comply with the leak repair requirements pursuant to 40 CFR 82.156.
 - (6) Owners/operators of appliances normally containing 50 or more pounds of refrigerant shall keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR 82.166.
 - b. If the permittee performs service on motor (fleet) vehicle air conditioners containing ozone-depleting substances, the source shall comply with all applicable requirements as specified in 40 CFR 82, Subpart B, *Servicing of Motor Vehicle Air Conditioners*.

SECTION G - GENERAL PROVISIONS (CONTINUED)

9. Risk Management Provisions

- a. The permittee shall comply with all applicable requirements of 401 KAR Chapter 68, Chemical Accident Prevention, which incorporates by reference 40 CFR Part 68, Risk Management Plan provisions. If required, the permittee shall comply with the Risk Management Program and submit a Risk Management Plan to U.S. EPA using the RMP* eSubmit software.
- b. If requested, submit additional relevant information to the Division or the U.S. EPA.

Permit Number: V-20-026 R4

Page: 273 of 273

SECTION H - ALTERNATE OPERATING SCENARIOS

None

SECTION I - COMPLIANCE SCHEDULE

None



TOYOTA MOTOR MANUFACTURING, KENTUCKY, INC.

Mail Code: MFGS/ENV-K

1001 Cherry Blossom Way, P.O. Box 2700

Georgetown, KY 40324-5700

(502) 868-2000

July 21st, 2025

Director Michael Kennedy
Division of Air Quality
300 Sower Boulevard, 2nd Floor
Frankfort, Kentucky 40601

Permit: V-20-026 R3
Agency Interest: 7998
Source ID: 21-209-00030

RE: TOYOTA Kentucky: Volume Amendments for Lines 1, 2, 3

Director Kennedy,

TOYOTA Motor Manufacturing Kentucky (TMMK) will be redistributing vehicle model production across its assembly lines. This redistribution will require:

1. Upgrading the capacity of existing model-specific equipment used in Paint, Weld and Assembly. This has no impact on overall volume or bottlenecking.
2. Installing model specific equipment for the introduction of an existing vehicle to a new Line.

This modification request also includes a revision of the previous battery electric vehicle permit. Pursuant to 401 KAR 52:020 Sections 14 and 18, TMMK proposes to KYDEP DAQ the following changes at TMMK:

Project 1: Modification of Line 3 to support Camry production

TMMK Line 3 currently produces the Lexus ES, which will end production in 2025. Existing Camry production on Lines 1 and 2 will partially move to Line 3. To facilitate this changepoint:

- (F21) Line 3 Paint will install robot spray applicators for Softchip application. Soft chip is a solvent borne primer material applied to the hood of a vehicle. This is currently a permitted activity on Line 3 but was idled in 2017.
- (F23) Additional cavity wax robots will be installed.
- (F25) Solvent Purge is expected to increase for the additional soft chip application.
- (C06, C17) Line 3 Weld will have an additional sealer system installed and minor modifications to the weld machines. No weld wire increases are expected.

Project 2: Modification of Line 2 to expand RAV4 production

TMMK Line 2 will introduce a new model year of the RAV4. Production of the RAV4 will increase from ~80,000 vehicles to ~100,000 vehicles. Equipment at TMMK will be modified to accommodate this model-specific activity.

- (F11) Additional Rocker wax robots will be installed.
- (C06, C14) Weld Line 2 will have welding robots reconfigured for the volume shift, including new model specific welding stations and sealer equipment. The overall usage of weld wire is not expected to increase.

This change is unrelated to the TMMK Paint Line 2 Reborn project.

Project 3: Modification to Line 1, Battery Electric Vehicle Permit

TMMK is adjusting the production volume of Battery Electric Vehicles produced in 2026.

- Camry's volume is planned for 60,000 vehicles (originally 20,000 vehicles).
- The original BEV is now planned for 90,000 vehicles (originally 186,000 vehicles).
- A new model is now planned for 56,000 vehicles, in both a plug-in hybrid and battery variant.

This new model is an SUV with a similar surface area as the original BEV and is expected to be equivalent from an emissions perspective. This model volume change results in a slight decrease in emissions from the previously issued permit (V-20-026-R3). This project is a modification of the April 2024 BEV permit and utilizes demand growth to demonstrate the project emissions increase is below the VOC significant emission rate.

Project 4: Plastic Shops Parts Reconfiguration (G21, G22, G26)

The Plastics Shop will be reconfiguring the parts processed in its paint booths. This reconfiguration will cause parts that use relatively less paint to be processed through booths with less control. TMMK is also requesting the booths be renamed to coincide with plant terminology.

- G21 (Exterior Parts) currently processes Rockers and other parts for Lines 1-3. It will now process Bumpers for Lines 1 and 3. Emissions will decrease by ~11 tons VOC. TMMK requests no changes to the permit. TMMK requests B1 Booth be changed to "RT3".
- G22 (Bumpers) currently processes Bumpers for Line 1 (G) and Bumpers for Line 2 (H). It will now process Rockers and other Exterior Parts for Lines 1-3 and continue to process Bumpers for Line 2. This will result in an emissions increase of ~6 tons of VOC, but does not meet the definition of physical modification or change in the method of operation. TMMK meets all existing limits from this change and requests no changes to the permit PTE for this project. TMMK requests Booth G and H Booth be changed to "RT1" and "RT2" and "Bumper" be changed to "Plastic Parts".
- G26 (Bumper and Rocker) currently processes parts for Line 3. The booth is expected to be decommissioned with Lexus ES end of production. TMMK requests no changes to the permit and no permitting action to be taken with this statement.

Project 5: Emergency Generator Installation and Replacement (D07)

TMMK will install a 150 kW NG emergency generator for its Team Member Services Building. TMMK will install a 275 kW NG emergency generator for its Childcare Center Building. This will replace the existing 300 HP diesel emergency generator and associated diesel tank.

The schedule for the changes:

Project	Impacted EU	Location	Installation	Production
Line 3 Paint Primer (Soft Chip)	F21	Bldg 2000A	Sep-25	Jan-26
Line 3 Paint Wax (Cavity Wax)	F23	Bldg 2000A	Sep-25	Jan-26
Line 3 Weld (Stations, Sealer)	C06, C17	Bldg 100A	Sep-25	Jan-26
Line 2 Paint Wax (Rocker Wax)	F11	Bldg 2000	Oct-25	May-26
Line 2 Weld	C06, C14	Bldg 100A	Oct-25	May-26
Line 1 Volume Modifications (New Vehicle)	E01R-E18R,	Bldg 250	Oct-25	Oct-26
Plastic Paint Booth Parts Adjustment	G21, G22, G26	Bldg 400	N/A	26-Jan
Emergency Generators	D07	TM Services	Jun-26	Oct-26

Please note, the proposed changes for Line 2 are effective for 2026-2028 only. The new Line #2 Paint (Reborn) shop already accommodates these changepoints.

TMMK proposes a minor modification for Project #1 – Line 3 Camry introduction.
TMMK proposes a 502(b)(10) amendment for Project #2 – Line 2 RAV4 Model Changeover.
TMMK proposes a minor modification for Project #3 – Line 1 Volume Reallocation.
TMMK proposes a 502(b)(10) amendment for Project #4 – Plastics Paint Booth Reallocation
TMMK proposes a 502(b)(10) amendment for Project #5 – Emergency Generators

Attached are:

- Required KYDEP Forms
- Technical Source Document
- Suggested Draft Amendment

If you have any questions, please contact Will Richardson at (502) 735-2554
will.richardson@toyota.com.

Sincerely,



Sandy Nott (Jul 21, 2025 10:22 EDT)

Sandy Nott,
Vice President
Toyota Motor Manufacturing Kentucky



TOYOTA MOTOR MANUFACTURING, KENTUCKY, INC.

Mail Code: MFGS/ENV-K

1001 Cherry Blossom Way, P.O. Box 2700

Georgetown, KY 40324-5700

(502) 868-2000

July 21st, 2025

Director Michael Kennedy
Division of Air Quality
300 Sower Boulevard, 2nd Floor
Frankfort, Kentucky 40601

Permit: V-20-026 R3
Agency Interest: 7998
Source ID: 21-209-00030

RE: TOYOTA Kentucky: Volume Amendments for Lines 1, 2, 3

Director Kennedy,

TOYOTA Motor Manufacturing Kentucky (TMMK) will be redistributing vehicle model production across its assembly lines. This redistribution will require:

1. Upgrading the capacity of existing model-specific equipment used in Paint, Weld and Assembly. This has no impact on overall volume or bottlenecking.
2. Installing model specific equipment for the introduction of an existing vehicle to a new Line.

This modification request also includes a revision of the previous battery electric vehicle permit. Pursuant to 401 KAR 52:020 Sections 14 and 18, TMMK proposes to KYDEP DAQ the following changes at TMMK:

Project 1: Modification of Line 3 to support Camry production

TMMK Line 3 currently produces the Lexus ES, which will end production in 2025. Existing Camry production on Lines 1 and 2 will partially move to Line 3. To facilitate this changepoint:

- (F21) Line 3 Paint will install robot spray applicators for Softchip application. Soft chip is a solvent borne primer material applied to the hood of a vehicle. This is currently a permitted activity on Line 3 but was idled in 2017.
- (F23) Additional cavity wax robots will be installed.
- (F25) Solvent Purge is expected to increase for the additional soft chip application.
- (C06, C17) Line 3 Weld will have an additional sealer system installed and minor modifications to the weld machines. No weld wire usage increases are expected.

Project 2: Modification of Line 2 to expand RAV4 production

TMMK Line 2 will introduce a new model year of the RAV4. Production of the RAV4 will increase from ~80,000 vehicles to ~100,000 vehicles. Equipment at TMMK will be modified to accommodate this model-specific activity.

- (F11) Additional Rocker wax robots will be installed.
- (C06, C14) Weld Line 2 will have welding robots reconfigured for the volume shift, including new model specific welding stations and sealer equipment. The overall usage of weld wire is not expected to increase.

This change is unrelated to the TMMK Paint Line 2 Reborn project.

Project 3: Modification to Line 1, Battery Electric Vehicle Permit

TMMK is adjusting the production volume of Battery Electric Vehicles produced in 2026.

- Camry's volume is planned for 60,000 vehicles (originally 20,000 vehicles).
- The original BEV is now planned for 90,000 vehicles (originally 186,000 vehicles).
- A new model is now planned for 56,000 vehicles, in both a plug-in hybrid and battery variant.

This new model is an SUV with a similar surface area as the original BEV and is expected to be equivalent from an emissions perspective. This model volume change results in a slight decrease in emissions from the previously issued permit (V-20-026-R3). This project is a modification of the April 2024 BEV permit and utilizes demand growth to demonstrate the project emissions increase is below the VOC significant emission rate.

Project 4: Plastic Shops Parts Reconfiguration (G21, G22, G26)

The Plastics Shop will be reconfiguring the parts processed in its paint booths. This reconfiguration will cause parts that use relatively less paint to be processed through booths with less control. TMMK is also requesting the booths be renamed to coincide with plant terminology.

- G21 (Exterior Parts) currently processes Rockers and other parts for Lines 1-3. It will now process Bumpers for Lines 1 and 3. TMMK requests B1 Booth be changed to "RT3".
- G22 (Bumpers) currently processes Bumpers for Line 1 (G) and Bumpers for Line 2 (H). It will now process Rockers and other Exterior Parts for Lines 1-3 and continue to process Bumpers for Line 2. TMMK meets all existing limits from this change and requests no changes to the permit PTE for this project. TMMK requests Booth G and H Booth be changed to "RT1" and "RT2" and "Bumper" be changed to "Plastic Parts".
- G26 (Bumper and Rocker) currently processes parts for Line 3. The booth is expected to be decommissioned with Lexus ES end of production, however TMMK requests no changes to the permit and no permitting action to be taken with this statement.

No physical change will occur due to this process change. TMMK does not consider running differently shaped parts to be considered a change in the method of operation.

Project 5: Emergency Generator Installation and Replacement (D07)

TMMK will install a 150 kW NG emergency generator for its Team Member Services Building.
TMMK will install a 275 kW NG emergency generator for its Childcare Center Building.

The schedule for the changes:

Project	Impacted EU	Location	Installation	Production
Line 3 Paint Primer (Soft Chip)	F21	Bldg 2000A	Sep-25	Jan-26
Line 3 Paint Wax (Cavity Wax)	F23	Bldg 2000A	Sep-25	Jan-26
Line 3 Weld (Stations, Sealer)	C06, C17	Bldg 100A	Sep-25	Jan-26
Line 2 Paint Wax (Rocker Wax)	F11	Bldg 2000	Oct-25	May-26
Line 2 Weld	C06, C14	Bldg 100A	Oct-25	May-26
Line 1 Volume Modifications (New Vehicle)	E01R-E18R,	Bldg 250	Oct-25	Oct-26
Plastic Paint Booth Parts Adjustment	G21, G22, G26	Bldg 400	N/A	26-Jan
Emergency Generators	D07	TM Services	Jun-26	Oct-26

Please note, the proposed changes for Line 2 are effective for 2026-2028 only. The new Line #2 Paint (Reborn) shop already accommodates these changepoints.

TMMK proposes a minor modification for Project #1 – Line 3 Camry introduction
TMMK proposes a 502(b)(10) amendment for Project #2 – Line 2 RAV4 Model Changeover
TMMK proposes a minor modification for Project #3 – Line 1 Volume Reallocation.
TMMK proposes a 502(b)(10) amendment for Project #4 – Plastics Paint Booth Reallocation
TMMK proposes a 502(b)(10) amendment for Project #5 – Emergency Generators

Attached are:

- Required KYDEP Forms
- Technical Source Document
- Suggested Draft Amendment

If you have any questions, please contact Will Richardson at (502) 735-2554
will.richardson@toyota.com.

Sincerely,

Sandy Nott,
Vice President
Toyota Motor Manufacturing Kentucky

H/2018		DEP7007AI	
Division for Air Quality		Administrative Information	
300 Sower Boulevard		___ Section AI.1: Source Information	
Frankfort, KY 40601		___ Section AI.2: Applicant Information	
(502) 564-3999		___ Section AI.3: Owner Information	
		___ Section AI.4: Type of Application	
		___ Section AI.5: Other Required Information	
		___ Section AI.6: Signature Block	
		___ Section AI.7: Notes, Comments, and Explanations	
		Additional Documentation	
		___ Additional Documentation attached	
Source Name: TOYOTA MOTOR MANUFACTURING KENTUCKY, INC			
KY EIS (AFS) #:		21- 209-00030	
Permit #:		V-20-026	
Agency Interest (AI) ID:		7998	
Date:		7/16/2025	
Section AI.1: Source Information			
Physical Location	Street:	1001 CHERRY BLOSSOM WAY	
Address:	City:	County:	Zip Code:
	GEORGETOWN	SCOTT	40324
Mailing Address:	Street or P.O. Box:		
	City:	State:	Zip Code:
Standard Coordinates for Source Physical Location			
Longitude:	84.23.30 (decimal degrees)	Latitude:	38.16.05 (decimal degrees)
Primary (NAICS) Category:		Primary NAICS #:	

Classification (SIC) Category:		Automobile Assembly		Primary SIC #:		3711	
Briefly discuss the type of business conducted at this site:							
Description of Area Surrounding Source:		☒ Rural Area ☐ Urban Area		☐ Industrial Park ☐ Industrial Area		☐ Residential Area ☐ Commercial Area	
Approximate distance to nearest residence or commercial property:				Property Area:		1300 acres	
				Is this source portable?		☐ Yes ☒ No	
What other environmental permits or registrations does this source currently hold or need to obtain in Kentucky?							
NPDES/KPDES:		☒ Currently Hold ☐ Need		☐ N/A			
Solid Waste:		☒ Currently Hold ☐ Need		☐ N/A			
RCRA:		☒ Currently Hold ☐ Need		☐ N/A			
UST:		☐ Currently Hold ☐ Need		☐ N/A			
Type of Regulated Waste Activity:		☐ Mixed Waste Generator ☐ U.S. Importer of Hazardous Waste		☐ Generator ☐ Transporter		☐ Recycler ☐ Treatment/Storage/Disposal Facility ☐ Other: ☐ N/A	

Number of Employees: 9568

11/2018

Section AI.2: Applicant Information

Applicant Name: TOYOTA MOTOR MANUFACTURING KENTUCKY, INC

Title: (if individual)

Mailing Address:

Street or P.O. Box: _____
City: _____ **State:** _____ **Zip Code:** _____

Email: (if individual)

Phone: _____

Technical Contact

Name: Will Richardson

Title: Environmental Engineer

Mailing Address:

Street or P.O. Box: 101 Engineering Way
City: Georgetown **State:** KY **Zip Code:** 40324

Email: will.richardson@toyota.com

Phone: 502 642-1696

Air Permit Contact for Source

Name: Chris Holbrook

Title: Sr. Environmental Engineer

Mailing Address:

Street or P.O. Box: 1001 Cherry Blossom
City: Georgetown **State:** KY **Zip Code:** 40324

Email: Chris.Holbrook@toyota.com

Phone: +1 (859) 699-9479

Section AI.3: Owner Information	
☒ Owner same as applicant	
Name:	
Title:	
Mailing Address:	Street or P.O. Box: City: State: Zip Code:
Email:	
Phone:	
List names of owners and officers of the company who have an interest in the company of 5% or more.	
Name	Position

Section AI.4: Type of Application

Current Status:	☒ Title V	☐ Conditional Major	☐ State-Origin	☐ General Permit	☐ Registration	☐ None
Requested Action: <i>(check all that apply)</i>	☐ Name Change	☐ Initial Registration	☐ Significant Revision	☐ Administrative Permit Amendment		
	☐ Renewal Permit	☐ Revised Registration	☒ Minor Revision	☐ Initial Source-wide Operating Permit		
	☐ 502(b)(10)Change	☐ Extension Request	☐ Addition of New Facility	☐ Portable Plant Relocation Notice		
	☐ Revision	☐ Off Permit Change	☐ Landfill Alternate Compliance Submittal	☐ Modification of Existing Facilities		
	☐ Ownership Change	☐ Closure				
Requested Status:	☒ Title V	☐ Conditional Major	☐ State-Origin	☐ PSD	☐ NSR	☐ Other: _____

Is the source requesting a limitation of potential emissions?		
	☐ Yes	☒ No
Pollutant:	Requested Limit:	Requested Limit:
☐ Particulate Matter	_____	☐ Single HAP
☐ Volatile Organic Compounds (VOC)	_____	☐ Combined HAPs
☐ Carbon Monoxide	_____	☐ Air Toxics (40 CFR 68, Subpart F)
☐ Nitrogen Oxides	_____	☐ Carbon Dioxide
☐ Sulfur Dioxide	_____	☐ Greenhouse Gases (GHG)
☐ Lead	_____	☐ Other

For New Construction:	Proposed Operation Start-Up Date: (MM/YYYY)
Proposed Start Date of Construction: (MM/YYYY)	_____

For Modifications:	Proposed Operation Start-Up Date: (MM/YYYY)	01/2026
Proposed Start Date of Modification: (MM/YYYY)	09/2025	
Applicant is seeking coverage under a permit shield. ☐ Yes ☐ No		
Identify any non-applicable requirements for which permit shield is sought on a separate attachment to the application.		

Section AI.5 Other Required Information

Indicate the documents attached as part of this application:

☐ DEP7007A Indirect Heat Exchangers and Turbines	☐ DEP7007CC Compliance Certification
☒ DEP7007B Manufacturing or Processing Operations	☐ DEP7007DD Insignificant Activities
☐ DEP7007C Incinerators and Waste Burners	☒ DEP7007EE Internal Combustion Engines
☐ DEP7007F Episode Standby Plan	☐ DEP7007FF Secondary Aluminum Processing
☐ DEP7007J Volatile Liquid Storage	☐ DEP7007GG Control Equipment
☒ DEP7007K Surface Coating or Printing Operations	☐ DEP7007HH Haul Roads
☐ DEP7007L Mineral Processes	☐ Confidentiality Claim
☐ DEP7007M Metal Cleaning Degreasers	☐ Ownership Change Form
☒ DEP7007N Source Emissions Profile	☐ Secretary of State Certificate
☐ DEP7007P Perchloroethylene Dry Cleaning Systems	☐ Flowcharts or diagrams depicting process
☐ DEP7007R Emission Offset Credit	☐ Digital Line Graphs (DLG) files of buildings, roads, etc.
☐ DEP7007S Service Stations	☐ Site Map
☐ DEP7007T Metal Plating and Surface Treatment Operations	☐ Map or drawing depicting location of facility
☐ DEP7007V Applicable Requirements and Compliance Activities	☐ Safety Data Sheet (SDS)
☐ DEP7007Y Good Engineering Practice and Stack Height Determination	☐ Emergency Response Plan
☐ DEP7007AA Compliance Schedule for Non-complying Emission Units	☐ Other: _____
☐ DEP7007BB Certified Progress Report	

Section AI.6: Signature Block

I, the undersigned, hereby certify under penalty of law, that I am a responsible official*, and that I have personally examined, and am familiar with, the information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the information is on knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false or incomplete information, including the possibility of fine or imprisonment.

Sandy Nott
Sandy Nott (Jul 21, 2025 10:22 EDT)

Authorized Signature

Sandy Nott

Type or Printed Name of Signatory

*Responsible official as defined by 401 KAR 52:001.

07/21/2025

Date

Vice President, Administration

Title of Signatory

Section AI.7: Notes, Comments, and Explanations	

11/2018		DEP7007AI		Additional Documentation	
Division for Air Quality		Administrative Information		Additional Documentation attached	
300 Sower Boulevard		Section AI.1: Source Information			
Frankfort, KY 40601		Section AI.2: Applicant Information			
(502) 564-3999		Section AI.3: Owner Information			
		Section AI.4: Type of Application			
		Section AI.5: Other Required Information			
		Section AI.6: Signature Block			
		Section AI.7: Notes, Comments, and Explanations			
Source Name:		TOYOTA MOTOR MANUFACTURING KENTUCKY, INC			
KY EIS (AFS) #:		21- 209-00030			
Permit #:		V-20-026			
Agency Interest (AI) ID:		7998			
Date:		7/16/2025			
Section AI.1: Source Information					
Physical Location		Street: 1001 CHERRY BLOSSOM WAY			
Address:		City: GEORGETOWN		County: SCOTT	Zip Code: 40324
		Street or			
Mailing Address:		P.O. Box:			
		City:		State:	Zip Code:
Standard Coordinates for Source Physical Location					
Longitude:		84.23.30 (decimal degrees)		Latitude: 38.16.05 (decimal degrees)	
Primary (NAICS) Category:					
Primary NAICS #:					

外:

7AI

Classification (SIC) Category:

Automobile Assembly

Primary SIC #:

3711

Briefly discuss the type of business conducted at this site:

Description of Area Surrounding Source:

☒ Rural Area

☐ Industrial Park

☐ Residential Area

☐ Urban Area

☐ Industrial Area

☐ Commercial Area

Is any part of the source located on federal land?

☐ Yes

☐ No

Number of Employees:

9568

Approximate distance to nearest residence or commercial property:

Property Area:

1300 acres

Is this source portable?

☐ Yes

☒ No

What other environmental permits or registrations does this source currently hold or need to obtain in Kentucky?

NPDES/KPDES:

☒ Currently Hold

☐ Need

☐ N/A

Solid Waste:

☒ Currently Hold

☐ Need

☐ N/A

RCRA:

☒ Currently Hold

☐ Need

☐ N/A

UST:

☐ Currently Hold

☐ Need

☐ N/A

Type of Regulated Waste Activity:

☐ Mixed Waste Generator

☐ Generator

☐ Recycler

☐ Other: _____

☐ U.S. Importer of Hazardous Waste

☐ Transporter

☐ Treatment/Storage/Disposal Facility

☐ N/A

11/2018

Section AI.2: Applicant Information

Applicant Name: TOYOTA MOTOR MANUFACTURING KENTUCKY, INC

Title: (if individual)

Mailing Address: **Street or P.O. Box:**

City:

State:

Zip Code:

Email: (if individual)

Phone:

Technical Contact

Name: Will Richardson

Title: Environmental Engineer

Mailing Address: **Street or P.O. Box:** 101 Engineering Way
City: Georgetown **State:** KY **Zip Code:** 40324

Email: will.richardson@toyota.com

Phone: 502 642-1696

Air Permit Contact for Source

Name: Chris Holbrook

Title: Sr. Environmental Engineer

Mailing Address: **Street or P.O. Box:** 1001 Cherry Blossom
City: Georgetown **State:** KY **Zip Code:** 40324

Email: Chris.Holbrook@toyota.com

Phone: +1 (859) 699-9479

Section AI.3: Owner Information

☒ Owner same as applicant

Name: _____

Title: _____

Mailing Address: Street or P.O. Box: _____
City: _____ State: _____ Zip Code: _____

Email: _____

Phone: _____

List names of owners and officers of the company who have an interest in the company of 5% or more.

Name

Position

11/2018

Section AI.4: Type of Application

Current Status:	☒ Title V	☐ Conditional Major	☐ State-Origin	☐ General Permit	☐ Registration	☐ None
	☐ Name Change	☐ Initial Registration	☐ Significant Revision	☐ Administrative Permit Amendment		
Requested Action: (check all that apply)	☐ Renewal Permit	☐ Revised Registration	☒ Minor Revision	☐ Initial Source-wide Operating Permit		
	☒ 502(b)(10)Change	☐ Extension Request	☐ Addition of New Facility	☐ Portable Plant Relocation Notice		
	☐ Revision	☐ Off Permit Change	☐ Landfill Alternate Compliance Submittal	☐ Modification of Existing Facilities		
	☐ Ownership Change	☐ Closure				
Requested Status:	☒ Title V	☐ Conditional Major	☐ State-Origin	☐ PSD	☐ NSR	☐ Other: _____

Is the source requesting a limitation of potential emissions?

☐ Yes ☒ No

Pollutant:	Requested Limit:	Pollutant:	Requested Limit:
☐ Particulate Matter	_____	☐ Single HAP	_____
☐ Volatile Organic Compounds (VOC)	_____	☐ Combined HAPs	_____
☐ Carbon Monoxide	_____	☐ Air Toxics (40 CFR 68, Subpart F)	_____
☐ Nitrogen Oxides	_____	☐ Carbon Dioxide	_____
☐ Sulfur Dioxide	_____	☐ Greenhouse Gases (GHG)	_____
☐ Lead	_____	☐ Other	_____

For New Construction:

Proposed Start Date of Construction:
(MM/YYYY)

Proposed Operation Start-Up Date: (MM/YYYY)

For Modifications:

Proposed Start Date of Modification:
(MM/YYYY)

_____ 09/2025

Proposed Operation Start-Up Date: (MM/YYYY)

_____ 01/2026

Applicant is seeking coverage under a permit shield.

☐ Yes ☐ No

Identify any non-applicable requirements for which permit shield is sought on a separate attachment to the application.

Section AI.5 Other Required Information

Indicate the documents attached as part of this application:

☐ DEP7007A Indirect Heat Exchangers and Turbines	☐ DEP7007CC Compliance Certification
☒ DEP7007B Manufacturing or Processing Operations	☐ DEP7007DD Insignificant Activities
☐ DEP7007C Incinerators and Waste Burners	☒ DEP7007EE Internal Combustion Engines
☐ DEP7007F Episode Standby Plan	☐ DEP7007FF Secondary Aluminum Processing
☐ DEP7007J Volatile Liquid Storage	☐ DEP7007GG Control Equipment
☒ DEP7007K Surface Coating or Printing Operations	☐ DEP7007HH Haul Roads
☐ DEP7007L Mineral Processes	☐ Confidentiality Claim
☐ DEP7007M Metal Cleaning Degreasers	☐ Ownership Change Form
☒ DEP7007N Source Emissions Profile	☐ Secretary of State Certificate
☐ DEP7007P Perchloroethylene Dry Cleaning Systems	☐ Flowcharts or diagrams depicting process
☐ DEP7007R Emission Offset Credit	☐ Digital Line Graphs (DLG) files of buildings, roads, etc.
☐ DEP7007S Service Stations	☐ Site Map
☐ DEP7007T Metal Plating and Surface Treatment Operations	☐ Map or drawing depicting location of facility
☐ DEP7007V Applicable Requirements and Compliance Activities	☐ Safety Data Sheet (SDS)
☐ DEP7007Y Good Engineering Practice and Stack Height Determination	☐ Emergency Response Plan
☐ DEP7007AA Compliance Schedule for Non-complying Emission Units	☐ Other: _____
☐ DEP7007BB Certified Progress Report	

Section AI.6: Signature Block

I, the undersigned, hereby certify under penalty of law, that I am a responsible official*, and that I have personally examined, and am familiar with, the information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the information is on knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false or incomplete information, including the possibility of fine or imprisonment.

Authorized Signature

Sandy Nott

Type or Printed Name of Signatory

Date

Vice President, Administration

Title of Signatory

*Responsible official as defined by 401 KAR 52:001.

Section AI.7: Notes, Comments, and Explanations

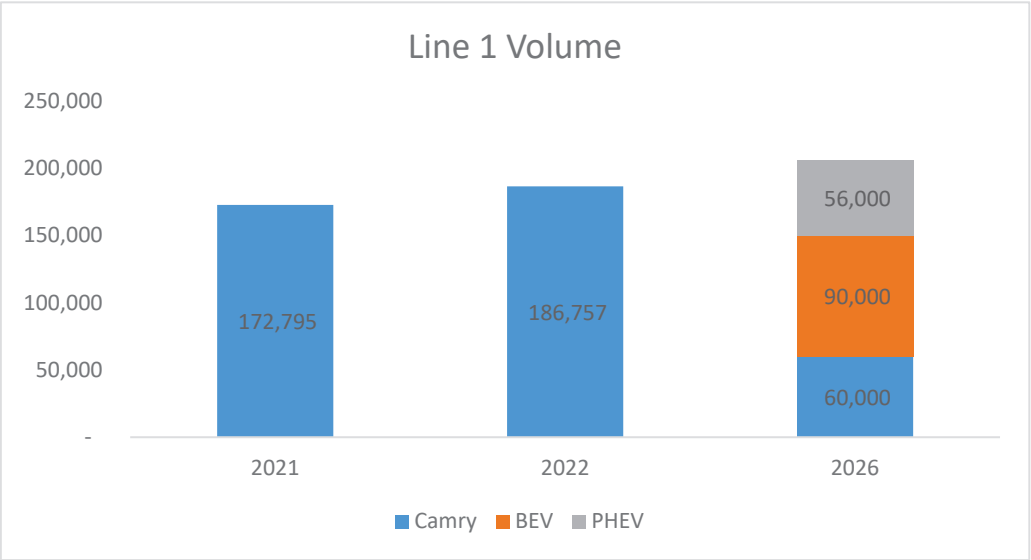
Project	Impacted EU	Location	Installation
Line 3 Paint Primer (Soft Chip)	F21	Bldg 2000A	Sep-25
Line 3 Paint Wax (Cavity Wax)	F23	Bldg 2000A	Sep-25
Line 3 Weld (Stations, Sealer)	C06, C17	Bldg 100A	Sep-25
Line 2 Paint Wax (Rocker Wax)	F11	Bldg 2000	Oct-25
Line 2 Weld	C06, C14	Bldg 100A	Oct-25
Line 1 Volume Modifications (New Vehicle)	E01R-E18R,	Bldg 250	Oct-25
Plastic Paint Booth Parts Adjustment	G21, G22, G26	Bldg 400	N/A
Emergency Generators	D07	TM Services	Jun-26

Production
Jan-26
Jan-26
Jan-26
May-26
May-26
Oct-26
26-Jan
Oct-26

TMMK	2021	2022	2026	Capacity
Line 1	172,795	186,757	206,000	341,298
Line 2	221,832	218,708	220,000	262,000
Line 3	44,512	43,211	45,000	70,000
	439,139	448,676	471,000	673,298

Line 1	2021	2022	2026
Camry	172,795	186,757	60,000
BEV	0	0	90,000
PHEV	0	0	56,000
			206,000

Line 2	2021
RAV4	76,862
Camry	144,970
	221,832



2022	2026
80,926	100,000
137,782	129,000
218,708	229,000

Line 3	2021	2022	2026
Camry	-	-	50,000
Lexus ES	44,512	43,211	-
			50,000

		Project	Impacted EU	2021 Actual
Project #1	ATPA	Line 3 Paint Primer (Soft Chip)	F21	0.04
		Line 3 Paint Wax (Cavity Wax)	F23	0.01
	Summary	Total Project #1 Line 3 Camry		30.38
		Significant Emission Rate PM2.5		
	ATPA	Line 3 Paint Primer (Soft Chip)	F21	16.73
		Line 3 Paint Wax (Cavity Wax)	F23	0.09
		Line 3 Solvent Purge	F25	8.50
		Line 3 Weld (Stations, Sealer)	C06, C17	5.06
	Summary	Total Project #1 Line 3 Camry		30.38
		Significant Emission Rate VOC		

		Project	Impacted EU	2021 Actual
Project #2	ATPA	Line 2 Paint Wax - Rocker	F11	0.91
		Line 2 Weld	C06, C14	-
	Summary	Total Project #2 Line 2 RAV4		0.91
		Significant Emission Rate PM2.5		
	ATPA	Line 2 Paint Wax - Rocker	F11	0.03
		Line 2 Weld (Stations, Sealer)	C06, C14	0.70
	Summary	Total Project #2 Line 2 RAV4		0.73
		Significant Emission Rate VOC		

		Project	Impacted EU	2021 Actual
Project #3	ATPA	Modified BEV Application	All	22.77
	Summary	Total Revised Project #3		22.77
		Significant Emission Rate PM2.5		
	ATPA	Modified BEV Application (No E or G Series)	All	11.92
		Line 1 Volume Modifications (New Vehicle)	All	147.57
	Summary	Total Revised Project #3		159.50
		Significant Emission Rate VOC		

*VOC utilizes could have accommodated emissions for E02R,E05R,E07R,E09R,E11R,E13R

*VOC corrected to remove Project Emissions Accounting per DAQ guidance.

		Project	Impacted EU	2021 Actual
	ATPA	Line 3 Bumpers	G21	0.51
		Line 1-3 Exterior Parts	G22	

Project #4	Summary	Total Project #4		0.51
		Significant Emission Rate PM2.5		
	ATPA	Line 3 Bumpers	G21	7.39
		Line 1-3 Exterior Parts	G22	71.77
	Summary	Total Project #4		79.15
		Significant Emission Rate VOC		

*For reference only. No physical modification and no change in the method of operation.

Project #5		Project	Impacted EU	VOC
	ATPA	TM Services	D07	0.00
		Child Care	D07	0.00
	Summary	Total Project #5		0.00
		Significant Emission Rate		40.00

PM Ton/year			
2022 Actual	Baseline Actual	Projected Actual	Projected actual - Baseline Actual (or PTE)
0.04	0.04	0.04	0.00
0.11	0.06	0.12	0.06
26.18	28.28	23.17	0.07
			10.00
VOC Ton/year			
16.08	16.40	9.73	(6.67)
0.91	0.50	0.99	0.49
8.69	8.60	9.55	0.95
0.50	2.78	2.90	0.12
26.18	28.28	23.17	1.56
			40.00

PM Ton/year			
2022 Actual	Baseline Actual	Projected Actual	Projected actual - Baseline Actual (or PTE)
0.97	0.94	4.18	3.23
-	-	-	-
0.97	0.94	4.18	3.23
			10.00
VOC Ton/year			
0.04	0.04	0.16	0.12
3.77	2.23	2.26	0.03
3.80	2.27	2.42	0.15
			40.00

PM Ton/year			
2022 Actual	Baseline Actual	Projected Actual	Projected actual - Baseline Actual (or PTE)
23.17	22.97	25.80	4.00
23.17	22.97	25.80	4.00
			10.00
VOC Ton/year*			
16.34	14.13	25.48	16.06
114.27	130.92	124.54	3.42
130.61	145.05	150.02	19.48
			40.00

PM Ton/year			
2022 Actual	Baseline Actual	Projected Actual	Projected actual - Baseline Actual (or PTE)
0.26	0.39	0.93	0.54

0.26	0.39	0.93	0.54
			10.00
VOC Ton/year			
3.63	5.51	12.13	6.62
39.53	55.65	48.35	(7.30)
43.16	61.16	60.48	6.62
			40.00

PTE			
PM2.5	NOx	SO2	CO
0.00	0.01	0.00	0.01
0.00	0.02	0.00	0.02
0.00	0.04	0.00	0.03
10.00	40.00	40.00	100.00

		Project	Impacted EU	2021 Actual
Project #3	New equipment added PTE	Battery Assembly	*New	-
		Battery Case Welding	*New	-
		Vacuum Form Machines	*New (G14b)	-
	Changes to existing Equipment Projected Actual - Baseline Actual	Glass Panel Install Replacement	A03	-
		Coolant Tank and Filling	A05, D06	-
		Toe and Drum Tester	A09	0.77
		Battery Case Press	C02	-
		BodyWeld Model Updates	C03,C06,C14,C17	16.50
		Paint 1 Topcoat, Sealer, Wax	E02,E04,E05,E07,E11R	5.08
		Plastics Line 1 Exterior and Bumper	G21, G22	0.35
		Update to Small Parts ED System	C08/C09	0.07
	Summary	Total Project #1 (BEV)		22.77

		Project	Impacted EU	2021 Actual
Project #3	New equipment added PTE	Battery Assembly	*New	-
		Battery Case Welding	*New	-
		Vacuum Form Machines	*New (G14b)	-
	Changes to existing Equipment Projected Actual - Baseline Actual	Glass Panel Install Replacement	A03	1.01
		Coolant Tank and Filling	A05, D06	0.20
		Toe and Drum Tester	A09	-
		Battery Case Press	C02	7.47
		BodyWeld Model Updates	C03,C06,C14,C17	0.60
		Paint 1 Topcoat, Sealer, Wax	E02,E04,E05,E07,E11R	66.73
		Solvent Purge	E13R	0.37
		Plastics Line 1 Exterior and Bumper	G21, G22	80.47
		Update to Small Parts ED System	C08/C09	2.65
	Summary	Total Project #1 (BEV)		

*Adjusted PA-BA to remove Project Emissions Accounting net decreases.

PM Ton/year			
2022 Actual	Baseline Actual	Projected Actual	PA-BA (PTE)
-	-	-	-
-	-	-	0.29
-	-	-	0.88
-	-	-	-
-	-	-	-
0.83	0.80	0.80	0.00
-	-	-	-
16.40	16.45	18.04	1.59
5.51	5.29	6.41	1.11
0.35	0.35	0.39	0.04
0.08	0.08	0.16	0.08
23.17	22.97	25.80	4.00

VOC Ton/year			
2022 Actual	Baseline Actual	Projected Actual	PA-BA (PTE)
-	-	-	6.91
-	-	-	0.00
-	-	-	0.00
0.42	0.72	1.86	1.15
0.12	0.16	0.17	0.01
-	-	-	-
11.89	9.68	11.19	1.51
1.24	0.92	1.30	0.37
70.40	68.57	93.01	26.09
0.48	0.43	0.61	0.18
43.39	61.93	66.65	4.72
2.67	2.66	4.06	1.40
			42.34

April 2024 BEV Application		
-	-	
-	-	
-	-	
-	-	
-	-	
-	-	
	0.77	0.83
-	-	
	16.50	16.40
	5.08	5.51
	0.35	0.35
	0.07	0.08

2024 Application		
-	-	
-	-	
-	-	
-	-	
	1.01	0.42
	0.20	0.12
-	-	
	7.47	11.89
	0.60	1.24
	66.73	70.40
	1.93	2.36
	80.47	51.94
	4.09	4.13

tion			
-	-	-	
-	-		0.29
-	-		0.88
-	-	-	
-	-	-	
	0.80	0.80	0.00
-	-	-	
	16.45	18.04	1.59
	5.29	6.41	1.11
	0.35	0.45	0.10
	0.08	0.16	0.08

-	-		6.91	
-	-		0.00	
-	-		0.00	
	0.72	1.86	1.15	
	0.16	0.17	0.01	
-	-	-		
	9.68	11.19	1.51	
	0.92	1.30	0.37	
	68.57	93.54	24.97	-1.12
	2.15	2.90	0.54	0.36
	66.20	68.93	2.73	-1.99
	4.11	4.44	0.33	-1.08

TMMK Paint 250 Could Have Accommodated

	Could Have	Capacity
Vehicles/Hr	55	70
Vehicles/Year	245,674	341,298
Hrs/Year	5,600	8760

Max Monthly	Jun-21
Veh/Month	22,334
Veh/Yr	245,674

Project
Other Projects (
ED
Sealer
Primer
Top
Black
Wax
Solvent Purge
Total Project #1

	Description	Emission Point	Gallons/Veh	VOC (lb VOC/Gal)	Capture
Electrodeposition E02R	Bath Hood Exhaust		1.58	0.18	25%
	Oven Emissions	RTO	-	-	75%

	Description	Emission Point	Gallons/Veh	VOC (lb VOC/Gal)	Capture
Sealer Application (F E04R	Sealer	Building	1.08	0.34	13%
	Deadener	Building	1.17	0.30	5%
	PVC	Building	1.45	0.31	6%
	Oven Emissions	RTO	-	-	

	Description	Emission Point	Gallons/Veh	VOC (lb VOC/Gal)	Capture
Coating Application E05R	Primer		0.57	1.01	43%
	Soft Chip Primer		0.03	6.81	43%
	Oven Emissions	RTO	-	-	57%
Coating Application (E07R	Basecoat		0.78	1.31	30%
	Clearcoat		0.48	3.83	6%
	Oven Emissions	RTO	-	-	

	Description	Emission Point	Gallons/Veh	VOC (lb VOC/Gal)	Capture
Blackout (E09R)	Blackout Coating		0.003	0.64	100%

Wax (E11R)	Wax Coating	0.084	1.40	100%

	Emission			
	Point		Gallons/V	
	Description		VOC (lb VOC/Gal)	
Purge - Solvent Only E13R			Capture	
	Line Purge - Solvent		0.110	5.47
	Booth Emissions		-	-

Impacted EU	VOC Ton/year					Projected	Adjusted Projected	Adj PJAC-BAE
	2021 Actual	2022 Actual	Baseline Actual	CHA	Demand Growth			
(G,A,C)			76.06			85.22	85.22	16.06
E02R	7.19	8.59	7.89	9.05	1.16	10.09	8.93	1.04
E04R	8.76	9.94	9.35	13.24	3.89	9.90	6.02	(3.33)
E05R	11.29	11.50	11.39	42.32	30.92	16.99	(13.93)	(25.33)
E07R	32.78	32.10	32.44	57.32	24.88	46.44	21.56	(10.87)
E09R	0.18	0.12	0.15	0.26	0.11	2.64	2.53	2.38
E11R	6.54	8.15	7.34	14.41	7.07	6.94	(0.13)	(7.47)
E13R	0.37	0.48	0.43	0.74	0.31	0.61	0.29	(0.13)
(BEV)			145.05	137.34	68.35	178.83	124.54	19.48

VOC Control	VOC - UNC		VOC - CNT	
	lb/hr	TPY	lb/hr	TPY
0%	3.89	8.69	3.89	8.69
98.6%	11.67	26.06	0.16	0.36

VOC Control	VOC - UNC		VOC - CNT	
	lb/hr	TPY	lb/hr	TPY
0%	2.57	5.75	2.57	5.75
0%	0.95	2.13	0.95	2.13
0%	1.58	3.52	1.58	3.52
98.6%	58.85	131.43	0.82	1.84

VOC Control	VOC - UNC		VOC - CNT	
	lb/hr	TPY	lb/hr	TPY
0%	13.61	30.39	13.61	30.39
0%	4.86	10.85	4.86	10.85
98.0%	24.27	54.22	0.49	1.08
0%	16.94	37.83	16.94	37.83
0%	6.04	13.50	6.04	13.50
98.0%	134.04	299.36	2.68	5.99

VOC Control	VOC - UNC		VOC - CNT	
	lb/hr	TPY	lb/hr	TPY
0%	0.12	0.26	0.12	0.26

0%	6.45	14.41	6.45	14.41

	VOC - UNC		VOC - CNT	
VOC Control	lb/hr	TPY	lb/hr	TPY
100%	16.55	36.96	0.00	0.00
98.0%	8.27	36.96	0.17	0.74

***New Source Potential To Emit**

G14?

Vehicles/Year

	VOC		PM		HAPS
	lbs/hr	Tons/Year	lbs/hr	Tons/Year	lbs/hr
Vacuum Form Machines	3.11E-06	4.36E-06	0.2	0.876	3.06E-06
Total	3.11E-06	4.36E-06	0.20	0.88	3.06E-06

		ug/Part	Parts/Year	Tons/Year	Parts/Hr
Formaldehyde	HAP	1.7	230,000	4.31E-07	82
Acetaldehyde	HAP	2	230,000	5.07E-07	82
Toluene	HAP	7	230,000	1.77E-06	82
Xylene	HAP	3	230,000	7.61E-07	82
Ethylbenzene	HAP	2.1	230,000	5.32E-07	82
Styrene	HAP	0.5	230,000	1.27E-07	82
Dibutyl phthalate	HAP	0.3	230,000	7.61E-08	82
2-ethylhexyl phthalate	HAP	0.3	230,000	7.61E-08	82
Tetradecane	VOC	0.3	230,000	7.61E-08	82

Tons/Year
4.28E-06

4.28E-06

Lbs/Hr

3.07E-07	9.84E-08
3.62E-07	1.16E-07
1.27E-06	4.05E-07
5.42E-07	1.74E-07
3.80E-07	1.22E-07
9.04E-08	2.89E-08
5.42E-08	1.74E-08
5.42E-08	1.74E-08
5.42E-08	1.74E-08

***New Source Potential To Emit**

Case/Hr 70
Case/Year 230,000
Hrs/Year 5,500

VOC

	Gal/Case	VOC (lb/gal)	lbs/hr	Tons/Year
Sealer	0.0252	0.00	0.00	0.00

PM	lbs/Case	lbs/hr	Tons/Year
Spot Weld	0.0025	0.175	0.29

***New Source Potential To Emit**

	Veh/Hr	Veh/Year
Line 1	70	230,000

Material	Density (g/cm3)	VOC	Gal/Veh	VOC	
				lbs/veh	lbs/hr
TIM (Cooling)	2.81	0.57%	0.33	0.04	3.11
TIM (Module)	2.9	0.07%	0.42	0.01	0.46
Urethane	1.26	0.00%	0.15	0.00	0.00
ED Repair	1.20	13.9%	0.000	0.00	0.01
Cleaner	0.79	100%	0.001	0.01	0.62

4.20

032D Li7.A Direct material consumption list

Process name	Unit	Consumption per unit	Unit	VOC%
Thermal application Cc	per Ltr.	3.3 (1.26L)	Kgs	0.57
ED Repair	per Kgs.	0.0005	Kgs	13.9
Thermal application M	per Kgs.	4.6	Kgs	0.07
Connector block Ureth	per Kgs.	0.018	Kgs	0
Upper cover	per Kgs.	0.7	Kgs	0
cleaning before apply t	per Kgs.	0.004	Kgs	100
cleaning before apply t	per packs	0.04	Pcs	100

Tons/Yr	gal/yr	5.88
5.12	76,557.05	172,934.279
0.76	96,377.23	
0.00	34,682.13	
0.02	25.32	
1.01	307.68	
6.91		

***Actual to Projected Actual**

21% Surface Area Increase for BEV.

	2021	2022	Plan
Line 1	172,795	186,757	206,000
Line 2	221,832	218,708	220,000
Line 3	44,512	43,211	45,000
	439,139	448,676	471,000

Camry	BEV
60,000	146,000
29%	71%

VOC	2021			2022		
	lb/veh	lb/hr	Ton/Year	lb/veh	lb/hr	Ton/Year
C02	0.034	3.64	7.47	0.053	5.80	11.89

Future			BACT Limit
lb/veh	lb/hr	Ton/Year	lb/veh
0.047	4.97	11.19	0.518

9%

Increase	
lb/hr	Ton/Year
0.25	1.51

***Actual to Projected Actual**

- 1 Addition of Chassy Welding, Front Suspension, Rear Suspension, Lower Arm. Expe
- 2 Model changeover for Underbody, Main Body, Shell Body

	2021	2022	Plan	Camry	BEV+PHEV
Line 1	172,795	186,757	206,000	60,000	146,000
Line 2	221,832	218,708	220,000	29%	71%
Line 3	44,512	43,211	45,000		
	439,139	448,676	471,000		

Weld Wire Usage				Hours		PM	
	2021 Lbs/Yr	2022	Future	2021	2022	2021 Lbs/Hr	Tons/Yr
Weld 1 (C03)	37,417	28,021	40,345	3940	3871	0.24	0.47
Weld 2 (C03)	48,035	32,814	40,425	4325	4129	0.28	0.60
General Weld (C14)				21.69	15.72	6.82	14.1
C03/C14						7.3	14.5

Inherent DC	2021 TPY	2022 TPY	Future TPY	2021 lb/hr	2022 lb/hr	Future lb/hr
C17	1.70	1.81	1.94	0.86	0.93	0.99

Brazing Grinding	2021 TPY	2022 TPY	Future TPY	2021 lb/hr	2022 lb/hr	Future lb/hr
C04	0.35	0.36	0.44	0.18	0.19	0.22

VOC Sealers (C06)	2021 lb/veh	2022 lb/veh	Future lb/veh	lb/hr	Ton/Yr	Limit lb/veh
Line 1	0.007	0.0133	0.013	0.67	1.30	0.12

Limits							
	PM BACT lbs/hr	PM BACT TPY	VOC BACT lb/veh	Prod BACT Wire lb/hr	2021	2022	Future
C03/C14	14.48				7.3	7.4	8.1
C06 (L1)			0.12		0.007	0.0133	0.013
C01-C14		39.6			20.10	18.59	20.76
C03				463.6	15.66	32.08	20.87
	56%	52%	10%	5%			

ected 23% increase.

2022		Future		Increase	Increase
Lbs/Hr	Tons/Yr	Lbs/Hr	Tons/Yr	Lb/hr	TPY
0.18	0.35	0.26	0.50		
0.20	0.41	0.24	0.51		
6.97	13.9	7.6	15.5		
7.4	14.2	8.1	15.7	0.75	1.33

Increase Lb/hr	Increase TPY
0.09	0.18

Increase Lb/hr	Increase TPY
0.04	0.08

PM BACT lb/hr
0.28

Increase Lb/hr	Increase TPY
0.16	0.37

	Increase	
56%	0.75	lb/hr
10%	0.000	lb/veh
52%	1.42	TPY
5%	2.16	wire lb/hr

	2021	2022	Future
Line 1	172,795	186,757	206,000
Line 2	221,832	218,708	220,000
Line 3	44,512	43,211	45,000
	439,139	448,676	471,000

Camry BEV
60,000 146,000
29% 71%

A03	2021			2022		
	lb/veh	lb/hr	Ton/Yr	lb/veh	lb/hr	Ton/Yr
VOC	0.012	0.49	1.01	0.005	0.21	0.42

Usage	2021	2022	Future	2021		2022
A05	529,230	310,425	612,162	lb/hr	Ton/Yr	lb/hr
VOC (lb/gal)	7.55	7.56		0.10	0.20	0.06
HAPs (lb/Gal)	7.55	7.56		0.10	0.20	0.06

A09	2021			2022		
	lb/veh	lb/hr	Ton/Yr	lb/veh	lb/hr	Ton/Yr
PM		0.43	0.77		0.43	0.83

unit/vehicle

LLC	3.709 L	0.98 Gal
Brake Fluid	1.119 L	0.30 Gal
Urethane	0.695 Kg	
eTAF oil	1.4 L	0.37 Gal
High Res LLC	4.99 L	1.32 Gal

	2021	2022	Future	VOC (lb/ga	Increase
Glass Primer	366	208	626	5.95	1.01

	2021	2022	Future	Density (lb, Gal	Increase
LLC	317,388	190,953	446,505	9.42	192,335

VOC Dens HAP Dens (EtGly, DetGly)

High Res LLC	5.18	5.18

EU	Name
A03	Glass Panel
A05	Coolant
A09	Toe, Brake, Drum Tester

Projected	Actual			Limit
lb/veh	lb/hr	Ton/Yr		lb/veh
0.018	0.98	1.86		0.11

Increase

lb/hr	Ton/Yr
0.63	1.15

	Projected	Actual	Insig.
Ton/Yr	lb/hr	Ton/Yr	TPY
0.12	0.08	0.16	5.00
0.12	0.08	0.16	

Increase

lbs/hr	tons/yr
3.17E-03	6.35E-03
3.17E-03	6.35E-03

Projected	Actual			Limit
lb/veh	lb/hr	Ton/Yr		lb/hr
	0.43	0.80		0.85

Increase

lb/hr	Ton/Yr
-	-

Reference D06k-5316 as permitted May 2023.

Process ID	Source					
	ID	Color	Type (units)	Hor/Vert H/V	Min T (F)	Ave T (F)
D06k-14	BC-001	Gray	Coolant	H	45	54.9

Breathing L						
De (ft)	Hvo (ft)	Vv (ft3)	Tax (°R)	Tan (°R)	I (Btu/ft2day)	α
16.6	6	1,297	524	504	1220	0.17

Working Loss					VOC	
Ks	N (per year)	Vlx (ft3)	Kn	Control %	Ls (lbs/yr)	Lw (lbs/yr)
1.00	21.62	2,036	1.55	0%	0.28	1.02

				V	Q			
Max T	D	Hs	L	Capacity	Max	Mv	Pva	Pa
(F)	(ft)	(ft)	(ft)	(gal)	(gal/yr)	(lb/lbmole)	(psia)	(psia)
64.7	12	12	18	15,228	329,340	72	0.00116	14.7

Loss								
Taa	Tb	Tla	Wv	Δ Tv	Tlx	Tln	Pvx	Pvn
(°R)	(°R)	(°R)	(lbs/ft3)	(°R)	(°R)	(°R)	(psia)	(psia)
514	514	514	1.51E-05	20.2	519	509	5.00E-05	2.50E-05

Lt	
(lbs/yr)	(tons/yr)
1.30	6.50E-04

Reference
MSDS

working loss lbs/gal

0.0000185

lbs/hr
3.17E-04

ΔP_v (psia)	P_{bp} (psia)	P_{bv} (psia)	ΔP_b (psia)	K_e
0.00	0.06	0.0000	0.06	0.039314

Newark TLS Spill Watch
Shift Log

Submit to: Sergio.Matos@toyota.com
Jeikot.Hendricks@toyota.com

	2021	2022	Plan
Line 1	172,795	186,757	206,000
Line 2	221,832	218,708	220,000
Line 3	44,512	43,211	45,000
	439,139	448,676	471,000
Hours	3665	3980	

Camry BEV+PHEV
60,000 146,000
29% 71%

1

ED Bath	E02R	Gallons	Control	Avg VOC	Baseline Actual		
			%	lb/gal	lbs/hr	Tons/Yr	lbs/veh
2021	Bath	260,282	68%	0.17	3.92	7.19	0.08
2022	Bath	294,204	68%	0.18	4.31	8.59	0.09

Sealer	E04R	Gallons	Control	Avg VOC	Baseline Actual		
			%	lb/gal	lbs/hr	Tons/Yr	lbs/veh
2021	Sealer	171,461	86.1%	0.34	2.21	4.05	0.05
	Damping	199,806	93.7%	0.17	0.58	1.06	0.01
	UBC	281,202	92.3%	0.34	1.99	3.65	0.04
2022	Sealer	202,330	86.1%	0.34	2.61	4.79	0.06
	Damping	219,163	93.7%	0.17	0.63	1.16	0.01
	UBC	316,223	92.3%	0.33	2.18	3.99	0.05

Primer	E05R	Gallons	Current		Baseline Actual		
			Control	Avg VOC	lbs/hr	Tons/Yr	lbs/veh
2021	Oven	50,818	55.8%	1.01	6.16	11.29	0.13
2022	Oven	52,599	55.8%	0.99	5.78	11.50	0.12

Topcoat	E07R	Gallons	Control	Avg VOC	Baseline Actual		
			%	lb/gal	lbs/hr	Tons/Yr	lbs/veh
2021	Base	120,254	68.7%	1.13	11.64	21.34	0.25
	Clear	76,009	92%	3.96	6.24	11.44	0.13
2022	Base	117,559	68.7%	1.15	11.54	21.15	0.24
	Clear	75,194	92%	3.83	5.97	10.95	0.13

Blackout	E09R	Gallons	Control	Avg VOC	Baseline Actual		
			%	lb/gal	lbs/hr	Tons/Yr	lbs/veh
2021		572	0.0%	0.62	0.10	0.18	0.002
2022		397	0.0%	0.62	0.06	0.12	0.001

Wax	E11R	Gallons	Control	Avg VOC	Baseline Actual		
			%	lb/gal	lbs/hr	Tons/Yr	lbs/veh
2021	Cavity	11,110	0.0%	1.12	3.38	6.20	0.07
	Hinge	94	0.0%	4.46	0.11	0.21	0.00

Newark TLS Spill Watch
Shift Log

Submit to: Sergio.Matos@toyota.com
Jeikot.Hendricks@toyota.com

2022	Rocker	1,697	0.0%	0.15	0.07	0.13	0.00
	Cavity	9,030	0.0%	1.76	4.34	7.95	0.09
	Hinge	83	0.0%	4.46	0.10	0.18	0.00
	Rocker	10,788	0.0%	0.00	0.01	0.02	0.00

PM	2021			2022	
	Gal/Yr	lbs/hr	Tons/Yr	Gal/Yr	lbs/hr
E05R	50,818	0.27	0.49	52,599	0.27
E07R	196,263	1.4	2.57	192,753	1.40
E09R	572	0.11	0.20	397	0.11
E11R	12,901	0.99	1.81	19,901	0.99

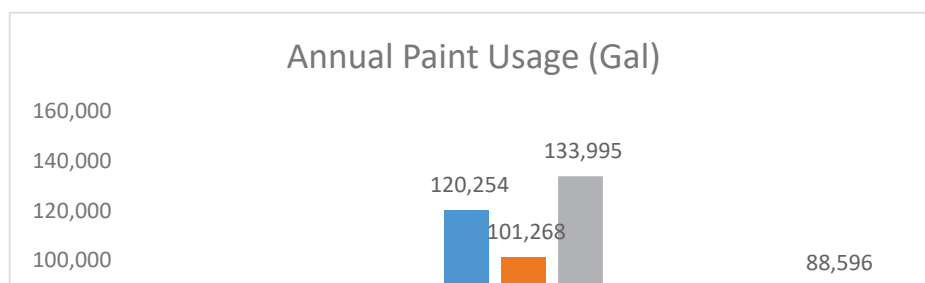
0.8193 60.68 93.01

		Single Tone			2-Tone		
		Primer	Base	Clear	Primer	Base	Clear
1st Pass	1L5	0.317	1.18	0.555			
	1N4	0.317	1.44	0.555			
	6x7	0.338	0.772	0.504			
	089	0.446	0.786	0.626			
	218	0.338	0.772	0.504			
	8Q4	0.313	0.714	0.555			
	4x9	0.313	0.772	0.555			
2nd Pass	1L5	0.338	0.349	0.292	0.244	0.992	0.472
	1N4	0.338	0.349	0.292	0.244	1.192	0.472
	8Q4	0.338	0.349	0.292	0.241	0.608	0.472
	6x7	0.338	0.349	0.292	0.253	0	0.429
	089	0.338	0.349	0.292	0.342	0.679	0.429

gal/yr	Primer	Base	Clear
Existing	52,599	120,254	76,009
Single Tone	41,720	101,268	64,557
2-Tone	61,431	133,995	88,596

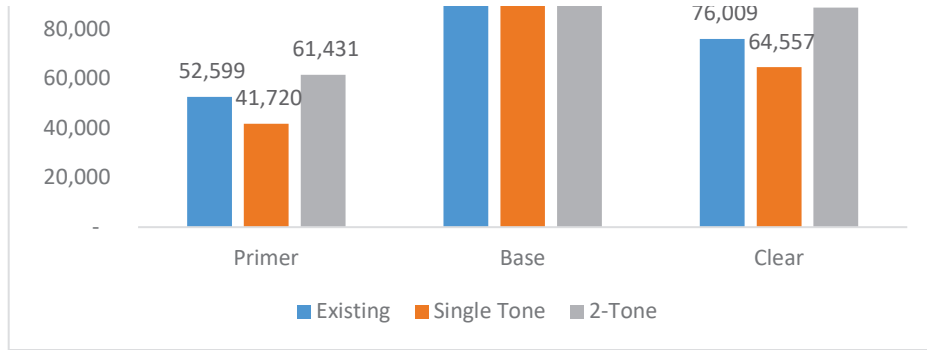
gal/veh	Primer
	0.120
	0.089
	0.130

1.188 1.127 1.172 0.807



Newark TLS Spill Watch Shift Log

Submit to: Sergio.Matos@toyota.com
Jeikot.Hendricks@toyota.com



	gal/veh	Mid	Long
ED Pigmen	0.185	16,650	10,360
ED Resin	1.695	152,550	94,920
Sealer	0.92	82,675	51,442
Damp	1.02	91,710	57,064
UBC	1.75	157,845	98,215

Project Increase				
VOC		PM		
lbs/hr	Tons/Yr	lbs/hr	Tons/Yr	
10.09	24.29	0.08	1.11	

	VOC BACT	PM BACT
	lb/veh	lb/hr
E02R	0.185	
E04R	1.15	
E05R	2.11	4.02
E07R	3.86	7.43
E09R	0.11	0.59
E11R	0.27	1.33

Projected Ac VOC %				
Gallons	lb/gal	lbs/hr	Tons/Yr	lbs/veh
355,230	0.17	5.07	10.09	0.10

Increase	
lbs/hr	Tons/Yr

0.95	2.20

Projected Ac VOC %				
Gallons	lb/gal	lbs/hr	Tons/Yr	lbs/veh
188,553	0.34	2.24	4.46	0.04
209,789	0.17	0.56	1.11	0.01
343,064	0.34	2.18	4.33	0.04

(0.13)	0.55

Projected Ac VOC %				
Gallons	lb/gal	lbs/hr	Tons/Yr	lbs/veh
76,492	1.00	8.54	16.99	0.16

2.57	5.60

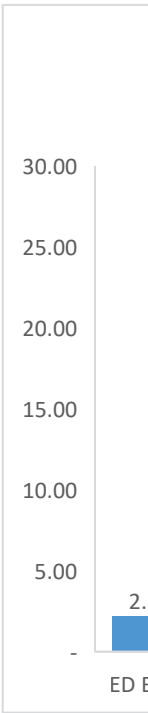
Projected Ac VOC %				
Gallons	lb/gal	lbs/hr	Tons/Yr	lbs/veh
168,628		15.24	30.34	0.29
110,616		8.09	16.11	0.16

5.64	14.01

Projected Ac VOC %				
Gallons	lb/gal	lbs/hr	Tons/Yr	lbs/veh
8,468		1.44	2.64	0.03

1.28	2.34

Projected Ac VOC %				
Gallons	lb/gal	lbs/hr	Tons/Yr	lbs/veh



Newark TLS Spill Watch
Shift Log

Submit to: Sergio.Matos@toyota.com
Jeikot.Hendricks@toyota.com

7,330	2.88	5.27	0.05
364	0.44	0.81	0.01
22,258	0.47	0.86	0.01

(0.22) (0.40)

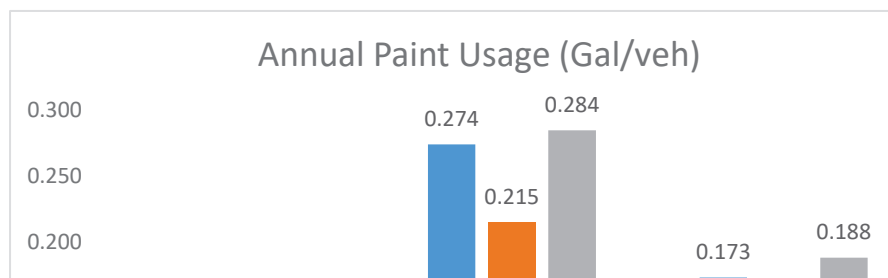
Tons/Yr	Projected Actual		
	Gallons	lbs/hr	Tons/Yr
0.54	76,492	0.28	0.62
2.79	279,243	1.44	3.24
0.22	8,468	0.11	0.25
1.97	29,953	1.02	2.29

0.01 0.11
0.04 0.56
0.00 0.04
0.03 0.40

Vehicles 56,000				90,000			
Long	Primer	Base	Clear	Mid			
12%	2,130	7,930	3,730	20.9%	5,963	22,196	10,440
0%	-	-	-	5.5%	1,569	7,128	2,747
9%	1,704	3,891	2,540	5.6%	1,704	3,891	2,540
30%	7,493	13,205	10,517	26.0%	10,436	18,392	14,648
10%	1,893	4,323	2,822	12.6%	3,833	8,754	5,715
10%	1,753	3,998	3,108	8.4%	2,366	5,398	4,196
5%	876	2,162	1,554	0.0%	-	-	-
8%	2,607	6,008	3,423	6.5%	3,405	7,845	4,469
0%	-	-	-	2.8%	1,467	3,883	1,925
7%	2,270	3,751	2,995	0.0%	-	-	-
9%	2,979	1,759	3,634	2.2%	1,170	691	1,428
0%	-	-	-	9.5%	5,814	8,789	6,165

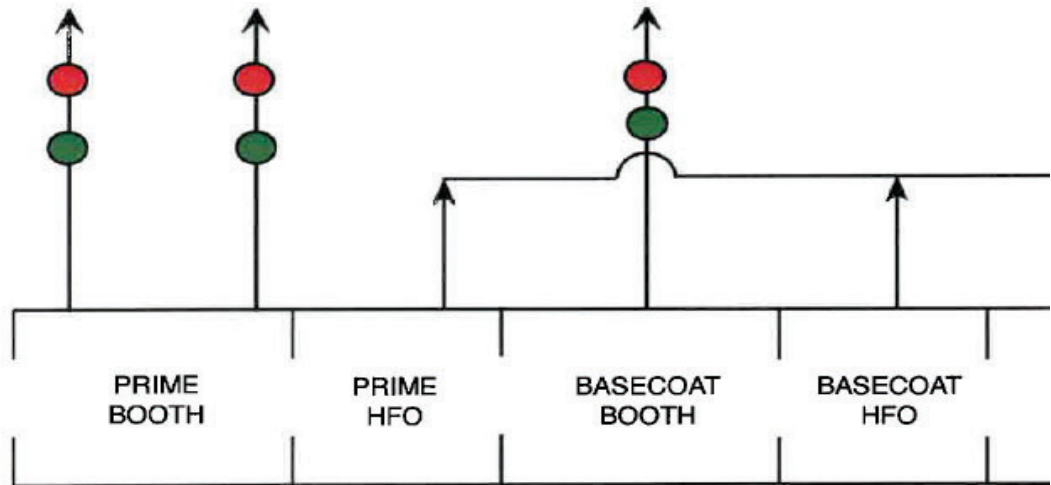
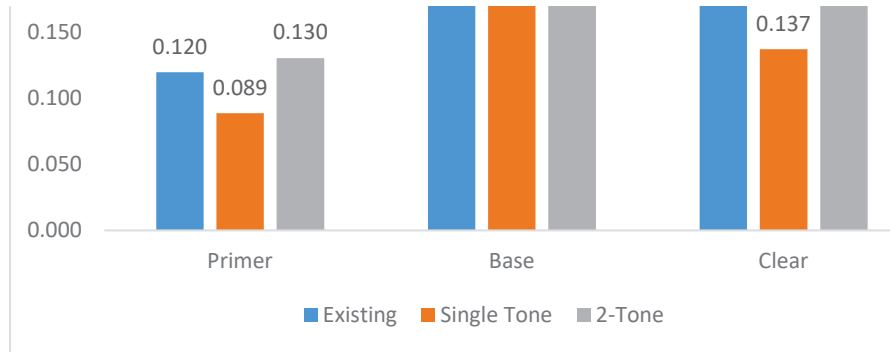
Base	Clear
0.274	0.173
0.215	0.137
0.284	0.188

0.852 0.854



Newark TLS Spill Watch Shift Log

Submit to: Sergio.Matos@toyota.com
Jeikot.Hendricks@toyota.com



- Particulate test site
- Capture efficiency test site
- Destruction efficiency test site

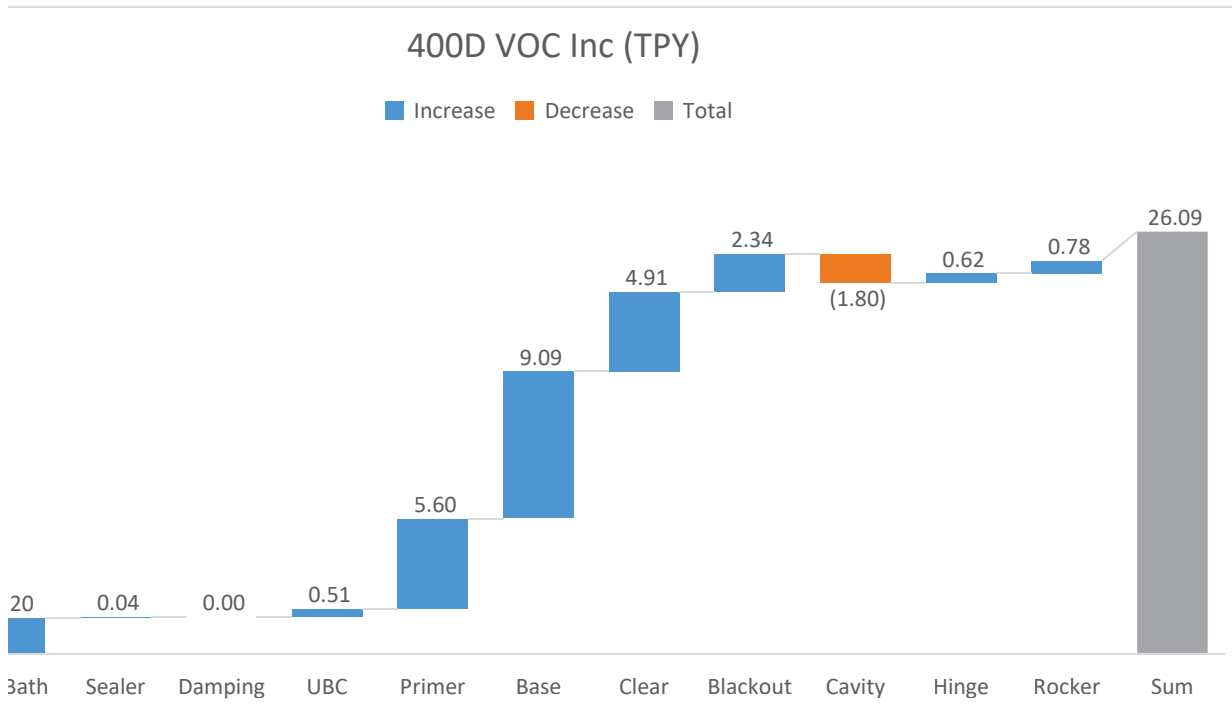
Newark TLS Spill Watch
Shift Log

Submit to: Sergio.Matos@toyota.com
Jeikot.Hendricks@toyota.com

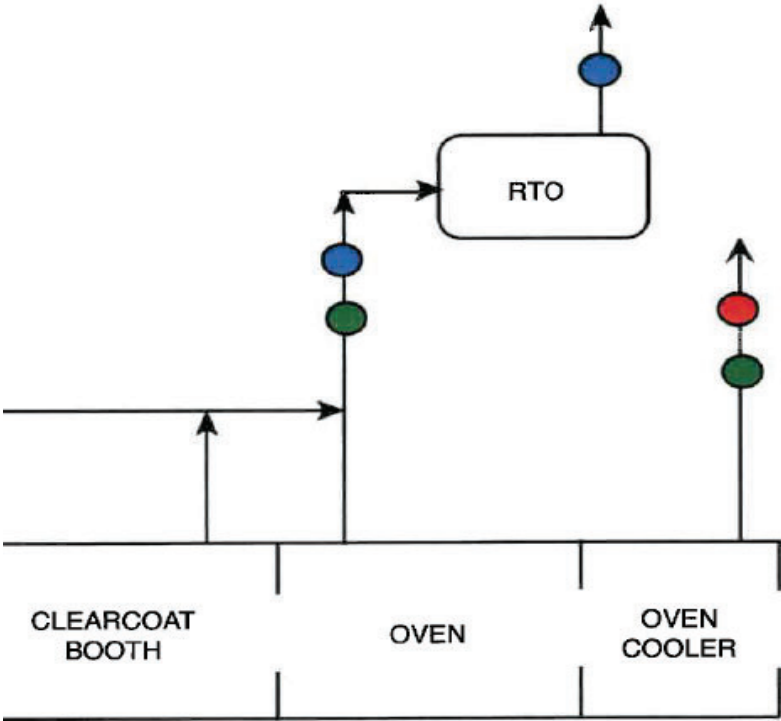
VOC		PM	
Max Reported			
2021	2022	2021	2022
0.178	0.109		
1.062	0.99		
0.357	0.325	0.27	0.27
1.221	1.209	1.4	1.4
0.026	0.005	0.11	0.11
0.254	0.227	1.04	0.99

VOC		PM	
Projected			
lb/veh	lb/hr		
0.10			
0.10			
0.16	0.28		
0.45	1.44		
0.03	0.11		
0.07	1.02		

ED Bath	10.09	2.20
Sealer	4.46	0.04
Damping	1.11	0.00
UBC	4.33	0.51
Primer	16.99	5.60
Base	30.34	9.09
Clear	16.11	4.91
Blackout	2.64	2.34
Cavity	5.27	(1.80)
Hinge	0.81	0.62
Rocker	0.86	0.78
Sum	93.01	26.09







E13R (Solvent Purge Only)

Clear Purge	VOC (lb/gal)	Gallons	Control%	Unc VOC (Tons)	Controlled VOC (Tons)
2021	5.47	13,620	99.0%	37.25	0.37
2022	5.12	18,672	99.0%	47.83	0.48
Project Act	5.12	23,624	99%	60.51	0.61
Increase		4,725		17.97	0.18

0.08
0.11

	2021	2022	Future	
Line 1	172,795	186,757	206,000	45%
Line 2	221,832	218,708	220,000	55%
Line 3	44,512	43,211	50,000	
	439,139	448,676	476,000	
Hours	3665	3980		

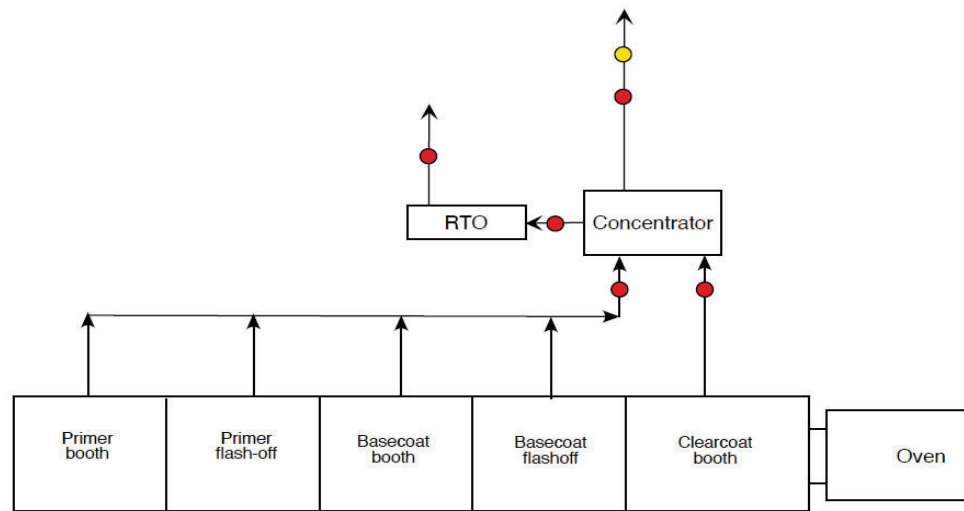
Ext Paint (Rocker)	G21	Control		Avg VOC lb/gal	Baseline Actual		
		Gallons	%		lbs/hr	Tons/Yr	lbs/veh
2021	Primer	5,708	90%	1.10	0.18	0.33	0.00
	Base	21,884	90%	1.32	0.82	1.50	0.01
	Clear	13,782	75%	3.32	3.06	5.61	0.03
2022	Primer	3,181	90%	1.16	0.10	0.19	0.00
	Base	11,241	90%	1.08	0.34	0.63	0.00
	Clear	6,826	75%	3.30	1.51	2.76	0.01

Bumper	G22	Control		Avg VOC lb/gal	Baseline Actual		
		Gallons	%		lbs/hr	Tons/Yr	lbs/veh
2021	Primer	35,765	0%	1.19	11.61	21.28	0.11
	Base	52,389	0%	1.44	20.58	37.72	0.19
	Clear	26,832	73%	3.86	7.66	14.03	0.07
2022	Primer	31,431	0%	0.91	7.84	14.36	0.07
	Base	33,245	0%	1.17	10.61	19.45	0.10
	Clear	29,045	90%	3.95	3.27	5.99	0.03

PM	2021			2022	
	Gal/Yr	lbs/hr	Tons/Yr	Gal/Yr	lbs/hr
G21	41,374	0.055	0.12	21,248	0.055
G22	114,986	0.10	0.23	93,721	0.10

	Mid			Long	
	Primer	Base	Clear	Primer	Base
	0.051	0.104	0.115	0.044	0.089
	0.051	0.104	0.115	-	-
	0.051	0.102	0.115	0.044	0.089
	0.051	0.156	0.115	0.044	0.128
	0.051	0.077	0.115	0.044	0.101
	0.051	0.078	0.115	0.044	0.068
	-	-	-	0.044	0.069

Primer	Base	Clear
5,499	12,435	14,646



G21
Rocker Mold Exterior Parts

Project Increase			
VOC		PM	
lbs/hr	Tons/Yr	lbs/hr	Tons/Yr
(5.15)	(9.45)	0.02	0.04

	VOC BACT	PM BACT
	lb/veh	lb/hr
G21	0.21	0.99
G22	1.04	5.42

Projected Actual			
Gallons	lbs/hr	Tons/Yr	lbs/veh
7,947	0.26	0.48	0.002
21,557	0.81	1.48	0.006
20,321	4.51	8.27	0.035

Increase		
lbs/hr	Tons/Yr	lb/veh

2.57	4.72	0.02

Projected Actual			
Gallons	lbs/hr	Tons/Yr	lbs/veh
24,003	6.89	12.62	0.05
36,017	12.82	23.50	0.10
30,033	3.34	6.13	0.03

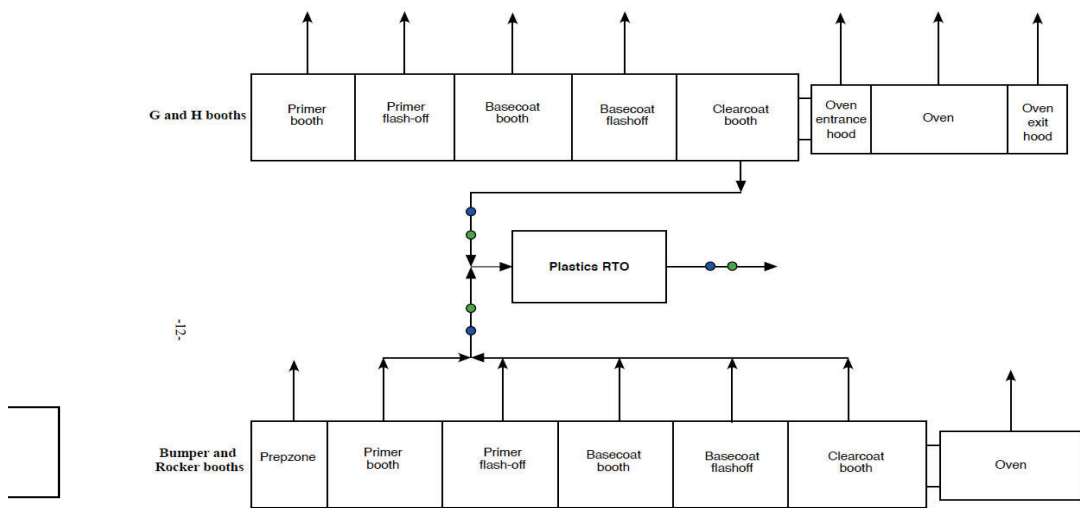
Increase		
lbs/hr	Tons/Yr	lb/veh

(7.73)	(14.17)	(0.11)

	Projected Actual		
Tons/Yr	Gallons	lbs/hr	Tons/Yr
0.12	49,824	0.09	0.20
0.23	90,054	0.09	0.19

0.03	0.07
(0.01)	(0.03)

	90,000				Vehicles	56,000		
Clear		Primer	Base	Clear		Primer	Base	Clear
0.152	20.9%	959	1,956	2,163	12%	296	598	1,021
-	5.5%	252	515	569	0%	-	-	-
0.152	5.6%	257	514	580	9%	222	449	766
0.152	26.0%	1,193	3,650	2,691	30%	739	2,150	2,554
0.152	12.6%	578	873	1,304	10%	246	566	851
0.152	8.4%	386	590	869	10%	246	381	851
0.152	0.0%	-	-	-	5%	123	193	426



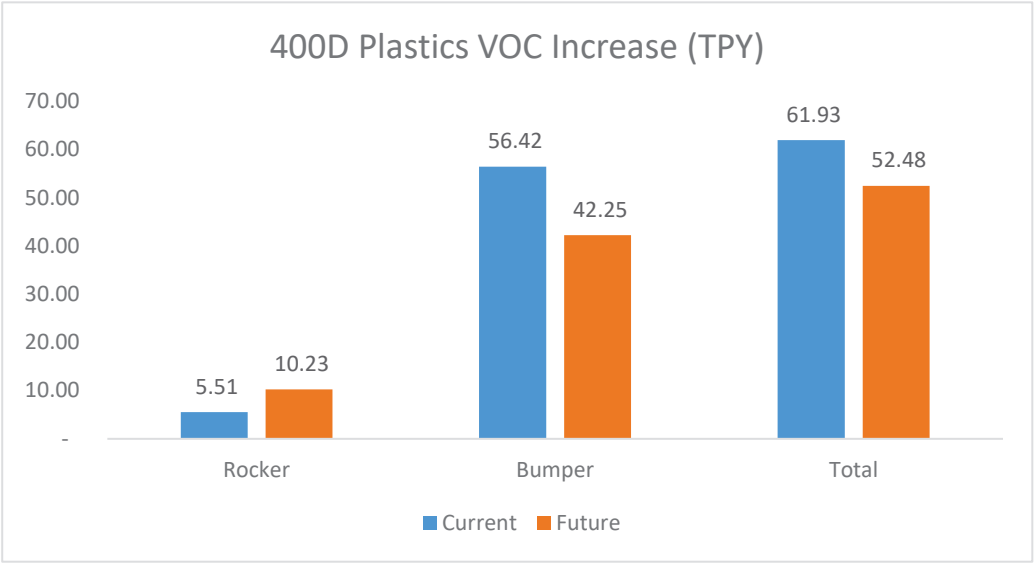
G22 & G26

Bumper

Lexus

VOC		PM	
2021	2022	2021	2022
0.102	0.084	0.055	0.055
0.6	0.337	0.1	0.1

	Current	Future	
Rocker	5.51	10.23	4.72
Bumper	56.42	42.25	(14.17)
Total	61.93	52.48	4.72
			66.65



Application Control

74%

Bath Usage

	Reported		Reported	
	2021 Usage		2022 Usage	
	Gal/Yr	lbs VOC/Yr	Gal/Year	lbs VOC/Yr
ED	105,553	20,468	103,081	20,636
Gal/Veh	0.24		0.23	
lbs VOC/Gal	0.19		0.20	
lbs VOC/veh	0.047		0.046	
Control (60%)	0.012		0.012	
Control (74%)	0.0120		0.0119	

C09

Bath

Part	SurfA (m2)	Gal/Veh	VOC (lb/gal)	VOC (lbs/veh)
Battery Case	17.1	0.37	0.197	0.073
Existing Parts	10.9	0.24	0.197	0.046
Total (Controlled)				0.018
Limit (BACT)				0.041

VOC	2021			2022
	lbs/hr	lbs/veh	tons/yr	lbs/hr
C09	1.51	0.012	2.65	1.52

C08 (PM)

Degrease

Part	SurfA (m2)	lbs/hr	Tons/Year
Battery Case	17.1	0.03	0.08
Increase		0.03	0.08
Current	10.9	0.04	0.08
Total		0.07	0.16
Limit		0.38	0.97

PM	2021	
	lbs/hr	tons/yr
C08	0.04	0.07

7/25/2023 Emissions Test Report

C09 RTO

	lbs VOC/hr	VOC TPY	lbs VOC/veh	Control %
Inlet	5.3	9.7	0.044	98.9%
Outlet	0.06	0.11	0.001	

•• PROTECTED 関係者外秘

Usage 2021	23.74	43.5	0.194
Usage 2022	22.09	44.0	0.200

	5/5/2017 Capture Test Report		Capture %
RTO inlet	3.9	18%	97.0%
Fugitive	0.63	3%	
Wastewater	16.58	79%	
Usage 2015	21.11	100%	
Unc Emit	4.53	21%	

*Bath VOC components do not volatilize below 350C. Bath = 100C; Oven = 300C.

**Permit App Capture= 75%

•• PROTECTED 関係者外秘

Tested Control 74%

Projected

Future	Usage
Gal/Year	lbs VOC/Yr
159,444	8,121

0.36

0.051

0.018

Uncontrolled

Vehicles/Yr
146,000
448,676

VOC lbs/Hr	VOC TPY
5.53	5.32
3.52	10.39
9.05	15.71

Controlled

VOC lbs/Hr	VOC TPY
1.43	1.37
0.91	2.69
2.34	4.06

		Projected Actual		BACT Limit
lbs/veh	tons/yr	lbs/veh	tons/yr	lbs/veh
0.012	2.67	0.018	4.06	0.041

Increase	
lbs/hr	Tons/Year
0.62	1.40

2022		Projected Actual		BACT Limit
lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr
0.04	0.08	0.07	0.16	0.38

Increase	
lbs/hr	Tons/Year
0.04	0.10

NSPS Subpart MM

EU	Unit	2021	2022 Projected	Limit
C09	Kg VOC/L Solid App	0.033	0.052	0.043 0.17
E02R	Kg VOC/L Solid App	0.106	0.052	0.079 0.17
E04R,E05R,E12R	Kg VOC/L Solid App	0.0465	0.0445	0.0455 1.4
E05R,E07R,E09R,E12R	Kg VOC/L Solid App	0.3624	0.4699	0.4162 1.47
F02,F19	Kg VOC/L Solid App	0.0186	0.0853	0.0520 0.17
F04,F05,F12,F21,F24	Kg VOC/L Solid App	0.1108	0.8646	0.4877 1.4
F05,F07,F09,F12,F22,F24	Kg VOC/L Solid App	0.8546	0.8690	0.8618 1.47

*No change in VOC content anticipated.

	2021	2022	Plan
Line 1	172,795	186,757	206,000
Line 2	221,832	218,708	220,000
Line 3	44,512	43,211	45,000
	439,139	448,676	471,000
Hours	3665	3980	

Line 1
PHEV
BEV
Camry

VOC		2021	2022	2021
Wax	Description	Usage (Gal/Yr)	Usage (Gal/Yr)	VOC (lb/gal)
F11	Rocker Wax	4,390	4,685	0.0157728

VOC		2021	2022	2021
		Usage (Gal/Yr)	Usage (Gal/Yr)	VOC (lb/gal)
C06 -L2	Adhesive Sealers	5365	28,881	0.2604325

PM		2021	2022	
Wax	Description	Usage (Gal/Yr)	Usage (Gal/Yr)	Lbs Sol/ Gal Mat
F11	Rocker Wax	4390	4685	8.31498

2021	2022	2026
0	0	56,000
0	0	90,000
172,795	186,757	60,000
206,000		

Line 2	2021	2022	2026
RAV4	76,862	80,926	100,000
Camry	144,970	137,782	129,000
	221,832	218,708	229,000

2022	2021	2022
VOC (lb/gal)	lb/hr	TPY
0.0157728	0.02	0.03

Projected
Usage (Gal/Yr)
20,086

2022	2021	2022
VOC (lb/gal)	lb/hr	TPY
0.2608106	0.38	0.70

Projected
Usage (Gal/Yr)
17,347

2021	2022
Overspray (%)	lb/hr
5%	0.50

Projected
Usage (Gal/Yr)
20,086

Line 3	2021	2022	2026
Lexus ES	44,512	43,211	-
Camry	-	-	50,000
			50,000

	L1	L2	L3
Total	206,000	229,000	50,000
CAMRY	60,000	129,000	50,000

lb/hr	TPY
0.09	0.16

BACT (lb/veh)
0.27 0.00

Increase
0.12

lb/hr	TPY
1.14	2.26

BACT (lb/veh)
0.306 0.02

0.03

lb/hr	TPY
2.28	4.18

3.23

	2021	2022	Plan
Line 1	172,795	186,757	206,000
Line 2	221,832	218,708	220,000
Line 3	44,512	43,211	45,000
	439,139	448,676	471,000
Hours	3665	3980	

Line 1	2021
PHEV	0
BEV	0
Camry	172,795

		2021		2022	
	Emission Point	Usage (Gal/Veh)	VOC (lb/Gal)	Usage (Gal/Veh)	VOC (lb/Gal)
Coating Application F21	Primer	0.70	3.88	0.61	4.26
	Soft Chip Primer	0.03	6.81	0.03	6.81
	Concentrator				
	Booth Emission RTO				
	Oven Emission RTO				
Purge - Solvent Only F25	Line Purge - Solvent	1.82	5.61	1.92	5.61
	Concentrator	-	-	-	-
	Booth Emission RTO	-	-	-	-

		2021	2022	2021	2022
	Emission Point	Usage (Gal/Yr)	Usage (Gal/Yr)	VOC (lb/gal)	VOC (lb/gal)
Wax F23	Cavity Wax	55	550	3.2309091	3.2913782

		2021	2022	2021	2022
		Usage (Gal/Yr)	Usage (Gal/Yr)	VOC (lb/gal)	VOC (lb/gal)
C16 -L3	Adhesive Sealers	41,783	4,779	0.2422224	0.2104884

		2021	2022		
	Description	Usage (Gal/Yr)	Usage (Gal/Yr)	Lbs Sol/ Gal Mat	Overspray (%)
Wax F23	Cavity Wax	55	550	8.31498	5%

		2021	2022			
	Description	Usage (Gal/Yr)	Usage (Gal/Yr)	Lbs Sol/ Gal Mat	Overspray (%)	Capture
Coating Application	Primer	31,087	29,279	0.36	25%	49%

F21	Soft Chip Print	0.00	0.00	0.39	25%	49%
	Conc. Emission	-	-	-	-	0.3%
	Booth Emission	-	-	-	-	43%
	Oven Emission	-	-	-	-	8%

2022	2026
0	56,000
0	90,000
186,757	60,000
206,000	

Line 2	2021	2022	2026
RAV4	76,862	77,404	100,000
Camry	144,970	137,782	129,000
	221,832	215,186	229,000

Line 3
Lexus ES
Camry

		2021		2022		2022		2022	
		VOC - UNC		VOC -CNT		VOC - UNC		VOC -CNT	
VOC		lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	
Capture	Control								
25%	0%	8.22	15.07	8.22	15.07	7.09	14.53	7.09	
25%	0%	-	-	-	-	-	-	-	
3.1%	0%	0.77	1.41	0.77	1.41	0.66	1.32	0.66	
41%	99.6%	10.09	18.48	0.04	0.07	8.69	17.30	0.03	
31%	98.8%	7.65	14.02	0.09	0.17	6.59	13.12	0.08	
50%	100%	62.08	113.77	-	-	58.47	116.36	-	
3.6%	0%	4.41	8.08	4.41	8.08	4.15	8.26	4.15	
46.5%	99.6%	57.67	105.69	0.23	0.42	54.32	108.09	0.22	

2021		2022	
lb/hr	TPY	lb/hr	TPY
0.05	0.09	0.45	0.91

Projected		
Usage	VOC	
(Gal/Yr)	(lb/gal)	lb/hr
600	3.291378	0.54

2021		2022	
lb/hr	TPY	lb/hr	TPY
2.76	5.06	0.25	0.50

Projected		
Usage	VOC	
(Gal/Yr)	(lb/gal)	lb/hr
23,980	0.242222	1.58

2021		2022	
lb/hr	TPY	lb/hr	TPY
0.01	0.01	0.06	0.11

Projected	
Usage	
(Gal/Yr)	lb/hr
600	0.07

		2021		2022		2022		2022	
		PM -UNC		PM -CNT		PM -UNC		PM -CNT	
PM		lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
Control									
95%		0.37	0.68	0.02	0.03	0.32	0.64	0.02	0.03

95%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
99.5%	0.33	0.60	0.00	0.00	0.28	0.57	0.00	0.00
97.4%	0.06	0.11	0.00	0.00	0.05	0.11	0.00	0.00

2021	2022	2026
44,512	43,211	-
-	-	50,000
50,000		

	L1	L2	L3
Total	206,000	229,000	50,000
CAMRY	60,000	129,000	50,000

Projected				
	VOC - UNC		VOC -CNT	
TPY	lb/hr	TPY	lb/hr	TPY
14.53	3.94	7.21	3.94	7.21
-	0.70	1.28	0.70	1.28
1.32	0.40	1.06	0.40	1.06
0.07	5.17	13.88	0.02	0.06
0.16	3.92	10.53	0.05	0.13
-	69.73	127.79	-	-
8.26	4.56	9.07	4.56	9.07
0.43	59.66	118.72	0.24	0.47

-6.67
0.95

TPY
0.99

0.49

TPY
2.90

0.12

1.56

TPY
0.12

0.06

Projected				
	PM -UNC		PM -CNT	
Usage (Gal/Yr)	lb/hr	TPY	lb/hr	TPY
32,789	0.39	0.72	0.02	0.04

0.003

1,500	0.02	0.04	0.00	0.00
-	0.00	0.00	0.00	0.00
-	0.36	0.67	0.00	0.00
-	0.07	0.12	0.00	0.00

0.002
0.000
0.000
0.000

BACT (lb/job)
1.026

0.39

	Before	After
RT1	Line 1 Bumper	Line 1,2,3 Rocker
RT2	Line 2 Bumper	Line 2 Bumper
RT3	Line 1,2,3 (Rocker,	Line 1,3 Bumper
Lexus	Line 3 Bumper	Decomissioned

G21

G22

G26

	Surface Area	Bumper	Rocker, Lower, HH	
Line 1,2,3	Camry	2.608	2.11	0.49
Line 1	BEV	3.260	2.25	1.01
Line 1	BEV2	2.518	1.67	0.85
Line 2	RAV4	2.816	1.45	1.37
Line 3	ES	2.790	2.30	0.49

VOC

G26

Lexus

2021	Usage (Gal)	VOC Density (lb/Gal)	Control	VOC TPY
Primer	11,733	3.24	93%	2,801
Base	14,348	1.30	93%	1,372
Clear	6,192	3.43	93%	1,563
2022	Usage (Gal)	VOC Density (lb/Gal)		
Primer	9,152	2.85	93%	1,921
Base	10,824	1.19	93%	951
Clear	5,627	3.22	93%	1,335

G22

L1, L2 Bumper
RT1, RT2

2021	Usage (Gal)	VOC Density (lb/Gal)		
Primer	35,765	1.19	0%	42,649
Base	52,389	1.44	0%	75,541
Clear	26,832	3.50	73%	25,349
2022	Usage (Gal)	VOC Density (lb/Gal)		
Primer	31,431	0.91	0%	28,724
Base	33,245	1.17	0%	39,049
Clear	29,045	3.72	90%	11,281

G21

All Rocker
RT3

2021	Usage (Gal)	VOC Density (lb/Gal)		
Primer	5,708	1.10	90%	649
Base	21,884	1.27	90%	2,888
Clear	13,782	3.32	75%	11,233
2022	Usage (Gal)	VOC Density (lb/Gal)		
Primer	3,181	0.66	90%	217
Base	11,241	1.08	90%	1,264
Clear	6,826	3.45	75%	5,783

PM

G21

2021	Usage (Gal)	Solids (lb/gal)			
Primer	5,708	3.62	99.4%	122	
Base	21,884	1.98	99.2%	341	
Clear	13,782	5.34	99.2%	567	
2022	Usage (Gal)	Solids (lb/gal)			
Primer	3,181	3.95	99.4%	74	
Base	11,241	2.10	99.2%	186	
Clear	6,826	5.09	99.2%	267	

Permit

Exterior Parts	B1	RT3
Bumper	G & H	RT1, RT2
Bumper & Rocker	D	Lexus

	RT1	RT2	RT3
Line 1	R, L, HH		B
Line 2	R, L, HH	B	
Line 3	R, L, HH		B

Change in Paint Usage

Total SA	Before	After
RT1	394,804	168,208
RT2	408,452	417,506
RT3	320,721	528,380
Lexus	124,188	-

EU	% Change
G22	-57%
G21	64.75%
G26	-100%

Sum	1,248,166	1,114,094

	-11%

5,736
4,208

Lexus

Projected	Usage (Gal)	VOC Density (lb/Gal)			
Primer	-	3.24	93%	-	
Base	-	1.30	93%	-	
Clear	-	3.43	93%	-	-

143,539
79,054

Line 2 Bump & All Rocker (RT2, RT1)

Projected	Usage (Gal)	VOC Density (lb/Gal)			
Primer	21,529	1.05	0%	22,674	
Base	38,335	1.31	0%	50,152	
Clear	24,511	3.61	73%	23,877	96,702

14,771
7,263

Line 1,3 Bumper (RT3)

Projected	Usage (Gal)	VOC Density (lb/Gal)			
Primer	26,128	1.05	90%	2,856	
Base	32,633	1.31	90%	4,431	
Clear	19,173	3.61	75%	16,968	24,254

1,030
527

Line 1,3 Bumper (RT3)

Projected	Usage (Gal)	Solids (lb/gal)			
Primer	26,128	3.62	99.4%	558	
Base	32,633	1.98	99.2%	508	
Clear	19,173	5.34	99.2%	789	1,855

Line 1	2021	2022	2026
Camry	172,795	186,757	60,000
BEV	0	0	90,000
PHEV	0	0	56,000
			206,000

Line 3	2021
Camry	-
Lexus ES	44,512

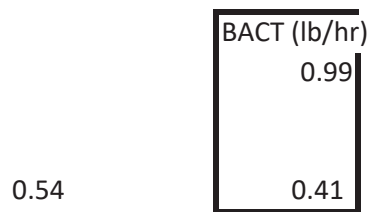
Line 2	2021	2022	2026
RAV4	76,862	80,926	100,000
Camry	144,970	137,782	129,000
	221,832	218,708	229,000

(2.49)

(7.30)

6.62

BACT (lb/veh)
0.21
0.09



2022	2026
-	50,000
43,211	-

AP-42 lb/ MMBTU

VOC	PM	NOx	CO2e
0.005392	0.007451	0.098039	117.6

Add PTE

Name	Fuel	Power (kw)	Power (MMBTU)	VOC (TPY)	PM (TPY)	NOx (TPY)	CO2e (TPY)
Team Member Services Emergency Generator	PNG	150	0.512	0.00	0.00	0.01	15
Child Care Center Emergency Generator	PNG	275	0.938	0.00	0.00	0.02	28

SO2	CO
0.000588	0.082353

SO2 (TPY)	CO (TPY)
0.00	0.01
0.00	0.02

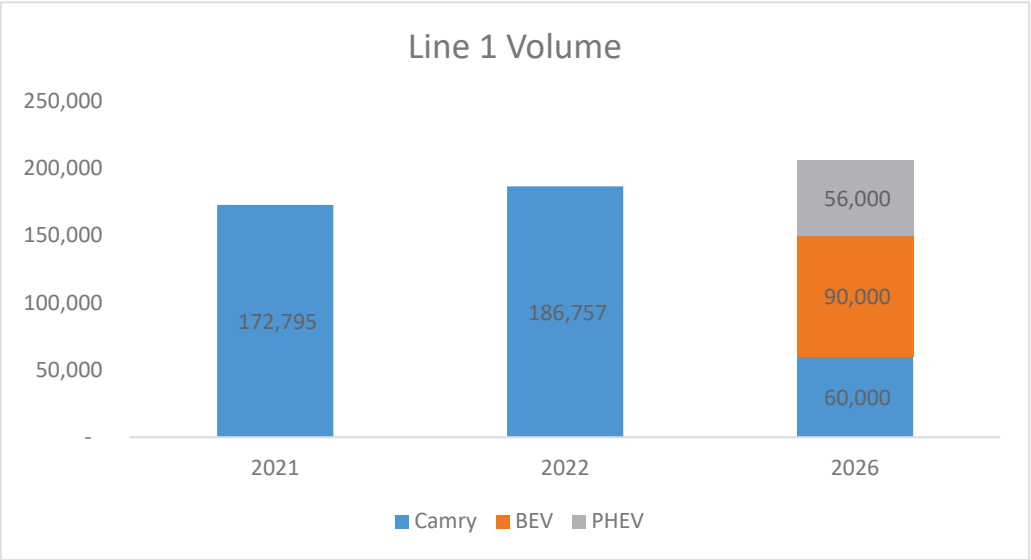
Project	Impacted EU	Location	Installation
Line 3 Paint Primer (Soft Chip)	F21	Bldg 2000A	Sep-25
Line 3 Paint Wax (Cavity Wax)	F23	Bldg 2000A	Sep-25
Line 3 Weld (Stations, Sealer)	C06, C17	Bldg 100A	Sep-25
Line 2 Paint Wax (Rocker Wax)	F11	Bldg 2000	Oct-25
Line 2 Weld	C06, C14	Bldg 100A	Oct-25
Line 1 Volume Modifications (New Vehicle)	E01R-E18R,	Bldg 250	Oct-25
Plastic Paint Booth Parts Adjustment	G21, G22, G26	Bldg 400	N/A
Emergency Generators	D07	TM Services	Jun-26

Production
Jan-26
Jan-26
Jan-26
May-26
May-26
Oct-26
26-Jan
Oct-26

TMMK	2021	2022	2026	Capacity
Line 1	172,795	186,757	206,000	341,298
Line 2	221,832	218,708	220,000	262,000
Line 3	44,512	43,211	45,000	70,000
	439,139	448,676	471,000	673,298

Line 1	2021	2022	2026
Camry	172,795	186,757	60,000
BEV	0	0	90,000
PHEV	0	0	56,000
			206,000

Line 2	2021
RAV4	76,862
Camry	144,970
	221,832



2022	2026
80,926	100,000
137,782	129,000
218,708	229,000

Line 3	2021	2022	2026
Camry	-	-	50,000
Lexus ES	44,512	43,211	-
			50,000

		Project	Impacted EU	2021 Actual
Project #1	ATPA	Line 3 Paint Primer (Soft Chip)	F21	0.04
		Line 3 Paint Wax (Cavity Wax)	F23	0.01
		Line 3 Welding (Arc + Scrubbers)	C17	1.70
	Summary	Total Project #1 Line 3 Camry		1.76
		Significant Emission Rate PM2.5		
	ATPA	Line 3 Paint Primer (Soft Chip)	F21	16.73
		Line 3 Paint Wax (Cavity Wax)	F23	0.09
		Line 3 Solvent Purge	F25	8.50
		Line 3 Weld (Stations, Sealer)	C06, C17	5.06
	Summary	Total Project #1 Line 3 Camry		30.38
		Significant Emission Rate VOC		

		Project	Impacted EU	2021 Actual
Project #2	ATPA	Line 2 Paint Wax - Rocker	F11	0.91
		Line 2 Weld	C06, C14	-
	Summary	Total Project #2 Line 2 RAV4		0.91
		Significant Emission Rate PM2.5		
	ATPA	Line 2 Paint Wax - Rocker	F11	0.03
		Line 2 Weld (Stations, Sealer)	C06, C14	0.70
	Summary	Total Project #2 Line 2 RAV4		0.73
		Significant Emission Rate VOC		

		Project	Impacted EU	2021 Actual
Project #3	ATPA	Modified BEV Application	All	22.77
	Summary	Total Revised Project #3		22.77
		Significant Emission Rate PM2.5		
	ATPA	Modified BEV Application (No E or G Series)	All	11.92
		Line 1 Volume Modifications (New Vehicle)	All	147.57
	Summary	Total Revised Project #3		159.50
		Significant Emission Rate VOC		

*VOC utilizes could have accommodated emissions for E02R,E05R,E07R,E09R,E11R,E13R

*VOC corrected to remove Project Emissions Accounting per DAQ guidance.

		Project	Impacted EU	2021 Actual
		Line 3 Bumpers	G21	0.51

Project #4	ATPA	Line 1-3 Exterior Parts	G22	
	Summary	Total Project #4		0.51
		Significant Emission Rate PM2.5		
	ATPA	Line 3 Bumpers	G21	7.39
	ATPA	Line 1-3 Exterior Parts	G22	71.77
	Summary	Total Project #4		79.15
		Significant Emission Rate VOC		

*For reference only. No physical modification and no change in the method of operation.

			Project	Impacted EU
Project #5		TM Services	D07	0.00
	ATPA	Child Care	D07	0.00
	Summary	Total Project #5		0.00
		Significant Emission Rate		40.00

PM Ton/year			
2022 Actual	Baseline Actual	Projected Actual	Projected actual - Baseline Actual (or PTE)
0.04	0.04	0.04	0.00
0.11	0.06	0.12	0.06
1.81	1.76	1.89	0.14
1.96	1.86	2.06	0.20
			10.00
VOC Ton/year			
16.08	16.40	9.73	(6.67)
0.91	0.50	0.99	0.49
8.69	8.60	9.55	0.95
0.50	2.78	2.90	0.12
26.18	28.28	23.17	1.56
			40.00

10.14.202
Change po

PM Ton/year			
2022 Actual	Baseline Actual	Projected Actual	Projected actual - Baseline Actual (or PTE)
0.97	0.94	4.18	3.23
-	-	-	-
0.97	0.94	4.18	3.23
			10.00
VOC Ton/year			
0.04	0.04	0.16	0.12
3.77	2.23	2.26	0.03
3.80	2.27	2.42	0.15
			40.00

PM Ton/year			
2022 Actual	Baseline Actual	Projected Actual	Projected actual - Baseline Actual (or PTE)
23.17	22.97	25.80	4.00
23.17	22.97	25.80	4.00
			10.00
VOC Ton/year*			
16.34	14.13	27.77	18.36
114.27	130.92	124.54	3.42
130.61	145.05	152.32	21.77
			40.00

PM Ton/year			
2022 Actual	Baseline Actual	Projected Actual	Projected actual - Baseline Actual (or PTE)
0.26	0.39	0.93	0.54

0.26	0.39	0.93	0.54
			10.00
VOC Ton/year			
3.63	5.51	12.13	6.62
39.53	55.65	48.35	(7.30)
43.16	61.16	60.48	6.62
			40.00

PTE			
PM2.5	NOx	SO2	CO
0.00	0.01	0.00	0.01
0.00	0.02	0.00	0.02
0.00	0.04	0.00	0.03
10.00	40.00	40.00	100.00

15
oint

		Project	Impacted EU	2021 Actual
Project #3	New equipment added PTE	Battery Assembly	*New	-
		Battery Case Welding	*New	-
		Vacuum Form Machines	*New (G14b)	-
	Changes to existing Equipment Projected Actual - Baseline Actual	Glass Panel Install Replacement	A03	-
		Coolant Tank and Filling	A05, D06	-
		Toe and Drum Tester	A09	0.77
		Battery Case Press	C02	-
		BodyWeld Model Updates	C03,C06,C14,C17	16.50
		Paint 1 Topcoat, Sealer, Wax	E02,E04,E05,E07,E11R	5.08
		Plastics Line 1 Exterior and Bumper	G21, G22	0.35
		Update to Small Parts ED System	C08/C09	0.07
	Summary	Total Project #1 (BEV)		22.77

		Project	Impacted EU	2021 Actual
Project #3	New equipment added PTE	Battery Assembly	*New	-
		Battery Case Welding	*New	-
		Vacuum Form Machines	*New (G14b)	-
	Changes to existing Equipment Projected Actual - Baseline Actual	Glass Panel Install Replacement	A03	1.01
		Coolant Tank and Filling	A05, D06	0.20
		Toe and Drum Tester	A09	-
		Battery Case Press	C02	7.47
		BodyWeld Model Updates	C03,C06,C14,C17	0.60
		Paint 1 Topcoat, Sealer, Wax	E02,E04,E05,E07,E11R	66.73
		Solvent Purge	E13R	0.37
		Plastics Line 1 Exterior and Bumper	G21, G22	80.47
		Update to Small Parts ED System	C08/C09	2.65
	Summary	Total Project #1 (BEV)		

*Adjusted PA-BA to remove Project Emissions Accounting net decreases.

PM Ton/year			
2022 Actual	Baseline Actual	Projected Actual	PA-BA (PTE)
-	-	-	-
-	-	-	0.29
-	-	-	0.88
-	-	-	-
-	-	-	-
0.83	0.80	0.80	0.00
-	-	-	-
16.40	16.45	18.04	1.59
5.51	5.29	6.41	1.11
0.35	0.35	0.39	0.04
0.08	0.08	0.16	0.08
23.17	22.97	25.80	4.00

VOC Ton/year			
2022 Actual	Baseline Actual	Projected Actual	PA-BA (PTE)
-	-	-	9.20
-	-	-	0.00
-	-	-	0.00
0.42	0.72	1.86	1.15
0.12	0.16	0.17	0.01
-	-	-	-
11.89	9.68	11.19	1.51
1.24	0.92	1.30	0.37
70.40	68.57	93.01	26.09
0.48	0.43	0.61	0.18
43.39	61.93	66.65	4.72
2.67	2.66	4.06	1.40
			44.63

April 2024 BEV Application		
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	0.77	0.83
-	-	-
-	16.50	16.40
-	5.08	5.51
-	0.35	0.35
-	0.07	0.08

2024 Application		
-	-	-
-	-	-
-	-	-
-	1.01	0.42
-	0.20	0.12
-	-	-
-	7.47	11.89
-	0.60	1.24
-	66.73	70.40
-	1.93	2.36
-	80.47	51.94
-	4.09	4.13

tion			
-	-	-	
-	-		0.29
-	-		0.88
-	-	-	
-	-	-	
	0.80	0.80	0.00
-	-	-	
	16.45	18.04	1.59
	5.29	6.41	1.11
	0.35	0.45	0.10
	0.08	0.16	0.08

-	-		6.91	
-	-		0.00	
-	-		0.00	
	0.72	1.86	1.15	
	0.16	0.17	0.01	
-	-	-		
	9.68	11.19	1.51	
	0.92	1.30	0.37	
	68.57	93.54	24.97	-1.12
	2.15	2.90	0.54	0.36
	66.20	68.93	2.73	-1.99
	4.11	4.44	0.33	-1.08

TMMK Paint 250 Could Have Accommodated

	Could Have	Capacity
Vehicles/Hr	55	70
Vehicles/Year	245,674	341,298
Hrs/Year	5,600	8760

Max Monthly	Jun-21
Veh/Month	22,334
Veh/Yr	245,674

Project
Other Projects (
ED
Sealer
Primer
Top
Black
Wax
Solvent Purge
Total Project #1

	Description	Emission Point	Gallons/Veh	VOC (lb VOC/Gal)	Capture
Electrodeposition E02R	Bath Hood Exhaust		1.58	0.18	25%
	Oven Emissions	RTO	-	-	75%

	Description	Emission Point	Gallons/Veh	VOC (lb VOC/Gal)	Capture
Sealer Application (F E04R	Sealer	Building	1.08	0.34	13%
	Deadener	Building	1.17	0.30	5%
	PVC	Building	1.45	0.31	6%
	Oven Emissions	RTO	-	-	

	Description	Emission Point	Gallons/Veh	VOC (lb VOC/Gal)	Capture
Coating Application E05R	Primer		0.57	1.01	43%
	Soft Chip Primer		0.03	6.81	43%
	Oven Emissions	RTO	-	-	57%
Coating Application (E07R	Basecoat		0.78	1.31	30%
	Clearcoat		0.48	3.83	6%
	Oven Emissions	RTO	-	-	

	Description	Emission Point	Gallons/Veh	VOC (lb VOC/Gal)	Capture
Blackout (E09R)	Blackout Coating		0.003	0.64	100%

Wax (E11R)	Wax Coating	0.084	1.40	100%

	Emission			
	Point		Gallons/V	
	Description		VOC (lb VOC/Gal)	
Purge - Solvent Only E13R			Capture	
	Line Purge - Solvent		0.110	5.47
	Booth Emissions		-	-

Impacted EU	VOC Ton/year					Projected	Adjusted Projected	Adj PJAC-BAE
	2021 Actual	2022 Actual	Baseline Actual	CHA	Demand Growth			
(G,A,C)			76.06			85.22	85.22	18.36
E02R	7.19	8.59	7.89	9.05	1.16	10.09	8.93	1.04
E04R	8.76	9.94	9.35	13.24	3.89	9.90	6.02	(3.33)
E05R	11.29	11.50	11.39	42.32	30.92	16.99	(13.93)	(25.33)
E07R	32.78	32.10	32.44	57.32	24.88	46.44	21.56	(10.87)
E09R	0.18	0.12	0.15	0.26	0.11	2.64	2.53	2.38
E11R	6.54	8.15	7.34	14.41	7.07	6.94	(0.13)	(7.47)
E13R	0.37	0.48	0.43	0.74	0.31	0.61	0.29	(0.13)
(BEV)			145.05	137.34	68.35	178.83	124.54	21.77

VOC Control	VOC - UNC		VOC - CNT	
	lb/hr	TPY	lb/hr	TPY
0%	3.89	8.69	3.89	8.69
98.6%	11.67	26.06	0.16	0.36

VOC Control	VOC - UNC		VOC - CNT	
	lb/hr	TPY	lb/hr	TPY
0%	2.57	5.75	2.57	5.75
0%	0.95	2.13	0.95	2.13
0%	1.58	3.52	1.58	3.52
98.6%	58.85	131.43	0.82	1.84

VOC Control	VOC - UNC		VOC - CNT	
	lb/hr	TPY	lb/hr	TPY
0%	13.61	30.39	13.61	30.39
0%	4.86	10.85	4.86	10.85
98.0%	24.27	54.22	0.49	1.08
0%	16.94	37.83	16.94	37.83
0%	6.04	13.50	6.04	13.50
98.0%	134.04	299.36	2.68	5.99

VOC Control	VOC - UNC		VOC - CNT	
	lb/hr	TPY	lb/hr	TPY
0%	0.12	0.26	0.12	0.26

0%	6.45	14.41	6.45	14.41

	VOC - UNC		VOC - CNT	
VOC Control	lb/hr	TPY	lb/hr	TPY
100%	16.55	36.96	0.00	0.00
98.0%	8.27	36.96	0.17	0.74

***New Source Potential To Emit**

G14?

Vehicles/Year

	VOC		PM		HAPS
	lbs/hr	Tons/Year	lbs/hr	Tons/Year	lbs/hr
Vacuum Form Machines	3.11E-06	4.36E-06	0.2	0.876	3.06E-06
Total	3.11E-06	4.36E-06	0.20	0.88	3.06E-06

		ug/Part	Parts/Year	Tons/Year	Parts/Hr
Formaldehyde	HAP	1.7	230,000	4.31E-07	82
Acetaldehyde	HAP	2	230,000	5.07E-07	82
Toluene	HAP	7	230,000	1.77E-06	82
Xylene	HAP	3	230,000	7.61E-07	82
Ethylbenzene	HAP	2.1	230,000	5.32E-07	82
Styrene	HAP	0.5	230,000	1.27E-07	82
Dibutyl phthalate	HAP	0.3	230,000	7.61E-08	82
2-ethylhexyl phthalate	HAP	0.3	230,000	7.61E-08	82
Tetradecane	VOC	0.3	230,000	7.61E-08	82

Tons/Year
4.28E-06

4.28E-06

Lbs/Hr

3.07E-07	9.84E-08
3.62E-07	1.16E-07
1.27E-06	4.05E-07
5.42E-07	1.74E-07
3.80E-07	1.22E-07
9.04E-08	2.89E-08
5.42E-08	1.74E-08
5.42E-08	1.74E-08
5.42E-08	1.74E-08

***New Source Potential To Emit**

Case/Hr 70
Case/Year 230,000
Hrs/Year 5,500

VOC

	Gal/Case	VOC (lb/gal)	lbs/hr	Tons/Year
Sealer	0.0252	0.00	0.00	0.00

PM	lbs/Case	lbs/hr	Tons/Year
Spot Weld	0.0025	0.175	0.29

***New Source Potential To Emit**

	Veh/Hr	Veh/Year
Line 1	70	230,000

10.14.20
Change

Material	Density (g/cm3)	VOC	Gal/Veh	VOC lbs/veh	lbs/hr
TIM (Cooling)	2.81	0.57%	0.48	0.06	4.45
TIM (Module)	2.9	0.07%	0.48	0.01	0.53
Urethane	1.26	0.00%	0.15	0.00	0.00
ED Repair	1.20	13.9%	0.000	0.00	0.01
Cleaner	0.79	100%	0.001	0.01	0.62

5.60

032D Li7.A Direct material consumption list

Process name	Unit	Consumption per unit	Unit	VOC%
Thermal application Cc	per Ltr.	3.3 (1.26L)	Kgs	0.57
ED Repair	per Kgs.	0.0005	Kgs	13.9
Thermal application M	per Kgs.	4.6	Kgs	0.07
Connector block Ureth	per Kgs.	0.018	Kgs	0
Upper cover	per Kgs.	0.7	Kgs	0
cleaning before apply	per Kgs.	0.004	Kgs	100
cleaning before apply	per packs	0.04	Pcs	100

25
oint

Tons/Yr	gal/yr	8.17
7.31	109,365.00	218,730.000
0.86	109,365.00	
0.00	34,682.13	
0.02	25.32	
1.01	307.68	
9.20		

***Actual to Projected Actual**

21% Surface Area Increase for BEV.

	2021	2022	Plan
Line 1	172,795	186,757	206,000
Line 2	221,832	218,708	220,000
Line 3	44,512	43,211	45,000
	439,139	448,676	471,000

Camry	BEV
60,000	146,000
29%	71%

VOC	2021			2022		
	lb/veh	lb/hr	Ton/Year	lb/veh	lb/hr	Ton/Year
C02	0.034	3.64	7.47	0.053	5.80	11.89

Future

lb/veh	lb/hr	Ton/Year	BACT Limit
0.047	4.97	11.19	0.518

9%

Increase

lb/hr	Ton/Year
0.25	1.51

***Actual to Projected Actual**

- 1 Addition of Chassy Welding, Front Suspension, Rear Suspension, Lower Arm. Expe
- 2 Model changeover for Underbody, Main Body, Shell Body

	2021	2022	Plan	Camry	BEV+PHEV
Line 1	172,795	186,757	206,000	60,000	146,000
Line 2	221,832	218,708	220,000	29%	71%
Line 3	44,512	43,211	45,000		
	439,139	448,676	471,000		

Weld Wire Usage				Hours		PM	
	2021 Lbs/Yr	2022	Future	2021	2022	2021 Lbs/Hr	Tons/Yr
Weld 1 (C03)	37,417	28,021	40,345	3940	3871	0.24	0.47
Weld 2 (C03)	48,035	32,814	40,425	4325	4129	0.28	0.60
General Weld (C14)				21.69	15.72	6.82	14.1
C03/C14						7.3	14.5

Inherent DC	2021 TPY	2022 TPY	Future TPY	2021 lb/hr	2022 lb/hr	Future lb/hr
C17	1.70	1.81	1.94	0.86	0.93	0.99

Brazing Grinding	2021 TPY	2022 TPY	Future TPY	2021 lb/hr	2022 lb/hr	Future lb/hr
C04	0.35	0.36	0.44	0.18	0.19	0.22

VOC Sealers (C06)	2021 lb/veh	2022 lb/veh	Future lb/veh	lb/hr	Ton/Yr	Limit lb/veh
Line 1	0.007	0.0133	0.013	0.67	1.30	0.12

Limits							
	PM BACT lbs/hr	PM BACT TPY	VOC BACT lb/veh	Prod BACT Wire lb/hr	2021	2022	Future
C03/C14	14.48				7.3	7.4	8.1
C06 (L1)			0.12		0.007	0.0133	0.013
C01-C14		39.6			20.10	18.59	20.76
C03				463.6	15.66	32.08	20.87
	56%	52%	10%	5%			

ected 23% increase.

2022		Future		Increase	Increase
Lbs/Hr	Tons/Yr	Lbs/Hr	Tons/Yr	Lb/hr	TPY
0.18	0.35	0.26	0.50		
0.20	0.41	0.24	0.51		
6.97	13.9	7.6	15.5		
7.4	14.2	8.1	15.7	0.75	1.33

Increase Lb/hr	Increase TPY
0.09	0.18

Increase Lb/hr	Increase TPY
0.04	0.08

PM BACT lb/hr
0.28

Increase Lb/hr	Increase TPY
0.16	0.37

	Increase	
56%	0.75	lb/hr
10%	0.000	lb/veh
52%	1.42	TPY
5%	2.16	wire lb/hr

	2021	2022	Future
Line 1	172,795	186,757	206,000
Line 2	221,832	218,708	220,000
Line 3	44,512	43,211	45,000
	439,139	448,676	471,000

Camry BEV
60,000 146,000
29% 71%

A03	2021			2022		
	lb/veh	lb/hr	Ton/Yr	lb/veh	lb/hr	Ton/Yr
VOC	0.012	0.49	1.01	0.005	0.21	0.42

Usage	2021	2022	Future	2021		2022
A05	529,230	310,425	612,162	lb/hr	Ton/Yr	lb/hr
VOC (lb/gal)	7.55	7.56		0.10	0.20	0.06
HAPs (lb/Gal)	7.55	7.56		0.10	0.20	0.06

A09	2021			2022		
	lb/veh	lb/hr	Ton/Yr	lb/veh	lb/hr	Ton/Yr
PM		0.43	0.77		0.43	0.83

unit/vehicle

LLC	3.709 L	0.98 Gal
Brake Fluid	1.119 L	0.30 Gal
Urethane	0.695 Kg	
eTAF oil	1.4 L	0.37 Gal
High Res LLC	4.99 L	1.32 Gal

	2021	2022	Future	VOC (lb/ga	Increase
Glass Primer	366	208	626	5.95	1.01

	2021	2022	Future	Density (lb, Gal	Increase
LLC	317,388	190,953	446,505	9.42	192,335

VOC Dens HAP Dens (EtGly, DetGly)

High Res LLC	5.18	5.18

EU	Name
A03	Glass Panel
A05	Coolant
A09	Toe, Brake, Drum Tester

Projected	Actual			Limit
lb/veh	lb/hr	Ton/Yr		lb/veh
0.018	0.98	1.86		0.11

Increase

lb/hr	Ton/Yr
0.63	1.15

	Projected	Actual	Insig.
Ton/Yr	lb/hr	Ton/Yr	TPY
0.12	0.08	0.16	5.00
0.12	0.08	0.16	

Increase

lbs/hr	tons/yr
3.17E-03	6.35E-03
3.17E-03	6.35E-03

Projected	Actual			Limit
lb/veh	lb/hr	Ton/Yr		lb/hr
	0.43	0.80		0.85

Increase

lb/hr	Ton/Yr
-	-

Reference D06k-5316 as permitted May 2023.

Process ID	Source					
	ID	Color	Type (units)	Hor/Vert H/V	Min T (F)	Ave T (F)
D06k-14	BC-001	Gray	Coolant	H	45	54.9

Breathing L						
De (ft)	Hvo (ft)	Vv (ft3)	Tax (°R)	Tan (°R)	I (Btu/ft2day)	α
16.6	6	1,297	524	504	1220	0.17

Working Loss					VOC	
Ks	N (per year)	Vlx (ft3)	Kn	Control %	Ls (lbs/yr)	Lw (lbs/yr)
1.00	21.62	2,036	1.55	0%	0.28	1.02

				V	Q			
Max T	D	Hs	L	Capacity	Max	Mv	Pva	Pa
(F)	(ft)	(ft)	(ft)	(gal)	(gal/yr)	(lb/lbmole)	(psia)	(psia)
64.7	12	12	18	15,228	329,340	72	0.00116	14.7

Loss								
Taa	Tb	Tla	Wv	Δ Tv	Tlx	Tln	Pvx	Pvn
(°R)	(°R)	(°R)	(lbs/ft3)	(°R)	(°R)	(°R)	(psia)	(psia)
514	514	514	1.51E-05	20.2	519	509	5.00E-05	2.50E-05

Lt	
(lbs/yr)	(tons/yr)
1.30	6.50E-04

Reference
MSDS

working loss lbs/gal

0.0000185

lbs/hr
3.17E-04

ΔP_v (psia)	P_{bp} (psia)	P_{bv} (psia)	ΔP_b (psia)	K_e
0.00	0.06	0.0000	0.06	0.039314

Newark TLS Spill Watch
Shift Log

Submit to: Sergio.Matos@toyota.com
Jeikot.Hendricks@toyota.com

	2021	2022	Plan
Line 1	172,795	186,757	206,000
Line 2	221,832	218,708	220,000
Line 3	44,512	43,211	45,000
	439,139	448,676	471,000
Hours	3665	3980	

Camry BEV+PHEV
60,000 146,000
29% 71%

1

ED Bath	E02R	Gallons	Control	Avg VOC	Baseline Actual		
			%	lb/gal	lbs/hr	Tons/Yr	lbs/veh
2021	Bath	260,282	68%	0.17	3.92	7.19	0.08
2022	Bath	294,204	68%	0.18	4.31	8.59	0.09

Sealer	E04R	Gallons	Control	Avg VOC	Baseline Actual		
			%	lb/gal	lbs/hr	Tons/Yr	lbs/veh
2021	Sealer	171,461	86.1%	0.34	2.21	4.05	0.05
	Damping	199,806	93.7%	0.17	0.58	1.06	0.01
	UBC	281,202	92.3%	0.34	1.99	3.65	0.04
2022	Sealer	202,330	86.1%	0.34	2.61	4.79	0.06
	Damping	219,163	93.7%	0.17	0.63	1.16	0.01
	UBC	316,223	92.3%	0.33	2.18	3.99	0.05

Primer	E05R	Gallons	Control	Avg VOC	Baseline Actual		
			%	lb/gal	lbs/hr	Tons/Yr	lbs/veh
2021	Oven	50,818	55.8%	1.01	6.16	11.29	0.13
2022	Oven	52,599	55.8%	0.99	5.78	11.50	0.12

Topcoat	E07R	Gallons	Control	Avg VOC	Baseline Actual		
			%	lb/gal	lbs/hr	Tons/Yr	lbs/veh
2021	Base	120,254	68.7%	1.13	11.64	21.34	0.25
	Clear	76,009	92%	3.96	6.24	11.44	0.13
2022	Base	117,559	68.7%	1.15	11.54	21.15	0.24
	Clear	75,194	92%	3.83	5.97	10.95	0.13

Blackout	E09R	Gallons	Control	Avg VOC	Baseline Actual		
			%	lb/gal	lbs/hr	Tons/Yr	lbs/veh
2021		572	0.0%	0.62	0.10	0.18	0.002
2022		397	0.0%	0.62	0.06	0.12	0.001

Wax	E11R	Gallons	Control	Avg VOC	Baseline Actual		
			%	lb/gal	lbs/hr	Tons/Yr	lbs/veh
2021	Cavity	11,110	0.0%	1.12	3.38	6.20	0.07
	Hinge	94	0.0%	4.46	0.11	0.21	0.00

Newark TLS Spill Watch
Shift Log

Submit to: Sergio.Matos@toyota.com
Jeikot.Hendricks@toyota.com

2022	Rocker	1,697	0.0%	0.15	0.07	0.13	0.00
	Cavity	9,030	0.0%	1.76	4.34	7.95	0.09
	Hinge	83	0.0%	4.46	0.10	0.18	0.00
	Rocker	10,788	0.0%	0.00	0.01	0.02	0.00

PM	2021			2022	
	Gal/Yr	lbs/hr	Tons/Yr	Gal/Yr	lbs/hr
E05R	50,818	0.27	0.49	52,599	0.27
E07R	196,263	1.4	2.57	192,753	1.40
E09R	572	0.11	0.20	397	0.11
E11R	12,901	0.99	1.81	19,901	0.99

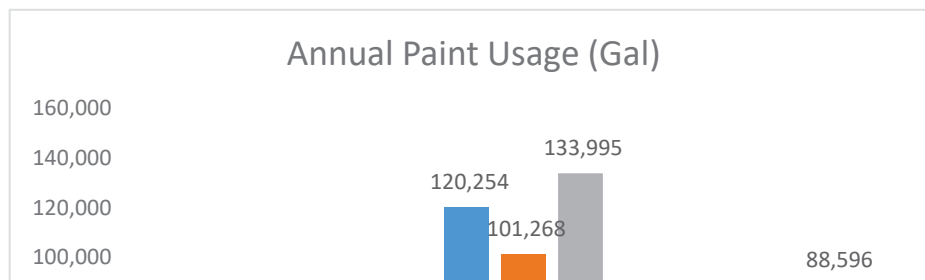
0.8193 60.68 93.01

		Single Tone			2-Tone		
		Primer	Base	Clear	Primer	Base	Clear
1st Pass	1L5	0.317	1.18	0.555			
	1N4	0.317	1.44	0.555			
	6x7	0.338	0.772	0.504			
	089	0.446	0.786	0.626			
	218	0.338	0.772	0.504			
	8Q4	0.313	0.714	0.555			
	4x9	0.313	0.772	0.555			
2nd Pass	1L5	0.338	0.349	0.292	0.244	0.992	0.472
	1N4	0.338	0.349	0.292	0.244	1.192	0.472
	8Q4	0.338	0.349	0.292	0.241	0.608	0.472
	6x7	0.338	0.349	0.292	0.253	0	0.429
	089	0.338	0.349	0.292	0.342	0.679	0.429

gal/yr	Primer	Base	Clear
Existing	52,599	120,254	76,009
Single Tone	41,720	101,268	64,557
2-Tone	61,431	133,995	88,596

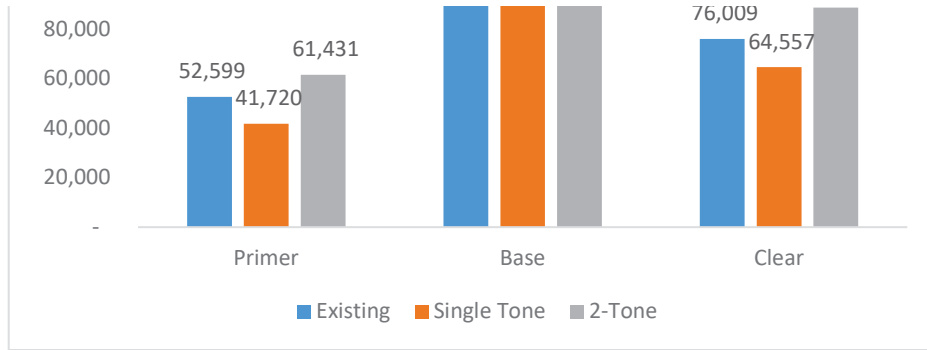
gal/veh	Primer
	0.120
	0.089
	0.130

1.188 1.127 1.172 0.807



Newark TLS Spill Watch Shift Log

Submit to: Sergio.Matos@toyota.com
Jeikot.Hendricks@toyota.com



	gal/veh	Mid	Long
ED Pigmen	0.185	16,650	10,360
ED Resin	1.695	152,550	94,920
Sealer	0.92	82,675	51,442
Damp	1.02	91,710	57,064
UBC	1.75	157,845	98,215

Project Increase				
VOC		PM		
lbs/hr	Tons/Yr	lbs/hr	Tons/Yr	
10.09	24.29	0.08	1.11	

	VOC BACT	PM BACT
	lb/veh	lb/hr
E02R	0.185	
E04R	1.15	
E05R	2.11	4.02
E07R	3.86	7.43
E09R	0.11	0.59
E11R	0.27	1.33

Projected Ac VOC %				
Gallons	lb/gal	lbs/hr	Tons/Yr	lbs/veh
355,230	0.17	5.07	10.09	0.10

Increase	
lbs/hr	Tons/Yr

0.95	2.20

Projected Ac VOC %				
Gallons	lb/gal	lbs/hr	Tons/Yr	lbs/veh
188,553	0.34	2.24	4.46	0.04
209,789	0.17	0.56	1.11	0.01
343,064	0.34	2.18	4.33	0.04

(0.13)	0.55

Projected Ac VOC %				
Gallons	lb/gal	lbs/hr	Tons/Yr	lbs/veh
76,492	1.00	8.54	16.99	0.16

2.57	5.60

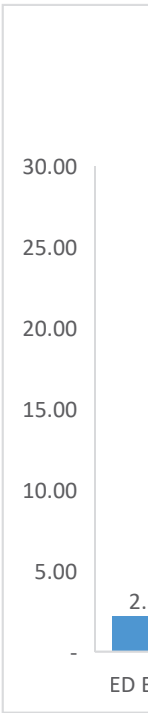
Projected Ac VOC %				
Gallons	lb/gal	lbs/hr	Tons/Yr	lbs/veh
168,628		15.24	30.34	0.29
110,616		8.09	16.11	0.16

5.64	14.01

Projected Ac VOC %				
Gallons	lb/gal	lbs/hr	Tons/Yr	lbs/veh
8,468		1.44	2.64	0.03

1.28	2.34

Projected Ac VOC %				
Gallons	lb/gal	lbs/hr	Tons/Yr	lbs/veh



Newark TLS Spill Watch
Shift Log

Submit to: Sergio.Matos@toyota.com
Jeikot.Hendricks@toyota.com

7,330	2.88	5.27	0.05
364	0.44	0.81	0.01
22,258	0.47	0.86	0.01

(0.22) (0.40)

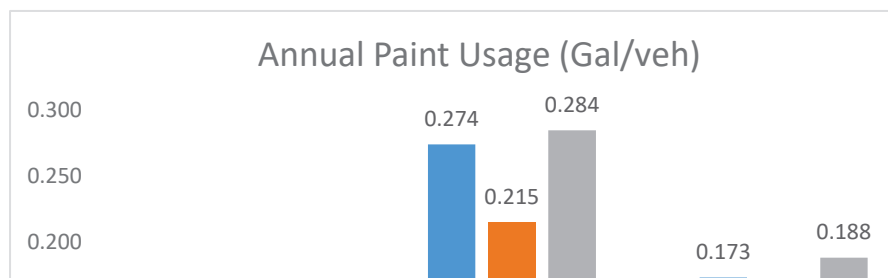
Tons/Yr	Projected Actual		
	Gallons	lbs/hr	Tons/Yr
0.54	76,492	0.28	0.62
2.79	279,243	1.44	3.24
0.22	8,468	0.11	0.25
1.97	29,953	1.02	2.29

0.01 0.11
0.04 0.56
0.00 0.04
0.03 0.40

Vehicles 56,000				90,000			
Long	Primer	Base	Clear	Mid			
12%	2,130	7,930	3,730	20.9%	5,963	22,196	10,440
0%	-	-	-	5.5%	1,569	7,128	2,747
9%	1,704	3,891	2,540	5.6%	1,704	3,891	2,540
30%	7,493	13,205	10,517	26.0%	10,436	18,392	14,648
10%	1,893	4,323	2,822	12.6%	3,833	8,754	5,715
10%	1,753	3,998	3,108	8.4%	2,366	5,398	4,196
5%	876	2,162	1,554	0.0%	-	-	-
8%	2,607	6,008	3,423	6.5%	3,405	7,845	4,469
0%	-	-	-	2.8%	1,467	3,883	1,925
7%	2,270	3,751	2,995	0.0%	-	-	-
9%	2,979	1,759	3,634	2.2%	1,170	691	1,428
0%	-	-	-	9.5%	5,814	8,789	6,165

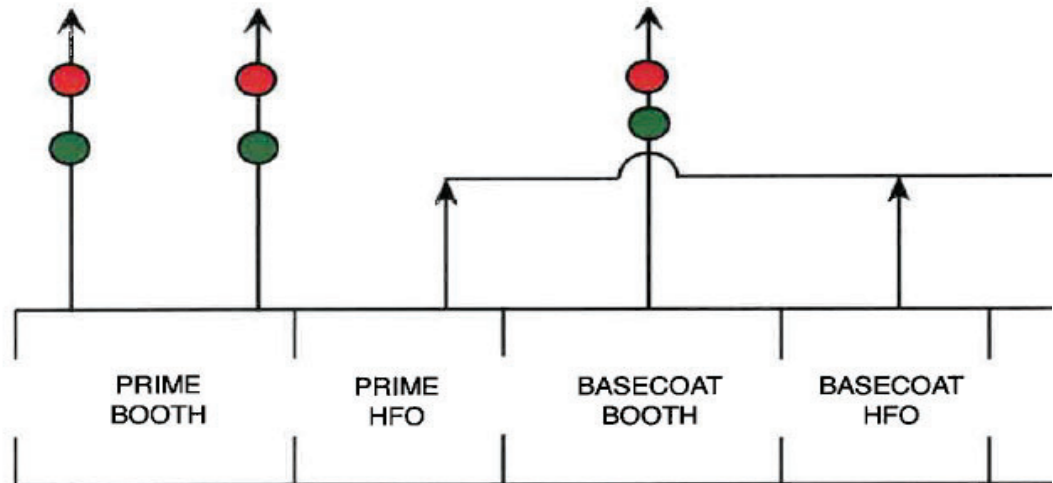
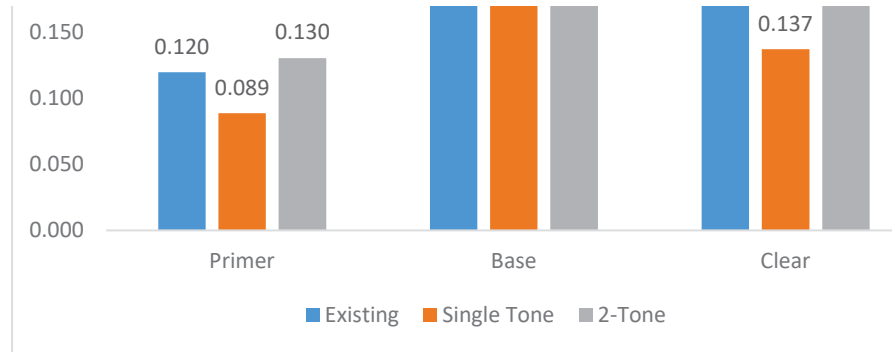
Base	Clear
0.274	0.173
0.215	0.137
0.284	0.188

0.852 0.854



Newark TLS Spill Watch Shift Log

Submit to: Sergio.Matos@toyota.com
Jeikot.Hendricks@toyota.com



- Particulate test site
- Capture efficiency test site
- Destruction efficiency test site

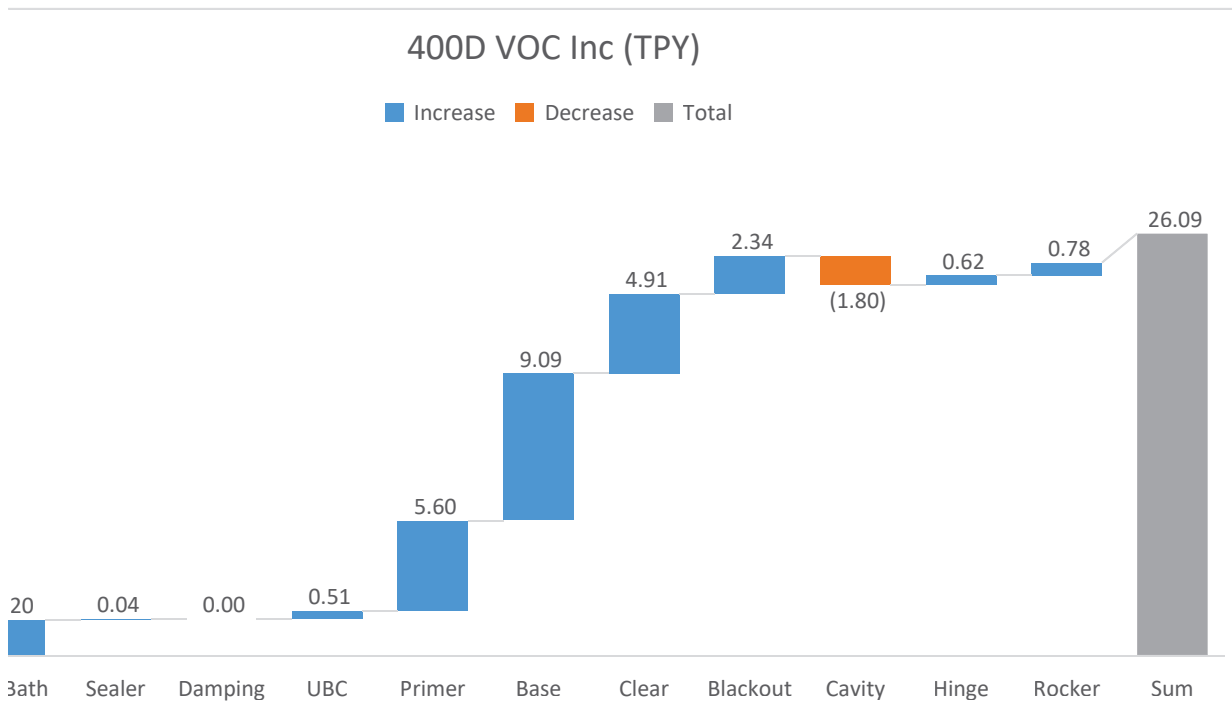
Newark TLS Spill Watch
Shift Log

Submit to: Sergio.Matos@toyota.com
Jeikot.Hendricks@toyota.com

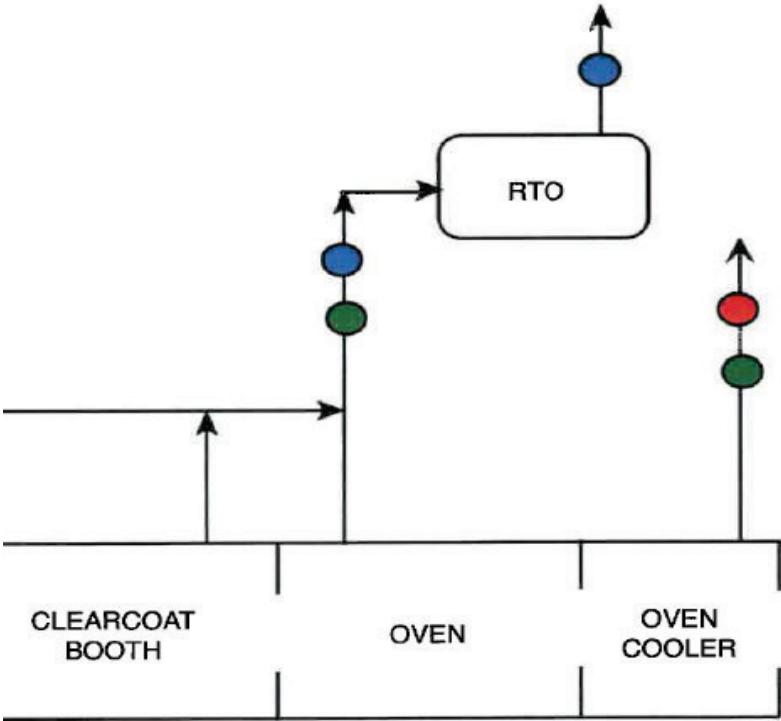
VOC Max Reported		PM	
2021	2022	2021	2022
0.178	0.109		
1.062	0.99		
0.357	0.325	0.27	0.27
1.221	1.209	1.4	1.4
0.026	0.005	0.11	0.11
0.254	0.227	1.04	0.99

VOC Projected		PM
lb/veh	lb/hr	
0.10		
0.10		
0.16	0.28	
0.45	1.44	
0.03	0.11	
0.07	1.02	

ED Bath	10.09	2.20
Sealer	4.46	0.04
Damping	1.11	0.00
UBC	4.33	0.51
Primer	16.99	5.60
Base	30.34	9.09
Clear	16.11	4.91
Blackout	2.64	2.34
Cavity	5.27	(1.80)
Hinge	0.81	0.62
Rocker	0.86	0.78
Sum	93.01	26.09







E13R (Solvent Purge Only)

Clear Purge	VOC (lb/gal)	Gallons	Control%	Unc VOC (Tons)	Controlled VOC (Tons)
2021	5.47	13,620	99.0%	37.25	0.37
2022	5.12	18,672	99.0%	47.83	0.48
Project Act	5.12	23,624	99%	60.51	0.61
Increase		4,725		17.97	0.18

0.08

0.11

	2021	2022	Future	
Line 1	172,795	186,757	206,000	45%
Line 2	221,832	218,708	220,000	55%
Line 3	44,512	43,211	50,000	
	439,139	448,676	476,000	
Hours	3665	3980		

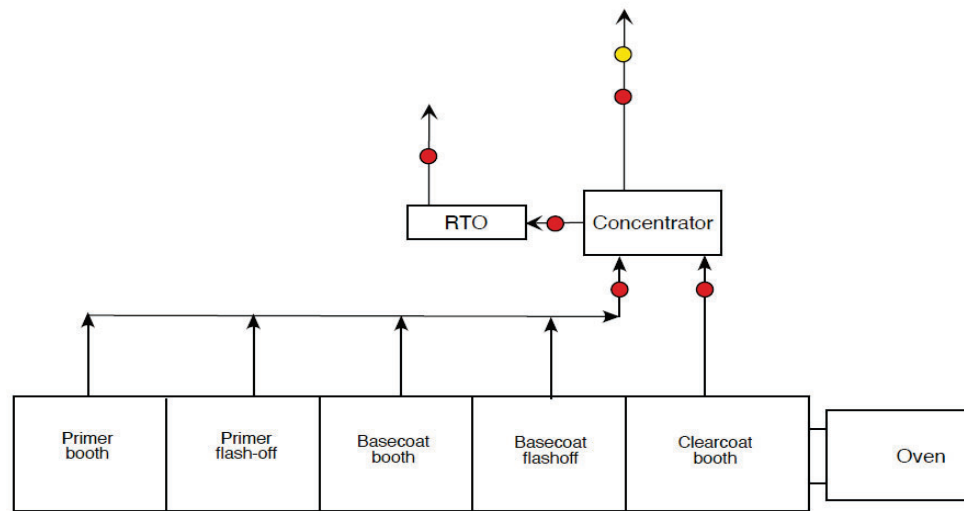
Ext Paint (Rocker)	G21	Control		Avg VOC lb/gal	Baseline Actual		
		Gallons	%		lbs/hr	Tons/Yr	lbs/veh
2021	Primer	5,708	90%	1.10	0.18	0.33	0.00
	Base	21,884	90%	1.32	0.82	1.50	0.01
	Clear	13,782	75%	3.32	3.06	5.61	0.03
2022	Primer	3,181	90%	1.16	0.10	0.19	0.00
	Base	11,241	90%	1.08	0.34	0.63	0.00
	Clear	6,826	75%	3.30	1.51	2.76	0.01

Bumper	G22	Control		Avg VOC lb/gal	Baseline Actual		
		Gallons	%		lbs/hr	Tons/Yr	lbs/veh
2021	Primer	35,765	0%	1.19	11.61	21.28	0.11
	Base	52,389	0%	1.44	20.58	37.72	0.19
	Clear	26,832	73%	3.86	7.66	14.03	0.07
2022	Primer	31,431	0%	0.91	7.84	14.36	0.07
	Base	33,245	0%	1.17	10.61	19.45	0.10
	Clear	29,045	90%	3.95	3.27	5.99	0.03

PM	2021			2022	
	Gal/Yr	lbs/hr	Tons/Yr	Gal/Yr	lbs/hr
G21	41,374	0.055	0.12	21,248	0.055
G22	114,986	0.10	0.23	93,721	0.10

	Mid			Long	
	Primer	Base	Clear	Primer	Base
	0.051	0.104	0.115	0.044	0.089
	0.051	0.104	0.115	-	-
	0.051	0.102	0.115	0.044	0.089
	0.051	0.156	0.115	0.044	0.128
	0.051	0.077	0.115	0.044	0.101
	0.051	0.078	0.115	0.044	0.068
	-	-	-	0.044	0.069

Primer	Base	Clear
5,499	12,435	14,646



G21
Rocker Mold Exterior Parts

Project Increase			
VOC		PM	
lbs/hr	Tons/Yr	lbs/hr	Tons/Yr
(5.15)	(9.45)	0.02	0.04

	VOC BACT	PM BACT
	lb/veh	lb/hr
G21	0.21	0.99
G22	1.04	5.42

Projected Actual			
Gallons	lbs/hr	Tons/Yr	lbs/veh
7,947	0.26	0.48	0.002
21,557	0.81	1.48	0.006
20,321	4.51	8.27	0.035

Increase		
lbs/hr	Tons/Yr	lb/veh

2.57	4.72	0.02

Projected Actual			
Gallons	lbs/hr	Tons/Yr	lbs/veh
24,003	6.89	12.62	0.05
36,017	12.82	23.50	0.10
30,033	3.34	6.13	0.03

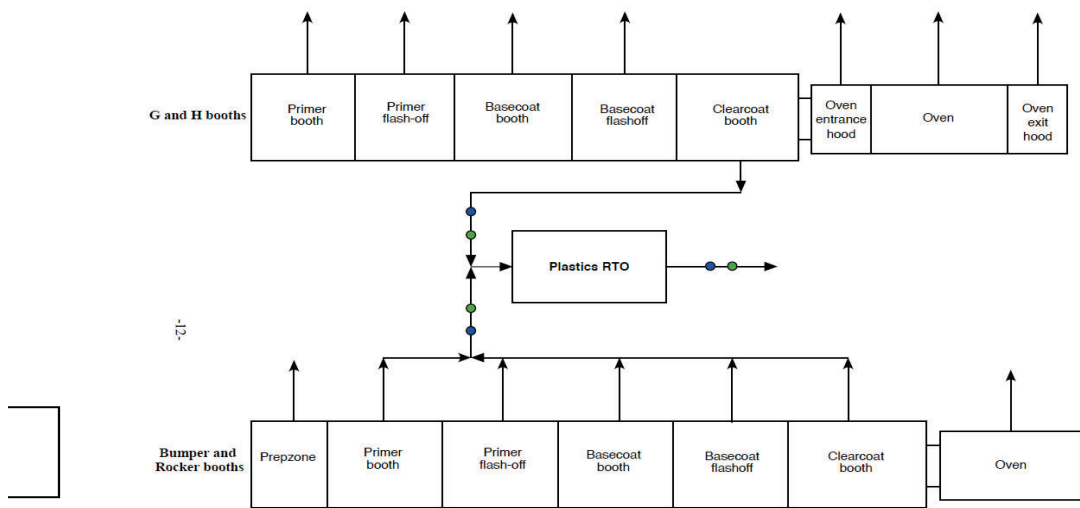
Increase		
lbs/hr	Tons/Yr	lb/veh

(7.73)	(14.17)	(0.11)

	Projected Actual		
Tons/Yr	Gallons	lbs/hr	Tons/Yr
0.12	49,824	0.09	0.20
0.23	90,054	0.09	0.19

0.03	0.07
(0.01)	(0.03)

	90,000				Vehicles	56,000		
Clear		Primer	Base	Clear		Primer	Base	Clear
0.152	20.9%	959	1,956	2,163	12%	296	598	1,021
-	5.5%	252	515	569	0%	-	-	-
0.152	5.6%	257	514	580	9%	222	449	766
0.152	26.0%	1,193	3,650	2,691	30%	739	2,150	2,554
0.152	12.6%	578	873	1,304	10%	246	566	851
0.152	8.4%	386	590	869	10%	246	381	851
0.152	0.0%	-	-	-	5%	123	193	426



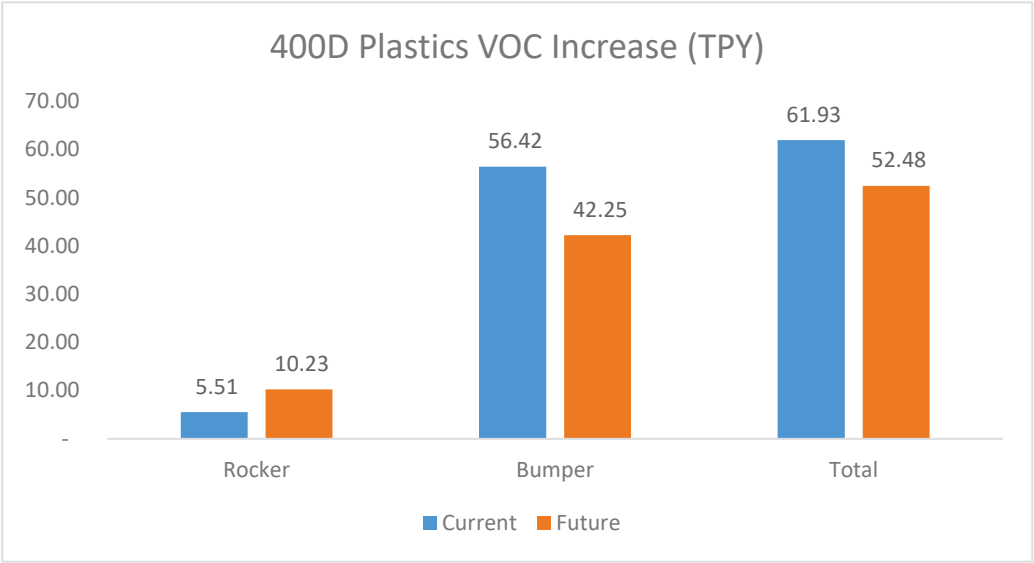
G22 & G26

Bumper

Lexus

VOC		PM	
2021	2022	2021	2022
0.102	0.084	0.055	0.055
0.6	0.337	0.1	0.1

	Current	Future	
Rocker	5.51	10.23	4.72
Bumper	56.42	42.25	(14.17)
Total	61.93	52.48	4.72
			66.65



Application Control

74%

Bath Usage

	Reported		Reported	
	2021 Usage		2022 Usage	
	Gal/Yr	lbs VOC/Yr	Gal/Year	lbs VOC/Yr
ED	105,553	20,468	103,081	20,636
Gal/Veh	0.24		0.23	
lbs VOC/Gal	0.19		0.20	
lbs VOC/veh	0.047		0.046	
Control (60%)	0.012		0.012	
Control (74%)	0.0120		0.0119	

C09

Bath

Part	SurfA (m2)	Gal/Veh	VOC (lb/gal)	VOC (lbs/veh)
Battery Case	17.1	0.37	0.197	0.073
Existing Parts	10.9	0.24	0.197	0.046
Total (Controlled)				0.018
Limit (BACT)				0.041

VOC	2021			2022
	lbs/hr	lbs/veh	tons/yr	lbs/hr
C09	1.51	0.012	2.65	1.52

C08 (PM)

Degrease

Part	SurfA (m2)	lbs/hr	Tons/Year
Battery Case	17.1	0.03	0.08
Increase		0.03	0.08
Current	10.9	0.04	0.08
Total		0.07	0.16
Limit		0.38	0.97

PM	2021	
	lbs/hr	tons/yr
C08	0.04	0.07

7/25/2023 Emissions Test Report

C09 RTO

	lbs VOC/hr	VOC TPY	lbs VOC/veh	Control %
Inlet	5.3	9.7	0.044	98.9%
Outlet	0.06	0.11	0.001	

•• PROTECTED 関係者外秘

Usage 2021	23.74	43.5	0.194
Usage 2022	22.09	44.0	0.200

	5/5/2017 Capture Test Report		Capture %
RTO inlet	3.9	18%	97.0%
Fugitive	0.63	3%	
Wastewater	16.58	79%	
Usage 2015	21.11	100%	
Unc Emit	4.53	21%	

*Bath VOC components do not volatilize below 350C. Bath = 100C; Oven = 300C.

**Permit App Capture= 75%

•• PROTECTED 関係者外秘

Tested Control 74%

Projected

Future	Usage
Gal/Year	lbs VOC/Yr
159,444	8,121

0.36

0.051

0.018

Vehicles/Yr	Uncontrolled		Controlled	
	VOC lbs/Hr	VOC TPY	VOC lbs/Hr	VOC TPY
146,000	5.53	5.32	1.43	1.37
448,676	3.52	10.39	0.91	2.69
	9.05	15.71	2.34	4.06

		Projected Actual		BACT Limit
lbs/veh	tons/yr	lbs/veh	tons/yr	lbs/veh
0.012	2.67	0.018	4.06	0.041

Increase	
lbs/hr	Tons/Year
0.62	1.40

2022		Projected Actual		BACT Limit
lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr
0.04	0.08	0.07	0.16	0.38

Increase	
lbs/hr	Tons/Year
0.04	0.10

NSPS Subpart MM

EU	Unit	2021	2022 Projected	Limit
C09	Kg VOC/L Solid App	0.033	0.052	0.043 0.17
E02R	Kg VOC/L Solid App	0.106	0.052	0.079 0.17
E04R,E05R,E12R	Kg VOC/L Solid App	0.0465	0.0445	0.0455 1.4
E05R,E07R,E09R,E12R	Kg VOC/L Solid App	0.3624	0.4699	0.4162 1.47
F02,F19	Kg VOC/L Solid App	0.0186	0.0853	0.0520 0.17
F04,F05,F12,F21,F24	Kg VOC/L Solid App	0.1108	0.8646	0.4877 1.4
F05,F07,F09,F12,F22,F24	Kg VOC/L Solid App	0.8546	0.8690	0.8618 1.47

*No change in VOC content anticipated.

	2021	2022	Plan
Line 1	172,795	186,757	206,000
Line 2	221,832	218,708	220,000
Line 3	44,512	43,211	45,000
	439,139	448,676	471,000
Hours	3665	3980	

Line 1
PHEV
BEV
Camry

VOC		2021	2022	2021
Wax	Description	Usage (Gal/Yr)	Usage (Gal/Yr)	VOC (lb/gal)
F11	Rocker Wax	4,390	4,685	0.0157728

VOC		2021	2022	2021
		Usage (Gal/Yr)	Usage (Gal/Yr)	VOC (lb/gal)
C06 -L2	Adhesive Sealers	5365	28,881	0.2604325

PM		2021	2022	
Wax	Description	Usage (Gal/Yr)	Usage (Gal/Yr)	Lbs Sol/ Gal Mat
F11	Rocker Wax	4390	4685	8.31498

2021	2022	2026
0	0	56,000
0	0	90,000
172,795	186,757	60,000
206,000		

Line 2	2021	2022	2026
RAV4	76,862	80,926	100,000
Camry	144,970	137,782	129,000
	221,832	218,708	229,000

2022	2021		2022	
VOC (lb/gal)	lb/hr	TPY	lb/hr	TPY
0.0157728	0.02	0.03	0.02	0.04

Projected	
Usage (Gal/Yr)	VOC (lb/gal)
20,086	0.015773

2022	2021		2022	
VOC (lb/gal)	lb/hr	TPY	lb/hr	TPY
0.2608106	0.38	0.70	1.89	3.77

Projected	
Usage (Gal/Yr)	VOC (lb/gal)
17,347	0.260811

	2021		2022	
Overspray (%)	lb/hr	TPY	lb/hr	TPY
5%	0.50	0.91	0.49	0.97

Projected	
Usage (Gal/Yr)	
20,086	

Line 3	2021	2022	2026
Lexus ES	44,512	43,211	-
Camry	-	-	50,000
			50,000

	L1	L2	L3
Total	206,000	229,000	50,000
CAMRY	60,000	129,000	50,000

lb/hr	TPY
0.09	0.16

BACT (lb/veh)
0.27 0.00

Increase
0.12

lb/hr	TPY
1.14	2.26

BACT (lb/veh)
0.306 0.02

0.03

lb/hr	TPY
2.28	4.18

3.23

	2021	2022	Plan
Line 1	172,795	186,757	206,000
Line 2	221,832	218,708	220,000
Line 3	44,512	43,211	45,000
	439,139	448,676	471,000
Hours	3665	3980	

Line 1
PHEV
BEV
Camry

		2021	2022	2021
	Description	Emission Point	Usage (Gal/Veh)	VOC (lb/Gal)
Coating Application F21	Primer		0.70	3.88
	Soft Chip Primer		0.03	6.81
	Concentrator			
	Booth Emission RTO			
	Oven Emission RTO			
Purge - Solvent Only F25	Line Purge - Solvent		1.82	5.61
	Concentrator		-	-
	Booth Emission RTO		-	-

		2021	2022	2021
	Description	Emission Point	Usage (Gal/Yr)	VOC (lb/gal)
Wax F23	Cavity Wax		55	550

		2021	2022	2021
		Usage (Gal/Yr)	Usage (Gal/Yr)	VOC (lb/gal)
C16 -L3	Adhesive Sealers	41,783	4,779	0.242

		2021	2022	
	Description	Usage (Gal/Yr)	Usage (Gal/Yr)	Lbs Sol/ Gal Mat
Wax F23	Cavity Wax	55	550	8.31498

		2021	2022		
	Description	Usage (Gal/Yr)	Usage (Gal/Yr)	Lbs Sol/ Gal Mat	Overspray (%)
Coating Application	Primer	31,087	29,279	0.36	25%

F21	Soft Chip Prim	0.00	0.00	0.39	25%
	Conc. Emission	-	-	-	-
	Booth Emissio	-	-	-	-
	Oven Emission	-	-	-	-

10.14.2025
Changepoint

		Usage (1000 lb/yr)			EF
		2021	2022	PTE	lb/1000 lb
C17	Arc Welding	1363	1447	3,390	25

2021	2022	2026
0	0	56,000
0	0	90,000
172,795	186,757	60,000
206,000		

Line 2	2021	2022	2026
RAV4	76,862	77,404	100,000
Camry	144,970	137,782	129,000
	221,832	215,186	229,000

			2021		2022		2022	
			VOC - UNC		VOC - CNT		VOC - UNC	
VOC (lb/Gal)	Capture	VOC Control	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
4.26	25%	0%	8.22	15.07	8.22	15.07	7.09	14.53
6.81	25%	0%	-	-	-	-	-	-
	3.1%	0%	0.77	1.41	0.77	1.41	0.66	1.32
	41%	99.6%	10.09	18.48	0.04	0.07	8.69	17.30
	31%	98.8%	7.65	14.02	0.09	0.17	6.59	13.12
5.61	50%	100%	62.08	113.77	-	-	58.47	116.36
-	3.6%	0%	4.41	8.08	4.41	8.08	4.15	8.26
-	46.5%	99.6%	57.67	105.69	0.23	0.42	54.32	108.09

2022	2021	2022
VOC (lb/gal)	lb/hr	TPY
3.291	0.05	0.09

Projected
Usage VOC (Gal/Yr) (lb/gal)
600 3.291378

2022	2021	2022
VOC (lb/gal)	lb/hr	TPY
0.210	2.76	5.06

Projected
Usage VOC (Gal/Yr) (lb/gal)
23,980 0.242222

2021	2022
Overspray (%)	lb/hr
5%	0.01

Projected
Usage (Gal/Yr)
600

			2021		2022		2022	
			PM -UNC		PM -CNT		PM -UNC	
Capture	PM Control		lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
49%	95%		0.37	0.68	0.02	0.03	0.32	0.64

49%	95%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.3%	95%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
43%	99.5%	0.33	0.60	0.00	0.00	0.28	0.57	0.00
8%	97.4%	0.06	0.11	0.00	0.00	0.05	0.11	0.00

Control	PM Emissions (TPY)		
%	2021	2022	PTE
90%	1.70	1.81	4.24

Projected

Wire	PM
lb/ 1000 lb	TPY
1,515	1.89

Line 3	2021	2022	2026
Lexus ES	44,512	43,211	-
Camry	-	-	50,000
			50,000

	L1	L2	L3
Total	206,000	229,000	50,000
CAMRY	60,000	129,000	50,000

Projected						
VOC -CNT		VOC - UNC		VOC -CNT		
lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	
7.09	14.53	3.94	7.21	3.94	7.21	
-	-	0.70	1.28	0.70	1.28	
0.66	1.32	0.40	1.06	0.40	1.06	
0.03	0.07	5.17	13.88	0.02	0.06	
0.08	0.16	3.92	10.53	0.05	0.13	
-	-	69.73	127.79	-	-	
4.15	8.26	4.56	9.07	4.56	9.07	
0.22	0.43	59.66	118.72	0.24	0.47	

-6.67
0.95

lb/hr	TPY	
0.54	0.99	0.49

lb/hr	TPY	
1.58	2.90	0.12
		1.56

lb/hr	TPY	
0.07	0.12	0.06

Projected					
		PM -UNC		PM -CNT	
	Usage				
TPY	(Gal/Yr)	lb/hr	TPY	lb/hr	TPY
0.03	32,789	0.39	0.72	0.02	0.04
					0.003

0.00	1,500	0.02	0.04	0.00	0.00	0.002
0.00	-	0.00	0.00	0.00	0.00	0.000
0.00	-	0.36	0.67	0.00	0.00	0.000
0.00	-	0.07	0.12	0.00	0.00	0.000

0.14

BACT (lb/job)
1.026

0.39

	Before	After	
RT1	Line 1 Bumper	Line 1,2,3 Rocker	G21
RT2	Line 2 Bumper	Line 2 Bumper	G22
RT3	Line 1,2 (Rocker, Lower, HH)	Line 1,3 Bumper	G26
Lexus	Line 3 Bump/Rocker	Decomissioned	

	Surface Area	Bumper	Rocker, Lower, HH
Line 1,2,3	Camry	2.608	2.11 0.49
Line 1	BEV	3.260	2.25 1.01
Line 1	BEV2	2.518	1.67 0.85
Line 2	RAV4	2.816	1.45 1.37
Line 3	ES	2.790	2.30 0.49

VOC	G26	2021	Usage (Gal)	VOC Density (lb/Gal)	Control	VOC TPY
	Lexus	Primer	11,733	3.24	93%	2,801
		Base	14,348	1.30	93%	1,372
		Clear	6,192	3.43	93%	1,563
		2022	Usage (Gal)	VOC Density (lb/Gal)		
		Primer	9,152	2.85	93%	1,921
		Base	10,824	1.19	93%	951
		Clear	5,627	3.22	93%	1,335

	G22	2021	Usage (Gal)	VOC Density (lb/Gal)		
L1, L2 Bumper		Primer	35,765	1.19	0%	42,649
RT1, RT2		Base	52,389	1.44	0%	75,541
		Clear	26,832	3.50	73%	25,349
		2022	Usage (Gal)	VOC Density (lb/Gal)		
		Primer	31,431	0.91	0%	28,724
		Base	33,245	1.17	0%	39,049
		Clear	29,045	3.72	90%	11,281

	G21	2021	Usage (Gal)	VOC Density (lb/Gal)		
All Rocker		Primer	5,708	1.10	90%	649
RT3		Base	21,884	1.27	90%	2,888
		Clear	13,782	3.32	75%	11,233
		2022	Usage (Gal)	VOC Density (lb/Gal)		
		Primer	3,181	0.66	90%	217
		Base	11,241	1.08	90%	1,264
		Clear	6,826	3.45	75%	5,783

PM

G21

2021	Usage (Gal)	Solids (lb/gal)			
Primer	5,708	3.62	99.4%	122	
Base	21,884	1.98	99.2%	341	
Clear	13,782	5.34	99.2%	567	
2022	Usage (Gal)	Solids (lb/gal)			
Primer	3,181	3.95	99.4%	74	
Base	11,241	2.10	99.2%	186	
Clear	6,826	5.09	99.2%	267	

Permit

Exterior Parts	B1	RT3
Bumper	G & H	RT1, RT2
Bumper & Rocker	D	Lexus

	RT1	RT2	RT3
Line 1	R, L, HH		B
Line 2	R, L, HH	B	
Line 3	R, L, HH		B

Change in Paint Usage

Total SA	Before	After
RT1	394,804	168,208
RT2	408,452	417,506
RT3	320,721	528,380
Lexus	124,188	-

EU	% Change
G22	-57%
G21	64.75%
G26	-100%

Sum	1,248,166	1,114,094

	-11%

5,736
4,208

Lexus

Projected	Usage (Gal)	VOC Density (lb/Gal)			
Primer	-	3.24	93%	-	
Base	-	1.30	93%	-	
Clear	-	3.43	93%	-	-

143,539
79,054

Line 2 Bump & All Rocker (RT2, RT1)

Projected	Usage (Gal)	VOC Density (lb/Gal)			
Primer	21,529	1.05	0%	22,674	
Base	38,335	1.31	0%	50,152	
Clear	24,511	3.61	73%	23,877	96,702

14,771
7,263

Line 1,3 Bumper (RT3)

Projected	Usage (Gal)	VOC Density (lb/Gal)			
Primer	26,128	1.05	90%	2,856	
Base	32,633	1.31	90%	4,431	
Clear	19,173	3.61	75%	16,968	24,254

1,030
527

Line 1,3 Bumper (RT3)

Projected	Usage (Gal)	Solids (lb/gal)			
Primer	26,128	3.62	99.4%	558	
Base	32,633	1.98	99.2%	508	
Clear	19,173	5.34	99.2%	789	1,855

Line 1	2021	2022	2026
Camry	172,795	186,757	60,000
BEV	0	0	90,000
PHEV	0	0	56,000
			206,000

Line 3	2021
Camry	-
Lexus ES	44,512

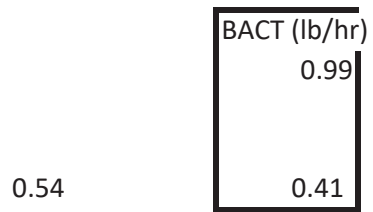
Line 2	2021	2022	2026
RAV4	76,862	80,926	100,000
Camry	144,970	137,782	129,000
	221,832	218,708	229,000

(2.49)

(7.30)

6.62

BACT (lb/veh)
0.21
0.09



2022	2026
-	50,000
43,211	-

AP-42 lb/ MMBTU

VOC	PM	NOx	CO2e
0.005392	0.007451	0.098039	117.6

Add PTE

Name	Fuel	Power (kw)	Power (MMBTU)	VOC (TPY)	PM (TPY)	NOx (TPY)	CO2e (TPY)
Team Member Services Emergency Generator	PNG	150	0.512	0.00	0.00	0.01	15
Child Care Center Emergency Generator	PNG	275	0.938	0.00	0.00	0.02	28

SO2	CO
0.000588	0.082353

SO2 (TPY)	CO (TPY)
0.00	0.01
0.00	0.02

Division for Air Quality

300 Sower Boulevard
Frankfort, KY 40601
(502) 564-3999

DEP7007B

Manufacturing or Processing Operations

- ☐ Section B.1: Process Information
☐ Section B.2: Materials and Fuel Information
☐ Section B.3: Notes, Comments, and Explanations

Additional Documentation

- ☐ Complete DEP7007AI, DEP7007N,
DEP7007V, and DEP7007GG.
☐ Attach a flow diagram
☐ Attach SDS

Source Name:

Toyota Motor Manufacturing Kentucky

KY EIS (AFS) #:

21- 209-00030

Permit #:

V-20-026-R3

Agency Interest (AI) ID:

7998

Date:

7/21/2025**Section B.1: Process Information**

Emission Unit #	Emission Unit Name	Describe Emission Unit	Process ID	Process Name	Manufacturer	Model No.	Proposed/Actual Date of Construction Commencement (MM/YYYY)	Is the Process <u>Continuous</u> or <u>Batch</u> ?	Number of Batches per 24 Hours (if applicable)	Hours per Batch (if applicable)
F21	Line 3 Primer	See TSD								
F23	Line 3 Wax									
F25	Line 3 Purge									
F11	Line 2 Wax									
C06	Weld									
G21	Plastic Parts									
D07	E-Gens									

Section B.2: Materials and Fuel Information

**Maximum yearly fuel usage rate only applies if applicant request operating restrictions through federally enforceable limitations.*

Emission Unit #	Emission Unit Name	Name of Raw Materials Input	Maximum Quantity of Each Raw Material Input		Total Process Weight Rate for Emission Unit (tons/hr)	Name of Finished Materials	Maximum Quantity of Each Finished Material Output		Fuel Type	Maximum Hourly Fuel Usage Rate		Maximum Yearly Fuel Usage Rate		Sulfur Content (%)	Ash Content (%)
				(Specify Units/hr)				(Specify Units/hr)			(Specify Units)		(Specify Units)		

Section B.3: Notes, Comments, and Explanations

Division for Air Quality 300 Sower Boulevard Frankfort, KY 40601 (502) 564-3999	DEP7007EE Internal Combustion Engines ___ Section EE.1: General Information ___ Section EE.2: Operating Information ___ Section EE.3: Design Information ___ Section EE.4: Fuel Information ___ Section EE.5: Emission Factor Information ___ Section EE.6: Notes, Comments, and Explanations	Additional Documentation ___ Complete DEP7007AI, DEP7007N, DEP7007V, and DEP7007GG ___ Attach EPA certification of the engine								
Source Name: Toyota Motor Manufacturing Kentucky KY EIS (AFS) #: 21- 209-00030 Permit #: V-20-026 R3 Agency Interest (AI) ID: 7998 Date: 7/21/2025										
Section EE.1: General Information										
Emission Unit #	Emission Unit Name	Control Device ID	Stack ID	Manufacturer	Model Number	Model Year	Date of Manufacture	Proposed/Actual Date of Construction Commencement (MM/YYYY)	Date Reconstructed/ Modified	List Applicable Regulations
D07	Childcare Gen							06/2026		ZZZZ
D07	Pharmacy Gen							06/2026		ZZZZ

Section EE.2: Operating Information

Emission Unit #	Engine Purpose (Identify if Non-Emergency, Emergency, Fire/Water Pump, Black-start engine for combustion turbine, Engine Testing)	Hours Operated	Is this engine a rental? <i>(Yes/No)</i>	Rental Time Period <i>(hrs)</i>	Alternate Operating Scenarios (Describe any operating scenarios in which the engine may be used in a different configuration)
D07	Emergency Only	500	No		
D07	Emergency Only	500	No		

Section EE.3: Design Information

Emission Unit #	Engine Type (Identify all that apply: Commercial, Institutional, Stationary, Non-Road)	Ignition Type (Identify if either Compression or Spark Ignition)	Engine Family (Identify all that apply: 2-stroke, 4-stroke, Rich Burn, Lean Burn)	Maximum Engine Power (bhp)	Maximum Engine Speed (rpm)	Total Displacement (L)	Number of Cylinders
D07	Commercial	Spark					
D07	Commercial	Spark					

Section EE.4: Fuel Information

[illegible]

Emission factors expressed here are based on the potential to emit.

See TSD (AP-42)

Section EE.6: Notes, Comments, and Explanations	

Division for Air Quality 300 Sower Boulevard Frankfort, KY 40601 (502) 564-3999	DEP7007N Source Emissions Profile ___ Section N.1: Emission Summary ___ Section N.2: Stack Information ___ Section N.3: Fugitive Information ___ Section N.4: Notes, Comments, and Explanations	Additional Documentation ___ Complete DEP7007AI

Source Name:	Toyota Motor Manufacturing Kentucky
KY EIS (AFS) #:	21- 209-00030
Permit #:	V-20-026 R3
Agency Interest (AI) ID:	7998
Date:	7/21/2025

N.1: Emission Summary																
Emission Unit #	Emission Unit Name	Process ID	Process Name	Control Device Name	Control Device ID	Stack ID	Maximum Design Capacity (SCC Units/hour)	Pollutant	Uncontrolled Emission Factor (lb/SCC Units)	Emission Factor Source (e.g. AP-42, Stack Test, Mass Balance)	Capture Efficiency (%)	Control Efficiency (%)	Hourly Emissions		Annual Emissions	
													Uncontrolled Potential (lb/hr)	Controlled Potential (lb/hr)	Uncontrolled Potential (tons/yr)	Controlled Potential (tons/yr)
F11	Line 2 Wax															
F21, F25	Line 3 Primer and Purge		See TSD													
F23	Line 3 Wax															
C06	Weld															
G21	Plastic Parts															
D07	E-Gen															

Section N.2: Stack Information

UTM Zone:

Stack ID	Identify all Emission Units (with Process ID) and Control Devices that Feed to Stack	Stack Physical Data			Stack UTM Coordinates		Stack Gas Stream Data		
		Equivalent Diameter <i>(ft)</i>	Height <i>(ft)</i>	Base Elevation <i>(ft)</i>	Northing <i>(m)</i>	Easting <i>(m)</i>	Flowrate <i>(acfm)</i>	Temperature <i>(° F)</i>	Exit Velocity <i>(ft/sec)</i>
D07	ChildCare	2	10	0	See Facility Map				
D07	Pharmacy	2	10	0					

Section N.3: Fugitive Information

UTM Zone:

Emission Unit #	Emission Unit Name	Process ID	Area Physical Data		Area UTM Coordinates		Area Release Data	
			Length of the X Side <i>(ft)</i>	Length of the Y Side <i>(ft)</i>	Northing <i>(m)</i>	Easting <i>(m)</i>	Release Temperature <i>(°F)</i>	Release Height <i>(ft)</i>

Section N.4: Notes, Comments, and Explanations

Parsons, William (EEC)

From: Will Richardson (TEMA) <will.richardson@toyota.com>
Sent: Tuesday, October 14, 2025 4:44 PM
To: Parsons, William (EEC)
Subject: TMMK - Permit Application Update ('Bridge')
Attachments: 2025 TMMK Volume Bridge TSD v3 10.8.2025.xlsx

This Message Originated from Outside the Organization

[Report Suspicious](#)

This Message Is From an External Sender.

●● PROTECTED 関係者外秘

William,

We recently had a couple changepoints to the last application we submitted ('2025 TMMK Volume Bridge').

1. The Battery Electric Vehicle Line (Project #3)
 - a. An increase to Thermal Insulating Material usage
 - i. (A14) ~ 4 TPY VOC
2. Camry Model Update (Project #1)
 - a. Installation of Arc Welding units with Mini-Scrubbers control (inherent)
 - i. (C17) ~ 0.15 TPY PM/10/2.5

These increases shouldn't impact the final permit evaluation. Attached is the updated TSD with notes on 'L1 Battery Assembly', 'L3 Camry', and 'Summary'. Do you need anything else for this changepoint?

SOP is still scheduled for January 2026 for Camry. We would need an issued permit for this, correct? Or are we good to proceed?

Thanks,

Will Richardson
Environmental Engineer – Compliance & Risk
TOYOTA Production Engineering – ENV R1
Cell: 502 735-2554

Commonwealth of Kentucky
Energy and Environment Cabinet
Department for Environmental Protection
Division for Air Quality
300 Sower Boulevard, 2nd Floor
Frankfort, Kentucky 40601
(502) 564-3999

Final

AIR QUALITY PERMIT
Issued under 401 KAR 52:020

Permittee Name: Toyota Motor Manufacturing, Kentucky, Inc.
Mailing Address: 1001 Cherry Blossom Way
Georgetown, KY 40324

Source Name: Toyota Motor Manufacturing, Kentucky, Inc.
Mailing Address: 1001 Cherry Blossom Way
Georgetown, KY 40324

Source Location: Near the intersection of Cherry Blossom Way
and Cynthiana Road

Permit: V-20-026 R3
Agency Interest: 7998
Activity: APE20240001
Review Type: Title V, Construction / Operating
Source ID: 21-209-00030

Regional Office: Frankfort Regional Office
300 Sower Boulevard, 1st Floor
Frankfort, KY 40601
(502) 564-3358

County: Scott

Application
Complete Date: September 22, 2020
Issuance Date: May 23, 2021
Revision Date: March 28, 2025
Expiration Date: May 23, 2026

Michael J. Kennedy
X
For Michael J. Kennedy, P.E.
Director
Signed by: Rick Shewekah
Division for Air Quality

TABLE OF CONTENTS

SECTION	ISSUANCE	PAGE
A. PERMIT AUTHORIZATION	Revision 1	1
B. EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS	Revision 3	2
C. INSIGNIFICANT ACTIVITIES	Revision 1	161
D. SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS	Renewal	163
E. SOURCE CONTROL EQUIPMENT REQUIREMENTS	Renewal	167
F. MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS	Renewal	199
G. GENERAL PROVISIONS	Revision 3	202
H. ALTERNATE OPERATING SCENARIOS	Renewal	209
I. COMPLIANCE SCHEDULE	Renewal	209

Permit	Permit Type	Activity #	Complete Date	Issuance Date	Summary of Action
V-20-026	Renewal	APE20200001	9/22/2020	5/23/2021	Permit Renewal
V-20-026 R1	Minor Revision	APE20220001	3/24/2022	7/1/2022	Addition of RT12 RTO to control emissions from G22 and G26 Booths, moving replaced Concentrators and Oxidizers to an alternate operating scenario. Replacement of C08 and C09.

V-20-026 R2	Minor Revision	APE20220004	11/1/2022	2/20/2023	Addition of Soft Chip to E05R, Replacement at F05, New Tanks H11, Replacements at A09, H01-19 Machining Equipment, ED Bath replacement E02, Weld Mods C06 and C17, Paint 1 Mods E02-11
V-20-026 R3	Minor Revision	APE20240001	6/10/2024	3/28/2025	Addition of EV Battery Vehicle modifications to Line 1, Two 35 HP Emergency Generators at D07, and Replacement of Spray Applicators at F04.

SECTION A - PERMIT AUTHORIZATION

Pursuant to a duly submitted application the Kentucky Energy and Environment Cabinet (Cabinet) hereby authorizes the operation of the equipment described herein in accordance with the terms and conditions of this permit. This permit was issued under the provisions of Kentucky Revised Statutes (KRS) Chapter 224 and regulations promulgated pursuant thereto.

The permittee shall not construct, reconstruct, or modify any affected facilities without first submitting a complete application and receiving a permit for the planned activity from the permitting authority, except as provided in this permit or in 401 KAR 52:020, Title V Permits.

Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by the Cabinet or any other federal, state, or local agency.

Toyota Motor Manufacturing, Kentucky, Incorporated (TMMK), Source ID # 21-209-00030, Agency Interest: 7998 and Toyota Motor Engineering & Manufacturing North America, Inc. (TEMA), Source ID # 21-209-00072, Agency Interest: 126184, are located on contiguous properties, belong to the same industrial grouping, and are under common control. By the definition of major stationary source in 401 KAR 51:001, TMMK and TEMA constitute one major source for PSD purpose. By the definition of major source in 401 KAR 52:001 for Title V program, they constitute one major source for non-hazardous regulated air pollutants and hazardous air pollutants, therefore, both facilities' emissions should be aggregated for the purpose of Title V, and PSD applicability determination.

**SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE
REGULATIONS, AND OPERATING CONDITIONS**

ASSEMBLY#1

ASSEMBLY#2

ASSEMBLY#3

PRODUCTION CONTROL

QUALITY CONTROL

TOYOTA LOGISTICS

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Description and Applicable Regulations:

401 KAR 59:010 and 401 KAR 51:017 apply to all affected facilities listed in the following table, unless otherwise stated.

ASSEMBLY #1, 300 BUILDING, Operations include the following processes:

EMISSION UNIT	OPERATION	CONSTRUCTION COMMENCED	CONTROL EQUIPMENT	OTHER APPLICABLE REGULATIONS
A01	Source Reassigned to Emission Unit A02	July 17, 1986	None	
A02	Miscellaneous Wax Coating Operations, including hinge and hub wax.	July 17, 1986	None	401 KAR 63:002
A03	Glass Installation, including glass primer, body primer and window sealer.	July 17, 1986 Modification Projected June 2025	None	401 KAR 63:002
A04	Miscellaneous Adhesive Applications	July 17, 1986	None	401 KAR 63:002
A05	Fluid Filling Operations, including windshield cleaner, brake fluid, antifreeze, steering fluid, transmission fluid, refrigerants, and fuel. (Insignificant Activities List)	July 17, 1986 December 2015 July 2022 Modification Projected June 2025	None	
A06	Non-Process Cleaning Activities	July 17, 1986	None	401 KAR 59:185 401 KAR 63:002
A07	Process Cleaning Activities, including solvent wiping.	July 17, 1986	None	401 KAR 63:002
A08	Process Lubrication, including hose installation. (Insignificant Activities List)	July 17, 1986	None	
A09	Testing Operations, including Brake Tester, Drum Tester, Final Line, Off-line Vehicle Inspection/Testing, Tester Waiter, Toe Tester	July 17, 1986 Modified December 20, 2022 Modification Projected July 2025	None	
A10	Paint Hospital, including Sanding and Buffing			401 KAR 63:002
		July 17, 1986	None	

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EMISSION UNIT	OPERATION	CONSTRUCTION COMMENCED	CONTROL EQUIPMENT	OTHER APPLICABLE REGULATIONS
	Painting Deck	July 17, 1986	None	
	ED Repair	Construction Projected July 2025	None	
A11	Raw Material Supply	July 17, 1986	None	401 KAR 63:002
A12	Miscellaneous Assembly Operations, not otherwise listed (e.g., minor repairs, chassis assembly, trim installation, engine installation...). (Insignificant Activities List)	July 17, 1986	None	
A13	General Exhausts	July 17, 1986	None	
A14	Battery Assembly cleaner use and thermal interface application	October, 2024	None	401 KAR 63:002 *401 KAR 51:017 and 401 KAR 59:010 do not apply to A14

ASSEMBLY #2, 3000 BUILDING, Operations include the following processes:

EMISSION UNIT	OPERATION	CONSTRUCTION COMMENCED	CONTROL EQUIPMENT	OTHER APPLICABLE REGULATIONS
B01	Source Reassigned to Emission Unit B02	N/A		
B02	Miscellaneous Wax Coating Operations, including hinge and hub wax.	March 22, 1991	None	401 KAR 63:002
B03	Glass Installation, including glass primer, body primer and window sealer.	March 22, 1991, April 2019	None	401 KAR 63:002
B04	Miscellaneous Adhesive Applications	March 22, 1991	None	401 KAR 63:002
B05	Fluid Filling Operations, including windshield cleaner, brake fluid, antifreeze, steering fluid, transmission fluid, refrigerants, and fuel. (Insignificant Activities List)	March 22, 1991 December 2015	None	
B06	Non-Process Cleaning Activities	March 22, 1991	None	401 KAR 59:185 401 KAR 63:002
B07	Process Cleaning Activities, including solvent wiping	March 22, 1991	None	401 KAR 63:002

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EMISSION UNIT	OPERATION	CONSTRUCTION COMMENCED	CONTROL EQUIPMENT	OTHER APPLICABLE REGULATIONS
B08	Process Lubrication, including hose installation. (Insignificant Activities List)	March 22, 1991	None	
B09	Testing Operations, including Line Off, Functional Inspection, Vibr. Toe and Strg. Test, Roll Test, Brake and Flutter test, Em. Test and Ubody Test	March 22, 1991	None	
B10	Paint Hospital, including: Sanding and Buffing Painting Deck	March 22, 1991 March 22, 1991	None None	401 KAR 63:002
B11	Raw Material Supply / Storage	March 22, 1991	None	
B12	Miscellaneous Assembly Operations, not otherwise listed (e.g., minor repairs, chassis assembly, trim installation, engine installation...). (Insignificant Activities List)	March 22, 1991	None	
B13	General Exhaust	March 22, 1991	None	

ASSEMBLY #3, 3000 BUILDING, Operations include the following processes:

EMISSION UNIT	OPERATION	CONSTRUCTION COMMENCED	CONTROL EQUIPMENT	OTHER APPLICABLE REGULATIONS
M01	Miscellaneous Wax Coating Operations, including underbody, engine, and hub wax.	March 2014	None	401 KAR 63:002
M02	Glass Installation, including glass primer, body primer and window sealer.	March 2014	None	401 KAR 63:002
M03	Fluid Filling Operations, including windshield cleaner, brake fluid, antifreeze, steering fluid, transmission fluid, refrigerants, and fuel.	March 2014	None	
M04	Testing Operations, including brake tester, drum tester, final line, off-line vehicle inspection/testing, tester waiter, toe tester.	March 2014	None	
M05	Miscellaneous Process Cleaners	March 2014	None	401 KAR 63:002
M06	Miscellaneous Adhesive Applications	March 2014	None	401 KAR 63:002

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EMISSION UNIT	OPERATION	CONSTRUCTION COMMENCED	CONTROL EQUIPMENT	OTHER APPLICABLE REGULATIONS
M07	Non-Process Cleaning Activities	March 2014	None	401 KAR 59:185 401 KAR 63:002
M08	Process Lubrication, including hose installation.	March 2014	None	
M09	Raw Material Supply / Storage	March 2014	None	401 KAR 63:002

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

PRODUCTION CONTROL OPERATIONS include the following processes:

EMISSION UNIT	OPERATION	CONSTRUCTION COMMENCED	CONTROL EQUIPMENT	OTHER APPLICABLE REGULATIONS
K01	Dock Unloading Areas (Insignificant Activities List)	July 17, 1986	None	
K02	Parts Conveyance (Insignificant Activities List)	July 17, 1986	None	
K03	Shipping Preparation (Insignificant Activities List)	July 17, 1986	None	
K04	Fork Truck Repair Painting (Insignificant Activities List)	July 17, 1986	None	
K05	Cross Dock (Insignificant Activities List)	Feb 2004	None	
K06	Battery Charging Stations (Insignificant Activities List)	July 17, 1986	None	
K07	Non-Process Cleaning Activities	July 17, 1986	None	401 KAR 59:185

QUALITY CONTROL OPERATIONS include the following processes:

EMISSION UNIT	OPERATION	CONSTRUCTION COMMENCED	CONTROL EQUIPMENT	OTHER APPLICABLE REGULATIONS
J01	Audit Lab (Insignificant Activities List)	July 17, 1986	None	
J02	Raw Material Test Lab (Insignificant Activities List)	July 17, 1986	None	
J03	Test Track Operations (Insignificant Activities List)	July 17, 1986	None	
J04	Non-Process Cleaning Activities	July 17, 1986	None	401 KAR 59:185

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

LOGISTICS OPERATIONS include the following processes:

EMISSION UNIT	OPERATION	CONSTRUCTION COMMENCED	CONTROL EQUIPMENT	OTHER APPLICABLE REGULATIONS
L01	Repair Painting	July 17, 1986	None	401 KAR 63:002
L02	Accessory Installation (Insignificant Activities List)	July 17, 1986	None	
L03	Shipping Preparation (Insignificant Activities List)	July 17, 1986	None	
L04	Non-Process Cleaning Activities	July 17, 1986	None	401 KAR 59:185 401 KAR 63:002

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

APPLICABLE REGULATIONS:

401 KAR 51:017, *Prevention of significant deterioration of air quality*

401 KAR 59:010, *New Process Operations*

401 KAR 59:185, *New solvent metal cleaning equipment*

401 KAR 63:002 Section 2(4)(ooo), 40 C.F.R. 63.3080 to 63.3176, Tables 1 through 4, and Appendix A (Subpart IIII), *National Emission Standards for Hazardous Air Pollutants: Surface Coating of Automobiles and Light-Duty Trucks* (Refer to Section B Group Requirements)

1. Operating Limitations:

- a. The usage rates of materials used in all affected facilities shall be limited so as not to exceed the emission limitations in Section B.2. Wherever practicable, the permittee shall utilize work practices to minimize emissions from non-process cleaning activities. Refer to Section B Group Requirements for requirements specific to 40 CFR 63 Subpart IIII.

Specific Operating Limitations for Cold Cleaner in Emission Unit A06, B06, M07, K07, J04, L04:

- b. The permittee shall comply with control equipment and operating requirements specified in 401 KAR 59:185, Section 4 (1) & (2). Refer to Section B Group Requirements.

2. Emission Limitations:

- a. **401 KAR 59:010, Section 3 (1):** The opacity of visible emissions from each stack shall not equal or exceed 20 percent.

Compliance Demonstration Method:

Compliance with the opacity standard is assumed given the processes and activities associated with Assembly #1, Assembly #2, Production Control, Quality Control, Toyota Logistics and Assembly #3.

- b. **401 KAR 59:010, Section 3 (2):** Emission of particulate matter from a control device or stack of any affected facility up to a process rate of 1000 lbs/hr shall not exceed **2.34** lbs/hr.

Compliance Demonstration Method:

The total process weight, "P" as defined in 401 KAR 59:010 must reflect a period that covers a complete operation or an integral number of cycles, divided by the hours of actual process operation during such a period. This period shall not exceed 24 hours. In the case where there are no periodic monitoring requirements associated with the affected facility, continuous compliance shall be assumed as long as there are no process or operational changes. The determination of the emission rate "E" in pounds per hour for compliance with 401 KAR 59:010 may also be used to demonstrate compliance with 401 KAR 51:017, except that the period allowed for the determination of "P" shall be one month.

The source is considered to be in compliance when the emission units under Production Control, Quality Control, Toyota Logistics and Assembly #3 are properly operated and maintained.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- c. **401 KAR 51:017:** Emissions of VOC and PM shall not exceed the following, as calculated on a monthly basis:

EMISSION UNIT	OPERATION	VOC LIMIT (lb/job)	PM LIMIT (lb/hr)
A02	Misc Wax Coating	0.28	N/A
A03	Glass Installation	0.11	N/A
A06	Non-Process Cleaning Activities	0.081	N/A
A09	Testing Operations	N/A	0.85
A13	General Exhaust	N/A	1.05
B02	Miscellaneous Wax Coating	0.19	N/A
B03	Glass Installation	0.11	N/A
B06	Non-Process Cleaning Activities	0.081	N/A
B09	Testing Operations	N/A	0.79
B13	General Exhaust	N/A	1.08
M02	Glass Installation	0.17	N/A
M05	Miscellaneous Process Cleaners	0.316	N/A

Compliance Demonstration Method:

$$VOC\ Value = \frac{\sum U_i * V_i * E_i * (1 - C_i * F_i)}{P}$$

U_i = Usage of material “i”,

V_i = Volatile organic compound (VOC) content,

E_i = VOC Emission Factor,

F_i = Control efficiency,

C_i = Collection efficiency,

P = Production rate (number of vehicles produced)

PM Value = Measurement, when prescribed by periodic monitoring requirements table.

Otherwise PM shall be calculated as follows:

$$PM\ Value = \sum \frac{P}{P_m} * E_i, \text{ or equivalent methods approved by the Division}$$

P = Average shop production throughput,

P_m = Maximum vehicle production rate

E_i = PM Emission Factor (controlled) for each stack “i”.

See Compliance Demonstration Method for 401 KAR 59:010, in this Section.

- d. **401 KAR 51:017:** Emissions of VOC shall not exceed the following, based on a 12-month rolling total:

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EMISSION UNIT	VOC LIMIT (tons/year)
Assembly #1	92.4
Assembly #2	61.3
Production Control	5
Quality Control	5
Toyota Logistics	5
Assembly #3	23

Compliance Demonstration Method:

$$VOC\ Value = \sum U_i * V_i * E_i * (1 - C_i * F_i)$$

U_i = Usage of material “i”,

V_i = Volatile organic compound (VOC) content,

E_i = VOC Emission Factor,

F_i = Control efficiency,

C_i = Collection efficiency.

- e. **401 KAR 51:017:** PM emissions from Assembly #1 Operations and Assembly #2 Operations shall not exceed 5.26 tons and 8.76 tons per year respectively, based on a 12-month rolling total.

Compliance Demonstration Method:

$$PM\ Value = \sum P * E_i$$

P = Average shop production throughput

E_i = PM Emission Factor (controlled) for “i”,

See Compliance Demonstration Method for 401 KAR 59:010, in this Section.

- f. **40 CFR 63 Subpart IIII, Section 63.3091 - Emission Limits for Existing Sources**

EMISSION UNITS	NESHAP AFFECTED OPERATIONS	EMISSION LIMIT
A02, B02, M01	Miscellaneous Wax Coating Operations	Refer to Section B Group Requirements for Group Emission Limits.
A03, B03, M02	Glass Bonding Primer	
A03, B03, M02	Glass Bonding Adhesive	
A04, A14, B04, M06	Adhesives and sealers other than glass bonding adhesive	
A06, B06, M07	Non -Process Cleaning*	
A07, B07, M05	Process Cleaning*	
A10, B10	Final Repair	

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

L01	Final Repair	Refer to Section B Group Requirements for Group Emission Limits.
L04	Non-Process Cleaning Activities	

* Applicable only to organic-HAP-containing cleaning materials used in coating operations for which emission limits are established under 40 CFR 63 Section 63.3901(a) through (d).

Compliance Demonstration Method:

Refer to Section B Group Requirements.

g. Synthetic Minor Limit for PM_{2.5}, NO_x and CO₂e emissions. See Section D.4.

3. **Testing Requirements:**

Testing shall be conducted at such times as may be requested by the Cabinet [401 KAR 50:045, Section 1].

4. **Specific Monitoring Requirements:**

The permittee shall monitor raw material usages as necessary to demonstrate compliance with all requirements of this permit. Refer to Section B Group Requirements for requirements specific to Subpart IIII.

5. **Specific Recordkeeping Requirements:**

a. The permittee shall keep calendar month records of usage of all applicable raw materials. Following the end of each month, Volatile Organic Compounds (VOC) emissions and Particulate Matter (PM) emissions shall be calculated on a twelve-month rolling total basis and recorded. Following the end of each month, pounds per job limits for VOC and pounds per hour limits for PM shall be calculated and recorded. These records shall represent the most recent year and shall show compliance with VOC and PM emission limitations listed in this permit. These records shall be made available for inspection upon request by any duly authorized representatives of the Division for Air Quality. Refer to Section B Group Requirements for requirements specific to Subpart IIII.

b. The permittee shall maintain monthly records of the data specified in subsection 2. **Emission Limitations** required to calculate the emission rate of VOC in terms of pounds per job.

6. **Specific Reporting Requirements:**

The permittee shall submit summary monitoring reports every 6 months containing monitoring information listed in Sections B.4, B.5, D.4 and D.6 of this permit. (See Section F.5 for specific reporting dates.)

7. **Specific Control Equipment Operating Conditions:**

Refer to Section E

**SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE
REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

BODY OPERATIONS

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Description and Applicable Regulations:

401 KAR 59:010 and 401 KAR 51:017 apply to all affected facilities listed in the following table, unless otherwise stated.

BODY OPERATIONS, 100/100A BUILDINGS and 400 BUILDING, Operations include the following processes:

EMISSION UNIT	OPERATION	CONSTRUCTION COMMENCED	CONTROL EQUIPMENT	OTHER APPLICABLE REGULATIONS
C01	Die Construction (Insignificant Activities List)	March 22, 1991	None	
C02	Stamping Press Operations (Line 1, 2 & 3)	March 22, 1991 January 2016 Modified December 2024	None	
C03	Welding Operations, including Laser (stamping), Arc, and Resistance Welding	March 22, 1991 January 2016 July 2019 Modified November 2024	Dust Collector DC03 for PM	
C04	Brazing, Grinding and Finishing Operations	March 22, 1991	None	
C06	Sealer and Adhesive Application, including Precure Ovens (Line 1 & 2)	July 17, 1986 January 2016 Modified November 2022, 2024, 2025	None	401 KAR 63:002
C08	Small Parts Phosphate System, including De-greasing Tank, Rinse Tanks, and Phosphate Dip Tank (Line 1 & 3)	April 1, 2022	None	
C09	Small Parts Electro deposition System, Including Rinse Tanks, Dip Tank, and Oven (Line 1, 2 & 3)	April 1, 2022	Oven - RTO WT01	401 KAR 60:005 401 KAR 63:002

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EMISSION UNIT	OPERATION	CONSTRUCTION COMMENCED	CONTROL EQUIPMENT	OTHER APPLICABLE REGULATIONS
C10	Fuel Tank Antichip Coating (Line 2), including Booths & Ovens	March 22, 1991 December 26, 2016 October 2018	Booths – Filters FTAC02 for PM	401 KAR 63:002
C11	Process Lubrication (Insignificant Activities List)	March 22, 1991	None	
C12	Non-Process Cleaning Activities	July 17, 1986	None	401 KAR 59:185 401 KAR 63:002
C13	Fuel Tank Cleaning (Insignificant Activities List)	July 17, 1986	None	
C14	General Exhaust	March 22, 1991 Modified November 2024	None	
C15	Welding Operations, including Resistance and Arc Welding	March 2014	None	
C16	Bodyweld Sealers and Adhesives (Line 3)	March 2014	None	401 KAR 63:002
C17	Welding Operations, including Laser and MIG Welding. Each MIG welding equipment equipped with integral dust collector	January 2016 April 2019 Modified February 2022 Modified November 2024	Integral dust collectors	
C18	Battery Case Welding	December 2024	None	*401 KAR 51:017 does not apply to C18

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

APPLICABLE REGULATIONS:

401 KAR 51:017, *Prevention of significant deterioration of air quality*

401 KAR 59:010, *New Process Operations*

401 KAR 59:185, *New solvent metal cleaning equipment*

401 KAR 60:005 Section 2(2)(tt) 40 C.F.R. 60.390 to 60.398 (Subpart MM), *Standards of Performance for Automobile and Light Duty Truck Surface Coating Operations*, (Refer to Section B Group Requirements).

401 KAR 63:002 Section 2(4)(ooo), 40 C.F.R. 63.3080 to 63.3176, Tables 1 through 4, and Appendix A (Subpart IIII), *National Emission Standards for Hazardous Air Pollutants: Surface Coating of Automobiles and Light-Duty Trucks* (Refer to Section B Group Requirements)

1. Operating Limitations:

- a. The usage rates of materials used in all affected facilities shall be limited so as not to exceed the emission limitations in Section B.2. Wherever practicable, the permittee shall utilize work practices to minimize emissions from non-process cleaning activities. Refer to Section B Group Requirements for requirements specific to 40 CFR 63 Subpart IIII.

Specific Operating Limitations for Emission Unit C03:

- b. The maximum weld wire usage from all arc welding operations in the Body Operations Shop shall not exceed 463.6 pounds per hour based on monthly usage data.

Compliance Demonstration Method:

The permittee shall perform semiannual primary production welder consumption audits to determine the weld wire percentage control ratio.

- c. Good operating practices shall be followed for each arc welding operation in the Body Operations shop.

Compliance Demonstration Method: Good operating practices shall include the following:

- (1) Weld nozzle cleaning, to allow appropriate flow characteristics of shielding gas, shall be performed at least daily per production week.
- (2) Visual inspections shall be performed at least once per shift on the majority of arc welds on the individual parts that make up a vehicle.
- (3) Weld wire confirmation shall be performed for each weld wire drum change.
- (4) Part jigs shall be cleaned to remove slag build-up as required to ensure proper part fit.

- d. **Specific Operating Limitations for Thermal Oxidizers:**

- (1) The average combustion chamber temperature in any 3-hour period shall not fall more than 28°C (50°F) below the combustion temperature established during the most recent performance test, which demonstrated compliance.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- (2) The permittee shall use the data collected during the performance test to calculate and record the average combustion temperature. This average combustion temperature is the minimum set point for the thermal oxidizer. The minimum-operating limit for thermal oxidizers is 28°C (50°F) below the minimum set point temperature.

Compliance Demonstration Method:

The permittee must monitor the temperature in the firebox of the thermal oxidizer or immediately downstream of the firebox before any substantial heat exchange occurs. Compliance shall be demonstrated by monitoring and recording the combustion temperature as required in the Periodic Monitoring Requirements table, averaged over 3 hours.

e. **Specific Operating Limitations for Cold Cleaner in Emission Unit C12:**

The permittee shall comply with control equipment and operating requirements specified in 401 KAR 59:185, Section 4 (1) & (2). Refer to Section B Group Requirements.

2. Emission Limitations:

- a. **401 KAR 59:010, Section 3 (1):** The opacity of visible emissions from each stack shall not equal or exceed 20 percent.

Compliance Demonstration Method:

- (1) See Specific Monitoring Requirements, B.4.
(2) See Periodic Monitoring Requirements table.

- b. **401 KAR 59:010, Section 3 (2):** For emissions from a control device or stack no person shall cause, suffer, allow or permit the emission into the open air of particulate matter from any affected facility which is in excess of 2.34 pounds per hour.

Compliance Demonstration Method:

- (1) For affected facilities that use transfer efficiency in the determination of PM/PM₁₀ emissions the permittee shall:

- i. Use the transfer efficiency value specified in 40 CFR 60.393 for the application method used; or
- ii. Use a transfer efficiency value determined through testing approved by the Division.

Previous transfer efficiency tests may be accepted if the following conditions are met:

- iii. The previous test must have been conducted using methods and conditions approved by the Division.
- iv. Either no process or equipment changes have been made since the previous test was performed, or the owner or operator must be able to demonstrate that the results of the performance test reliably demonstrate compliance despite process or equipment changes.
- v. Either the required operating parameters were established in the previous test, or sufficient data were collected in the previous test to establish the operating parameters.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- (2) The total process weight, “P” as defined in 401 KAR 59:010 must reflect a period that covers a complete operation or an integral number of cycles, divided by the hours of actual process operation during such a period. This period shall not exceed 24 hours. In the case where there are no periodic monitoring requirements associated with the affected facility, continuous compliance shall be assumed as long as there are no process or operational changes. The determination of the emission rate “E” in pounds per hour for compliance with 401 KAR 59:010 may also be used to demonstrate compliance with 401 KAR 51:017, except that the period allowed for the determination of “P” shall be one month.
- (3) For affected facilities with periodic monitoring requirements for particulate emissions the source shall demonstrate continuous compliance by adhering to the periodic monitoring requirements table. The source must maintain a record of deviations from “standard ranges” in the periodic monitoring requirements table and determine the particulate emissions from the deviation. The duration of the deviation shall be the period between when the “out of standard condition” was noted and when it is corrected. If an engineering evaluation utilizing control efficiency is used to determine particulate emissions for the affected facility, the allowed control efficiency shall be zero during the deviation period unless testing is conducted to prove otherwise.
- c. **401 KAR 51:017:** Emissions of VOC and PM shall not exceed the following, as calculated on a monthly average basis:

EMISSION UNIT	OPERATION	VOC LIMIT (lb/job)	PM LIMIT (lb/hr)
C02	Stamping Operations (Line 1, 2 & 3)	0.518	N/A
C03/C14	Welding Activities (all affected facilities) Line 1 & 2	N/A N/A	14.48
C04	Brazing and Grinding (all affected facilities) Line 1 & 2	N/A	0.28
C06	Adhesive/Sealer Application Line 1 Line 2	0.120 0.306	N/A
C08	Small Parts Phosphate (Line 1 & 3)	N/A	0.38
C09	Small Parts Electro deposition (Line 1, 2 & 3)	0.041	0.115
C10	Fuel Tank Anti-chip Coating Line 2	0.279	0.288
C12	Non-Process Cleaning Activities	0.270	N/A

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Compliance Demonstration Method:

$$VOC\ Value = \frac{\sum U_i * V_i * E_i * (1 - C_i * F_i)}{P}$$

U_i = Usage of material “i”,
 V_i = Volatile organic compound (VOC) content,
 E_i = VOC Emission Factor,
 F_i = Control efficiency,
 C_i = Collection efficiency,
 P = Production rate (number of vehicles produced)

PM Value = Measurement, when prescribed by periodic monitoring requirements table. Otherwise PM shall be calculated as follows:

$$PM\ Value = \sum \frac{P}{P_m} * E_i, \text{ or equivalent methods approved by the Division}$$

P = Average shop production throughput,
 P_m = Maximum vehicle production rate
 E_i = PM Emission Factor (controlled) for each stack “i”.
 See Compliance Demonstration method for 401 KAR 59:010, in this Section.

- d. **401 KAR 51:017:** VOC emissions from Line 2 Body Operations shall not exceed 176.1 tons per year, and VOC emissions shall not exceed 399.4 tons per year from the entire Body Operations shop, based on a 12-month rolling total.

Compliance Demonstration Method:

$$VOC\ Value = \sum U_i * V_i * E_i * (1 - C_i * F_i)$$

U_i = Usage of material “i”,
 V_i = Volatile organic compound (VOC) content,
 E_i = VOC Emission Factor,
 F_i = Control efficiency,
 C_i = Collection efficiency.

- e. **401 KAR 51:017:** PM emissions from Line 1 and Line 2 Body Operations combined (Emission Unit C01 through C14) shall not exceed 39.6 tons per year, based on a 12-month rolling total.

Compliance Demonstration Method:

- (1) Calculated from the following equation, except where testing specified
 (See item 2)

$$PM\ Value = \sum P * E_i$$

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

P = Average shop production throughput

E_i = PM Emission Factor (controlled) for “i”, See Compliance Demonstration Method for 401 KAR 59:010, in this Section.

(2) Testing, see Periodic Monitoring Requirements table.

f. 40 CFR 60 Subpart MM - 60.392:

On and after the date on which the initial performance test required by 40 CFR 60.8 is completed, no owner or operator subject to the provisions of 40 CFR 60 Subpart MM shall discharge or cause the discharge into the atmosphere from any affected facility VOC emissions in excess of:

NSPS CATEGORY (Affected Facilities)	EMISSION LIMIT (kg VOC per liter solid applied)	COATINGS INCLUDED IN GROUP
Primecoat Operations	0.17	C09- Electro deposition

Compliance Demonstration Method:

See Section B Group Requirements

g. 40 CFR 63 Subpart IIII, Section 63.3091 - Emission Limits for Existing Sources

EMISSION UNITS	NESHAP AFFECTED OPERATIONS	EMISSION LIMIT
C06	Sealer and Adhesive Application	Refer to Section B Group Requirements for Group Emission Limits.
C09	Small Parts Electro deposition System, Including Rinse Tanks, Dip Tank, and Oven (Line 1)	
C10	Fuel Tank Antichip Coating (Line 1 & 2),	
C12	Non-Process Cleaning*	
C16	Bodyweld Sealers and Adhesives	

* Applicable only to organic-HAP-containing cleaning materials used in coating operations for which emission limits are established under 40 CFR 63 Section 63.3901(a) through (d).

Compliance Demonstration Method:

Refer to Section B Group Requirements.

h. Synthetic Minor Limit for PM_{2.5} and CO₂e emissions from **Emission Unit C15**. See Section D 4.

3. Testing Requirements:

a. Testing shall be conducted at such times as may be requested by the Cabinet [401 KAR 50:045, Section 1].

b. See Section B Group Requirements.

c. The permittee shall perform periodic stack tests for Emission Unit C09 according to the standards and schedule specified in the Periodic Monitoring Requirements table.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

4. Specific Monitoring Requirements:

- a. The permittee shall conform to the monitoring requirements, as prescribed in its Periodic Monitoring Requirements table.
- b. The permittee shall monitor raw material usages as necessary to demonstrate compliance with all requirements of this permit. Refer to Section B Group Requirements for requirements specific to 40 CFR 60 Subpart MM and 40 CFR 63 Subpart IIII.
- c. The permittee shall perform a qualitative visual observation of the opacity of emissions at each stack no less than weekly while the affected facility is operating. If visible emissions from the stacks are observed (not including condensed water in the plume), the permittee shall determine the opacity using Reference Method 9. In lieu of determining the opacity using U.S. EPA Method 9, the permittee shall immediately perform a corrective action which results in no visible emissions (not including condensed water in the plume) [401 KAR 59:010].
- d. Stacks that are subject to specific periodic visible emissions monitoring are identified in the Periodic Monitoring Requirements table and are subject to the conditions specified below:
 - (1) The permittee shall perform a qualitative visual observation of the opacity of emissions at each stack on a weekly basis. See Section B 4. c.
 - (2) If no visible emissions are detected for a period of 1 month then the monitoring frequency shall be reduced from weekly to monthly.
 - (3) If visible emissions are detected during the monthly check, then the weekly check shall be re-instated until there are no visible emissions detected for 1 month period.
 - (4) If the method of operation changes for processes emitting to the atmosphere, then the requirement to perform weekly qualitative observations will be reinstated.

5. Specific Recordkeeping Requirements:

- a. The permittee shall conform to the record keeping requirements, as prescribed in its Periodic Monitoring Requirements table. All periodic monitoring records shall be maintained onsite for a period of not less than 5 years.
- b. The permittee shall keep calendar month records of usage of all applicable raw materials. Following the end of each month, Volatile Organic Compounds (VOC) emissions and Particulate Matter (PM) emissions shall be calculated on a twelve-month rolling total basis and recorded. Following the end of each month, pounds per job limits for VOC and pounds per hour limits for PM shall be calculated and recorded. These records shall represent the most recent year and shall show compliance with VOC and PM emission limitations listed in this permit. These records shall be made available for inspection upon request by any duly authorized representatives of the Division for Air Quality.
- c. The permittee shall maintain a log of the visual observations noting date, time, initials of observers, and records of corrective actions taken as a result of visible emissions from a stack and records of any Reference Method 9 readings performed.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- d. Records documenting the results of any required inspection and repair, as a result of a recorded opacity over 20% shall be maintained.
- e. The permittee shall maintain monthly records of the data specified in Emission Limitations B.2. required to calculate the emission rate of VOC in terms of pounds per job.

Thermal Oxidizer Specific Recordkeeping Requirements:

- f. The permittee shall maintain records of the following information for the thermal oxidizer:
 - (1) All 3-hour periods (during coating operations) during which the average combustion chamber temperature of the thermal oxidizer is more than 28°C (50°F) below the average combustion chamber temperature of the thermal oxidizer determined during the most recent performance test which demonstrated compliance. Each occurrence shall be considered a deviation from permit requirements. See Section F.6.
- g. During all periods of operation of the thermal oxidizer in which the 3-hour average combustion chamber temperature of the thermal oxidizer is more than 28°C (50°F) below the average combustion chamber temperature of the thermal oxidizer during the most recent performance test which demonstrated compliance, or other malfunction of the thermal oxidizer, a daily log of the following information shall be kept:
 - (1) Whether any air emissions were visible from the facilities associated with the thermal oxidizer.
 - (2) Whether visible emissions were normal for the process.
 - (3) The cause of the visible emissions.
 - (4) Corrective action(s) taken shall be recorded.

6. Specific Reporting Requirements:

The permittee shall submit summary monitoring reports every 6 months containing monitoring information listed in Sections B.4, B.5, D.4 and D.6 of this permit. (See Section F.5 for specific reporting dates.) The report shall list any “out of standard” conditions or periodic monitoring requirements, as listed in the Periodic Monitoring Requirements table below. If no “out of standard” conditions occurred, the permittee shall submit a negative report.

7. Specific Control Equipment Operating Conditions:

The permittee shall install, maintain, and operate its control equipment in accordance with manufacturers’ recommendations and good engineering practice.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

BODY OPERATIONS - PERIODIC MONITORING REQUIREMENTS

Emission Unit	Operation	Equipment Monitored	Characteristic Monitored	Parameter Monitored	Method or Device	Monitoring Frequency	Recording Frequency	Calibration Frequency	Standard Range
C03	Welding Operations (ALL)	Primary Production Arc Welders	Welding Emissions	Weld Wire consumption	Weld wire percentage control ratio	Semiannual	Semiannual	N/A	N/A
C03	Welding Operations – Arc Welding Robots (Primary)	Dust Collector (DC-03)	PM Removal Efficiency	Pressure Drop	Gauge	Continuous	Monthly	Annual	0.2 – 7.0 inches of water
C09	Electro deposition Prime #1	Oven	Electro coat Emissions	Opacity	Visual Inspection	Refer to Section B.4	Refer to Section B.4	N/A	< 20 Percent
C09	Small Parts Electro deposition – Oven	Thermal Oxidizer (WT01)	Destruction Efficiency	Combustion Chamber Temperature	Thermocouple	Continuous **	15 Minutes	Annual	Not More Than 28°C Below Combustion Temperature Limit
C09	Small Parts Electro deposition - Oven	Thermal Oxidizer (WT01)	Destruction Efficiency	VOC In / Out	Stack Test (EPA Method 25A)	Every 5 Years*	Every 5 Years*	Each Test	DRE ≥ 80%
C10	Fuel Tank Antichip Coating (Line 2)	Booth Exhaust Filters FTAC-02	PM Removal Efficiency	Filters in Place	Visual Inspection	Weekly	Weekly	N/A	No Visible Gaps
C15	Welding Operations – Arc Welding	Welders	Welding Emissions	Weld Wire consumption	N/A	Monthly	Monthly	N/A	Synthetic Minor Limit. Section D.4

* No more than 5 years from the last performance test.

** “Continuous” means at least one (1) reading every 15 minutes

Permit Number: V-20-026 R3

Page: 24 of 209

**SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE
REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

FACILITIES CONTROL

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Description and Applicable Regulations:

401 KAR 51:017 shall apply to all affected facilities listed in the following table.

FACILITIES CONTROL, Operations include the following processes:

EMISSION UNIT	OPERATION	CONSTRUCTION COMMENCED	CONTROL EQUIPMENT	OTHER APPLICABLE REGULATIONS
D02	Wastewater Pretreatment Facility (Insignificant Activities List)	March 22, 1991	None	401 KAR 59:010
D03A	Indirect / Direct Bldg Heat Combustion Units (Plant 2) > 1 MMBtu/hr (Natural Gas Only) (Total Capacity 622.4 MMBtu/hr)	1991 - 2015	None	401 KAR 59:015
D03B	Indirect / Direct Shop Process Combustion Units (Plant 2) > 1 MMBtu/hr (Natural Gas Only) (Total Capacity = 592.81 MMBtu/hr)	1991 - 2021	None	401 KAR 59:015 40 CFR 63 Subpart DDDDD
D04A	Indirect / Direct Bldg Heat Combustion Units (Plant 1) > 1 MMBtu/hr (Natural Gas Only) (Total Capacity 350.4 MMBtu/hr)	1986 – 2015	None	401 KAR 59:015
D04B	Indirect / Direct Shop Process Combustion Units (Plant 1) > 1 MMBtu/hr (Natural Gas Only) Total Capacity = 748.38 MMBtu/hr – including existing Plant 1 process units Total Capacity = 476.58 MMBtu/hr – after remove existing Plant 1 process units	1986 – 2015	None	401 KAR 59:015 40 CFR 63 Subpart DDDDD
D05	Cooling Tower Facilities, including primary towers and individual building towers (Insignificant Activities List)	March 22, 1991	None	401 KAR 59:010
D06	Raw Material Storage / Supply	March 22, 1991 for D06a-f, and g-j July 2023 for D06ff Construction projected June 2025 for D06k	Gasoline and Virgin Purge– Conservation Vents Gasoline Tanks - Submerged Fill	401 KAR 59:050 401 KAR 63:020

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EMISSION UNIT	OPERATION	CONSTRUCTION COMMENCED	CONTROL EQUIPMENT	OTHER APPLICABLE REGULATIONS
D07	Backup Generators utilizing #2 Fuel Oil D07(01, 02) Two (2) Backup Generators (17.45 MMBtu/hr, each) D07(03) One (1) Backup Generator (34.74 MMBtu/hr) D07(04) One (1) Backup Generator (2.26 MMBtu/hr, Mobile Unit) D07(05, 06) Two (2) Backup Generators (8.48 MMBtu/hr, each) D07(07) One (1) Backup Generator (17.45 MMBtu/hr, Mobile Unit) D07(08) Two (2) Backup Fire Pumps (269 HP, each) D07(09,10) Two Backup Generators (35 HP, each) Utilizing Pipeline Natural Gas D07 (NG01) 150 kW Emergency Generator (Childcare) D07 (NG02) 275 kW Emergency Generator (Team Member Services)	August 27, 1992 July 17, 1986 1996 2002 2003 1987 2004	None None None None None None None	40 CFR 63 Subpart ZZZZ
D08	Miscellaneous Combustion Sources, including Indirect Heat Exchangers ≤ 1 MMBtu/hr (Insignificant Activities List)	1986 - 2022	None	
D09	Non-Process Cleaning	July 17, 1986	None	401 KAR 59:185
D11A	Indirect / Direct Bldg Heat Combustion Units (Line 3) > 1 MMBtu/hr (Natural Gas Only) (Total Capacity 49.99 MMBtu/hr)	March 2014	None	401 KAR 59:015
D11B	Indirect / Direct Shop Process Combustion Units (Line 3) > 1 MMBtu/hr (Natural Gas Only) (Total Capacity = 184.3 MMBtu/hr)	March 2014	None	401 KAR 59:015 40 CFR 63 Subpart DDDDD

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

APPLICABLE REGULATIONS:

401 KAR 51:017, *Prevention of significant deterioration of air quality*

401 KAR 59:010, *New Process Operations*

401 KAR 59:015, *New Indirect Heat Exchangers*

401 KAR 59:050, *New Storage Vessels for Petroleum Liquids*

401 KAR 59:185, *New solvent metal cleaning equipment*

401 KAR 63:002 Section 2(4)(eeee) 40 C.F.R. 63.6580 to 63.6675, Tables 1a through 8, and Appendix A (Subpart ZZZZ), *National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*,

401 KAR 63:002 Section 2(4) (iii) 40 C.F.R. 63.7480 to 63.7575, Tables 1 through 13 (Subpart DDDDD), *National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters*

STATE-ORIGIN REQUIREMENTS:

401 KAR 63:020, *Potentially hazardous matter or toxic substances*

1. Operating Limitations:

- a. The affected facilities shall be operated so as not to exceed the emission limitations in Section B.2.

Specific Operating Limitations for Emission Unit D06:

- b. The gasoline storage tanks, T5311, T5312, T800-B1, T800-3 and T800-4, shall be equipped with submerged fill pipes, and a vapor balance system for gasoline truck unloading. Tank trucks shall not be unloaded unless they are properly connected to the vapor balance system [401 KAR 59:050, Section 3 (2)].

Specific Operating Limitations for Cold Cleaner in Emission Unit D09:

- c. The permittee shall comply with control equipment and operating requirements specified in 401 KAR 59:185, Section 4 (1) & (2). Refer to Section B Group Requirements.

Specific Operating Limitations for Emission Unit D07:

40 CFR 63 Subpart ZZZZ:

- d. For emergency stationary CI RICE [40 CFR 63.6602 and Table 2c]:
 - (1) Change oil and filter every 500 hours of operation or annually, whichever comes first;
 - (2) Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary;
 - (3) Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- (4) Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply [40 CFR 63.6625 (h)].
- (5) The source has the option to utilize an oil analysis program as described in 40 CFR 63.6625(i) in order to extend the specified oil change requirement.

Work or Management Practices [40 CFR 63.6625 (e) and Table 6 (9)]:

- e. The permittee shall operate and maintain the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions or maintenance plan developed by permittee which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.
- f. The permittee shall install a non-resettable hour meter on the Emission Unit D07 engines [40 CFR 63.6625 (f)].
- g. The permittee shall operate the emergency stationary RICE according to the requirements in paragraphs (f)(1) through (4) of this 40 CFR 63.6640. In order for the engine to be considered an emergency stationary RICE under 40 CFR 63 subpart ZZZZ, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1) through (4) of 40 CFR 63.6640, is prohibited. If the permittee does not operate the engine according to the requirements in paragraphs (f)(1) through (4) of 40 CFR 63.6640, the engine will not be considered an emergency engine under 40 CFR 63 subpart ZZZZ and must meet all requirements for non-emergency engines [40 CFR 63.6640 (f)].
 - (1) There is no time limit on the use of emergency stationary RICE in emergency situations.
 - (2) The permittee may operate their emergency stationary RICE for any combination of the purposes specified in paragraphs (f)(2)(i) through (iii) of 40 CFR 63.6640 for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraphs (f)(3) and (4) of 40 CFR 63.6640 counts as part of the 100 hours per calendar year allowed by 40 CFR 63.6640(f)(2).
 - (3) Emergency stationary RICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- (4) Emergency stationary RICE located at major sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing provided in paragraph (f)(2) of 40 CFR 63.6640.
- h. Line 3 Operations (Emission Units D11A and D11B) natural gas usage shall not exceed 787.82 million cubic feet of per year, based on a 12 month rolling total, to preclude applicability of 401 KAR 51:017 for PM2.5, NOx and CO2e pollutants.
- i. Paint Line #1 Rebuilt project natural gas usage shall not exceed 1485.58 million cubic feet of per year, based on a 12 month rolling total, to preclude applicability of 401 KAR 51:017 for PM10, NOx, CO and CO2e pollutants.

Specific Operating Limitations for Boilers and Process Heaters in Emission Units, D03B, D04B, and D11B:

40 CFR 63 Subpart DDDDD:

- j. Pursuant to 40 CFR 63.7500 and Table 3 to Subpart DDDDD, the permittee shall comply with the following applicable work practice standards:

40 CFR 63 Subpart DDDDD

If boiler or process heater is . . .	The permittee shall meet the following . . .
1. A new or existing boiler or process heater with a continuous oxygen trim system that maintains an optimum air to fuel ratio, or a heat input capacity of less than or equal to 5 million Btu per hour in any of the following subcategories: unit designed to burn gas 1; unit designed to burn gas 2 (other); or unit designed to burn light liquid, or a limited use boiler or process heater	Conduct a tune-up of the boiler or process heater every 5 years as specified in 40 CFR 63.7540.
2. A new or existing boiler or process heater without a continuous oxygen trim system and with heat input capacity of less than 10 million Btu per hour in the unit designed to burn heavy liquid or unit designed to burn solid fuel subcategories; or a new or existing boiler or process heater with heat input capacity of less than 10 million Btu per hour, but greater than 5 million Btu per hour, in any of the following subcategories: unit designed to burn gas 1; unit designed to burn gas 2 (other); or unit designed to burn light liquid	Conduct a tune-up of the boiler or process heater biennially as specified in 40 CFR 63.7540.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

3. A new or existing boiler or process heater without a continuous oxygen trim system and with heat input capacity of 10 million Btu per hour or greater	Conduct a tune-up of the boiler or process heater annually as specified in 40 CFR 63.7540. Units in either the Gas 1 or Metal Process Furnace subcategories will conduct this tune-up as a work practice for all regulated emissions under 40 CFR 63 Subpart DDDDD. Units in all other subcategories will conduct this tune-up as a work practice for dioxins/furans.
4. An existing boiler or process heater located at a major source facility, not including limited use units	Must have a one-time energy assessment performed by a qualified energy assessor. An energy assessment completed on or after January 1, 2008, that meets or is amended to meet the energy assessment requirements in this table, satisfies the energy assessment requirement. A facility that operates under an energy management program compatible with ISO 50001 that includes the affected units also satisfies the energy assessment requirement. The energy assessment must include the following with extent of the evaluation for items a. to e. appropriate for the on-site technical hours listed in 40 CFR 63.7575: a. A visual inspection of the boiler or process heater system. b. An evaluation of operating characteristics of the boiler or process heater systems, specifications of energy using systems, operating and maintenance procedures, and unusual operating constraints. c. An inventory of major energy use systems consuming energy from affected boilers and process heaters and which are under the control of the boiler/process heater owner/operator. d. A review of available architectural and engineering plans, facility operation and maintenance procedures and logs, and fuel usage. e. A review of the facility's energy management practices and provide recommendations for improvements

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

	consistent with the definition of energy management practices, if identified. f. A list of cost-effective energy conservation measures that are within the facility's control. g. A list of the energy savings potential of the energy conservation measures identified. h. A comprehensive report detailing the ways to improve efficiency, the cost of specific improvements, benefits, and the time frame for recouping those investments.

2. Emission Limitations:

- a. **401 KAR 51:017 and 401 KAR 59:015:** Emissions of PM, SO₂, NO_x, CO, and VOC from Facilities Control Operations shall not exceed:

<i>401 KAR 51:017, D11A and D11B, Indirect / Direct Bldg Heat and Shop Process Combustion Units (Line 3) > 1 MMBtu/hr (Natural Gas Only) (Total Capacity 234.29 MMBtu/hr)</i>	
Pollutants	Natural Gas Allowable Emission Rates (lb/MMBtu heat Input)
VOC	0.0054
<i>401 KAR 51:017, D03A, Indirect / Direct Bldg Heat Combustion Units (Plant 2) > 1 MMBtu/hr (Natural Gas Only) (Total Capacity 622.4 MMBtu/hr)</i>	
Pollutants	Allowable Emission Rate (Tons pollutant/year)
PM	10.6
SO ₂	0.8
NO _x	139.3
CO	117.0
VOC	7.7

<i>401 KAR 59:015, D03A, D03B, D04A, D04B, D11A, D11B Indirect Heat Exchangers > 1 MM Btu/hr</i>	
Pollutants	Allowable Emission Rate (lb/MMBtu)
PM	0.1
SO _x	0.8

Fuels are limited to natural gas only.

Compliance Demonstration Method:

- (1) Combustion units are assumed to be in compliance with 401 KAR 51:017 and 401 KAR 59:015 lb/MMBtu standards while burning natural gas.
- (2) See subsection **5. Recordkeeping requirements.**

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

b. Specific Emission Limitations for Indirect Heat Exchangers in Emission Units, D03A, D03B, D04A, D04B, D11A, and D11B:

Pursuant to 401 KAR 59:015, Section 4(2), emissions from each unit shall not exceed 20% opacity.

c. Synthetic Minor Limits for PM_{2.5}, NO_x and CO₂e emissions from Emission Units D11A and D11B. See Section D.4.

d. Persons responsible for a source from which hazardous matter or toxic substances may be emitted shall provide the utmost care and consideration, in the handling of these materials, to the potentially harmful effects of the emissions resulting from such activities. No owner or operator shall allow any affected facility to emit potentially hazardous matter or toxic substances in such quantities or duration as to be harmful to the health and welfare of humans, animals and plants. Evaluation of such facilities as to adequacy of controls and/or procedures and emission potential will be made on an individual basis by the cabinet. [401 KAR 63:020, Section 3]

Compliance Demonstration Method:

Based upon the emission rates of toxics and hazardous air pollutants determined by the Cabinet using information provided in the application and supplemental information submitted by the source, the Cabinet determines the affected facility to be in compliance with 401 KAR 63:020.

3. Testing Requirements:

Testing shall be conducted at such times as may be requested by the Cabinet [401 KAR 50:045, Section 1].

4. Specific Monitoring Requirements:

a. The permittee shall conform to the monitoring requirements, as prescribed in its Periodic Monitoring Requirements table.

**b. Specific Monitoring Requirements for Emission Unit D07:
40 CFR 63 Subpart ZZZZ:**

The permittee shall monitor the hours of operation of the engine that is recorded through the non-resettable hour meter.

5. Specific Recordkeeping Requirements:

a. The permittee shall conform to the record keeping requirements, as prescribed in its Periodic Monitoring Requirements table. All periodic monitoring records shall be maintained onsite for a period of not less than 5 years.

b. The permittee shall keep calendar month records of natural gas usage. These records shall be made available for inspection upon request by any duly authorized representatives of the Division for Air Quality.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

c. Specific Recordkeeping Requirements for Emission Units D03A, D03B, D04A, D04B, D11A and D11B:

- (1) The permittee shall maintain records of volume of natural gas burned for each building with affected facilities included in Emission Units D03A, D03B, D04A, D04B, D11A and D11B. These records shall represent the most recent year. Following the end of each month, PM, SO₂, NO_x, CO and VOC emissions shall be calculated on a twelve-month rolling total and recorded.
- (2) The permittee shall maintain records of the AP-42 emission factors and heating value of natural gas used in the compliance demonstration for unit D03A, D03B, D04A, D04B, D11A and D11B. The compliance demonstration records shall be updated if these values change.

Specific Recordkeeping Requirements for Emission Unit D07: 40 CFR 63 Subpart ZZZZ:

- d. The permittee shall keep records of the maintenance conducted on the stationary RICE in order to demonstrate that the engine was operated and maintained according to the maintenance plan for the engine.
- e. The permittee shall keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The permittee must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation [40 CFR 63.6655(f)].

6. Specific Reporting Requirements:

- a. The permittee shall submit summary monitoring reports every 6 months containing monitoring information listed in Sections B.4 and B.5 of this permit. (See Section F.5 for specific reporting dates.) The report shall list any “out of standard” conditions or periodic monitoring requirements, as listed in the Periodic Monitoring Requirements table below. If no “out of standard” conditions occurred, the permittee shall submit a negative report.

Specific Reporting Requirements for Emission Unit D07: 40 CFR 63 Subpart ZZZZ:

- b. The permittee shall submit an initial notification that includes the information in 40 CFR 63.9(b)(2)(i) through (v), and a statement that the stationary RICE has no additional requirements and explain the basis of the exclusion.

Specific Reporting Requirements for Emission Units D03B, D04B, D011B: 40 CFR 63 Subpart DDDDD

- c. The permittee shall submit compliance reports required in 40 CFR 63, Subpart DDDDD, 63.7550.
- d. Unless the EPA Administrator has approved a different schedule for submission of reports under 40 CFR 63.10(a), the permittee must submit each report, according to paragraph (h) of this 40 CFR 63.7550, by the date in Table 9 to 40 CFR 63 Subpart DDDDD and according to the requirements in paragraphs (b)(1) through (4) of 40 CFR 63.7550. For

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

units that are subject only to a requirement to conduct subsequent annual, biennial, or 5-year tune-up according to 40 CFR 63.7540(a)(10), (11), or (12), respectively, and not subject to emission limits or Table 4 operating limits, the permittee may submit only an annual, biennial, or 5-year compliance report, as applicable, as specified in paragraphs (b)(1) through (4) of 40 CFR 63.7550, instead of a semi-annual compliance report [40 CFR 63.7550(b)].

- (1) The first semi-annual compliance report must cover the period beginning on the compliance date that is specified for each boiler or process heater in 40 CFR 63.7495 and ending on June 30 or December 31, whichever date is the first date that occurs at least 180 days after the compliance date that is specified for the permittee's source in 40 CFR 63.7495. If submitting an annual, biennial, or 5-year compliance report, the first compliance report must cover the period beginning on the compliance date that is specified for each boiler or process heater in 40 CFR 63.7495 and ending on December 31 within 1, 2, or 5 years, as applicable, after the compliance date that is specified for the permittee's source in 40 CFR 63.7495 [40 CFR 63.7550(b)(1)].
 - (2) The first semi-annual compliance report must be postmarked or submitted no later than July 31 or January 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for each boiler or process heater in 40 CFR 63.7495. The first annual, biennial, or 5-year compliance report must be postmarked or submitted no later than January 31 [40 CFR 63.7550(b)(2)].
 - (3) Each subsequent semi-annual compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31. Annual, biennial, and 5-year compliance reports must cover the applicable 1-, 2-, or 5-year periods from January 1 to December 31 [40 CFR 63.7550(b)(3)].
 - (4) Each subsequent semi-annual compliance report must be postmarked or submitted no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period. Annual, biennial, and 5-year compliance reports must be postmarked or submitted no later than January 31 [40 CFR 63.7550(b)(4)].
- e. If the facility is subject to the requirements of a tune up the permittee must submit a compliance report with the information in paragraphs (c)(5)(i) through (iii) of 40 CFR 63.7550, (xiv) and (xvii) of 40 CFR 63.7550, and paragraph (c)(5)(iv) of 40 CFR 63.7550 for limited-use boiler or process heater [40 CFR 63.7550(c)(1)].
- (1) Company and Facility name and address [40 CFR 63.7550(c)(5)(i)].
 - (2) Process unit information, emissions limitations, and operating parameter limitations [40 CFR 63.7550(c)(5)(ii)].
 - (3) Date of report and beginning and ending dates of the reporting period [40 CFR 63.7550(c)(5)(iii)].
 - (4) The total operating time during the reporting period [40 CFR 63.7550(c)(5)(iv)].
 - (5) Include the date of the most recent tune-up for each unit subject to only the requirement to conduct an annual, biennial, or 5-year tune-up according to 40 CFR 63.7540(a)(10), (11), or (12) respectively. Include the date of the most recent burner inspection if it was not done annually, biennially, or on a 5-year period and was delayed until the next scheduled or unscheduled unit shutdown [40 CFR 63.7550(c)(5)(xiv)].

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(6) Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report [40 CFR 63.7550(c)(5)(xvii)].

7. Specific Control Equipment Operating Conditions:

The permittee shall install, maintain, and operate its control equipment in accordance with manufacturers' recommendations and good engineering practices.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

FACILITIES CONTROL - PERIODIC MONITORING REQUIREMENTS

Emission Unit	Operation	Equipment Monitored	Characteristic Monitored	Parameter Monitored	Method or Device	Monitoring Frequency	Recording Frequency	Calibration Frequency	Standard Range
D03A	Indirect /Direct Bldg Heat Combustion Units > 1 MMBTU/hr (Plant 2, F-99-029 Only)	Plant 2 Natural Gas	Volume used	Standard Cubic Feet (SCF)	N/A	Monthly	Monthly	N/A	See Section B.2
D03B	Indirect /Direct Shop Process Combustions Unit > 1 MMBTU/hr (Plant 2)	Plant 2 Natural Gas	Volume used	Standard Cubic Feet (SCF)	N/A	Monthly	Monthly	N/A	N/A
D04A	Indirect /Direct Bldg Heat Combustions Units > 1 MMBTU/hr (Plant 1)	Plant 1 Natural Gas	Volume used	Standard Cubic Feet (SCF)	N/A	Monthly	Monthly	N/A	N/A
D04B	Indirect /Direct Shop Process Combustions Units > 1 MMBTU/hr (Plant 1)	Plant 1 Natural Gas	Volume used	Standard Cubic Feet (SCF)	N/A	Monthly	Monthly	N/A	N/A
D06	Bulk / Tank Farm Storage (gasoline and virgin purge only)	Conservation Valve	Valve Function	Movement	Visual	Annual	Annual	N/A	Operational
D07	Back-up Generators	Back-up Generators	Hours of Operation per generator	Hours of Operation per generator	N/A	Monthly	Monthly	N/A	< 50 hours per year per generator in non-emergency situations
D11A	Indirect /Direct Bldg Heat Combustion Units > 1 MMBTU/hr	Line 3 Natural Gas	Volume used	Standard Cubic Feet (SCF)	N/A	Monthly	Monthly	N/A	See Section B.2 and D.8
D11B	Indirect /Direct Shop Process Combustions Units > 1 MMBTU/hr	Line 3 Natural Gas	Volume used	Standard Cubic Feet (SCF)	N/A	Monthly	Monthly	N/A	See Section B.2 and D.8

**SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE
REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

PAINT #1

PAINT #2

PLASTICS

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Description and Applicable Regulations:

401 KAR 59:010 and 401 KAR 51:017 apply to all affected facilities listed in the following table.

PAINT #1 Rebuilt, 250 BUILDING, Operations include the following processes

EMISSION UNIT	OPERATION ¹	CONSTRUCTION COMMENCED	CONTROL EQUIPMENT	OTHER APPLICABLE REGULATIONS
E01R	Metal Pretreatment System, including degrease and conversion coating processes	May 2016	None	
E02R	Electro deposition Coating System, including rinse tanks, dip tank, dry sanding, and oven	May 2016 Modified December 2022	Oven – Thermal Oxidizer RTO-03 for VOC	401 KAR 60:005 401 KAR 63:002
E03R	Metal Finishing Line, including metal assembly (Insignificant Activities List)	May 2016	None	
E04R	Sealer Line and Oven, including: Solvent Wiping Stations Seam Sealer Stations (robot and manual application) Seal Damping Coat Area PVC Booths (Undercoat, mask, unmask, PVC rocker, flange & wheel arch, underbody and touch-up)	May 2016 May 2016 Modified December 2022 Modified July 2024 May 2016 Modified December 2022 Modified July 2024 May 2016 Modified December 2022 Modified July 2024	None VOC Carryover to Sealer Oven VOC Carryover to Sealer Oven VOC Carryover to Sealer Oven	401 KAR 63:002 401KAR 63:002 401 KAR 63:002 401 KAR 63:002

1-All processes exclude non-process cleaning activities, except emission unit E13R.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EMISSION UNIT	OPERATION ¹	CONSTRUCTION COMMENCED	CONTROL EQUIPMENT	OTHER APPLICABLE REGULATIONS
	Bake Oven	May 2016 Modified December 2022	Oven – Thermal Oxidizer RTO-03 for VOC	
E05R	Primer Booths D and E, including: Solvent Wiping and Blow-off	May 2016	None	401 KAR 63:002
	Soft Chip	April 2022 (NSPS) December 2022 (NSR)	None	401 KAR 60:005 401 KAR 63:002
	Primer Booths, Lines D and E	May 2016	Lines D and E – Scrubbers TS11, TS12 for PM VOC Carryover to Heated Flash Off	401 KAR 60:005 401 KAR 63:002
	Heated Flash Off, Lines D and E	May 2016 2019	Line D - Thermal Oxidizer RTO-05 Line E - Thermal Oxidizer RTO-06	
E07R	Topcoat Lines D and E, including: Solvent Wiping and Blow-off Area	May 2016	None	40 CFR64
	Basecoat Booths, Lines D and E	May 2016 Modified December 2022 Modified July 2024	Lines D and E – Scrubbers TS11, TS12 for PM VOC Carryover to Heated Flash Off	401 KAR 60:005 401 KAR 63:002
	Heated Flash Off, Lines D and E	May 2016 2019 Modified December 2022	Line D - Thermal Oxidizer RTO-05 Line E - Thermal Oxidizer RTO-06	
	Clearcoat Booths, Lines D and E	May 2016 2019 Modified December 2022 Modified July 2024	Lines D and E – Scrubbers TS11, TS12 for PM Line D - Thermal Oxidizer RTO-05 Line E - Thermal Oxidizer RTO-06 VOC Carryover to Oven	401 KAR 60:005 401 KAR 63:002

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EMISSION UNIT	OPERATION ¹	CONSTRUCTION COMMENCED	CONTROL EQUIPMENT	OTHER APPLICABLE REGULATIONS
	Bake Ovens, D and E	May 2016 2019 Modified December 2022	Oven D – Thermal Oxidizer RTO-05 for VOC Oven E – Thermal Oxidizer RTO-06 for VOC	401 KAR 60:005
E08R	Inspection Lines (Insignificant Activities List)	May 2016	None	
E09R	Blackout Coating, including grille blackout, wheelhouse blackout and windshield blackout	May 2016 Modified December 2022	Grille and Wheelhouse – Dry Filter TF05 for PM	401 KAR 60:005 401 KAR 63:002
E10R	Moon Roof Installation (Insignificant Activities List)	Modified July 2024		
E11R	Wax Coating, including cavity wax, hinge wax and spot wax	May 2016	None	
		May 2016 Modified December 2022	None	401 KAR 63:002
E12R	Repair Deck Operations, including ED, sealer, primer, topcoat and blackout repairs	Modified July 2024		
		May 2016	None	401 KAR 60:005 401 KAR 63:002
E13R	Non-Process Cleaning Activities, including caustic stripping, grate coating, water blasting, line purging, shot blasting, cold cleaner and surface cleaning	May 2016	None	401 KAR 59:185 401 KAR 63:002
E14R	Raw Material Supply Systems, including ED system supply and paint mix/supply rooms	May 2016	None	401 KAR 63:002
E15R	Water/Wastewater Treatment Operations, including all De-ionizing processes and sludge pool processes	May 2016	None	
E16R	Robot Teaching Booth (Insignificant Activities List)	May 2016	None	
E17R	Two Tone Masking Booth (Insignificant Activities List)	May 2016	None	
E18R	General Exhaust	May 2016	None	

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

401 KAR 59:010 and 401 KAR 51:017 apply to all affected facilities listed in the following table.

PAINT #2, 2000 BUILDING, Operations include the following processes

EMISSION UNIT	OPERATION ³	CONSTRUCTION COMMENCED	CONTROL EQUIPMENT	OTHER APPLICABLE REGULATIONS
F01	Phosphate System, including de-greasing tank, rinse tanks, and phosphate dip tank	March 22, 1991	None	
F02	Electrodeposition Coating System, including rinse tanks, dip tank, dry sanding, and oven	March 22, 1991	Oven - Thermal Oxidizer TT02 for VOC	401 KAR 60:005 401 KAR 63:002
F03	Metal Finishing Line, including metal assembly (Insignificant Activities List)	March 22, 1991	None	
F04	Sealer Line and Oven, including: Solvent Wiping Areas	March 22, 1991	None	401 KAR 63:002
	Seam Sealer Area (robot and manual application)	January 2016		
		March 22, 1991	VOC Carryover to Oven	401 KAR 63:002
	Damping Coat Area	January 2016		
		2004	VOC Carryover to Oven	401 KAR 63:002
		January 2016 Modified July 2024		
	PVC Booths (underbody and touch-up)	March 22, 1991	VOC Carryover to Oven	401 KAR 63:002
	Bake Oven	January 2016		
		March 22, 1991	Thermal Oxidizer TT03 for VOC	
F05	Primer Booth and Oven, including: Solvent Wiping and Blow-off			
		March 22, 1991	None	401 KAR 63:002

2 -All processes exclude non-process cleaning activities, except emission units F13 and F25.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EMISSION UNIT	OPERATION ³	CONSTRUCTION COMMENCED	CONTROL EQUIPMENT	OTHER APPLICABLE REGULATIONS
	Soft Chip	March 22, 1991 Modified April 2022 (NSPS), December 2022 (NSR)	None	401 KAR 60:005 401 KAR 63:002
	Exterior	December, 2014	Scrubber TS19 for PM VOC Concentrator TC01 for VOC Thermal Oxidizer TT10 for VOC VOC Carryover to Oven	401 KAR 60:005 401 KAR 63:002
	Interior	March 22, 1991	Scrubber TS19 for PM VOC Carryover to Oven	401 KAR 60:005 401 KAR 63:002
	Door sash and Rocker	March 22, 1991	Scrubber TS19 for PM VOC Carryover to Oven	401 KAR 60:005 401 KAR 63:002
	Oven	March 22, 1991	Thermal Oxidizer TT05 for VOC	
	Wet Sand Line, including wet sand and dry sand booth, re-coat dry sand booth, touch-up booth (not in Use) and oven (Not in use)	March 22, 1991	None	
F06	Topcoat Lines A and B, including: Solvent Wiping and Blow-off Area	March 22, 1991	None	40 CFR 64 401 KAR 63:002

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EMISSION UNIT	OPERATION ³	CONSTRUCTION COMMENCED	CONTROL EQUIPMENT	OTHER APPLICABLE REGULATIONS
	All Coating Applications, Lines A & B	December, 2014	Booth A – Scrubber TS23 and exhaust filters TF27 for PM Booth B – Scrubber TS24 and exhaust filters TF28 for PM Booth A – VOC Concentrator TC02 for VOC Booth B – VOC Concentrator TC03 for VOC Booth A – VOC Thermal Oxidizer TT06 for VOC (Back-up for RTO-03) Booth B – Thermal Oxidizer TT08 for VOC (Back-up for RTO-03) Booths A/B – Thermal Oxidizer RTO-03 for VOC Booths A/B – VOC Carryover to Oven Oven A – Thermal Oxidizer TT07 for VOC Oven B – Thermal Oxidizer TT09 for VOC	401 KAR 60:005 401 KAR 63:002
	Bake Ovens A & B	March 22, 1991		401 KAR 60:005 401 KAR 63:002
F08	Inspection Lines (Insignificant Activities List)	March 22, 1991	None	
F09	Blackout Coating, including grille blackout, wheelhouse blackout and windshield blackout and touch-up station	March 22, 1991 December 2014 April 1, 2017	Blackout Booth - exhaust filters TF12 for PM Underbody, Touchup Station – Filter TF12 for PM	401 KAR 60:005 401 KAR 63:002
F10	Moon Roof Installation (Insignificant Activities List)	March 22, 1991	None	
F11	Wax Coating, including cavity wax, hinge wax, spot wax and rocker wax	March 22, 1991 March, 2019, 2026	None	
F12	Repair Deck Operations, including ED, sealer, primer, topcoat and blackout repairs	March 22, 1991	None	401 KAR 60:005 401 KAR 63:002

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EMISSION UNIT	OPERATION ³	CONSTRUCTION COMMENCED	CONTROL EQUIPMENT	OTHER APPLICABLE REGULATIONS
F13	Non-Process Cleaning Activities, including, grate coating, water blasting, line purging, cold cleaner and surface cleaning	March 22, 1991	None	401 KAR 59:185 401 KAR 63:002
F14	Raw Material Supply Systems, including ED system supply and paint mix/supply rooms	March 22, 1991	None	401 KAR 63:002
F15	Water/Wastewater Treatment Operations, including all De-ionizing processes and sludge pool processes (Insignificant Activities List)	March 22, 1991	None	
F16	Robot Teaching Booth (Insignificant Activities List)	March 22, 1991	None	
F17	Two Tone Masking Booth (Insignificant Activities List)	March 22, 1991	None	
F18	General Exhaust	March 22, 1991	None	
F19	Electrodeposition Coating System, including rinse tanks, dip tank, dry sanding, and oven	March 2014	VOC Carryover to Oven with Thermal Oxidizer TT12	401 KAR 60:005 401 KAR 63:002
F20	Sealer and PVC application line and Oven			
	Sealer Area (robot and manual application)	March 2014	VOC Carryover to Oven	401 KAR 63:002
	Dampening Coat Area	March 2014	VOC Carryover to Oven	401 KAR 63:002
	PVC Area (underbody coat robot and manual application)	March 2014	VOC Carryover to Oven	401 KAR 63:002
	Bake Oven	August 2014	Thermal Oxidizer TT03 for VOC	
F21	Primer Booth and Oven, including: Hood Soft Chip	March 2014 September 2025	Scrubber TS25 for PM VOC Carryover to Oven	401 KAR 60:005 401 KAR 63:002

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EMISSION UNIT	OPERATION ³	CONSTRUCTION COMMENCED	CONTROL EQUIPMENT	OTHER APPLICABLE REGULATIONS
	Interior/ Exterior	August 2014	Scrubber TS25 for PM Automatic Zone – VOC Concentrator TC04 and Thermal Oxidizer TT13 for VOC	401 KAR 60:005 401 KAR 63:002
	Oven	March 2014 December 26, 2016	VOC Carryover to Oven Thermal Oxidizer TT11 for VOC	
F22	Topcoat Line C Booth and Oven, including: Basecoat Booth Clearcoat Booth Bake Oven	March 2014 July 2016 August 2014 March 2014 December 26, 2016	Scrubber TS25 for PM VOC Carryover to Oven Scrubber TS25 for PM VOC Carryover to Oven Automatic Zone – VOC Concentrator TC04 and Thermal Oxidizer TT13 for VOC Thermal Oxidizer TT11 for VOC	40 CFR 64 401 KAR 60:005 401 KAR 63:002 401 KAR 60:005 401 KAR 63:002
F23	Wax Coating, including cavity wax, hinge wax, spot wax and rocker wax	March 2014 March 2019 September 2025	None	
F24	Repair Operations, including offline repair, underbody touchup booth and repair polish booth	March 2014	None	401 KAR 60:005 401 KAR 63:002
F25	Non-Process Cleaning Activities, including, grate coating, water blasting, line purging, and surface cleaning	March 2014	Work Practice Standards	401 KAR 63:002
F26	Miscellaneous Process Cleaners - Wiping Solvents	March 2014	None	401 KAR 63:002

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

401 KAR 59:010 and 401 KAR 51:017 apply to all affected facilities listed in the following table, unless otherwise stated.

PLASTICS, 400/400A BUILDING, Operations include the following processes

EMISSION UNIT	OPERATION	CONSTRUCTION COMMENCED	CONTROL EQUIPMENT	OTHER APPLICABLE REGULATIONS
G01	Thermal Injection Molding Operations	1991-2015 April 2019	None	
G02	Source Shutdown / Removed	March 22, 1991	None	
G04	Repair Painting	March 22, 1991 July 18, 2016, 2018		401 KAR 63:002
G05	Raw Material Supply Systems, including injection part and bumper painting, exterior painting, injection molding (silos), monofoam, mold release, slush molding supply and regrind	March 22, 1991 April 2019		401 KAR 63:002
G06	Source Shutdown / Removed	N/A	N/A	
G07	Source Reassigned to Emission Unit G22	N/A	N/A	
G08	Source Shutdown / Removed	N/A	N/A	
G09	Source Reassigned to Emission Unit G22	N/A	N/A	
G10	Source Reassigned to G22	N/A	N/A	
G12	Source Removed	March 22, 1991	N/A	
G13	Slush Molding Operation, including molding, miniblasting, dry ice machine, and repair painting	March 22, 1991 April 2019	System 1 – Fluidized Bed Filter RF01 for PM System 2 – Fluidized Bed Filter RF02 for PM System 3 – Fluidized Bed Filter RF03 for PM System 4 – Fluidized Bed Filter RF04 for PM	401 KAR 63:002
G14	Source Removed	N/A	N/A	
G14b	Vacuum Form Machines	Proposed June, 2025	N/A	401 KAR 63:020 *401 KAR 51:017 does not apply to G14b

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EMISSION UNIT	OPERATION	CONSTRUCTION COMMENCED	CONTROL EQUIPMENT	OTHER APPLICABLE REGULATIONS
G15	Source Removed	N/A	N/A	
G16	Source Reassigned to Emission Unit G19	N/A	N/A	
G17	Water/Wastewater Treatment Operations, including sludge pool processes	March 22, 1991	None	
G18	Source Removed	N/A	N/A	
G19	Non-Process Cleaning Activities, including paint stripping, water blasting, line purging, surface cleaning cold cleaner, jig cleaning and chemical honing	July 17, 1986/ March 22, 1991/ January 2011/ June 15, 2015/ January 2016	None	401 KAR 59:185 401 KAR 63:002
G20	Monofoam Molding, including turntables, clamp molds, hot knife scoring / heat treating, day tanks	July 17, 1986 July 2016/ April 2019	None	
G21	Plastic Part Painting Operations including:			40 CFR 64
	Solvent Wiping, RT31	January 2016	None	401 KAR 63:002
	All Coating Applications, RT3	January 2016	RT3 Booth – Filter RF14 for PM RT3 Booth – Wet Scrubber RS16 for PM RT3 Booth (Primer/Base/Clear) – VOC Concentrator RC07 and Thermal Oxidizer RT11 for VOC	401 KAR 63:002
	Repair Painting, RT3	January 2016	None	401 KAR 63:002
	Bake Oven, RT3	January 2016	None	
G22	Plastic Parts Painting Operations including:			40 CFR 64
	Solvent Wiping, RT1 & RT2	June 15, 2015	None	401 KAR 63:002

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EMISSION UNIT	OPERATION	CONSTRUCTION COMMENCED	CONTROL EQUIPMENT	OTHER APPLICABLE REGULATIONS
	Coating Applications, RT1 & RT2	June 15, 2015	Booth RT1 – Wet Scrubber RS14 for PM Booth RT2 – Wet Scrubber RS15 for PM Booths RT1 and RT2 - RT12 for VOC <i>Backup VOC Control equipment:</i> <i>Booth RT1 – Concentrator RC04 for VOC Booth RT2 – Concentrator RC05 for VOC</i> <i>Booth RT1 – Thermal Oxidizer RT08 for VOC</i> <i>Booth RT2 – Thermal Oxidizer RT09 for VOC</i>	401 KAR 63:002
	Repair Painting, RT1 & RT2	June 15, 2015	None	401 KAR 63:002
	Bake Oven, RT1 & RT2	June 15, 2015	Oven RT1 & RT2-- None	
G24	General Exhaust	March 22, 1991	None	
G25	Manifold Assembly Operation (Insignificant Activities List)	Aug 1, 1999	None	

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EMISSION UNIT	OPERATION	CONSTRUCTION COMMENCED	CONTROL EQUIPMENT	OTHER APPLICABLE REGULATIONS
G26	Plastic Parts Painting Operations including: Primer/Basecoat/Clearcoat Booths	August 2014	Primer Booth – Filters RF11 and Wet Scrubber RS13 for PM Basecoat Booth – Filters RF12 and Wet Scrubber RS13 for PM Clearcoat Booth – Filters RF13 and Wet Scrubber RS13 for PM Primer and Basecoat Booth (Automatic Zone) and Clearcoat Booth (Automatic Zone) - RT12 for VOC <i>Backup VOC Control equipment: Primer and Basecoat Booth (Automatic Zone) – VOC Concentrator RC06 and Thermal Oxidizer RT10 for VOC Clearcoat Booth (Automatic Zone) – Concentrator RC03 and Thermal Oxidizer RT07 for VOC</i>	401 KAR 63:002
G27	Bake Oven, Lexus Non-Process Cleaning Activities, including paint stripping, water blasting, line purging, surface cleaning and jig cleaning	March 2014	None	
G28	Miscellaneous Process Cleaners - Wiping Solvents	March 2014	Work Practice Standards	401 KAR 63:002
G29	Four Plasma Robots (Insignificant Activities List)	2017	None	401 KAR 63:002

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

APPLICABLE REGULATIONS:

401 KAR 51:017, *Prevention of significant deterioration of air quality*

401 KAR 59:010, *New Process Operations*

401 KAR 59:185, *New solvent metal cleaning equipment*

401 KAR 60:005 Section 2(2)(tt) 40 C.F.R. 60.390 to 60.398 (Subpart MM), *Standards of Performance for Automobile and Light Duty Truck Surface Coating Operations*, (Refer to Section B Group Requirements).

401 KAR 63:002 Section 2(4)(ooo), 40 C.F.R. 63.3080 to 63.3176, Tables 1 through 4, and Appendix A (Subpart IIII), *National Emission Standards for Hazardous Air Pollutants: Surface Coating of Automobiles and Light-Duty Trucks* (Refer to Section B Group Requirements)

40 CFR 64, *Compliance Assurance Monitoring (CAM)*, (See Section E, EU E05R, E07R, F07, F22, G21, G22 and G26).

STATE-ORIGIN REQUIREMENTS:

401 KAR 63:020, *Potentially hazardous matter or toxic substances*

1. Operating Limitations:

- a. The usage rates of materials used in all affected facilities shall be limited so as not to exceed the emission limitations in Section B.2. Wherever practicable, the permittee shall utilize work practices to minimize emissions from non-process cleaning activities.
- b. The permittee shall install, maintain, and operate its control equipment in accordance with manufacturers' recommendations and good engineering practices. The permittee shall conform to the operating conditions, as prescribed in the periodic monitoring requirements table. Refer to Section B Group Requirements for requirements specific to 40 CFR 63 Subpart IIII.
- c. See Periodic Monitoring Requirements Table.
- d. **401 KAR 51:017: Specific Operating Conditions for Purging Solvent Borne Solvents:** Except for applicator nozzles/tips, coating applicator purging solvents shall be collected and retained until such time as they are shipped offsite for disposal or recycled. Waste purge solvent tanks shall be kept closed when not in use.
- e. **Specific Operating Limitations for Cold Cleaner in Emission Units E13R, F13, G19:** The permittee shall comply with control equipment and operating requirements specified in 401 KAR 59:185, Section 4 (1) & (2). Refer to Section B Group Requirements.
- f. **401 KAR 51:017:** The permittee shall operate the control equipment listed in the Periodic Monitoring Requirements table.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

2. Emission Limitations:

- a. **401 KAR 59:010, Section 3 (1):** The opacity of visible emissions from each stack shall not equal or exceed 20 percent.

Compliance Demonstration Method:

- (1) See Monitoring Requirements, B.4.
- (2) See periodic monitoring requirements table.

- b. **401 KAR 59:010, Section 3 (2):**

Emission of particulate matter from a control device or stack of any affected facility up to a process rate of 1000 lbs/hr shall not exceed **2.34** lbs/hr. For processing rates greater than 1000 lbs/hr up to 60,000 lbs/hr, particulate emissions shall not exceed the emission rate calculated by the following equation:

$$E = 3.59(P)^{0.62}$$

E = the PM emissions rate (pounds/hour)

P = the process rate (tons/hour)

Compliance Demonstration Method:

- (1) For affected facilities that use transfer efficiency in the determination of PM/PM₁₀ emissions the permittee shall:

- i. Use the transfer efficiency value specified in 40 CFR 60.393 for the application method used; or
- ii. Use a transfer efficiency value determined through testing approved by the Division.

Previous transfer efficiency tests may be accepted if the following conditions are met:

- iii. The previous test must have been conducted using methods and conditions approved by the Division.
 - iv. Either no process or equipment changes have been made since the previous test was performed or the owner or operator must be able to demonstrate that the results of the performance test, reliably demonstrate compliance despite process or equipment changes.
 - v. Either the required operating parameters were established in the previous test or sufficient data were collected in the previous test to establish the operating parameters.
- (2) The total process weight, "P" as defined above must reflect a period that covers a complete operation or an integral number of cycles, divided by the hours of actual process operation during such a period. This period shall not exceed 24 hours. In the case where there are no periodic monitoring requirements associated with the affected facility, continuous compliance shall be assured as long as there are no process or operational changes. The determination of the emission rate "E" in pounds per hour for compliance with 401 KAR 59:010 may also be used to demonstrate compliance with 401 KAR 51:017, except that the period allowed for the determination of "P" shall be one month.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(3) For affected facilities with periodic monitoring requirements for particulate emissions the source shall demonstrate continuous compliance by adhering to the periodic monitoring requirements table. The source must maintain a record of deviations from “standard ranges” in the periodic monitoring requirements table and determine the particulate emissions from the deviation. The duration of the deviation shall be the period between when the “out of standard condition” was noted and when it is corrected. If an engineering evaluation utilizing a control efficiency that is used to determine particulate emissions for the affected facility, the allowed control efficiency shall be zero during the deviation period unless testing is conducted to prove otherwise.

- c. **401 KAR 51:017:** Emissions of VOC and PM shall not exceed those in the table below, as calculated on a monthly basis:

EMISSION UNIT	OPERATION	VOC LIMIT (lb/job)	PM LIMIT (lb/hr)
Paint #1			
E01R	Phosphate System	N/A	0.54
E02R	Electro deposition System	0.185	N/A
E04R	Sealer Line/Oven	1.15	N/A
E05R	Primer Line/Oven	2.11	4.02
E07R	Topcoat Booth/Oven	3.86	7.43
E09R	Blackout Coating	0.11	0.59
E11R	Wax Coating	0.27	1.33
E12R	Repair Coating and Sanding	N/A	0.93
E13R	Non-Process Cleaning Activities	3.09	0.26
E14R	Raw Material Supply	N/A	2.23
E15R	Water/Wastewater Treatment	N/A	1.63
E18R	General Exhaust	N/A	1.02
Paint #2			
F02	Electro Dip System	0.19	0.22
F04	Sealer Line/Oven	1.15	N/A
F05	Primer Line/Oven	2.73	1.91
F06	Wet Sand Line/Oven	0.13	0.53
F07	Topcoat A,B Booth/Oven	3.86	7.42
F09	Blackout Coating	0.55	0.22
F11	Wax Coating	0.27	N/A
F12	Repair Coating and Sanding	N/A	0.18
F13	Non-Process Cleaning Activities	3.09	1.00
F18	General Exhaust	N/A	1.00
F19	Electrodeposition Coating System	0.116	N/A
F20	Sealer and PVC application line	0.8	N/A
F21	Primer Booths/Oven	1.026	N/A

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

F22	Topcoat Booths/Oven	3.54	N/A
F25	Non-Process Cleaning - Purging/Cleaning	1.68	N/A
F26	Process Cleaners	0.186	N/A
Plastic			
G04	Repair Painting	0.26	0.41
G13	Slush Molding Operation	N/A	1.28
G17	Water/Wastewater Treatment	N/A	0.56
G19	Non-Process Cleaning Activities Purge/Cleaning	1.17	0.14
G20	Monofoam	0.24	2.36
G21	Exterior Part Painting	0.21	0.99
G22	Bumper Painting	1.04	5.42
G24	General Exhaust	N/A	1.73
G26	Bumper and Rocker Painting	0.88	N/A
G27	Non-Process Cleaning Activities Purge/Cleaning	0.36	N/A
G28	Process Cleaners – Wiping Solvents	0.45	N/A

Compliance Demonstration Method:

$$VOC\ Value = \frac{\sum U_i * V_i * E_i * (1 - C_i * F_i)}{P}$$

U_i = Usage of material “i”,

V_i = Volatile organic compound (VOC) content,

E_i = VOC Emission Factor,

F_i = Control efficiency,

C_i = Collection efficiency,

P = Production rate (number of vehicles produced)

PM Value = Measurement, when prescribed by periodic monitoring requirements table.

Otherwise PM shall be calculated as follows:

$$PM\ Value = \sum \frac{P}{P_m} * E_i, \text{ or equivalent method approved by the Division}$$

P = Average shop production throughput,

P_m = Maximum vehicle production rate

E_i = PM Emission Factor (controlled) for each stack “i”.

See Compliance Demonstration Method for 401 KAR 59:010, in this Section.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- d. **401 KAR 51:017:** Emissions of VOC shall not exceed the following, based on a 12-month rolling total.

EMISSION UNIT	VOC LIMIT (tons/year)
Paint #1 Rebuilt	809
Paint #2 (Emission Unit F01 through F18)	1,571
Plastic (Line 2 operations)	498
Plastics Shop*	1047
Paint #2, Line 3 operations (Emission Unit F19 through F24)	197
Plastics, Line 3 operations (Emission Unit G26)	31

* Emissions from entire Plastic Shop exclude Line 3 operations.

Compliance Demonstration Method:

$$VOC\ Value = \sum U_i * V_i * E_i * (1 - C_i * F_i)$$

U_i = Usage of material “i”,
 V_i = Volatile organic compound (VOC) content,
 E_i = VOC Emission Factor,
 F_i = Control efficiency,
 C_i = Collection efficiency.

- e. **401 KAR 51:017:** Emissions of PM shall not exceed the following, based on a 12-month rolling total.

EMISSION UNIT	PM LIMIT (tons/year)
Paint #1 Rebuilt	25.65
Paint #2 (Emission Unit F01 through F18)	60.62
Plastic (Line 2 operations)	27.4
Plastics Shop (Emission Unit G01 through G25, except G14b)	68.5

Compliance Demonstration Method:

- (1) Calculated from the following equation, except where testing specified (see item 3)

$$PM\ Value = \sum P * E_i$$

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

P = Average shop production throughput

E_i = PM Emission Factor (controlled) for “i”,

(2) See Compliance Demonstration Method for 401 KAR 59:010, in this Section.

(3) Testing, see periodic monitoring requirements table.

- f. **401 KAR 51:017:** Emissions of VOC shall not exceed the following from process and non-process cleaning operations including paint purging, based on a 12-month rolling total.

EMISSION UNIT	VOC LIMIT (tons/year)
Paint #2, Line 3 operations (Emission Unit F25 and F26)	65
Plastics, Line 3 operations (Emission Unit G27 and G28)	28

Compliance Demonstration Method:

$$VOC\ Value = [\sum(U_i * V_i * E_i) - \sum(R * V)] * (1 - C_i * F_i)$$

U_i = Usage of material “i”,

V_i = Volatile organic compound (VOC) content,

E_i = VOC Emission Factor,

F_i = Control efficiency,

C_i = Collection efficiency,

R = Volume of reclaimed purging solvent,

V = VOC content of reclaimed purging solvent.

- g. Synthetic Minor Limit for PM_{2.5} emissions from Line 3 Operations (Emission Unit F19 through F26 and G26). See Section D.4.

- h. **40 CFR 60 Subpart MM - 60.392:**

The permittee shall not cause the discharge into the atmosphere of more than the following, as calculated on a monthly average basis:

NSPS CATEGORY (Affected Facilities)	EMISSION LIMIT (kg VOC per liter solid applied)	COATINGS INCLUDED IN GROUP
(a) - Primecoat Operations	0.17	E02R, F02 & F19 - Electro deposition
(b) - Guidecoat Operations	1.40	E04R, F04 & F20 - Sealer E05R, F05 & F21 - Soft Chip, Interior, Exterior E12R, F12 & F24 - Repair
(c) - Topcoat Operations	1.47	E05R & F05 – Door sash and Rocker Panel Black E07R, F07 & F22 - Topcoat Solid, Base, Clear

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

NSPS CATEGORY (Affected Facilities)	EMISSION LIMIT (kg VOC per liter solid applied)	COATINGS INCLUDED IN GROUP
		E09R & F09 – Blackouts E12R, F12 & F24 - Repair

Compliance Demonstration Method:

See Section B Group Requirements

i. **40 CFR 63 Subpart IIII, Section 63.3091 - Emission Limits for Existing Sources**

EMISSION UNITS	NESHAP AFFECTED OPERATIONS	EMISSION LIMIT
E02R, F02 & F19 E04R, F04 & F20 E04R, F04, F20 E04R, F04 & F20 E05R, F05 & F21 E07R, F07 & F22 E09R & F09 E11R, F11 & F23 E12R, F12 & F24 G04, & G26 G21, G22 E13R, F13, F25, G19 & G27 E04R, E05R, E07R, F04, F05, F07, F26 & G28	Electro deposition primer Primer-surfacer Adhesives and sealers Deadener Primer-surfacer Topcoat Blackout Wax Coating Final Repair Coatings and repair painting Coating, process cleaning* and repair painting Non-Process Cleaning* Process Cleaning*	Refer to Section B Group Requirements for Group Emission Limits.

* Applicable only to organic-HAP-containing cleaning materials used in coating operations for which emission limits are established under 40 CFR 63 Section 63.3901(a) through (d).

Compliance Demonstration Method:

Refer to Section B Group Requirements.

- j. Persons responsible for a source from which hazardous matter or toxic substances may be emitted shall provide the utmost care and consideration, in the handling of these materials, to the potentially harmful effects of the emissions resulting from such activities. No owner or operator shall allow any affected facility to emit potentially hazardous matter or toxic substances in such quantities or duration as to be harmful to the health and welfare of humans, animals and plants. Evaluation of such facilities as to adequacy of controls and/or procedures and emission potential will be made on an individual basis by the cabinet. [401 KAR 63:020, Section 3]

Compliance Demonstration Method:

Based upon the emission rates of toxics and hazardous air pollutants determined by the Cabinet using information provided in the application and supplemental information submitted by the source, the Cabinet determines the affected facility to be in compliance with 401 KAR 63:020.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

3. Testing Requirements:

- a. The permittee shall perform stack testing according to the standards and schedule specified in the Periodic Monitoring Requirements table.
- b. The permittee shall conduct initial performance tests for RT12 using EPA Method 25A, or an alternate method approved by the Administrator, to determine the destruction efficiency of the oxidizer in accordance with SECTION G.4. and G.5. of this permit (V-20-026 R1).

4. Specific Monitoring Requirements:

- a. The permittee shall conform to the monitoring requirements, as prescribed in the Periodic Monitoring Requirements table. The permittee shall monitor raw material usages as necessary to demonstrate compliance with all requirements of this permit. Refer to Section B Group Requirements for requirements specific to 40 CFR 60 Subpart MM and 40 CFR 63 Subpart IIII.
- b. The permittee shall perform a qualitative visual observation of the opacity of emissions at each stack no less than weekly while the affected facility is operating. If visible emissions from the stacks are observed (not including condensed water in the plume), the permittee shall determine the opacity using Reference Method 9. In lieu of determining the opacity using U.S. EPA Method 9, the permittee shall immediately perform a corrective action which results in no visible emissions (not including condensed water in the plume).
- c. Stacks that are subject to specific periodic visible emissions monitoring are identified in the Periodic Monitoring Requirements table and are subject to the conditions specified below:
 - (1) The permittee shall perform a qualitative visual observation of the opacity of emissions at each stack on a weekly basis. See Section B 4.b.
 - (2) If no visible emissions are detected for a period of 1 month then the monitoring frequency shall be reduced from weekly to monthly.
 - (3) If visible emissions are detected during the monthly check, then the weekly check shall be re-instated until there are no visible emissions detected for 1 month period.
 - (4) If the method of operation changes for processes emitting to the atmosphere, then the requirement to perform weekly qualitative observations will be reinstated.
- d. **Specific Monitoring Requirements for Emission Units E02R, E04R, E05R, E07R, F02, F04, F05, F07, F19, F20, F21, F22, G21, G22 and G26:**
An alarm system shall be installed on these emission units which will notify the operator of the units in the event the burner temperature of the incinerator falls below indicator range as prescribed by periodic monitoring requirements table.

Specific Monitoring Requirements for VOC Concentrator

- e. The performance of the adsorbent material will be verified by examining representative samples and testing the performance (adsorbent activity) per the manufacturer's recommendation. The results shall be assessed (e.g., compared to historical results or results for new adsorbent) and the adsorbent shall be replaced as appropriate.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- f. Alternatively, performance can be checked with a portable flame ionization detector (FID), photo ionization detector (PID), or other appropriate equipment or methodologies. In this case, the concentration of the adsorber outlet stream, or the percent reduction in concentration of the inlet/outlet stream measurements are compared to historical data from performance tests. The results shall be assessed and the adsorbent shall be replaced as appropriate.

401 KAR 51:017, Section 16(5)(c). Source Obligation

- g. The permittee shall monitor and calculate annual VOC emissions from emission units A03, A05, A10 (Case ED Coating Repair), A14, C02, C06, C08, C09, D06, E02R, E04R, E05R, E07R, E09R, E11R, E13R, G14b, G21 and G22 and maintain a record of the annual emissions, in tons per year on a calendar year basis for five years following resumption of regular operations after the year 2024-2026 EV battery modification to Line #1. The source shall submit a report to the Division if:
 - (1) The annual VOC emissions, in tons per year, from this proposed project exceeds the baseline actual emissions by a significant amount for these pollutants; and
 - (2) The VOC emissions exceed the projected actual emissions as submitted in the application for the Line #1 modification.
- h. The permittee shall monitor and calculate annual VOC emissions from emission units E05R, F05, C06, E13R, F13 and maintain a record of the annual emissions, in tons per year on a calendar year basis for five years following resumption of regular operations after the year 2022 Camry model year change modifications to Line #1 and Line #2, including soft-chip paint additions, and increased adhesive and solvent use. The source shall submit a report to the Division if:
 - (1) The annual VOC emissions, in tons per year, from this proposed project exceeds the baseline actual emissions by a significant amount for these pollutants; and
 - (2) The VOC emissions exceed the projected actual emissions as submitted in the application for the Line 1 and 2 Camry modification.

5. Specific Recordkeeping Requirements:

- a. The permittee shall conform to the record keeping requirements, as prescribed in the Periodic Monitoring Requirements table. The permittee shall maintain monthly and annual records of the maximum material usage rates and maximum vehicle production rates for each emission unit which uses a control device to demonstrate compliance with the pounds per job emission limits for VOC specified in subsection 2. **Emission Limitations**. These records shall specify the methodology used to determine the maximum material usage rate, and must reflect the most current technology used.
- b. Refer to Section B Group Requirements for requirements specific to 40 CFR 60 Subpart MM and 40 CFR 63 Subpart IIII.
- c. The permittee shall maintain a log of the visual observations noting date, time, initials of observers, and records of corrective actions taken as a result of visible emissions from a stack and records of any Reference Method 9 readings performed.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- d. In addition, for all required emissions control equipment, the permittee shall keep the following records:
- (1) Design or manufacturer's specifications.
 - (2) Preventive maintenance records related to performance of control equipment.
 - (3) All periods, during normal operating conditions, where parameters listed in the periodic monitoring requirements table are "out of standard". For thermal oxidizers and VOC wheel concentrators, "out of standard" is defined as a confirmed three-hour period during which the average of the monitored values fails to meet the specified temperature requirements.
 - (4) All periods, during normal operating conditions, where emissions control equipment, required by this permit, is not operating.
 - (5) All periods, during normal operating conditions, where emissions control equipment, required by this permit, is bypassed.
 - (6) Description of operating, temperature-measuring devices (e.g., automatic strip charts, digital data acquisition systems).
 - (7) Data from the temperature-measuring devices (as prescribed by the periodic monitoring requirements table) and any temporary data logged manually as back up.
 - (8) Inspection reports and maintenance performed in response to recommendations in inspection reports.
 - (9) Monitoring system malfunctions.
 - (10) Corrective actions taken in response to "out of standard" conditions as specified in the periodic monitoring requirements table.
 - (11) Calibration records for monitoring equipment specified in the periodic monitoring requirements table.
 - (12) Records documenting the results of any required inspection and repair, as a result of a recorded opacity over 20%.

Thermal Oxidizer Specific Recordkeeping Requirements:

The permittee shall maintain records of the following information for the thermal oxidizer:

- e. All 3-hour periods (during coating operations) during which the average combustion chamber temperature of the thermal oxidizer is more than 28°C (50°F) below the average combustion chamber temperature of the thermal oxidizer determined during the most recent performance test which demonstrated compliance. Each occurrence shall be considered a deviation from permit requirements. See Section F.6.
- f. During all periods of operation of the thermal oxidizer in which the 3-hour average combustion chamber temperature of the thermal oxidizer is more than 28°C (50°F) below the average combustion chamber temperature of the thermal oxidizer during the most recent performance test which demonstrated compliance, or other malfunction of the thermal oxidizer, a daily log of the following information shall be kept:
- (1) Whether any air emissions were visible from the facilities associated with the thermal oxidizer.
 - (2) Whether visible emissions were normal for the process.
 - (3) The cause of the visible emissions.
 - (4) Corrective action(s) taken shall be recorded.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

VOC Concentrator Specific Recordkeeping Requirements:

- g. The permittee shall maintain records of the following information for the VOC concentrator:
 - (1) All periods (during coating operations) during which the 3-hour average desorption gas inlet temperature is more than 8°C (15°F) below the average desorption gas inlet temperature determined during the most recent performance test, which demonstrated compliance. Each occurrence shall be considered a deviation from permit requirements. See Section F.6.
 - (2) During all periods of operation of the VOC concentrator in which the 3-hour average desorption gas inlet temperature is more than 8°C (15°F) below the average desorption gas temperature determined during the most recent performance test which demonstrated compliance, or other malfunction of the VOC concentrator, a daily log of the following information shall be kept:
 - (3) Whether any air emissions were visible from the facilities associated with the VOC concentrator.
 - (4) Whether visible emissions were normal for the process.
 - (5) The cause of the visible emissions.
 - (6) Corrective action(s) taken shall be recorded.
- h. The permittee shall keep calendar month records of usage of all applicable raw materials. Following the end of each month, Volatile Organic Compounds (VOC) emissions and Particulate Matter (PM) emissions shall be calculated on a twelve-month rolling total basis and recorded. Following the end of each month, pounds per job limits for VOC and pounds per hour limits for PM shall be calculated and recorded. These records shall represent the most recent year and shall show compliance with VOC and PM emission limitations listed in this permit. These records shall be made available for inspection upon request by any duly authorized representatives of the Division for Air Quality. See Section B Group Requirements.
- i. All records required by this permit shall be kept onsite for a minimum of 5 years.
- j. The permittee shall maintain records of the annual emissions, in tons per year on a calendar year basis for emission unit G22 and its line purging (G19) for 5 years according to subsection 4. **Specific Monitoring Requirements h.**

6. **Specific Reporting Requirements:**

- a. The permittee shall submit summary monitoring reports every 6 months containing monitoring information listed in Sections B.4, B.5, D.4 and D.6 of this permit. (See Section F.5 for specific reporting dates.) The report shall list any “out of standard” conditions for periodic monitoring requirements, as listed in the Periodic Monitoring Requirements table below. If no “out of standard” conditions occurred, the permittee shall submit a negative report.
- b. See subsection 4. **Specific Monitoring Requirements h.**

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

7. Specific Control Equipment Operating Conditions:

a. See Section B.1, Section B Group Requirements, and Section E.

b. Specific Operating Limitations for Thermal Oxidizers:

- (1) The average combustion chamber temperature in any 3-hour period shall not fall more than 28°C (50°F) below the combustion temperature limit established during the most recent performance test, which demonstrated compliance.
- (2) The permittee shall use the data collected during the performance test to calculate and record the average combustion temperature. This average combustion temperature is the minimum set point for the thermal oxidizer. The minimum-operating limit for thermal oxidizers is 28°C (50°F) below the minimum set point temperature.

Compliance Demonstration Method:

The permittee must monitor the temperature in the firebox of the thermal oxidizer or immediately downstream of the firebox before any substantial heat exchange occurs. Compliance shall be demonstrated by monitoring and recording the combustion temperature as required in the Periodic Monitoring Requirements table, averaged over 3 hours.

c. Specific Operating Limitations for VOC Concentrators:

- (1) The permittee must keep the set point for the desorption gas inlet temperature no lower than 6°C (10°F) below the lower of that set point during the last successful performance test for the concentrator and the average desorption gas inlet temperature established during the performance test.
- (2) The permittee shall use the data collected during the performance test to calculate and record the average desorption gas inlet temperature. The minimum operating limit for the concentrator is 8°C (15°F) below the average desorption gas inlet temperature established during the performance test.

Compliance Demonstration Method:

Compliance shall be demonstrated by monitoring and recording desorption gas inlet temperature as required by the periodic monitoring requirements table, averaged over 3 hours.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

8. Alternate Operating Scenarios:

Alternate operating scenarios for Emission Units F21 Primer Booth and F22 Topcoat Booth:

Description and Applicable Regulations:

401 KAR 59:010 and 401 KAR 51:017 apply to all affected facilities listed in the following table.

EMISSION UNIT	OPERATION	CONSTRUCTION COMMENCED	CONTROL EQUIPMENT	OTHER APPLICABLE REGULATIONS
F21	Primer Booth and Oven, including: Hood Soft Chip/Rocker Antichip	July 2016	Scrubber TS27 for PM VOC Carryover to Oven	401 KAR 60:005 401 KAR 63:002
	Interior/ Exterior	July 2016	Scrubber TS27 for PM Automatic Zone – VOC Concentrator TC05 (optional) and Thermal Oxidizer TT14 for VOC	401 KAR 60:005 401 KAR 63:002
	Oven	July 2016	VOC Carryover to Oven Thermal Oxidizer TT15 for VOC	
	Topcoat Booth and Oven, including: Basecoat Booth	March 2014	Scrubber TS25 for PM VOC Carryover to Oven	40 CFR 64 401 KAR 60:005 401 KAR 63:002
F22	Clearcoat Booth	August 2014	Scrubber TS25 for PM VOC Carryover to Oven Automatic Zone – VOC Concentrator TC04 and Thermal Oxidizer TT13 for VOC	401 KAR 60:005 401 KAR 63:002
	Bake Oven	March 2014 December 26, 2016	Thermal Oxidizer TT11 for VOC	

Emission Limitations:

- 401 KAR 51:017:** Emissions of VOC from Emission Unit F25 (Non-Process Cleaning Activities including paint purging) in this alternate operating scenario shall not exceed 0.75 lb/job, as calculated on a monthly basis.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

8. Alternate Operating Scenarios (continued):

Compliance Demonstration Method:

$$VOC\ Value = \frac{\sum U_i * V_i * E_i * (1 - C_i * F_i)}{P}$$

U_i = Usage of material “i”,

V_i = Volatile organic compound (VOC) content,

E_i = VOC Emission Factor,

F_i = Control efficiency,

C_i = Collection efficiency,

P = Production rate (number of vehicles produced)

PM Value = Measurement, when prescribed by periodic monitoring requirements table. Otherwise PM shall be calculated as follows:

PM Value = SUM (P/P_m x E_i), or equivalent method approved by the Division

P = Average shop production throughput,

P_m = Maximum vehicle production rate

E_i = PM Emission Factor (controlled) for each stack “i”.

See Compliance Demonstration Method for 401 KAR 59:010, in this Section.

- b. **401 KAR 51:017:** The total VOC emissions from Emission Units F25 and F26 (Process and Non-Process Cleaning Activities including paint purging) in this alternate operating scenario shall not exceed 33 tons per year, based on a 12-month rolling total.

Compliance Demonstration Method:

$$VOC\ Value = [\sum (U_i * V_i * E_i) - \sum (R * V)] * (1 - C_i * F_i)$$

U_i = Usage of material “i”,

V_i = Volatile organic compound (VOC) content,

E_i = VOC Emission Factor,

F_i = Control efficiency,

C_i = Collection efficiency,

R = Volume of reclaimed purging solvent,

V = VOC content of reclaimed purging solvent.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Alternate Operating Scenario for Emission Units G22 and G26 Bumper Paint Booths VOC Control Equipment:

G22	Bumper Painting Operations: Coating Applications, Lines G & H	June 15, 2015	Booth G – Wet Scrubber RS14 for PM Booth H – Wet Scrubber RS15 for PM Booth G (Clear) – Concentrator RC04 for VOC Booth H (Clear) – Concentrator RC05 for VOC Booth G (Clear) – Th.Oxidizer RT08 for VOC Booth H (Clear) – Th.Oxidizer RT09 for VOC	401 KAR 63:002
G26	Plastic Bumper and Rocker Painting Operations:: Primer/Basecoat/Clearcoat Booths	August 2014	Primer Booth – Filters RF11 and Wet Scrubber RS13 for PM Basecoat Booth – Filters RF12 and Wet Scrubber RS13 for PM Clearcoat Booth – Filters RF13 and Wet Scrubber RS13 for PM Primer and Basecoat Booth (Automatic Zone) – VOC Concentrator RC06 and Thermal Oxidizer RT10 for VOC Clearcoat Booth (Automatic Zone) – Concentrator RC03 and Thermal Oxidizer RT07 for VOC	401 KAR 63:002

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

PAINT #1 Rebuilt - PERIODIC MONITORING REQUIREMENTS

Emission Unit	Operation	Equipment Monitored	Characteristic Monitored	Parameter Monitored	Method or Device	Monitoring Frequency	Recording Frequency	Calibration Frequency	Standard Range
E02R & E04R	Electro Deposition Oven & Sealer Oven	Thermal Oxidizer (RTO-03)	Destruction Efficiency	Combustion Chamber Temperature	Thermocouple	Continuous***	15 Minutes & Each Occurrence of an Alarm	Annual	Not More Than 28°C Below Combustion Temperature Limit
E02R & E04R	Electro Deposition Oven & Sealer Oven	Thermal Oxidizer (RTO-03)	Destruction Efficiency	VOC In / Out	Stack Test (EPA Method 25A)	Every 5 Years*	Every 5 Years*	Each Test	DRE ≥ 90%
E05R	Primer Booth/Oven	Entrance/ Exit Bypass Hood	Primer Emissions	Opacity	Visual	Refer to Section B.4	Refer to Section B.4	N/A	< 20 Percent
E05R & E07R	Primer-Booth Topcoat-Booth	Booth Scrubber (TS11, TS12)	PM Removal Efficiency	Water Flow	Flow Meter	Continuous	Hourly & Each occurrence of an alarm	Annual	Primer, Clear Exterior : 30-80 gpm Base Exterior, Clear Interior 40-110 gpm Base Exterior, 50-140 gpm
E05R	Primer-Booth	Booth Exhaust	Emission Rate	Particulate Emission	Stack Test (EPA Method 17)	Every 5 Years*	Every 5 Years*	Each Test	See Section B.2
E05R & E07R	Primer & Basecoat - Heated Flash Off, Clearcoat-Booth & ovens (D, E)	Thermal Oxidizer (RTO-05, RTO-06)	Destruction Efficiency	Combustion Chamber Temperature	Thermocouple	Continuous***	15 Minutes & Each Occurrence of an Alarm	Annual	Not More Than 28°C Below Combustion Chamber Limit
E05R & E07R	Primer & Basecoat - Heated Flash Off, Clearcoat-Booth & ovens (D, E)	Thermal Oxidizer (RTO-05, RTO-06)	Destruction Efficiency	VOC In / Out	Stack Test (EPA Method 25A)	Every 5 Years*	Every 5 Years*	Each Test	DRE ≥ 95%
E07R	Topcoat Booths	Booth Exhaust	Emission Rate	Particulate Emission	Stack Test (EPA Method 17)	Every 5 Years*	Every 5 Years*	Each Test	See Section B.2
E09R	Blackout Coating	Exhaust Filters (TF05)	PM Removal Efficiency	All Final Filters In Place	Visual Inspection	Monthly	Monthly	N/A	No Visible By-Pass

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Unit	Operation	Equipment Monitored	Characteristic Monitored	Parameter Monitored	Method or Device	Monitoring Frequency	Recording Frequency	Calibration Frequency	Standard Range
E09R	Blackout Coating	Exhaust Filters (TF05)	PM Removal Efficiency	Pressure Drop	Gauge	Continuous	Daily**	Annual	1.5 in H20
E13R	Non-process Cleaning Activities (Purge Recovery)	Waste Purge Tank	VOC Emission Reclaimed	Recovered Purge	Meter	Monthly	Monthly	Annual	See Permit Limit Section B.2
E13R	Non-process Cleaning Activities (Purge Recovery)	Virgin Purge Tank	VOC Emission	Virgin Purge	Meter (Primary)	Monthly	Monthly	Annual	See Permit Limit Section B.2

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

PAINT #2 PERIODIC MONITORING REQUIREMENTS

Emission Unit	Operation	Equipment Monitored	Characteristic Monitored	Parameter Monitored	Method or Device	Monitoring Frequency	Recording Frequency	Calibration Frequency	Standard Range
F02	Electrodeposition -Oven	Oven Stacks	Electro coat Emissions	Opacity	Visual	Refer to Section B.4	Refer to Section B.4	N/A	< 20 Percent
F02	Electrodeposition -Oven	Thermal Oxidizer (TT02)	Destruction Efficiency	Combustion Chamber Temperature	Thermocouple	Continuous*** **	15 Minutes & Each Occurrence of an Alarm	Annual	Not More Than 28°C Below Combustion Chamber Limit
F02	Electrodeposition -Oven	Thermal Oxidizer (TT02)	Destruction Efficiency	VOC In / Out	Stack Test (EPA Method 25A)	Every 5 Years*	Every 5 Years*	Each Test	DRE ≥ 93%
F04	Sealer-Oven	Thermal Oxidizer (TT03)	Destruction Efficiency	Combustion Chamber Temperature	Thermocouple	Continuous*** **	15 Minutes & Each Occurrence of an Alarm	Annual	Not More Than 28°C Below Combustion Chamber Limit
F04	Sealer-Oven	Thermal Oxidizer (TT03)	Destruction Efficiency	VOC In / Out	Stack Test (EPA Method 25A)	Every 5 years*	Every 5 years*	Each Test	DRE ≥ 95%
F05	Primer-Booth	VOC Concentrator System (TC01)	Collection Efficiency	Desorption Gas Inlet Temperature	Thermocouple	Continuous*** **	15 Minutes	Annual	Not More Than 8°C Below Desorption Gas Inlet Temperature Limit
F05	Primer-Booth	VOC Concentrator System (TC01)	Collection Efficiency	Desorption/ Reactivation Fan Operation	Visual	Monthly	Monthly	N/A	Operating
F05	Primer-Booth	VOC Concentrator System (TC01)	Collection Efficiency	Revolutions Per Hour (rph)	Stopwatch	Annually	Annually	N/A	1.0 – 2.0 rph

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Unit	Operation	Equipment Monitored	Characteristic Monitored	Parameter Monitored	Method or Device	Monitoring Frequency	Recording Frequency	Calibration Frequency	Standard Range
F05	Primer-Booth	VOC Concentrator System (TC01)	Collection Efficiency	Adsorbent Material Performance	See Section B4	Annually	Annually	See Section B4	See Section B4
F05	Primer-Booth	VOC Concentrator System (TC01)	Collection Efficiency	VOC In / Out	Stack Test (EPA Method 25A)	Every 5 Years*	Every 5 Years*	Each Test	Collection Efficiency $\geq 85\%$
F05	Primer-Booth	VOC Concentrator System (TC01)	Collection Efficiency	Wheel Rotation	Proximity Switch	Continuous	Each Occurrence of an Alarm	Annual Confirm	No Faults
F05	Primer-Booth	VOC Concentrator System (TC01)	Incinerator Collection	By-Pass Damper Position	Alarm	Continuous	Each Occurrence of an Alarm	Annual Confirm	No Faults
F05	Primer-Booth	Thermal Oxidizer (TT10)	Destruction Efficiency	Combustion Chamber Temperature	Thermocouple	Continuous*** **	15 Minutes & Each Occurrence of an Alarm	Annual	Not More Than 28°C Below Combustion Chamber Limit
F05	Primer-Booth	Thermal Oxidizer (TT10)	Destruction Efficiency	VOC In / Out	Stack Test (EPA Method 25A)	Every 5 Years*	Every 5 Years*	Each Test	DRE $\geq 95\%$
F05	Primer-Booth	Booth Scrubber (TS19)	PM Removal Efficiency	Gaps at Venturi	Visual	Weekly	Weekly	N/A	No Significant Gaps
F05	Primer-Booth	Booth Exhaust	Emission Rate	Particulate Emission	Stack Test (EPA Method 17)	Every 5 Years*	Every 5 Years*	Each Test	See Section B.2
F05	Primer-Oven	Thermal Oxidizer (TT05)	Destruction Efficiency	Combustion Chamber Temperature	Thermocouple	Continuous*** **	15 Minutes & Each Occurrence of an Alarm	Annual	Not More Than 28°C Below Combustion Chamber Limit

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Unit	Operation	Equipment Monitored	Characteristic Monitored	Parameter Monitored	Method or Device	Monitoring Frequency	Recording Frequency	Calibration Frequency	Standard Range
F05	Primer-Oven	Thermal Oxidizer (TT05)	Destruction Efficiency	VOC In / Out	Stack Test (EPA Method 25A)	Every 5 Years*	Every 5 Years*	Each Test	DRE ≥ 95%
F07	Topcoat Booths (A & B)	Exhaust Filters (Final Stage) (TF27, TF28)	PM Removal Efficiency	Pressure Drop	Gauge	Weekly	Weekly	Annual	0 - 2 in. H ₂ O
F07	Topcoat Booths (A & B)	Exhaust Filters (Final Stage) (TF27, TF28)	PM Removal Efficiency	All Final Filters In Place	Visual	Monthly	Monthly	N/A	No Visible By-Pass
F07	Topcoat Booths (A & B)	Booth Scrubber (TS23, TS24)	PM Removal Efficiency	Gaps at Venturi	Visual	Weekly	Weekly	N/A	No Significant Gaps
F07	Topcoat Booths (A & B)	Booth Exhaust	Emission Rate	Particulate Emission	Stack Test (EPA Method 17)	Every 5 Years*	Every 5 Years*	Each Test	See Section B.2
F07	Topcoat Booths (A & B)	VOC Concentrator System (TC02, TC03)	Collection Efficiency	Desorption Gas Inlet Temperature	Thermocouple	Continuous*** **	15 Minutes	Annual	Not More Than 8°C Below Desorption Gas Inlet Temperature Limit
F07	Topcoat Booths (A & B)	VOC Concentrator System (TC02, TC03)	Collection Efficiency	Desorption/Reactivation Fan Operation	Visual	Monthly	Monthly	N/A	Operating
F07	Topcoat Booths (A & B)	VOC Concentrator System (TC02, TC03)	Collection Efficiency	Revolutions Per Hour (rph)	Stopwatch	Annually	Annually	N/A	2.0 – 3.5 rph
F07	Topcoat Booths (A & B)	VOC Concentrator System (TC02, TC03)	Collection Efficiency	Adsorbent Material Performance	See Section B.4	Annually	Annually	See Section B.4	See Section B.4

Permit Number: V-20-026 R3

Page: 70 of 209

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Unit	Operation	Equipment Monitored	Characteristic Monitored	Parameter Monitored	Method or Device	Monitoring Frequency	Recording Frequency	Calibration Frequency	Standard Range
F07	Topcoat Booths (A & B)	VOC Concentrator System (TC02, TC03)	Collection Efficiency	VOC In / Out	Stack Test (EPA Method 25A)	Every 5 Years*	Every 5 Years*	Each Test	Collection Efficiency ≥ 85%
F07	Topcoat Booths (A & B)	VOC Concentrator System (TC02, TC03)	Collection Efficiency	Wheel Rotation	Proximity Switch	Continuous	Each Occurrence of an Alarm	Annual Confirm	No Faults
F07	Topcoat Booths (A & B)	VOC Concentrator System (TC02, TC03)	Incinerator Collection	By-Pass Damper Position	Alarm	Continuous	Each Occurrence of an Alarm	Annual Confirm	No Faults
F07	Topcoat Booths (A & B)	Thermal Oxidizer RTO-03 (Back-up TT06, TT08) *****	Destruction Efficiency	Combustion Chamber Temperature	Thermocouple	Continuous**	15 Minutes & Each Occurrence of an Alarm	Annual	Not More Than 28°C Below Combustion Chamber Limit
F07	Topcoat Booths (A & B)	Thermal Oxidizer RTO-03 (Back-up TT06, TT08) *****	Destruction Efficiency	VOC In / Out	Stack Test (EPA Method 25A)	Every 5 Years*	Every 5 Years*	Each Test	DRE ≥ 95%
F07	Topcoat Ovens (A & B)	Thermal Oxidizer (TT07, TT09)	Destruction Efficiency	Combustion Chamber Temperature	Thermocouple	Continuous**	15 Minutes & Each Occurrence of an Alarm	Annual	Not More Than 28°C Below Combustion Chamber Limit
F07	Topcoat Ovens (A & B)	Thermal Oxidizer (TT07, TT09)	Destruction Efficiency	VOC In / Out	Stack Test (EPA Method 25A)	Every 5 Years*	Every 5 Years*	Each Test	DRE ≥ 95%
F09	Blackout Coating	Exhaust Filters (Final Stage) (TF12)	PM Removal Efficiency	All Final Filters In Place	Visual Inspection	Monthly	Monthly	N/A	No Visible By-Pass

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Unit	Operation	Equipment Monitored	Characteristic Monitored	Parameter Monitored	Method or Device	Monitoring Frequency	Recording Frequency	Calibration Frequency	Standard Range
F09	Blackout Coating	Exhaust Filters (Final stage) (TF12)	PM Removal Efficiency	Pressure Drop	Gauge	Continuous	Daily**	Annual	0 – 0.7 in. H ₂ O
F13 & F25	Non-process Cleaning Activities (Purge Supply)	Virgin WB Purge Tank	VOC Emission	Virgin WB Purge	Manual	Monthly	Monthly	Annual	See Permit Limit Section B.2
F13 & F25	Non-process Cleaning Activities (Purge Recovery)	Waste SB Purge Tank	VOC Emission Reclaimed	Recovered SB Purge	Meter (Primary)	Monthly	Monthly	Annual	See Permit Limit Section B.2
F13 & F25	Non-process Cleaning Activities (Purge Supply)	Virgin SB Purge Tank	VOC Emission	Virgin SB Purge	Meter (Primary)	Monthly	Monthly	Annual	See Permit Limit Section B.2
F19	Electrodeposition Oven	Thermal Oxidizer (TT12)	Destruction Efficiency	Combustion Chamber Temperature	Thermocouple	Continuous***	15 Minutes & Each Occurrence of an Alarm	Annual	Not More Than 28°C Below Combustion Chamber Limit
F19	Electrodeposition Oven	Thermal Oxidizer (TT12)	Destruction Efficiency	VOC In / Out	Stack Test (EPA Method 25A)	Every 5 Years*	Every 5 Years*	Each Test	DRE ≥ 90%
F20	Sealer-Oven	Thermal Oxidizer (TT03)	Destruction Efficiency	Combustion Chamber Temperature	Thermocouple	Continuous***	15 Minutes & Each Occurrence of an Alarm	Annual	Not More Than 28°C Below Combustion Chamber Limit
F20	Sealer-Oven	Thermal Oxidizer (TT03)	Destruction Efficiency	VOC In / Out	Stack Test (EPA Method 25A)	Every 5 year*	Every 5 year*	Each Test	DRE ≥ 90%
F21	Primer-Booth	Booth Scrubber (TS27)	PM Removal Efficiency	Gaps at Venturi	Visual	Weekly	Weekly	N/A	No Significant Gaps
F21	Primer-Booth	Booth Scrubber (TS27)	Control Efficiency	Particulate Emission	Stack Test (EPA Method 17)	Every 5 Years*	Every 5 Years*	Each Test	See Section D.4

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Unit	Operation	Equipment Monitored	Characteristic Monitored	Parameter Monitored	Method or Device	Monitoring Frequency	Recording Frequency	Calibration Frequency	Standard Range
F21	Primer-Booth Automatic Zone	VOC Concentrator System (TC05)	Collection Efficiency	Desorption Gas Inlet Temperature	Thermocouple	Continuous*** **	15 Minutes	Annual	Not More Than 8°C Below Desorption Gas Inlet Temperature Limit
F21	Primer-Booth Automatic Zone	VOC Concentrator System (TC05)	Collection Efficiency	Desorption/ Reactivation Fan Operation	Air Flow Monitor	Continuous	Each Occurrence of an Alarm	Annual	2100-2800 FPM
F21	Primer-Booth Automatic Zone	VOC Concentrator System (TC05)	Collection Efficiency	Adsorbent Material Performance	See Section B.4	Annually	Annually	See Section B.4	See Section B.4
F21	Primer-Booth Automatic Zone	VOC Concentrator System (TC05)	Collection Efficiency	VOC In / Out	Stack Test (EPA Method 25A)	Every 5 Years*	Every 5 Years*	Each Test	Collection Efficiency ≥ 85%
F21	Primer-Booth Automatic Zone	VOC Concentrator System (TC05)	Collection Efficiency	Adsorber Pressure Drop Across Trays	Pressure Sensor	Continuous	Each Occurrence of an Alarm	Annual Confirm	>0.7 in. H ₂ O
F21	Primer-Booth Automatic Zone	VOC Concentrator System (TC05)	Incinerator Collection	By-Pass Damper Position	Alarm	Continuous	Each Occurrence of an Alarm	Annual Confirm	No Faults
F21	Primer-Booth Automatic Zone	Thermal Oxidizer (TT14)	Destruction Efficiency	Combustion Chamber Temperature	Thermocouple	Continuous*** **	15 Minutes & Each Occurrence of an Alarm	Annual	Not More Than 28°C Below Combustion Chamber Limit
F21	Primer-Booth Automatic Zone	Thermal Oxidizer (TT14)	Destruction Efficiency	VOC In / Out	Stack Test (EPA Method 25A)	Every 5 Years*	Every 5 Years*	Each Test	DRE ≥ 95%
F21	Primer-Oven	Thermal Oxidizer (TT15)	Destruction Efficiency	Combustion Chamber Temperature	Thermocouple	Continuous*** **	15 Minutes & Each Occurrence of an Alarm	Annual	Not More Than 28°C Below Combustion Chamber Limit

Permit Number: V-20-026 R3

Page: 73 of 209

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Unit	Operation	Equipment Monitored	Characteristic Monitored	Parameter Monitored	Method or Device	Monitoring Frequency	Recording Frequency	Calibration Frequency	Standard Range
F21	Primer-Oven	Thermal Oxidizer (TT15)	Destruction Efficiency	VOC In / Out	Stack Test (EPA Method 25A)	Every 5 Years*	Every 5 Years*	Each Test	DRE ≥ 95%
F22/F21	Topcoat/Primer Booths	Booth Scrubber (TS25)	PM Removal Efficiency	Gaps at Venturi	Visual	Weekly	Weekly	N/A	No Significant Gaps
F22/F21	Topcoat/Primer Booths	Booth Scrubber (TS25)	Control Efficiency	Particulate Emission	Stack Test (EPA Method 17)	Every 5 Years*	Every 5 Years*	Each Test	See Section D.4
F22/F21	Topcoat – Clearcoat/Primer Automatic Zone	VOC Concentrator System (TC04)	Collection Efficiency	Desorption Gas Inlet Temperature	Thermocouple	Continuous*** **	15 Minutes	Annual	Not More Than 8°C Below Desorption Gas Inlet Temperature Limit
F22/F21	Topcoat – Clearcoat/Primer Automatic Zone	VOC Concentrator System (TC04)	Collection Efficiency	Desorption/Reactivation Fan Operation	Visual	Monthly	Monthly	N/A	Operating
F22/F21	Topcoat – Clearcoat/Primer Automatic Zone	VOC Concentrator System (TC04)	Collection Efficiency	Adsorbent Material Performance	See Section B.4	Annually	Annually	See Section B.4	See Section B.4
F22/F21	Topcoat – Clearcoat/Primer Automatic Zone	VOC Concentrator System (TC04)	Collection Efficiency	VOC In / Out	Stack Test (EPA Method 25A)	Every 5 Years*	Every 5 Years*	Each Test	Collection Efficiency ≥ 85%
F22/F21	Topcoat – Clearcoat/Primer Automatic Zone	VOC Concentrator System (TC04)	Collection Efficiency	Adsorbent Pressure Drop Across Trays	Pressure Sensor	Continuous	Each Occurrence of an Alarm	Annual Confirm	> 0.7 in. H ₂ O
F22/F21	Topcoat – Clearcoat/Primer Automatic Zone	VOC Concentrator System (TC04)	Incinerator Collection	By-Pass Damper Position	Alarm	Continuous	Each Occurrence of an Alarm	Annual Confirm	No Faults

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Unit	Operation	Equipment Monitored	Characteristic Monitored	Parameter Monitored	Method or Device	Monitoring Frequency	Recording Frequency	Calibration Frequency	Standard Range
F22/F21	Topcoat – Clearcoat/Primer Automatic Zone	Thermal Oxidizer (TT13)	Destruction Efficiency	Combustion Chamber Temperature	Thermocouple	Continuous*** **	15 Minutes & Each Occurrence of an Alarm	Annual	Not More Than 28°C Below Combustion Chamber Limit
F22/F21	Topcoat – Clearcoat/Primer Automatic Zone	Thermal Oxidizer (TT13)	Destruction Efficiency	VOC In / Out	Stack Test (EPA Method 25A)	Every 5 Years*	Every 5 Years*	Each Test	DRE ≥ 95%
F22/F21	Topcoat Oven & Primer Oven	Thermal Oxidizer (TT11)	Destruction Efficiency	Combustion Chamber Temperature	Thermocouple	Continuous*** **	15 Minutes & Each Occurrence of an Alarm	Annual	Not More Than 28°C Below Combustion Chamber Limit
F22/F21	Topcoat Oven & Primer Oven	Thermal Oxidizer (TT11)	Destruction Efficiency	VOC In / Out	Stack Test (EPA Method 25A)	Every 5 Years*	Every 5 Years*	Each Test	DRE ≥ 95%

Alternate Operating Scenario for Emission Unit F21 Primer Booth:

If Thermal Oxidizer (TT14) is utilized to control emissions from Emission Unit F21 Primer Booth instead of VOC Concentrator (TC05)/Thermal Oxidizer (TT14), the permittee shall comply with period monitoring requirements listed below:

Emission Unit	Operation	Equipment Monitored	Characteristic Monitored	Parameter Monitored	Method or Device	Monitoring Frequency	Recording Frequency	Calibration Frequency	Standard Range
F21	Primer-Booth Automatic Zone	Thermal Oxidizer (TT14)	Destruction Efficiency	Combustion Chamber Temperature	Thermocouple	Continuous*** **	15 Minutes & Each Occurrence of an Alarm	Annual	Not More Than 28°C Below Combustion Chamber Limit
F21	Primer-Booth Automatic Zone	Thermal Oxidizer (TT14)	Destruction Efficiency	VOC In / Out	Stack Test (EPA Method 25A)	Every 5 Years*	Every 5 Years*	Each Test	DRE ≥ 81%

* No more than 5 years from the last performance test.

***“Daily” means TMMK production day; A TMMK production day consists of both first and second shifts. F09 Blackout manual booth used as back-up only, daily pressure drop monitoring for exhaust filters applicable only when manual booth is in use.

***** “Continuous” means at least one (1) reading every 15 minutes

***** If this back-up control device operates for more than 30 consecutive days TMMK shall perform a performance test within 90 days.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

PLASTICS - PERIODIC MONITORING REQUIREMENTS

Emission Unit	Operation	Equipment Monitored	Characteristic Monitored	Parameter Monitored	Method or Device	Monitoring Frequency	Recording Frequency	Calibration Frequency	Standard Range
G13	Slush Mold	Fluidized Bed Filters (RF01, RF02, RF03, RF04)	PM Removal Efficiency	Press Drop	Gauge	Weekly	Weekly	Annual	0 – 5 in. H ₂ O
G19/G27	Non-process Cleaning Activities (Purge Recovery)	Solventborne Waste Purge Tank (Line 1, 2 and 3)	VOC Emission Credit	Recovered Purge	Meter	Monthly	Monthly	Annual	See Permit Limit Section B.2
G19/G27	Non-process Cleaning Activities (Purge Usage)	Solventborne Virgin Purge Tank (Line 1, 2 and 3)	VOC Emission	Virgin Purge	Meter	Monthly	Monthly	Annual	See Permit Limit Section B.2
G19	Non-process Cleaning Activities (Purge Usage)	Solventborne Virgin Purge Tank (Injection Parts)	VOC Emission	Virgin Purge	Meter	Monthly	Monthly	Annual	See Permit Limit Section B.2
G21	Ext Part Paint Booth B1	Exhaust Filters (RF14)	PM Removal Efficiency	All Final Filters In Place	Visual Inspection	Monthly	Monthly	N/A	No Visible By-Pass
G21	Ext Part Paint Booth B1	Exhaust Filters (RF14)	PM Removal Efficiency	Press Drop	Gauge	Continuous	Weekly	Annual	0 – 1 in. H ₂ O
G21	Ext Part Paint Booth B1	Booth Scrubbers (RS16)	PM Removal Efficiency	Water Flow	Flow Meter	Continuous	Hourly & Each occurrence of an alarm	Annual	37 - 53 gpm
G21	Ext Part Paint Booth B1	Booth Exhaust	PM Emission Rate	Particulate Emission	Stack Test (EPA Method 17)	Every 5 years*	Every 5 years*	Each Test	See Section B.2
G21	Ext Part Paint Booth B1	Thermal Oxidizers (RT11)	Destruction Efficiency	VOC In / Out	Stack Test (EPA Method 25A)	Every 5 Years*	Every 5 Years*	Each Test	DRE ≥ 95%
G21	Ext Part Paint Booth B1	Thermal Oxidizers (RT11)	Destruction Efficiency	Combustion Chamber Temperature	Thermocouple	Continuous***	15 Minutes	Annual	Not More Than 28°C Below Combustion Chamber Limit

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Unit	Operation	Equipment Monitored	Characteristic Monitored	Parameter Monitored	Method Device	Monitoring Frequency	Recording Frequency	Calibration Frequency	Standard Range
G21	Ext Part Paint Booth B1	VOC Concentrator System (RC07)	Collection Efficiency	Desorption Gas Inlet Temperature	Thermocouple	Continuous***	15 Minutes & Each Occurrence of an Alarm	Annual	Not More Than 8°C Below Desorption Gas Inlet Temperature Limit
G21	Ext Part Paint Booth B1	VOC Concentrator System (RC07)	Collection Efficiency	Desorption/Reactivation Fan Operation	Visual	Monthly	Monthly	N/A	Operating
G21	Ext Part Paint Booth B1	VOC Concentrator System (RC07)	Collection Efficiency	Adsorbent Material Performance	See Section B.4	Annually	Annually	See Section B.4	See Section B.4
G21	Ext Part Paint Booth B1	VOC Concentrator System (RC07)	Collection Efficiency	VOC In / Out	Stack Test (EPA Method 25A)	Every 5 Years*	Every 5 Years*	Each Test	Collection Efficiency ≥ 85%
G21	Ext Part Paint Booth B1	VOC Concentrator System (RC07)	Collection Efficiency	By-Pass Damper Position	Alarm	Continuous	Each Occurrence of an Alarm	Annual Confirm	No Faults
G21	Ext Part Paint Booth B1	VOC Concentrator System (RC07)	Collection Efficiency	Pressure Drop Across Carbon	Pressure Sensor	Continuous	Each Occurrence of an Alarm	Annual Confirm	0.25-3.0 in H2O
G22	Bumper Paint Booths (G,H)	Booth Scrubbers (RS14, RS15)	PM Removal Efficiency	Water Flow	Flow Meter	Continuous	Hourly & Each occurrence of an alarm	Annual	20 – 44 GPM
G22	Bumper Paint Booths (G,H)	Booth Exhaust	Emission Rate	Particulate Emission	Stack Test (EPA Method 17)	Every 5 Years*	Every 5 Years*	Each Test	See Section B.2
G22	Bumper Paint Booths (G,H)	Thermal Oxidizers (RT12)	Destruction Efficiency	VOC In / Out	Stack Test (EPA Method 25A)	Every 5 Years*	Every 5 Years*	Each Test	Control Efficiency ≥ 81%
G22	Bumper Paint Booths (G,H)	Thermal Oxidizers (RT12)	Destruction Efficiency	Combustion Chamber Temperature	Thermocouple	Continuous***	15 Minutes	Annual	Not More Than 28°C Below Combustion Chamber Limit

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Unit	Operation	Equipment Monitored	Characteristic Monitored	Parameter Monitored	Method Device	Monitoring Frequency	Recording Frequency	Calibration Frequency	Standard Range
G26	Bumper and Rocker Paint Booths	Exhaust Filters (RF11, RF12, RF13)	PM Removal Efficiency	Press Drop	Gauge	Continuous	Weekly	Annual	0 – 1.1 in. H ₂ O
G26	Bumper and Rocker Paint Booths	Exhaust Filters (RF11, RF12, RF13)	PM Removal Efficiency	All Filters In Place	Visual Inspection	Monthly	Monthly	N/A	No Visible By-Pass
G26	Bumper and Rocker Paint Booths	Booth Scrubbers (RS13)	PM Removal Efficiency	Gaps at Venturi	Visual Inspection	Weekly	Weekly	N/A	No Significant Gaps
G26	Bumper and Rocker Paint Booths	Booth Exhaust	Control Efficiency	Particulate Emission	Stack Test (EPA Method 17)	Every 5 Years*	Every 5 Years*	Each Test	See Section D.4
G26	Bumper and Rocker Paint Booths	Thermal Oxidizer (RT12)	Destruction Efficiency	VOC In / Out	Stack Test (EPA Method 25A)	Every 5 Years*	Every 5 Years*	Each Test	Control Efficiency ≥ 81%
G26	Bumper and Rocker Paint Booths	Thermal Oxidizer (RT12)	Destruction Efficiency	Combustion Chamber Temperature	Thermocouple	Continuous***	15 Minutes	Annual	Not More Than 28°C Below Combustion Chamber Limit

* No more than 5 years from the last performance test.

**“Daily” means TMMK production day; A TMMK production day consists of both first and second shifts.

*** “Continuous” means at least one (1) reading every 15 minutes

Alternate Operating Scenario for Emission Units G22 and G26 Bumper Paint Booths VOC Control Equipment:

If Thermal Oxidizers (RT07-10) and Concentrators (RC03-06) are utilized to control emissions from Emission Unit G22 and G26 Bumper Paint Booths instead of Thermal Oxidizer (RT12), the permittee shall comply with period monitoring requirements listed below:

Emission Unit	Operation	Equipment Monitored	Characteristic Monitored	Parameter Monitored	Method Device	Monitoring Frequency	Recording Frequency	Calibration Frequency	Standard Range
G22	Bumper Paint Booths (G,H)	Thermal Oxidizers (RT08, RT09)	Destruction Efficiency	VOC In / Out	Stack Test (EPA Method 25A)	Every 5 Years***	Every 5 Years***	Each Test	DRE ≥ 95%

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Unit	Operation	Equipment Monitored	Characteristic Monitored	Parameter Monitored	Method or Device	Monitoring Frequency	Recording Frequency	Calibration Frequency	Standard Range
G22	Bumper Paint Booths (G,H)	Thermal Oxidizers (RT08, RT09)	Destruction Efficiency	Combustion Chamber Temperature	Thermocouple	Continuous***	15 Minutes	Annual	Not More Than 28°C Below Combustion Chamber Limit
G22	Bumper Paint Booths (G,H)	VOC Concentrator System (RC04, RC05)	Collection Efficiency	Desorption Gas Inlet Temperature	Thermocouple	Continuous***	15 Minutes & Each Occurrence of an Alarm	Annual	Not More Than 8°C Below Desorption Gas Inlet Temperature Limit
G22	Bumper Paint Booths (G,H)	VOC Concentrator System (RC04, RC05)	Collection Efficiency	Desorption/Reactivation Fan Operation	Visual Inspection	Monthly	Monthly	N/A	Operating
G22	Bumper Paint Booths (G,H)	VOC Concentrator System (RC04, RC05)	Collection Efficiency	Adsorbent Material Performance	See Section B.4	Annually	Annually	See Section B.4	See Section B.4
G22	Bumper Paint Booths (G,H)	VOC Concentrator System (RC04, RC05)	Collection Efficiency	VOC In / Out	Stack Test (EPA Method 25A)	Every 5 Years****	Every 5 Years****	Each Test	Collection Efficiency ≥ 85%
G22	Bumper Paint Booths (G,H)	VOC Concentrator System (RC04, RC05)	Collection Efficiency	Adsorber Pressure Drop Across Trays	Pressure Sensor	Continuous	Each Occurrence of an Alarm	Annual Confirm	> 0.5 in. H ₂ O
G26	Bumper and Rocker Paint Booths	Booth Exhaust	Control Efficiency	Particulate Emission	Stack Test (EPA Method 17)	Every 5 Years****	Every 5 Years****	Each Test	See Section D.4
G26	Bumper and Rocker Paint Booths	VOC Concentrator System (RC03, RC06)	Collection Efficiency	Desorption Gas Inlet Temperature	Thermocouple	Continuous***	15 Minutes & Each Occurrence of an Alarm	Annual	Not More Than 8°C Below Desorption Gas Inlet Temperature Limit
G26	Bumper and Rocker Paint Booths	VOC Concentrator System (RC03, RC06)	Collection Efficiency	Desorption/Reactivation Fan Operation	Visual Inspection	Monthly	Monthly	N/A	Operating

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Unit	Operation	Equipment Monitored	Characteristic Monitored	Parameter Monitored	Method or Device	Monitoring Frequency	Recording Frequency	Calibration Frequency	Standard Range
G26	Bumper and Rocker Paint Booths	VOC Concentrator System (RC03, RC06)	Collection Efficiency	Adsorbent Material Performance	See Section B.4	Annually	Annually	See Section B.4	See Section B.4
G26	Bumper and Rocker Paint Booths	VOC Concentrator System (RC03, RC06)	Collection Efficiency	VOC In / Out	Stack Test (EPA Method 25A)	Every 5 Years****	Every 5 Years****	Each Test	Collection Efficiency $\geq 85\%$
G26	Bumper and Rocker Paint Booths	VOC Concentrator System (RC03, RC06)	Collection Efficiency	Adsorbent Pressure Drop Across Trays	Pressure Sensor	Continuous	Each Occurrence of an Alarm	Annual Confirm	> 0.5 in. H ₂ O
G26	Bumper and Rocker Paint Booths	VOC Concentrator System (RC03)	Incinerator Collection	By-Pass Damper Position	Alarm	Continuous	Each Occurrence of an Alarm	Annual Confirm	No Faults
G26	Bumper and Rocker Paint Booths	Thermal Oxidizer (RT07, RT10)	Destruction Efficiency	VOC In / Out	Stack Test (EPA Method 25A)	Every 5 Years****	Every 5 Years****	Each Test	DRE $\geq 95\%$
G26	Bumper and Rocker Paint Booths	Thermal Oxidizer (RT07, RT10)	Destruction Efficiency	Combustion Chamber Temperature	Thermocouple	Continuous***	15 Minutes	Annual	Not More Than 28°C Below Combustion Chamber Limit

**“Daily” means TMMK production day; A TMMK production day consists of both first and second shifts.

*** “Continuous” means at least one (1) reading every 15 minutes

**** If either of the back-up control devices operates for more than 30 consecutive days TMMK shall perform a performance test on the operated device within 90 days.

**SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE
REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

POWERTRAIN

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Description and Applicable Regulations:

401 KAR 59:010 and 401 KAR 51:017 apply to all affected facilities listed in the following table.

POWERTRAIN, 800 BUILDING, Operations include the following processes

EMISSION UNIT	OPERATION	CONSTRUCTION COMMENCED	CONTROL EQUIPMENT	OTHER APPLICABLE REGULATIONS
H01	All Cutting Operations Engine Lines	1988-1999 1988-1999 2007, 2015 2022 Modified June 2023	Filters for PM (MZY 1110-1,2) HVAC Filters for PM	
H02	Coating Application, including hub and shaft	1988-1999	None	401 KAR 63:002
H03	All Honing Operations Engine Lines	1988-1999 2015 2007 2022	All Other - HVAC Filters for PM	
H04	All Grinding Operations Engine Lines	1988-1999 2007, 2015 2022 Modified June 2023	HVAC Filters for PM	
H05	Non Process Solvent Cleaning Operations, including, CIPG and other areas	1988-2013	None	401 KAR 59:185 401 KAR 63:002
H06	Corrosion Inhibitor Application	1988-2013	None	401 KAR 63:002
H07	Source Removed	1988	None	

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EMISSION UNIT	OPERATION	CONSTRUCTION COMMENCED	CONTROL EQUIPMENT	OTHER APPLICABLE REGULATIONS
H08	Quenching Engine Lines	1988-1999 1988, 2015 2007 2022	HVAC Filters for PM	
H09	Washing	1988, 2015 Modified June 2023	HVAC Filters for PM	
H10	Gasket Installation Engine Lines	1988-1999, 2015 2015 2007 2022	None	401 KAR 63:002
H11	Raw Material Storage / Supply Engine Lines	1988-1993 1988-2013 2007-2008 2022	Gasoline Tanks – Conservation Vent for breathing losses, vapor balancing for working losses Two 10,000 gallon engine oil storage tanks are included (OT-08).	401 KAR 59:050 for OT-08
H12 H12-01 H12-02 H12-03 H12-06 H12-04 H12-07 H12-05 H12-08	Sub-Assembly and Final Engine Testing Fuel Day Tanks LLC Coolant Fluid Filing L4 Area: Loaded Dynamometer Test (4) Cells V6 Area: Loaded Dynamometer Test (3) Cells L4 Area: Up/Down Test Cells V6 Area: Up/Down Test Cells L4 Area: Hot Testing V6 Area: Hot Testing	1988, 2015 1988, 2015 2007-2008, 2015 2022	CC System for each cell CC System for each cell	40 CFR 64 40 CFR 64

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EMISSION UNIT	OPERATION	CONSTRUCTION COMMENCED	CONTROL EQUIPMENT	OTHER APPLICABLE REGULATIONS
H13	Operational Support, including material supply systems, scrap material handling, tool regrind and maintenance machining (Insignificant Activities List)	1988, 2015	None	
H14	Block Impregnation	Oct-98 2015	None	401 KAR 63:002
H15/H15b	Process Lubrication Activities (Building 800 for H15, Building 200 for H15b)	1988, 2015	None	
H16	Process Cleaning Operations Engine Lines	1988, 2015 1988, 2019 2007, 2018 2022	L4 & L4-2 Line – Laser Cladding Process Cleaning – Thermal Oxidizer KT01 for VOC (<i>KT01 will be removed December 2023</i>)	401 KAR 63:002
H17	Final Assembly Operations	1988, 2015, 2022	None	

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

APPLICABLE REGULATIONS:

401 KAR 51:017, *Prevention of significant deterioration of air quality*

401 KAR 59:010, *New Process Operations*

401 KAR 59:050, *New storage vessels for petroleum liquids*

401 KAR 59:185, *New solvent metal cleaning equipment*

401 KAR 63:002 Section 2(4)(ooo), **40 C.F.R. 63.3080 to 63.3176, Tables 1 through 4, and Appendix A (Subpart IIII)**, *National Emission Standards for Hazardous Air Pollutants: Surface Coating of Automobiles and Light-Duty Trucks* (Refer to Section B Group Requirements)

40 CFR 64, *Compliance Assurance Monitoring (CAM)*, (See Section E, EU H12-03 and H-06).

401 KAR 63:002 Section 2(4)(tttt) **40 C.F.R. 63.9280 to 63.9375, Tables 1 through 7 (Subpart PPPPP)**, *National Emission Standards for Hazardous Air Pollutants for Engine Test Cells/Standards* (Existing affected sources do not have to meet Subparts A of 40 CFR part 63 except for initial notification requirements).

1. Operating Limitations:

- a. The usage rates of materials used in all affected facilities shall be limited so as not to exceed the emission limitations in Section B.2. Refer to Section B Group Requirements for requirements specific to 40 CFR 63 Subpart IIII.
- b. Wherever practicable, the permittee shall utilize work practices to minimize emissions from non-process cleaning activities.

Specific Operating Limitations for Cold Cleaner in Emission Unit H05:

- c. The permittee shall comply with control equipment and operating requirements specified in 401 KAR 59:185, Section 4 (1) & (2). Refer to Section B Group Requirements.

Specific Operating Limitations for H11 401 KAR 59:050 affected tanks:

- d. If the storage vessel has a storage capacity greater than 2,195 liters (580 gallons), and if the true vapor pressure of the petroleum liquid, as stored, is equal to or greater than ten and three-tenths (10.3) kPa (one and five-tenths (1.5) psia), as a minimum it shall be equipped with a permanent submerged fill pipe [401 KAR 59:050 Section 3.(2)].
- e. There shall be no visible holes, tears, or other opening in the seal, any seal fabric, shoe, or seal envelope [401 KAR 59:050 Section 4.(1)].
- f. All openings, except stub drains, automatic bleeder vents, rim space vents, and leg sleeves, shall be equipped with covers, lids, or seals such that [401 KAR 59:050 Section 4.(2)]:
 - (1) The cover, lid, or seal is in the closed position at all times (i.e., no visible gap) except when in actual use or as described in subsection (3)(f) of section 4 of 401 KAR 59:050;

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- (2) Automatic bleeder vents are closed at all times except when the roof is floated off or landed on the roof leg supports; and
- (3) Rim vents, if provided, are set to open when the roof is being floated off the roof leg supports or at the manufacturer's recommended setting.

Specific Operating Limitations for Emission Unit H12:

- g. Pursuant to 401 KAR 51:017 Section 8(3), the permittee shall install and operate whenever a dynamometer is performing a loaded test pattern in H12(03) or H12(06), the Catalytic Converter System (CC System) required to meet the BACT limitation for control of CO. The timeframe to construct and operate the CC System shall be in compliance with the compliance schedule approved by the Division.

Compliance Demonstration Method:

See subsections **3. Testing Requirements**, **4. Specific Monitoring Requirements**, **5. Specific Recordkeeping Requirements**, and **7. Specific Control Equipment Operating Conditions**.

- h. Pursuant to **401 KAR 51:017**, the permittee shall not exceed the following limits:

Process ID	Operation Description	Short-Term Operational Restrictions	Annual Operational Restrictions
H12(03)	L4 Area: Loaded Dynamometer Test Cells	92.4 gallons of fuel/hour (Calculated as daily average)	170,000 gallons of fuel / 12 rolling months
H12(06)	V6 Area: Loaded Dynamometer Test Cells	69.3 gallons of fuel/hour (Calculated as daily average)	200,000 gallons of fuel / 12 rolling months
H12(04)	L4 Area: Up/Down Test Cell	1.9 gallons of fuel/hour (Calculated as monthly average)	6,000 gallons of fuel / 12 rolling months
H12(07)	V6 Area: Up/Down Test Cell	1.9 gallons of fuel/hour (Calculated as monthly average)	6,000 gallons of fuel / 12 rolling months
H12(05)	L4 Area: Hot Testing	110 engines hot tested/hour (Calculated as monthly average)	338,983 engines hot tested / 12 rolling months
H12(08)	V6 Area: Hot Testing	64.3 engines hot tested/hour (Calculated as monthly average)	342,466 engines hot tested / 12 rolling months

Compliance Demonstration Method:

- (1) See subsections **3. Testing Requirements**, **4. Specific Monitoring Requirements** and **5. Specific Recordkeeping Requirements** for compliance with the control efficiency requirement.
- (2) **Annual Operational Restrictions**: Gallons of fuel usage, hours of operation, and numbers of engines tested shall be recorded as indicated by subsections **4. Specific Monitoring Requirements** and **5. Specific Recordkeeping Requirements**

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(3) Short-Term Operational Restrictions:

H12(03) and H12(06):

Daily gallons of fuel usage and daily hours of operation shall be recorded for H12(03) and H12(06) as indicated by subsection 4. **Specific Monitoring Requirements** and subsection 5. **Specific Recordkeeping Requirements** and shall be used to calculate the hourly usage and shall be compared to the above limit.

Hourly fuel limit (gal/hr) = Daily fuel usage / Daily hours of operation

H12(04), H12(07), H12(05) and H12(08):

Monthly fuel usage/engines tested and monthly hours of operation shall be recorded for H12(04), H12(07), H12(05) and H12(08) as indicated by 4. **Specific Monitoring Requirements** and by 5. **Specific Recordkeeping Requirements** and shall be used to calculate the hourly usage and shall be compared to the above limit.

Hourly fuel or engines tested limit = Monthly fuel or engines tested / Monthly hours of operation

2. Emission Limitations:

- a. **401 KAR 59:010, Section 3 (1):** The opacity of visible emissions from each stack shall not equal or exceed 20 percent.

Compliance Demonstration Method:

See subsection 4. **Specific Monitoring Requirements**.

- b. **401 KAR 59:010, Section 3 (2):**

Emission of particulate matter from a control device or stack of any affected facility up to a process rate of 1000 lbs/hr shall not exceed **2.34** lbs/hr. For processing rates greater than 1000 lbs/hr up to 60,000 lbs/hr, particulate emissions shall not exceed the emission rate calculated by the following equation:

$$E = 3.59(P)^{0.62}$$

E = the PM emissions rate (pounds/hour)

P = the process rate (tons/hour)

Compliance Demonstration Method:

- (1) The total process weight, "P" as defined above must reflect a period that covers a complete operation or an integral number of cycles, divided by the hours of actual process operation during such a period. This period shall not exceed 24 hours. In the case where there are no periodic monitoring requirements associated with the affected facility, continuous compliance shall be assured as long as there are no process or operational changes. The determination of the emission rate "E" in pounds per hour for compliance with 401 KAR 59:010 may also be used to demonstrate compliance with 401 KAR 51:017, except that the period allowed for the determination of "P" shall be one month.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(2) For affected facilities with periodic monitoring requirements for particulate emissions, the source shall demonstrate continuous compliance by adhering to the periodic monitoring requirements table. The source must maintain a record of deviations from “standard ranges” in the periodic monitoring requirements table and determine the particulate emissions from the deviation. The duration of the deviation shall be the period between when the “out of standard condition” was noted and when it is corrected. If an engineering evaluation utilizing a control efficiency is used to determine particulate emissions for the affected facility, the allowed control efficiency shall be zero during the deviation period unless testing is conducted to prove otherwise.

- c. **401 KAR 51:017:** Emissions of VOC and PM shall not exceed the following, as calculated on a monthly basis:

EMISSION UNIT	OPERATION	VOC LIMIT (lb/job)	PM LIMIT (lb/hr)
H01	Cutting Operations	0.13	N/A
H03	Honing Operations	0.030	N/A
H04	Grinding Operations	0.015	N/A
H05	Non-Process Cleaning Activities	0.031	N/A
H08	Quenching Activities	0.016	N/A
ALL POINTS	All Powertrain Operations	N/A	3.69

Compliance Demonstration Method:

$$VOC\ Value = \frac{\sum U_i * V_i * E_i * (1 - C_i * F_i)}{P}$$

U_i = Usage of material “i”,

V_i = Volatile organic compound (VOC) content,

E_i = VOC Emission Factor,

F_i = Control efficiency,

C_i = Collection efficiency,

P = Production rate (total number of engines and axles assembled)

PM Value = Measurement, when prescribed by periodic monitoring requirements table.

Otherwise PM shall be calculated as follows:

$$PM\ Value = \sum \frac{P}{P_m} * E_i, \text{ or equivalent methods approved by Division,}$$

P = Average shop production throughput,

P_m = Maximum vehicle production rate

E_i = PM Emission Factor (controlled) for each stack “i”.

See Compliance Demonstration Method for 401 KAR 59:010, in this Section.

- d. **401 KAR 51:017:** Emissions of VOC shall not exceed 182.4 tons per year, based on a 12-month rolling total.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Compliance Demonstration Method:

$$VOC\ Value = \sum U_i * V_i * E_i * (1 - C_i * F_i)$$

U_i = Usage of material “i”,
 V_i = Volatile organic compound (VOC) content,
 E_i = VOC Emission Factor,
 F_i = Control efficiency,
 C_i = Collection efficiency.

- e. **401 KAR 51:017:** Emissions of PM shall not exceed 16.1 tons per year from Powertrain Operations, based on a 12-month rolling total.

Compliance Demonstration Method:

- (1) Calculated from the following equation, except where testing specified (see item 3)

$$PM\ Value = \sum P * E_i$$

P = Average shop production throughput
 E_i = PM Emission Factor (controlled) for “i”,
 (2) See Compliance Demonstration Method for 401 KAR 59:010, in this Section.
 (3) Testing, see periodic monitoring requirements table.

- f. **401 KAR 51:017:**

Emissions of CO from engine testing shall not exceed the following limits:

EMISSION UNIT	OPERATION	CO LIMIT based on 3-hr average (lb/hr)	Control Requirement
H12 (03)	L4 Area: Loaded Dynamometer 4 Test Cells (4 CC Systems)	6.39 per cell	CC System in each cell to achieve a 96% or greater control efficiency, except during “low inlet loadings of CO*”, idle, or non-loaded test patterns.
H12 (06)	V6 Area: Loaded Dynamometer 3 Test Cells (3 CC Systems)	6.39 per cell	CC System in each cell to achieve a 96% or greater control efficiency, except during “low inlet loadings of CO*”, idle, or non-loaded test patterns.
H12 (04)	L4 Area : Up/Down Test Cells	2.07	None
H12 (07)	V6 Area : Up/Down Test Cells	2.07	None
H12 (05)	L4 Area :Hot Testing	9.30	None
H12 (08)	V6 Area : Hot Testing	6.70	None

* “low inlet loading of CO” refers to test patterns which generate uncontrolled CO emission rates based on a 3-hour average which are lower than the CO BACT limit of 6.39 lb/hr.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Compliance Demonstration Method:

The following equation may be used to calculate CO emissions:

CO Emission lb/hr = Emission factor of CO (lb/gal) as listed in KYEIS X consumption of fuel in gallons/hr-cell)(1-Control Efficiency of Catalytic Converter System) X number of cells

See subsections **3. Testing Requirements**, **4. Specific Monitoring Requirements** and **5. Specific Recordkeeping Requirements** for compliance with CO emissions and control efficiency requirements.

g. 40 CFR 63 Subpart IIII, Section 63.3091 - Emission Limits for Existing Sources

EMISSION UNITS	NESHAP AFFECTED OPERATIONS	EMISSION LIMIT
H02	Primer-surfacer	Refer to Section B Group Requirements for Group Emission Limits.
H05	Non-Process Cleaning	
H06	Corrosion Inhibitor Application	
H10	Sealer and Adhesives	
H14	Block Impregnation	
H16	Process Cleaning Operations	

Compliance Demonstration Method:

Refer to Section B Group Requirements.

3. Testing Requirements:

- Testing shall be Testing shall be conducted at such times as may be requested by the Cabinet [401 KAR 50:045, Section 1].
- The permittee shall perform a stack test for CO each year on a representative loaded dynamometer test cell from the worst case emission scenario (H12(03) or H12(06)) using EPA Method 10. These tests shall be performed on the pattern and engine size used to established the worst-case uncontrolled CO emission factor, which formed the basis of the CO BACT determination. The average of 3 one-hour test runs from these stack tests shall be used to assess compliance with the CO hourly BACT limit and catalyst substrate health.
- If the permittee changes the catalyst manufacturer and type, the permittee shall perform a stack test for CO on a representative loaded dynamometer test cell from H12(03) and H12(06) using EPA Method 10 to ensure compliance with 96% control efficiency. These tests shall be performed on the pattern and engine size used to established the uncontrolled CO emission factor, which formed the basis of the CO BACT determination. The average of 3 one-hour test runs from controlled and uncontrolled stack tests shall be used to assess compliance with the control requirement of 96% and catalyst substrate health.

4. Specific Monitoring Requirements:

- See Section F for general monitoring requirements.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- b. The permittee shall install, operate, and maintain a device to measure the fuel usage in H12(03) and H12(06), H12(04) and H12(07).
- c. The permittee shall monitor the daily gallons of fuel usage in H12(03) and H12(06).
- d. The permittee shall monitor the monthly gallons of fuel usage in H12(03), H12(06), H12(04), H12(07).
- e. The permittee shall monitor the number of production engines per month that undergo Hot Testing in H12(05) and H12(08).
- f. The permittee shall monitor the hours of operation while engine testing is being performed for H12(04), H12(07), H12(05), and H12(08) on a monthly basis.
- g. The permittee shall monitor the hours of operation while engine testing using the CC System is being performed for H12(03), and H12(06) on a daily basis.
- h. To demonstrate compliance with the CO BACT Limits for H12(03) and H12(06), the permittee must meet the following monitoring requirements for the CC System:
 - (1) Continuous monitoring of the CC system to ensure it is operational at all times while loaded dynamometer test patterns are being performed for H12(03) and H12(06).
 - (2) The temperature in the catalyst chamber and Air to Fuel ratio (A/F) prior to the catalytic converter chamber shall be monitored continuously and recorded in at least 15-minute block averages during each specific loaded dynamometer test pattern.
 - (3) If the 15-minute block average temperature in the catalytic converter chamber exceeds the manufacturer's maximum recommended temperature specification, corrective actions shall be taken within the subsequent 45-minute period to bring the temperature below the maximum temperature, otherwise the loaded dynamometer test should cease.
 - (4) If the 15-minute block average A/F prior to the catalytic converter chamber is below 14.6, corrective actions shall be taken within the subsequent 45-minute period to bring the A/F above 14.6, otherwise the loaded dynamometer test should cease.
 - (5) Monthly monitoring of each CC System including inspections of the air supply lines, pipe network, and monitoring devices and, as necessary, adjust the equipment to assure proper air-to-fuel mixtures.
 - (6) Annual monitoring of thermocouples serving each CC System consisting of thermocouple validation checks and any subsequent accuracy audits.
 - (7) Semi-annual monitoring of the A/F sensor serving each CC System consisting of A/F validation checks and any subsequent accuracy audits.
 - (8) Monitor the number of hours each catalyst substrate is operated while performing loaded dynamometer test patterns and replace within the timeframe specified by the catalyst's manufacturer.
 - (9) Semi-annual monitoring of each catalyst converter substrate including internal visual inspection to check for leaks, channeling, abrasion, and settling. If problems are found, the permittee shall take corrective action consistent with the manufacturer's recommendations.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- i. The permittee shall conform to the monitoring requirements, as prescribed in the Periodic Monitoring Requirements table.
- j. Refer to Section B Group Requirements for requirements specific to 40 CFR 63 Subpart III.
- k. The permittee shall monitor raw material usages as necessary to demonstrate compliance with all requirements of this permit.
- l. Compliance with the opacity The permittee shall perform a qualitative visual observation of the opacity of emissions at each stack no less than weekly while the affected facility is operating. If visible emissions from the stacks are observed (not including condensed water in the plume), the permittee shall determine the opacity using Reference Method 9. In lieu of determining the opacity using U.S. EPA Method 9, the permittee shall immediately perform a corrective action which results in no visible emissions (not including condensed water in the plume).
- m. Available data on the typical Reid vapor pressure and the maximum expected storage temperatures of the stored product may be used to determine the maximum true vapor pressure as specified by the cabinet, unless the cabinet specifically requests that the liquid be sampled, the actual storage temperature determined, and the Reid vapor pressure determined from the sample(s) [401 KAR 59:050 Section 5.(2)].
- n. The true vapor pressure of each type of crude oil with a Reid vapor pressure less than thirteen and eight-tenths (13.8) kPa (two and zero-tenths (2.0) psia) or whose physical properties preclude determination by the recommended method is to be determined from available data and recorded if the estimated true vapor pressure is greater than six and nine-tenths (6.9) kPa (one and zero-tenths (1.0) psia) [401 KAR 59:050 Section 5.(3)].
- o. The following are exempt from the requirements of section 5 of 401 KAR 59:050 [401 KAR 59:050 Section 5.(4)]:
 - (1) Each owner or operator of each storage vessel storing a petroleum liquid with a Reid vapor pressure of less than six and nine-tenths (6.9) kPa (one and zero-tenths (1.0) psia) provided the maximum true vapor pressure does not exceed six and nine-tenths (6.9) kPa (one and zero-tenths (1.0) psia).
 - (2) Each owner or operator of each storage vessel equipped with a vapor recovery and return or disposal system in accordance with the requirements of Section 3(1)(a) and (b), (3)(c) and (4) of 401 KAR 59:050.

5. Specific Recordkeeping Requirements:

- a. Refer to Section F.
- b. Pursuant to 401 KAR 52:020 Section 26, the permittee shall maintain records of required stack tests, corrective actions, inspections, maintenance activities, throughputs, temperatures, A/F, and operational hours shall be maintained on site.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- c. The permittee shall record the daily gallons of fuel used for the Loaded Dynamometer Test Cells in H12(03) and H12(06).
- d. The permittee shall record the monthly gallons of fuel used for the Up/Down Test Cells in H12(04) and H12(07).
- e. The permittee shall record the number of production engines per month that undergo Hot Testing in H12(05) and H12(08).
- f. The permittee shall record the 12 rolling month summation of the gallons of fuel used for the Up/Down Test Cells in H12(04) and H12(07) on a monthly basis.
- g. The permittee shall record the 12 rolling month summation for the number of production engines per hour that undergo Hot Testing in H12(05) and H12(08) on a monthly basis.
- h. The permittee shall record the hours of operation while engine testing using the CC System is being performed for H12(03), and H12(06) on a daily basis.
- i. The permittee shall record the hours of operation during engine testing for H12(04), H12(07), H12(05), and H12(08) on a monthly basis.
- j. The permittee shall record the calculated hourly gallons of fuel used for the Loaded Dynamometer Test Cells in H12(03) and H12(06) on a daily basis.
- k. The permittee shall record the calculated hourly gallons of fuel used for the Up/Down Test Cells in H12(05) and H12(08) on a monthly basis.
- l. The permittee shall record the calculated number of production engines per hour that undergo Hot Testing in H12(05) and H12(08) on a monthly basis.
- m. To show compliance with 401 KAR 51:017, the following records shall be maintained for each CC System, which are required to demonstrate continuous compliance with each operating limit and emissions limit associated with Loaded Dynamometer Engine Test Cells H12(03) and H12(06):
 - (1) Records of the date, time, and duration of each excursion when the CC System is not operational while performing loaded test patterns. Each occurrence shall be considered a deviation from permit requirements.
 - (2) The temperatures in the catalytic converter chamber and A/F prior to the catalytic converter chamber shall be recorded continuously except for limited downtime during electronic calibration.
 - (3) Tabulate and record the 15-minute blocks of catalytic converter temperature and A/F concurrently measured and recorded while the engine is operating in an electronic database or other appropriate format.
 - (4) Records of the date, time, and duration of each excursion when the 60-minute block average temperature in the catalytic converter chamber exceeds the manufacturer's

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- maximum recommended temperature specification (when the affected facilities are in use). Each occurrence shall be considered a deviation from permit requirements.
- (5) Records of the date, time, and duration of each excursion when the 60-minute block average A/F prior to the catalytic converter chamber is below 14.6 during a loaded test cell pattern. Each occurrence shall be considered a deviation from permit requirements.
 - (6) The records for the number of hours each catalyst substrate is operated while performing loaded dynamometer test patterns.
 - (7) Records of the date, time, and duration of each excursion when the number of hours for each catalyst substrate exceeds the manufacturer's recommended catalyst life when the affected facilities are performing loaded dynamometer test patterns. Each occurrence shall be considered a deviation from permit requirements.
 - (8) The design or manufacturer's specifications or equivalent document.
 - (9) The operational procedures and preventive maintenance records.
 - (10) The monthly inspection records of each CC System for the air supply lines, pipe network, and monitoring devices.
 - (11) The annual calibration records for the temperature monitoring device serving each CC System, consisting of thermocouple validation checks and any subsequent accuracy audits.
 - (12) The semi-annual calibration records for the A/F monitoring device serving each CC System, consisting of A/F sensor validation checks and any subsequent accuracy audits.
 - (13) Records of semi-annual internal visual inspection of each catalyst converter substrate.
- n. The permittee keep all periodic monitoring records associated with the Periodic Monitoring Requirements table. All periodic monitoring records shall be maintained for a period of not less than 5 years.
 - o. The permittee shall maintain a log of the visual observations noting date, time, initials of observers, and records of corrective actions taken as a result of visible emissions from a stack and records of any Reference Method 9 readings performed.
 - p. The permittee shall keep calendar month records of usage of all applicable raw materials and fuel usage. Following the end of each month, VOC emissions, CO emissions, PM emissions, fuel usage, and engines hot tested shall be calculated on a twelve-month rolling basis and recorded. Following the end of each month, pounds per job limits for VOC, pound per hour limits for CO, pounds per hour limits for PM, gallons of fuel usage per hour, and number of engines hot tested per hour shall be calculated and recorded. These records shall represent the most recent year and shall show compliance with VOC emissions, CO emissions, PM emissions, fuel usage, and engines hot tested limitations listed in this permit. These records shall be made available for inspection upon request by any duly authorized representatives of the Division for Air Quality.
 - (1) Records documenting the results of each opacity reading by EPA Reference Method 9 shall be maintained.
 - (2) Records documenting the results of any required inspection and repair, as a result of a recorded opacity over 20%.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- q. H12(03) and H12(06): The permittee shall keep calendar day records of fuel usage for the Loaded Dynamometer Test Cells. Following the end of each day, CO emissions, and fuel usage shall be calculated on an hourly average basis using the daily fuel usage and hours of operation and recorded. These records shall represent the most recent day and shall show compliance with CO emissions, and fuel usage limitations listed in this permit.
- r. These records shall be made available for inspection upon request by any duly authorized representatives of the Division for Air Quality.

Thermal Oxidizer Specific Recordkeeping Requirements:

The permittee shall maintain records of the following information for the thermal oxidizer:

- s. All 3-hour periods (during coating operations) during which the average combustion chamber temperature of the thermal oxidizer is more than 28°C (50°F) below the average combustion chamber temperature of the thermal oxidizer determined during the most recent performance test which demonstrated compliance. Each occurrence shall be considered a deviation from permit requirements. See Section F.6.
- t. During all periods of operation of the thermal oxidizer in which the 3-hour average combustion chamber temperature of the thermal oxidizer is more than 28°C (50°F) below the average combustion chamber temperature of the thermal oxidizer during the most recent performance test which demonstrated compliance, or other malfunction of the thermal oxidizer, a daily log of the following information shall be kept:
 - (1) Whether any air emissions were visible from the facilities associated with the thermal oxidizer.
 - (2) Whether visible emissions were normal for the process.
 - (3) The cause of the visible emissions.
 - (4) Corrective action(s) taken shall be recorded.

6. Specific Reporting Requirements:

- a. See Section F for general reporting requirements.
- b. The permittee shall submit semiannual reports describing any excursions.
- c. Verification of emission rates includes the submittal of a complete report of the test results to the Division within 60 days following the last date of the tests required by subsection 3.

Testing Requirements.

- d. The permittee shall submit summary monitoring reports every 6 months containing monitoring information listed in Section B.4 and B.5 of this permit. Also see Section F.5 for specific reporting dates. The report shall list any “out of standard” conditions or periodic monitoring requirements, as listed in the Periodic Monitoring Requirements table. If no “out of standard” conditions occurred, the permittee shall submit a negative report.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

7. Specific Control Equipment Operating Conditions:

- a. The control equipment listed for these emissions units shall be operated anytime the processes are operating. For HVAC filter systems, “in operation” is defined as “all filters being in place, with no emissions by-pass occurring”. All HVAC systems need not be exhausting air, while the process(es) is operating.
- b. To meet the CO BACT demonstration in a loaded dynamometer test cell, the permittee shall install and maintain the Catalytic Converter System in accordance with manufacturers’ recommendations and good engineering practice all the time when Dynamometer is operational.
- c. While performing a specific loaded test pattern, the permittee shall meet the following operating limits:
H12-CC Catalytic Converter System (CC System): To capture emission from Emission Point H12-03 (4 Cells), and H-12-06 (3 Cells) Loaded Dynamometer Test Cells, One CC System in each cell: For each CC System,
 - (1) The 60-minute block average temperature in the catalytic converter chamber shall not exceed manufacturer's recommended specifications during a loaded test cell pattern.
 - (2) The 60-minute block average A/F prior to the catalytic converter chamber shall be above 14.6 during a loaded test cell pattern.
 - (3) The hours of operation of each catalyst substrate, where it is exposed to loaded dynamometer test patterns, does not exceed manufacturer’s recommendations or timeframe as approved by the Division.

Compliance Demonstration Method:

- (1) For the each CC System:
 - i. Monitoring of calibrations for monitoring devices by subsection 4. Specific Monitoring Requirements h.,
 - ii. Monitoring of inspections of the CC System’s components by subsection 4. Specific Monitoring Requirements h., and
 - iii. Monitoring A/F by subsection 4. Specific Monitoring Requirements h.
- (2) For each catalyst substrate used in the CC System:
 - i. Monitoring temperature in the catalytic converter chamber by 4. Specific Monitoring Requirements h., and
 - ii. Monitoring the number of hours each catalyst substrate is operated and annual inspections of catalyst substrate by 4. Specific Monitoring Requirements h.
- (3) Recordkeeping of the stack testing, temperature, A/F, operational hours, maintenance activities, inspections, etc. by subsection 5. Recordkeeping Requirements b. and m.
- (4) As indicated by subsection 5. Recordkeeping Requirements m., while performing a loaded dynamometer test pattern, records of when:
 - i. The CC System is not operating; or
 - ii. The usage of catalyst substrate exceeds the manufacturer’s specification; or
 - iii. The temperature exceeds the manufacturer’s recommended maximum specification; or
 - iv. The A/F is below 14.6.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

d. Specific Operating Limitations for Thermal Oxidizers:

- (1) The average combustion chamber temperature in any 3-hour period shall not fall more than 28°C (50°F) below the combustion temperature limit established during the most recent performance test, which demonstrated compliance.
- (2) The permittee shall use the data collected during the performance test to calculate and record the average combustion temperature. This average combustion temperature is the minimum set point for the thermal oxidizer. The minimum-operating limit for thermal oxidizers is 28°C (50°F) below the minimum set point temperature.

Compliance Demonstration Method:

The permittee must monitor the temperature in the firebox of the thermal oxidizer or immediately downstream of the firebox before any substantial heat exchange occurs. Compliance shall be demonstrated by monitoring and recording the combustion temperature as required in the Periodic Monitoring Requirements table, averaged over 3 hours.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

POWERTRAIN - PERIODIC MONITORING REQUIREMENTS

Emission Unit	Operation	Equipment Monitored	Characteristic Monitored	Parameter Monitored	Method or Device	Monitoring Frequency	Recording Frequency	Calibration Frequency	Standard Range
H01,H03 H04,H08 H09	HVAC Systems (Powertrain)	HVAC Exhaust Filters	Filter Condition (PM Removal Efficiency)	Pressure Drop	Gauge	Continuous	Intermittent (Problem Log)	Annual	No Alarms
H01	V6 - Block	Filter, MZY 1110-2 (3rd stage)	Filter Condition (PM Removal Efficiency)	Pressure Drop	Gauge	Continuous	Daily**	Annual	0.1 – 4.0 inches H ₂ O
H01	V6 - Block	Filter, MZY 1110-1 (3rd stage)	Filter Condition (PM Removal Efficiency)	Pressure Drop	Gauge	Continuous	Daily**	Annual	0.1 – 4.0 inches H ₂ O
H11	Raw Material Storage	Gasoline Tanks	Conservation Vents	Function	Visual	Annual	Annual	N/A	Functions
H12(03) and (06)	L4/V6 Area: Loaded Dyno Test Cells	CC System	CO Emissions (CO BACT)	Functioning per specifications	Stack Test (Method 10)	Annual	Annual	Each Test	CO emissions less than 6.4 lbs/hr/cell
H12(03) and (06)	L4/V6 Area: Loaded Dynamometer Test Cells	Catalytic Converter Substrate within each CC System	Catalytic Converter Life	Total hours of operation of substrate per CC.	Monitoring the hours	Daily	Daily	N/A	Less than Manufacturer's Recommendation Or timeframe approved by the Division.
H12(03) and (06)	L4/V6 Area: Loaded Dyno Test Cells	Air: Fuel Sensor within each CC System	CO Emissions (CO BACT)	Chamber A/F	Sensor	Continuous ***	15 Minutes	Semi-Annual	Greater than 14.6
H12(03) and (06)	L4/V6 Areas: Loaded Dyno Test Cells	Components of each CC System	Capture (CO BACT)	Air supply lines, pipe network, & monitoring devices	Inspections	Monthly	Monthly	N/A	Operational
H12(03) and (06)	L4/V6 Area: Loaded Dyno Test Cells	Catalytic Converter Substrate within each CC System	Substrate Health (CO BACT)	Chamber Temperature	Thermo-couple	Continuous ***	15 Minutes	Annual	Less than Manufacturer's Recommendation *****

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Unit	Operation	Equipment Monitored	Characteristic Monitored	Parameter Monitored	Method or Device	Monitoring Frequency	Recording Frequency	Calibration Frequency	Standard Range
H16	Laser Cladding Process Cleaning	Thermal Oxidizers (KT01)	Destruction Efficiency	Combustion Chamber Temperature	Thermocouple	Continuous***	15 Minutes & Each Occurrence of an Alarm	Annual	Not More Than 28°C Below Combustion Chamber Limit
H16	Laser Cladding Process Cleaning	Thermal Oxidizers (KT01)	Destruction Efficiency	VOC In / Out	Stack Test (EPA Method 25A)	Every 5 Years*	Every 5 Years*	Each Test	DRE ≥ 90%

* No more than 5 years from the last performance test.

**“Daily” means TMMK production day; A TMMK production day consists of both first and second shifts.

*** “Continuous” means at least one (1) reading every 15 minutes.

**** Outlet Temperature established per manufacturer’s specifications.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Group Requirements

40 CFR 60 Subpart MM Affected Sources

LIST of POINTS

C09- Electro deposition – Prime Coat
E02R, F02 & F19 - Electro deposition – Prime Coat
E04R, F04 & F20 – Sealer – Guide Coat
E05R, F05 & F21 - Soft Chip, Interior, Exterior – Guide Coat
E12R, F12 & F24 – Repair – Guide Coat
E05R & F05 – Door sash and Rocker Panel Black - Topcoat
E07R, F07 & F22 - Topcoat Solid, Base, Clear - Topcoat
E09R & F09 – Blackouts - Topcoat
E12R, F12 & F24 – Repair - Topcoat

APPLICABLE REGULATIONS:

401 KAR 60:005 Section 2(2)(tt) 40 C.F.R. 60.390 to 60.398 (Subpart MM), *Standards of Performance for Automobile and Light Duty Truck Surface Coating Operations*

1. Operating Limitations:

The usage rates of materials used in all affected facilities shall be limited so as not to exceed the emission limitations in Section B.2.

2. Emission Limitations:

- a. On and after the date on which the initial performance test required by 40 CFR 60.8 is completed, no owner or operator subject to the provisions of 40 CFR 60 subpart MM shall discharge or cause the discharge into the atmosphere from any affected facility VOC emissions in excess of:

- (1) Prime Coat Operation.

- i. For each EDP prime coat operation:

- A. 0.17 kilogram of VOC per liter of applied coating solids when the Solids Turnover Ratio (R_T) is 0.16 or greater [40 CFR 60.392(a)(1)(i)].
 - B. $0.17 \times 350 (0.160 - R_T)$ kg of VOC per liter of applied coating solids when R_T is greater than or equal to 0.040 and less than 0.160 [40 CFR 60.392(a)(1)(ii)].
 - C. When R_T is less than 0.040, there is no emission limit [40 CFR 60.392(a)(1)(iii)].

$$R_T = \frac{L_s}{L_g} \text{ truncated after 3 decimal places}$$

Where;

L_s = volume of solids in coatings consumed (liters),

L_E = the total volume of the EDP system (liters),

- ii. For each nonelectrodeposition prime coat operation: 0.17 kilogram of VOC per liter of applied coating solids [40 CFR 60.392(a)(2)].

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- (2) 1.40 kilograms of VOC per liter of applied coating solids from each guide coat operation [40 CFR 60.392(b)].
- (3) 1.47 kilograms of VOC per liter of applied coating solids from each topcoat operation [40 CFR 60.392(c)].

Compliance Demonstration Method:

- (1) The owner or operator shall use the following procedures for each affected facility which uses a capture system and a control device that destroys VOC (e.g., incinerator) to comply with the applicable emission limit specified under 40 CFR 60.392 [40 CFR 60.393(c)(2)].
 - i. Calculate the volume weighted average mass of VOC per volume of applied coating solids (G) during each calendar month for each affected facility as described under 40 CFR 60.393(c)(1)(i) [40 CFR 60.393(c)(2)(i)].

$$M_o + M_d = \sum_{i=1}^n L_{ci} D_{ci} W_{oi} + \sum_{j=1}^m L_{dj} D_{dj}$$

$$L_s = \sum L_{ci} V_{si}$$

$$T = \frac{\sum_{i=1}^{ni} T_l V_{si} L_{cil}}{\sum_{l=1}^p L_s}$$

$$G = \frac{M_o M_d}{L_s T}$$

Where;

- D_{ci} = density of each coating (i) as received (kilograms per liter),
- D_{dj} = density of each type VOC dilution solvent (j) added to the coatings, as received (kilograms per liter),
- D_r = density of VOC recovered from an affected facility (kilograms per liter),
- G = volume weighted average mass of VOC per volume of applied solids (kilograms per liter),
- L_{ci} = volume of each coating (i) consumed, as received (liters),
- L_{cil} = Volume of each coating (i) consumed by each application method (l), as received (liters),
- L_{dj} = volume of each type VOC dilution solvent (j) added to the coatings, as received (liters),
- L_s = volume of solids in coatings consumed (liters),
- M_d = total mass of VOC in dilution solvent (kilograms),
- M_o = total mass of VOC in coatings as received (kilograms),
- T = overall transfer efficiency,
- T_l = transfer efficiency for application method (l),
- V_{si} = proportion of solids by volume in each coating (i) as received (liter solids/liter coating)
- W_{oi} = proportion of VOC by weight in each coating (i), as received (kilogram VOC/kilogram coating)

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- ii. (Calculate the volume weighted average mass of VOC per volume of applied solids emitted after the control device, by the following equation [40 CFR 60.393(c)(2)(ii)]:

$$N = G[1 - FE]$$

Where;

E = VOC destruction or removal efficiency of the control device,

F = fraction of total VOC which is emitted by an affected facility that enters the control device,

G = volume weighted average mass of VOC per volume of applied solids (kilograms per liter),

N = volume weighted average mass of VOC per volume of applied coating solids after the control device (kilograms VOC / liter of applied solids)

- A. Determine the fraction of total VOC which is emitted by an affected facility that enters the control device by using the following equation where “n” is the total number of stacks entering the control device and “p” is the total number of stacks not connected to the control device. If the owner can justify to the Administrator's satisfaction that another method will give comparable results, the Administrator will approve its use on a case-by-case basis [40 CFR 60.393(c)(2)(ii)(A)].

$$\sum_{i=1}^n$$

- 1) In subsequent months, the owner or operator shall use the most recently determined capture fraction for the performance test [40 CFR 60.393(a)(c)(2)(ii)(a)(1)].
- B. Determines the destruction efficiency of the control device using values of the volumetric flow rate of the gas streams and the VOC content (as carbon) of each of the gas streams in and out of the device by the following equation where “n” is the total number of stacks entering the control device and “m” is the total number of stacks leaving the control device[40 CFR 60.393(a)(c)(2)(ii)(B)]:

$$E = \frac{\sum_{i=1}^n Q_{bi}C_{bi} - \sum_{j=1}^m Q_{aj}C_{aj}}{\sum_{i=1}^n Q_{bi}C_{bi}}$$

Where;

C_{aj} = concentration of VOC (as carbon) in the effluent gas flowing through stack (j) leaving the control device (parts per million by volume),

C_{bi} = concentration of VOC (as carbon) in the effluent gas flowing through stack (i) entering the control device (parts per million by volume),

E = VOC destruction or removal efficiency of the control device,

Q_{aj} = volumetric flow rate of the effluent gas flowing through stack (j) leaving the control device (dry standard cubic meters per hour),

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Q_{bi} = volumetric flow rate of the effluent gas flowing through stack (i) entering the control device (dry standard cubic meters per hour),

- 1) In subsequent months, the owner or operator shall use the most recently determined VOC destruction efficiency for the performance test [40 CFR 60.393(c)(2)(ii)(B)(I)].
- C. If an emission control device controls the emissions from more than one affected facility, the owner or operator shall measure the VOC concentration (C_{bi}) in the effluent gas entering the control device (in parts per million by volume) and the volumetric flow rate (Q_{bi}) of the effluent gas (in dry standard cubic meters per hour) entering the device through each stack. The destruction or removal efficiency determined using these data shall be applied to each affected facility served by the control device [40 CFR 60.393(c)(2)(ii)(C)].
 - i. If the volume weighted average mass of VOC per volume of applied solids emitted after the control device (N) calculated on a calendar month basis is less than or equal to the applicable emission limit specified in 40 CFR 60.392, the affected facility is in compliance. Each monthly calculation is a performance test for the purposes of 40 CFR 60 subpart MM [40 CFR 60.393(c)(2)(iii)].

3. Testing Requirements:

- a. Testing shall be conducted at such times as may be requested by the Cabinet [401 KAR 50:045, Section 1].
- b. The owner or operator of an affected facility shall conduct an initial performance test in accordance with 40 CFR 60.8(a) and thereafter for each calendar month for each affected facility according to the procedures in 40 CFR 60.393 [40 CFR 60.393(b)].

4. Specific Monitoring Requirements:

- a. The owner or operator of an affected facility which uses an incinerator to comply with the emission limits specified under 40 CFR 60.392 shall install, calibrate, maintain, and operate temperature measurement devices as prescribed below [40 CFR 60.394]:
 - (1) Where thermal incineration is used, a temperature measurement device shall be installed in the firebox.
 - (2) Each temperature measurement device shall be installed, calibrated, and maintained according to accepted practice and the manufacturer's specifications. The device shall have an accuracy of the greater of ± 5 percent of the temperature being measured expressed in degrees Celsius or ± 2.5 °C.
 - (3) Each temperature measurement device shall be equipped with a recording device so that a permanent record is produced.

5. Specific Recordkeeping Requirements:

See subsection 6. Specific Reporting Requirements.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

6. Specific Reporting Requirements:

- a. Each owner or operator of an affected facility shall include the data outlined in paragraphs (a)(1) and (2) in the initial compliance report required by 40 CFR 60.8 [40 CFR 60.395(a)].
 - (1) The owner or operator shall report the volume weighted average mass of VOC per volume of applied coating solids for each affected facility [40 CFR 60.395(a)(1)].
 - (2) Where compliance is achieved through the use of incineration, the owner or operator shall include the following additional data in the control device initial performance test required by 40 CFR 60.8(a) or subsequent performance tests at which destruction efficiency is determined: the combustion temperature (or the gas temperature upstream and downstream of the catalyst bed), the total mass of VOC per volume of applied coating solids before and after the incinerator, capture efficiency, the destruction efficiency of the incinerator used to attain compliance with the applicable emission limit specified in 40 CFR 60.392 and a description of the method used to establish the fraction of VOC captured and sent to the control device [[40 CFR 60.395(a)(2)].
- b. Following the initial performance test, the owner or operator of an affected facility shall identify, record, and submit a written report to the Administrator every calendar quarter of each instance in which the volume-weighted average of the total mass of VOC's emitted to the atmosphere per volume of applied coating solids (N) is greater than the limit specified under 40 CFR 60.392. If no such instances have occurred during a particular quarter, a report stating this shall be submitted to the Administrator semiannually. Where compliance is achieved through the use of a capture system and control device, the volume-weighted average after the control device should be reported [40 CFR 60.395(b)].
- c. Where compliance with 40 CFR 60.392 is achieved through the use of incineration, the owner or operator shall continuously record the incinerator combustion temperature during coating operations for thermal incineration or the gas temperature upstream and downstream of the incinerator catalyst bed during coating operations for catalytic incineration. The owner or operator shall submit a written report at the frequency specified in 40 CFR 60.7(c) and as defined below [40 CFR 60.395(c)].
 - (1) For thermal incinerators, every three-hour period shall be reported during which the average temperature measured is more than 28 °C less than the average temperature during the most recent control device performance test at which the destruction efficiency was determined as specified under 40 CFR 60.393 [40 CFR 60.395(c)(1)].

7. Specific Control Equipment Operating Conditions:

N/A

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Group Requirements

40 CFR 63 Subpart IIII Affected Sources

LIST of POINTS

C06 Sealer and Adhesive Application

C09 Small Parts Electro deposition System, Including Rinse Tanks, Dip Tank, and Oven (Line 1)

C10 Fuel Tank Antichip Coating (Line 1 & 2),

C12 Non-Process Cleaning

C16 Bodyweld Sealers and Adhesives

A02, B02, M01 Miscellaneous Wax Coating Operations

A03, B03, M02 Glass Bonding Primer, Glass Bonding Adhesive

A04, B04, M06 Adhesives and sealers other than glass bonding adhesive

A06, B06, M07 Non -Process Cleaning

A07, B07, M05 Process Cleaning

A10, B10 Final Repair

A14, Battery Assembly

L01 Final Repair

L04 Non-Process Cleaning Activities

E02R, F02 & F19 Electro deposition primer

E04R, F04 & F20 Primer-surfacer, Deadener

E04R, F04, F20 Adhesives and sealers

E05R, F05 & F21 Primer-surfacer

E07R, F07 & F22 Topcoat

E09R, F09 Blackout

E11R, F11 & F23 Wax Coating

E12R, F12 & F24 Final Repair

G04, G26 Coatings and repair painting

G21, G22 Coating, process cleaning and repair painting

E13R, F13, F25, G19 & G27 Non-Process Cleaning

E04R, E05R, E07R, F04, F05, F07, F26 & G28 Process Cleaning

H02 Primer-surfacer

H05 Non-Process Cleaning

H06 Corrosion Inhibitor Application

H10 Sealer and Adhesives

H14 Block Impregnation

H16 Process Cleaning Operations

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

APPLICABLE REGULATIONS:

401 KAR 63:002 Section 2(4)(ooo), 40 C.F.R. 63.3080 to 63.3176, Tables 1 through 4, and Appendix A (Subpart IIII), *National Emission Standards for Hazardous Air Pollutants: Surface Coating of Automobiles and Light-Duty Trucks*

1. Operating Limitations:

- a. The usage rates of materials used in all affected facilities shall be limited so as not to exceed the emission limitations in Section B.2.
- b. The permittee may choose to include in their affected source, and thereby make subject to the requirements of 40 CFR 63 subpart IIII, any coating operations, as defined in 40 CFR 63.3176, which would otherwise be subject to the National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products (subpart MMMM of 40 CFR Part 63) or the National Emission Standards for Hazardous Air Pollutants for Surface Coating of Plastic Parts and Products (subpart PPPP of 40 CFR Part 63) which apply coatings to new other motor vehicle bodies or body parts for new other motor vehicles, parts intended for use in new automobiles, new light-duty trucks, or new other motor vehicles, or aftermarket repair or replacement parts for automobiles, light-duty trucks, or other motor vehicles [40 CFR 63.3082(c)].
- c. For all coating operations which the permittee chooses to add to their affected source pursuant to paragraph (c) of 40 CFR 63.3082 [40 CFR 63.3082(d)]:
 - (1) All associated storage containers and mixing vessels in which coatings, thinners, and cleaning materials are stored or mixed; manual and automated equipment and containers used for conveying coatings, thinners, and cleaning materials; and storage containers and manual and automated equipment and containers used for conveying waste materials are also included in the permittee's affected source and are subject to the requirements of 40 CFR 63 subpart IIII.
 - (2) All cleaning and purging of equipment associated with the added surface coating operations is subject to the requirements of 40 CFR 63 subpart IIII.
 - (3) The permittee must identify and describe all additions to the affected source made pursuant to 40 CFR 63.3082(d).
- d. If the permittee's facility has multiple paint lines (e.g., two or more totally distinct paint lines each serving a distinct assembly line, or a facility with two or more paint lines sharing the same paint kitchen or mix room), then for the operations addressed in paragraphs (a) and (b) of 40 CFR 63.3091 [40 CFR 63.3091(f)]:
 - (1) The permittee may choose to use a single grouping under paragraph (a) of 40 CFR 63.3091 for all of their electrodeposition primer, primer-surfacer, topcoat, final repair, glass bonding primer, and glass bonding adhesive operations.
 - (2) The permittee may choose to use a single grouping under paragraph (b) of 40 CFR 63.3091 for all of their primer-surfacer, topcoat, final repair, glass bonding primer, and glass bonding adhesive operations as long as each of their electrodeposition primer systems meets the operating limits of 40 CFR 63.3092(a) or (b).

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- (3) The permittee may choose to use one or more groupings under paragraph (a) of 40 CFR 63.3091 for the electrodeposition primer, primer-surfacer, topcoat, final repair, glass bonding primer, and glass bonding adhesive operations from one or more of their paint lines; and one or more groupings under paragraph (b) of 40 CFR 63.3091 for the primer-surfacer, topcoat, final repair, glass bonding primer, and glass bonding adhesive operations from the remainder of their paint lines, as long as each electrodeposition primer system associated with each paint line the permittee includes in a grouping under paragraph (b) of 40 CFR 63.3091 meets the operating limits of 40 CFR 63.3092(a) or (b). For example, if the facility has three paint lines, the permittee may choose to use one grouping under paragraph (a) of 40 CFR 63.3091 for two of the paint lines; and a separate grouping under paragraph (b) of 40 CFR 63.3091 for the third paint line, as long as the electrodeposition primer system associated with the paint line the permittee includes in the grouping under paragraph (b) of 40 CFR 63.3091 meets the operating limits of 40 CFR 63.3092(a) or (b). Alternatively, the permittee may choose to use one grouping for two of the paint lines and a separate grouping of the same type for the third paint line. Again, each electrodeposition primer system associated with each paint line the permittee includes in a grouping under paragraph (b) of 40 CFR 63.3091 must meet the operating limits of 40 CFR 63.3092(a) or (b).
- (4) The permittee may choose to consider the electrodeposition primer, primer-surfacer, topcoat, final repair, glass bonding primer, and glass bonding adhesive operations from each of their paint lines as a separate grouping under either paragraph (a) or paragraph (b) of 40 CFR 63.3091. The electrodeposition primer system associated with each paint line the permittee chooses to consider in a grouping under paragraph (b) of 40 CFR 63.3091 must meet the operating limits of 40 CFR 63.3092(a) or (b). For example, if the facility has two paint lines, the permittee may choose to use the grouping under paragraph (a) of 40 CFR 63.3091 for one paint line and the grouping under paragraph (b) of 40 CFR 63.3091 for the other paint line.
- e. The permittee not required to meet any operating limits for any coating operation(s) without add-on controls, nor are they required to meet operating limits for any coating operation(s) that do not utilize emission capture systems and add-on controls to comply with the emission limits in 40 CFR 63.3090 or 40 CFR 63.3091 [40 CFR 63.3093(a)].
- f. Except as provided in paragraph (d) of 40 CFR 63.3093, for any controlled coating operation(s), the permittee must meet the operating limits specified in table 1 to 40 CFR 63 subpart III. These operating limits apply to the emission capture and add-on control systems on the coating operation(s) for which the permittee uses this option, and the permittee must establish the operating limits during performance tests according to the requirements in 40 CFR 63.3167. The permittee must meet the operating limits at all times after the permittee establishes them [40 CFR 63.3093(b)].
 - (1) For Thermal Oxidizers [Table 1 to 40 CFR 63 subpart III]:

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)

Compliance Demonstration Method:

 - i. Collecting the combustion temperature data according to 40 CFR 63.3168(c);
 - ii. Reducing the data to 3-hour block averages; and

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- iii. Maintaining the 3-hour average combustion temperature at or above temperature limit.
- (2) For Concentrators, including zeolite wheels and rotary carbon adsorbers [Table 1 to 40 CFR 63 subpart IIII]:

The average desorption gas inlet temperature in any 3-hour period must not fall below the limit established according to 40 CFR 63.3167(e)

Compliance Demonstration Method:

 - i. Collecting the temperature data according to 40 CFR 63.3168(f);
 - ii. Reducing the data to 3-hour block averages; and
 - iii. Maintaining the 3-hour average temperature at or above the temperature limit.
- (3) For Emission capture systems that are a PTE [Table 1 to 40 CFR 63 subpart IIII]:
 - i. The direction of the air flow at all times must be into the enclosure; and either
 - ii. The average facial velocity of air through all natural draft openings in the enclosure must be at least 200 feet per minute; or
 - iii. The pressure drop across the enclosure must be at least 0.007 inch water, as established in Method 204 of appendix M to 40 CFR part 51

Compliance Demonstration Method:

 - i. Collecting the direction of air flow, and either the facial velocity of air through all natural draft openings according to 40 CFR 63.3168(g)(1) or the pressure drop across the enclosure according to 40 CFR 63.3168(g)(2); and
 - ii. Maintaining the facial velocity of air flow through all natural draft openings or the pressure drop at or above the facial velocity limit or pressure drop limit, and maintaining the direction of air flow into the enclosure at all times.
- (4) For Emission capture systems that are not a PTE [Table 1 to 40 CFR 63 subpart IIII]:

The average gas volumetric flow rate or duct static pressure in each duct between a capture device and add-on control device inlet in any 3-hour period must not fall below the average volumetric flow rate or duct static pressure limit established for that capture device according to 40 CFR 63.3167(f). This applies only to capture devices that are not part of a PTE that meets the criteria of 40 CFR 63.3165(a) and that are not capturing emissions from a downdraft spray booth or from a flashoff area or bake oven associated with a downdraft spray booth

Compliance Demonstration Method:

 - i. Collecting the gas volumetric flow rate or duct static pressure for each capture device according to 40 CFR 63.3168(g);
 - ii. Reducing the data to 3-hour block averages; and
 - iii. Maintaining the 3-hour average gas volumetric flow rate or duct static pressure for each capture device at or above the gas volumetric flow rate or duct static pressure limit.
- g. If the permittee chooses to meet the emission limitations of 40 CFR 63.3092(b) and the emission limits of 40 CFR 63.3090(b) or 40 CFR 63.3091(b), then except as provided in paragraph (d) of 40 CFR 63.3093, the permittee must operate the capture system and add-on control device used to capture and control emissions from their electrodeposition primer bake oven(s) so that they meet the operating limits specified in Table 1 to 40 CFR 63 subpart IIII [40 CFR 63.3093(c)].

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- h. If the permittee uses an add-on control device other than those listed in Table 1 to 40 CFR 63 subpart IIII, or wish to monitor an alternative parameter and comply with a different operating limit, the permittee must apply to the Administrator for approval of alternative monitoring under 40 CFR 63.8(f) [40 CFR 63.3093(d)].
- i. The permittee must develop and implement 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 emission limits are established under 40 CFR 63.3090(a) through (d) or 40 CFR 63.3091(a) through (d). The plan must specify practices and procedures to ensure that, at a minimum, the elements specified in paragraphs (b)(1) through (5) of 40 CFR 63.3094 are implemented [40 CFR 63.3094(b)].
 - (1) All organic-HAP-containing coatings, thinners, cleaning materials, and waste materials must be stored in closed containers.
 - (2) The risk of spills of organic-HAP-containing coatings, thinners, cleaning materials, and waste materials must be minimized.
 - (3) Organic-HAP-containing coatings, thinners, cleaning materials, and waste materials must be conveyed from one location to another in closed containers or pipes.
 - (4) 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.
 - (5) Emissions of organic HAP must be minimized during cleaning of storage, mixing, and conveying equipment.
- j. The permittee must develop and implement a work practice plan to minimize organic HAP emissions from cleaning and from purging of equipment associated with all coating operations for which emission limits are established under 40 CFR 63.3090(a) through (d) or 40 CFR 63.3091(a) through (d) [40 CFR 63.3094(c)].
 - (1) The plan shall, at a minimum, address each of the operations listed in paragraphs (c)(1)(i) through (viii) of 40 CFR 63.3094 in which the permittee uses organic-HAP-containing materials or in which there is a potential for emission of organic HAP.
 - i. The plan must address vehicle body wipe emissions through one or more of the techniques listed in paragraphs (c)(1)(i)(A) through (E) of 40 CFR 63.3094, or an approved alternative.
 - A. Use of solvent-moistened wipes.
 - B. Keeping solvent containers closed when not in use.
 - C. Keeping wipe disposal/recovery containers closed when not in use.
 - D. Use of tack-wipes.
 - E. Use of solvents containing less than 1 percent organic HAP by weight.
 - ii. The plan must address coating line purging emissions through one or more of the techniques listed in paragraphs (c)(1)(ii)(A) through (D) of 40 CFR 63.3094, or an approved alternative.
 - A. Air/solvent push-out.
 - B. Capture and reclaim or recovery of purge materials (excluding applicator nozzles/tips).

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- C. Block painting to the maximum extent feasible.
 - D. Use of low-HAP or no-HAP solvents for purge.
- iii. The plan must address emissions from flushing of coating systems through one or more of the techniques listed in paragraphs (c)(1)(iii)(A) through (D) of 40 CFR 63.3094, or an approved alternative.
 - A. Keeping solvent tanks closed.
 - B. Recovering and recycling solvents.
 - C. Keeping recovered/recycled solvent tanks closed.
 - D. Use of low-HAP or no-HAP solvents.
- iv. The plan must address emissions from cleaning of spray booth grates through one or more of the techniques listed in paragraphs (c)(1)(iv)(A) through (E) of 40 CFR 63.3094, or an approved alternative.
 - A. Controlled burn-off.
 - B. Rinsing with high-pressure water (in place).
 - C. Rinsing with high-pressure water (off line).
 - D. Use of spray-on masking or other type of liquid masking.
 - E. Use of low-HAP or no-HAP content cleaners.
- v. The plan must address emissions from cleaning of spray booth walls through one or more of the techniques listed in paragraphs (c)(1)(v)(A) through (E) of 40 CFR 63.3094, or an approved alternative.
 - A. Use of masking materials (contact paper, plastic sheet, or other similar type of material).
 - B. Use of spray-on masking.
 - C. Use of rags and manual wipes instead of spray application when cleaning walls.
 - D. Use of low-HAP or no-HAP content cleaners.
 - E. Controlled access to cleaning solvents.
- vi. The plan must address emissions from cleaning of spray booth equipment through one or more of the techniques listed in paragraphs (c)(1)(vi)(A) through (E) of 40 CFR 63.3094, or an approved alternative.
 - A. Use of covers on equipment (disposable or reusable).
 - B. Use of parts cleaners (off-line submersion cleaning).
 - C. Use of spray-on masking or other protective coatings.
 - D. Use of low-HAP or no-HAP content cleaners.
 - E. Controlled access to cleaning solvents.
- vii. The plan must address emissions from cleaning of external spray booth areas through one or more of the techniques listed in paragraphs (c)(1)(vii)(A) through (F) of 40 CFR 63.3094, or an approved alternative.
 - A. Use of removable floor coverings (paper, foil, plastic, or similar type of material).
 - B. Use of manual and/or mechanical scrubbers, rags, or wipes instead of spray application.
 - C. Use of shoe cleaners to eliminate coating track-out from spray booths.
 - D. Use of booties or shoe wraps.
 - E. Use of low-HAP or no-HAP content cleaners.
 - F. Controlled access to cleaning solvents.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- viii. The plan must address emissions from housekeeping measures not addressed in paragraphs (c)(1)(i) through (vii) of 40 CFR 63.3094 through one or more of the techniques listed in paragraphs (c)(1)(viii)(A) through (C) of 40 CFR 63.3094 or an approved alternative.
 - A. Keeping solvent-laden articles (cloths, paper, plastic, rags, wipes, and similar items) in covered containers when not in use.
 - B. Storing new and used solvents in closed containers.
 - C. Transferring of solvents in a manner to minimize the risk of spills.
- (2) Notwithstanding the requirements of paragraphs (c)(1)(i) through (viii) of 40 CFR 63.3094, if the type of coatings used in any facility with surface coating operations subject to the requirements of 40 CFR 63.3094 are of such a nature that the need for one or more of the practices specified under paragraphs (c)(1)(i) through (viii) is eliminated, then the plan may include approved alternative or equivalent measures that are applicable or necessary during cleaning of storage, conveying, and application equipment.
- k. As provided in 40 CFR 63.6(g), the Environmental Protection Agency (EPA), may choose to grant the permittee permission to use an alternative to the work practice standards in 40 CFR 63.3094 [40 CFR 63.3094(d)].
- l. The work practice plans developed in accordance with paragraphs (b) and (c) of 40 CFR 63.3094 are not required to be incorporated in the permittee's title V permit. Any revisions to the work practice plans developed in accordance with paragraphs (b) and (c) of 40 CFR 63.3094 do not constitute revisions to the permittee's title V permit [40 CFR 63.3094(e)].
- m. On and after January 5, 2021, the coating operations must be in compliance with the operating limits for emission capture systems and add-on control devices required by 40 CFR 63.3093 at all times [40 CFR 63:3100(b)].
- n. The permittee must be in compliance with the work practice standards in 40 CFR 63.3094 at all times [40 CFR 63:3100(c)].
- o. On and after January 5, 2021, at all times, the owner or operator must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require the owner or operator to make any further efforts to reduce emissions if levels required by the applicable standard have been achieved. Determination of whether a source is operating in compliance with operation and maintenance requirements will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the affected source [40 CFR 63:3100(d)].
- p. The permittee must maintain a log detailing the operation and maintenance of the emission capture systems, add-on control devices, and continuous parameter monitoring

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

systems (CPMS) during the period between the compliance date specified for the permittee's affected source 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)].

2. Emission Limitations:

- a. Except as provided in paragraph (b) of 40 CFR 63.3091, the permittee must limit combined organic HAP emissions to the atmosphere from electrodeposition primer, primer-surfacer, topcoat, final repair, 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 added to the affected source pursuant to 40 CFR 63.3082(c) to no more than 0.072 kilogram (kg)/liter (0.60 pound lb/gal) of coating solids deposited during each month, determined according to the requirements in 40 CFR 63.3161 [40 CFR 63.3091(a)].

Compliance Demonstration Method for 40 CFR 63.3091 (a) [Combined Electrodeposition Primer, Primer-Surfacer, Topcoat, Final Repair, Glass Bonding Primer, and Glass Bonding Adhesive]:

- (1) *Existing affected sources.* For an existing affected source, the permittee must meet the requirements of paragraphs (b)(1) through (3) of 40 CFR 63.3160 [40 CFR 63.3160(b)].
 - i. All emission capture systems, add-on control devices, and CPMS must be installed and operating no later than the applicable compliance date specified in 40 CFR 63.3083. The permittee must conduct an initial performance test of each capture system and add-on control device according to the procedures in 40 CFR 63.3164 through 63.3166 and establish the operating limits required by 40 CFR 63.3093 no later than the compliance date specified in 40 CFR 63.3083.
 - ii. The permittee must develop and begin implementing the work practice plans required by 40 CFR 63.3094(b) and (c) no later than the compliance date specified in 40 CFR 63.3083.
 - iii. The permittee must complete the initial compliance demonstration for the initial compliance period according to the requirements of 40 CFR 63.3161. 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 compliance 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. The permittee must determine the mass of organic HAP emissions and volume of coating solids deposited during the initial compliance period. The initial compliance demonstration includes the results of emission capture system and add-on control device performance tests conducted according to 40 CFR 63.3164 through 63.3166; supporting documentation showing that during the initial compliance period the organic HAP emission rate was equal to or less than the emission limits in 40 CFR 63.3091(a); the operating limits established during the performance tests and the results of the continuous parameter monitoring required by 40 CFR 63.3168; and documentation of whether the permittee developed and implemented the work practice plans required by 40 CFR 63.3094(b) and (c).

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- (2) The permittee is not required to conduct an initial performance test to determine capture efficiency or destruction efficiency of a capture system or control device if the permittee receives approval to use the results of a performance test that has been previously conducted on that capture system (either a previous stack test or a previous panel test) or control device. The permittee is not required to conduct an initial test to determine transfer efficiency if the permittee receives approval to use the results of a test that has been previously conducted. Any such previous tests must meet the conditions described in paragraphs (c)(1) through (3) of 40 CFR 63.3160 [40 CFR 63.3160(c)].
 - i. The previous test must have been conducted using the methods and conditions specified in 40 CFR 63 subpart IIII.
 - ii. Either no process or equipment changes have been made since the previous test was performed or the owner or operator must be able to demonstrate that the results of the performance test reliably demonstrate compliance despite process or equipment changes.
 - iii. Either the required operating parameters were established in the previous test or sufficient data were collected in the previous test to establish the required operating parameters.
- (3) The permittee must meet all of the requirements of 40 CFR 63.3161 to demonstrate initial compliance. To demonstrate initial compliance, the organic HAP emissions from the combined electrodeposition primer, primer-surfacer, topcoat, final repair, 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 added to the affected source pursuant to 40 CFR 63.3082(c) must meet the applicable emission limitation in 40 CFR 63.3090(a) or 40 CFR 63.3091(a) and the applicable operating limits and work practice standards in 40 CFR 63.3093 and 63.3094 [40 CFR 63.3161(a)].
- (4) *Compliance with operating limits.* Except as provided in 40 CFR 63.3160(a)(4), the permittee must establish and demonstrate continuous compliance during the initial compliance period with the operating limits required by 40 CFR 63.3093, using the procedures specified in 40 CFR 63.3167 and 63.3168 [40 CFR 63.3161(b)].
- (5) *Compliance with work practice requirements.* The permittee must develop, implement, and document their implementation of the work practice plans required by 40 CFR 63.3094(b) and (c) during the initial compliance period, as specified in 40 CFR 63.3130 [40 CFR 63.3161(c)].
- (6) *Compliance with emission limits.* The permittee must follow the procedures in paragraphs (e) through (o) of 40 CFR 63.3161 to demonstrate compliance with the applicable emission limit in 40 CFR 63.3090(a) or 40 CFR 63.3091(a). The permittee may also use the guidelines presented in "Protocol for Determining the Daily Volatile Organic Compound Emission Rate of Automobile and Light-Duty Truck Topcoat Operations" EPA-450/3-88-018 (incorporated by reference, *see* 40 CFR 63.14), in making this demonstration [40 CFR 63.3161(d)].
- (7) *Determine the mass fraction of organic HAP, density, and volume used.* Follow the procedures specified in 40 CFR 63.3151(a) through (c) to determine the mass fraction of organic HAP and the density and volume of each coating and thinner used during each month. For electrodeposition primer operations, the mass fraction of organic HAP,

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

density, and volume used must be determined for each material added to the tank or system during each month [40 CFR 63.3161(e)].

- (8) *Calculate the total mass of organic HAP emissions before add-on controls.* Calculate the total mass of organic HAP emissions before consideration of add-on controls from all coatings and thinners used during each month in the combined electrodeposition primer, primer-surfacer, topcoat, final repair, 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 added to the affected source pursuant to 40 CFR 63.3082(c) using Equation 1 of 40 CFR 63.3161 [40 CFR 63.3161(h)]:

$$H_{BC} = A + B \quad (\text{Eq. 1})$$

Where:

H_{BC} = Total mass of organic HAP emissions before consideration of add-on controls during the month, kg.

A = Total mass of organic HAP in the coatings used during the month, kg, as calculated in Equation 1A of 40 CFR 63.3161.

B = Total mass of organic HAP in the thinners used during the month, kg, as calculated in Equation 1B of 40 CFR 63.3161.

- i. Calculate the kg organic HAP in the coatings used during the month using Equation 1A of 40 CFR 63.3161:

$$A = \sum_{i=1}^m (Vol_{c,i}) (D_{c,i}) (W_{c,i}) \quad (\text{Eq. 1A})$$

Where:

A = Total mass of organic HAP in the coatings used during the month, kg.

$Vol_{c,i}$ = Total volume of coating, i, used during the month, liters.

$D_{c,i}$ = Density of coating, i, kg coating per liter coating.

$W_{c,i}$ = Mass fraction of organic HAP in coating, i, kg organic HAP per kg coating.

m = Number of different coatings used during the month.

- ii. Calculate the kg of organic HAP in the thinners used during the month using Equation 1B of 40 CFR 63.3161:

$$B = \sum_{j=1}^n (Vol_{t,j}) (D_{t,j}) (W_{t,j}) \quad (\text{Eq. 1B})$$

Where:

B = Total mass of organic HAP in the thinners used during the month, kg.

$Vol_{t,j}$ = Total volume of thinner, j, used during the month, liters.

$D_{t,j}$ = Density of thinner, j, kg per liter.

$W_{t,j}$ = Mass fraction of organic HAP in thinner, j, kg organic HAP per kg thinner.

n = Number of different thinners used during the month.

- (9) *Calculate the organic HAP emission reduction for each controlled coating operation.* Determine the mass of organic HAP emissions reduced for each controlled coating

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

operation during each month. The emission reduction determination quantifies the total organic HAP emissions captured by the emission capture system and destroyed or removed by the add-on control device. Use the procedures in paragraph (j) of 40 CFR 63.3161 to calculate the mass of organic HAP emission reduction for each controlled coating operation using an emission capture system and add-on control device other than a solvent recovery system for which the permittee conducts liquid-liquid material balances. For each controlled coating operation using a solvent recovery system for which the permittee conducts a liquid-liquid material balance, use the procedures in paragraph (k) of 40 CFR 63.3161 to calculate the organic HAP emission reduction [40 CFR 63.3161(i)].

- (10) *Calculate the organic HAP emission reduction for each controlled coating operation not using liquid-liquid material balances.* For each controlled coating operation using an emission capture system and add-on control device other than a solvent recovery system for which the permittee conducts liquid-liquid material balances, calculate the mass of organic HAP emission reduction for the controlled coating operation, excluding all periods of time in which a deviation, including a deviation during a period of startup, shutdown, or malfunction, from an operating limit or from any CPMS requirement for the capture system or control device serving the controlled coating operation occurred, during the month using Equation 2 of 40 CFR 63.3161. The calculation of mass of organic HAP emission reduction for the controlled coating operation during the month applies the emission capture system efficiency and add-on control device efficiency to the mass of organic HAP contained in the coatings and thinners that are used in the coating operation served by the emission capture system and add-on control device during each month. Except as provided in paragraph (p) of 40 CFR 63.3161, for any period of time in which a deviation, including a deviation during a period of startup, shutdown, or malfunction, from an operating limit or from any CPMS requirement of the capture system or control device serving the controlled coating operation occurred, the permittee must assume zero efficiency for the emission capture system and add-on control device. Equation 2 of 40 CFR 63.3161 treats the materials used during such a deviation as if they were used on an uncontrolled coating operation for the time period of the deviation [40 CFR 63.3161(j)].

$$H_{Cn} = \left(A_C + B_C - A_{unc} - B_{unc} \right) \left(\frac{CE}{100} \times \frac{DRE}{100} \right) \quad (\text{Eq. 2})$$

Where:

H_{Cn} = Mass of organic HAP emission reduction, excluding all periods of time in which a deviation, including a deviation during a period of startup, shutdown, or malfunction, from an operating limit or from any CPMS requirement for the capture system or control device serving the controlled coating operation occurred, for the controlled coating operation during the month, kg.

A_C = Total mass of organic HAP in the coatings used in the controlled coating operation during the month, kg, as calculated in Equation 2A of 40 CFR 63.3161.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

B_C = Total mass of organic HAP in the thinners used in the controlled coating operation during the month, kg, as calculated in Equation 2B of 40 CFR 63.3161.

A_{unc} = Total mass of organic HAP in the coatings used during all periods of time in which a deviation, including a deviation during a period of startup, shutdown, or malfunction, from an operating limit or from any CPMS requirement for the capture system or control device serving the controlled coating operation occurred for the controlled coating operation during the month, kg, as calculated in Equation 2C of 40 CFR 63.3161.

B_{unc} = Total mass of organic HAP in the thinners used during all periods of time in which a deviation, including a deviation during a period of startup, shutdown, or malfunction, from an operating limit or from any CPMS requirement for the capture system or control device serving the controlled coating operation occurred for the controlled coating operation during the month, kg, as calculated in Equation 2D of 40 CFR 63.3161.

CE = Capture efficiency of the emission capture system vented to the add-on control device, percent. Use the test methods and procedures specified in 40 CFR 63.3164 and 63.3165 to measure and record capture efficiency.

DRE = Organic HAP destruction or removal efficiency of the add-on control device, percent. Use the test methods and procedures in 40 CFR 63.3164 and 63.3166 to measure and record the organic HAP destruction or removal efficiency.

- i. Calculate the mass of organic HAP in the coatings used in the controlled coating operation, kg, using Equation 2A of 40 CFR 63.3161.

$$A_C = \sum_{i=1}^m (Vol_{c,i}) (D_{c,i}) (W_{c,i}) \quad (\text{Eq. 2A})$$

Where:

A_C = Total mass of organic HAP in the coatings used in the controlled coating operation during the month, kg.

$Vol_{c,i}$ = Total volume of coating, i, used during the month, liters.

$D_{c,i}$ = Density of coating, i, kg per liter.

$W_{c,i}$ = Mass fraction of organic HAP in coating, i, kg per kg.

m = Number of different coatings used.

- ii. Calculate the mass of organic HAP in the thinners used in the controlled coating operation, kg, using Equation 2B of 40 CFR 63.3161.

$$B_C = \sum_{j=1}^n (Vol_{t,j}) (D_{t,j}) \quad (\text{Eq. 2B})$$

Where:

B_C = Total mass of organic HAP in the thinners used in the controlled coating operation during the month, kg.

$Vol_{t,j}$ = Total volume of thinner, j, used during the month, liters.

$D_{t,j}$ = Density of thinner, j, kg per liter.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

$W_{t,j}$ = Mass fraction of organic HAP in thinner, j, kg per kg.

n = Number of different thinners used.

- iii. Calculate the mass of organic HAP in the coatings used in the controlled coating operation during deviations specified in 40 CFR 63.3163(c) and (d), using Equation 2C of 40 CFR 63.3161:

$$A_{unc} = \sum_{i=1}^m (VOLD_i)(D_i)(W_i) \quad (\text{Eq. 2C})$$

Where:

A_{unc} = Total mass of organic HAP in the coatings used during all periods of time in which a deviation, including a deviation during a period of startup, shutdown, or malfunction, from an operating limit or from any CPMS requirement for the capture system or control device serving the controlled coating operation occurred for the controlled coating operation during the month, kg.

$VOLD_i$ = Total volume of coating, i, used in the controlled coating operation during deviations, liters.

D_i = Density of coating, i, kg per liter.

W_i = Mass fraction of organic HAP in coating, i, kg organic HAP per kg coating.

m = Number of different coatings.

- iv. Calculate the mass of organic HAP in the thinners used in the controlled coating operation during deviations specified in 40 CFR 63.3163(c) and (d), using Equation 2D of 40 CFR 63.3161:

$$B_{unc} = \sum_{j=1}^n (VOLD_j)(D_j)(W_j) \quad (\text{Eq. 2D})$$

Where:

B_{unc} = Total mass of organic HAP in the thinners used during all periods of time in which a deviation, including a deviation during a period of startup, shutdown, or malfunction, from an operating limit or from any CPMS requirement for the capture system or control device serving the controlled coating operation occurred for the controlled coating operation during the month, kg.

$VOLD_j$ = Total volume of thinner, j, used in the controlled coating operation during deviations, liters.

D_j = Density of thinner, j, kg per liter.

W_h = Mass fraction of organic HAP in thinner, j, kg organic HAP per kg coating.

n = Number of different thinners.

- (11) *Calculate the total volume of coating solids deposited.* Determine the total volume of coating solids deposited, liters, in the combined electrodeposition primer, primer-

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

surfacers, topcoat, final repair, 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 added to the affected source pursuant to 40 CFR 63.3082(c) using Equation 5 of 40 CFR 63.3161 [40 CFR 63.3161(l)]:

$$V_{sdep} = \sum_{i=1}^m (Vol_{c,i})(V_{s,i})(TE_{c,i})/100 \quad (\text{Eq. 5})$$

Where:

V_{sdep} = Total volume of coating solids deposited during the month, liters.

$Vol_{c,i}$ = Total volume of coating, i, used during the month, liters.

$V_{s,i}$ = Volume fraction of coating solids for coating, i, liter solids per liter coating, determined according to 40 CFR 63.3161(f).

$TE_{c,i}$ = Transfer efficiency of coating, i, determined according to 40 CFR 63.3161(g), expressed as a decimal, for example 60 percent must be expressed as 0.60.

M = Number of coatings used during the month.

(12) *Calculate the mass of organic HAP emissions for each month.* Determine the mass of organic HAP emissions, kg, during each month, using Equation 6 of 40 CFR 63.3161 [40 CFR 63.3161(m)].

$$H_{HAP} = H_{BC} - \sum_{i=1}^q H_{Cn,i} - \sum_{j=1}^r H_{CSR,j} - \sum_{k=1}^q \sum_{m=1}^{Sk} H_{DEV,k,m} \quad (\text{Eq. 6})$$

Where:

H_{HAP} = Total mass of organic HAP emissions for the month, kg.

H_{BC} = Total mass of organic HAP emissions before add-on controls from all the coatings and thinners used during the month, kg, determined according to paragraph (h) of 40 CFR 63.3161.

$H_{Cn,i}$ = Total mass of organic HAP emission reduction for controlled coating operation, i, not using a liquid-liquid material balance, excluding all periods of time in which a deviation, including a deviation during a period of startup, shutdown, or malfunction, from an operating limit or from any CPMS requirement for the capture system or control device serving the controlled coating operation occurred, for the controlled coating operation during the month, from Equation 2 of 40 CFR 63.3161.

$H_{CSR,j}$ = Total mass of organic HAP emission reduction for coating operation, j, controlled by a solvent recovery system using a liquid-liquid material balance, during the month, kg, from Equation 4 of 40 CFR 63.3161.

$H_{DEV,k,m}$ = Mass of organic HAP emission reduction, based on the capture system and control device efficiency approved under paragraph (p) of 40 CFR 63.3161 for period of deviation, m, for controlled coating operation, k, kg, as determined using Equation 8 of 40 CFR 63.3161.

q = Number of controlled coating operations not using a liquid-liquid material balance.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

r = Number of coating operations controlled by a solvent recovery system using a liquid-liquid material balance.

S_k = Number of periods of deviation in the month for which non-zero capture and control device efficiencies have been approved for controlled coating operation, k .

- (13) *Calculate the organic HAP emission rate for the month.* Determine the organic HAP emission rate for the month, kg organic HAP per liter coating solids deposited, using Equation 7 of 40 CFR 63.3161 [40 CFR 63.3161(n)]:

$$H_{rate} = (H_{HAP})(V_{sdep}) \quad (\text{Eq. 7})$$

Where:

H_{rate} = Organic HAP emission rate for the month compliance period, kg organic HAP per liter coating solids deposited.

H_{HAP} = Mass of organic HAP emissions for the month, kg, determined according to Equation 6 of 40 CFR 63.3161.

V_{sdep} = Total volume of coating solids deposited during the month, liters, from Equation 5 of 40 CFR 63.3161.

- (14) *Compliance demonstration.* To demonstrate initial compliance, the organic HAP emissions from the combined electrodeposition primer, primer-surfacer, topcoat, final repair, 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 added to the affected source pursuant to 40 CFR 63.3082(c) must be less than or equal to the applicable emission limitation in 40 CFR 63.3090(a) or 40 CFR 63.3091(a). The permittee must keep all records as required by 40 CFR 63.3130 and 63.3131. As part of the Notification of Compliance Status required by 40 CFR 63.3110, the permittee must submit a statement that the coating operation(s) was (were) in compliance with the emission limitations during the initial compliance period because the organic HAP emission rate was less than or equal to the applicable emission limit in 40 CFR 63.3090(a) or 40 CFR 63.3091(a) and the permittee achieved the operating limits required by 40 CFR 63.3093 and the work practice standards required by 40 CFR 63.3094 [40 CFR 63.3161(o)].
- (15) The permittee may request approval from the Administrator to use non-zero capture efficiencies and add-on control device efficiencies for any period of time in which a deviation, including a deviation during a period of startup, shutdown, or malfunction, from an operating limit or from any CPMS requirement for the capture system or add-on control device serving a controlled coating operation occurred [40 CFR 63.3161(p)].
- i. If the permittee has manually collected parameter data indicating that a capture system or add-on control device was operating normally during a CPMS malfunction, a CPMS out-of-control period, or associated repair, then these data may be used to support and document the permittee's request to use the normal capture efficiency or add-on control device efficiency for that period of deviation.
 - ii. If the permittee has data indicating the actual performance of a capture system or add-on control device (*e.g.*, capture efficiency measured at a reduced flow rate or

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

add-on control device efficiency measured at a reduced thermal oxidizer temperature) during a deviation, including a deviation during a period of startup, shutdown, or malfunction, from an operating limit or from any CPMS requirement for the capture system or add-on control device serving a controlled coating operation, then these data may be used to support and document the permittee's request to use these values for that period of deviation.

- iii. The organic HAP emission reduction achieved during each period of deviation, including a deviation during a period of startup, shutdown, or malfunction, from an operating limit or from any CPMS requirement for the capture system or add-on control device serving a controlled coating operation for which the Administrator has approved the use of non-zero capture efficiency and add-on control device efficiency values is calculated using Equation 8 of 40 CFR 63.3161.

$$H_{DEV} = \left(A_{DEV} + B_{DEV} \right) \left(\frac{CE_{DEV}}{100} \right) \left(\frac{DRE_{DEV}}{100} \right) \quad (\text{Eq. 8})$$

Where:

H_{DEV} = Mass of organic HAP emission reduction achieved during a period of deviation for the controlled coating operation, kg.

A_{DEV} = Total mass of organic HAP in the coatings used in the controlled coating operation during the period of deviation, kg, as calculated in Equation 8A of 40 CFR 63.3161.

B_{DEV} = Total mass of organic HAP in the thinners used in the controlled coating operation during the period of deviation, kg, as calculated in Equation 8B of 40 CFR 63.3161.

CE_{DEV} = Capture efficiency of the emission capture system vented to the add-on control device, approved for the period of deviation, percent.

DRE_{DEV} = Organic HAP destruction or removal efficiency of the add-on control device approved for the period of deviation, percent.

- iv. Calculate the total mass of organic HAP in the coatings used in the controlled coating operation during the period of deviation using equation 8A of 40 CFR 63.3161:

$$A_{DEV} = \sum_{i=1}^m (VOL_{CDEV,i}) (D_{c,i}) (W_{c,i}) \quad (\text{Eq. 8A})$$

Where:

A_{DEV} = Total mass of organic HAP in the coatings used in the controlled coating operation during the period of deviation, kg.

$VOL_{CDEV,i}$ = total volume of coating, i, used in the controlled coating operation during the period of deviation, liters.

$D_{c,i}$ = Density of coating, i, kg per liter.

$W_{c,i}$ = Mass fraction of organic HAP in coating, i, kg per kg.

m = Number of different coatings used.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- v. Calculate the total mass of organic HAP in the thinners used in the controlled coating operation during the period of deviation using equation 8B of 40 CFR 63.3161:

$$B_{DEV} = \sum_{j=1}^n (VOL_{TDEV,j})(D_{t,j})(W_{t,j}) \quad (\text{Eq. 8B})$$

Where:

B_{DEV} = Total mass of organic HAP in the thinners used in the controlled coating operation during the period of deviation, kg.

$VOL_{TDEV,j}$ = Total volume of thinner, j, used in the controlled coating operation during the period of deviation, liters.

$D_{t,j}$ = Density of thinner, j, kg per liter.

$W_{t,j}$ = Mass fraction of organic HAP in thinner, j, kg per kg.

n = Number of different thinners used.

- (16) To demonstrate continuous compliance with the applicable emission limit in 40 CFR 63.3090(a) or 40 CFR 63.3091(a), the organic HAP emission rate for each compliance period, determined according to the procedures in 40 CFR 63.3161, must be equal to or less than the applicable emission limit in 40 CFR 63.3090(a) or 40 CFR 63.3091(a). A compliance period consists of 1 month. Each month after the end of the initial compliance period described in 40 CFR 63.3160 is a compliance period consisting of that month. The permittee must perform the calculations in 40 CFR 63.3161 on a monthly basis [40 CFR 63.3163(a)].
- (17) If the organic HAP emission rate for any 1 month compliance period exceeded the applicable emission limit in 40 CFR 63.3090(a) or 40 CFR 63.3091(a), this is a deviation from the emission limitation for that compliance period and must be reported as specified in 40 CFR 63.3110(c)(6) and 63.3120(a)(6) [40 CFR 63.3163(b)].
- (18) The permittee must meet the requirements for bypass lines in 40 CFR 63.3168(b) for control devices other than solvent recovery systems for which the permittee conducts liquid-liquid material balances. If any bypass line is opened and emissions are diverted to the atmosphere when the coating operation is running, this is a deviation that must be reported as specified in 40 CFR 63.3110(c)(6) and 63.3120(a)(6). For the purposes of completing the compliance calculations specified in 40 CFR 63.3161(k), the permittee must assume that the emission capture system and add-on control device were achieving zero efficiency during the time period of the deviation [40 CFR 63.3163(d)].
- (19) The permittee must demonstrate continuous compliance with the work practice standards in 40 CFR 63.3094. If the permittee did not develop a work practice plan, if the permittee did not implement the plan, or if the permittee did not keep the records required by 40 CFR 63.3130(n), this is a deviation from the work practice standards that must be reported as specified in 40 CFR 63.3110(c)(6) and 63.3120(a)(6) [40 CFR 63.3163(e)].
- (20) If there were no deviations from the emission limitations, submit a statement as part of the semiannual compliance report that the permittee was in compliance with the

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

emission limitations during the reporting period because the organic HAP emission rate for each compliance period was less than or equal to the applicable emission limit in 40 CFR 63.3090(a) or 40 CFR 63.3091(a), 40 CFR 63.3090(b) or 40 CFR 63.3091(b), or 40 CFR 63.3092(a) or 40 CFR 63.3092(b), the permittee achieved the operating limits required by 40 CFR 63.3093, and the permittee achieved the work practice standards required by 40 CFR 63.3094 during each compliance period [40 CFR 63.3163(f)].

- (21) The permittee must maintain records as specified in 40 CFR 63.3130 and 63.3131 [40 CFR 63.3163(j)].
- (22) *General.* The permittee must install, operate, and maintain each CPMS specified in paragraphs (c), (e), (f), and (g) of 40 CFR 63.3168 according to paragraphs (a)(1) through (6) of 40 CFR 63.3168. The permittee must install, operate, and maintain each CPMS specified in paragraphs (b) and (d) of 40 CFR 63.3168 according to paragraphs (a)(3) through (5) of 40 CFR 63.3168 [40 CFR 63.3168(a)].
- i. The CPMS must complete a minimum of one cycle of operation for each successive 15-minute period. The permittee must have a minimum of four equally-spaced successive cycles of CPMS operation in 1 hour.
 - ii. The permittee must determine the average of all recorded readings for each successive 3-hour period of the emission capture system and add-on control device operation.
 - iii. The permittee must record the results of each inspection, calibration, and validation check of the CPMS.
 - iv. The permittee must maintain the CPMS at all times in accordance with 40 CFR 63.3100(d) and have readily available necessary parts for routine repairs of the monitoring equipment.
 - v. On and after January 5, 2021, the permittee must operate the CPMS and collect emission capture system and add-on control device parameter data at all times that a controlled coating operation is operating in accordance with 40 CFR 63.3100(d).
 - vi. On and after January 5, 2021, startups and shutdowns are normal operation for this source category. Emissions from these activities are to be included when determining if the standards specified in 40 CFR 63.3090, 63.3091, 63.3092, 63.4292, and 63.4293 are being attained. The permittee must not use emission capture system or add-on control device parameter data recorded during monitoring malfunctions, associated repairs, out-of-control periods, or required quality assurance or control activities when calculating data averages. The permittee must use all the data collected during all other periods in calculating the data averages for determining compliance with the emission capture system and add-on control device operating limits.
 - vii. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the CPMS to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions. On and after January 5, 2021, except for periods of required quality assurance or control activities, any period during which the CPMS fails to operate and record data continuously as required by paragraph (a)(1) of 40 CFR 63.3168, or generates data that cannot be included in calculating averages as specified in this paragraph (a)(7) constitutes a deviation from the monitoring requirements.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(23) *Capture system bypass line.* The permittee must meet the requirements of paragraphs (b)(1) and (2) of 40 CFR 63.3168 for each emission capture system that contains bypass lines that could divert emissions away from the add-on control device to the atmosphere [40 CFR 63.3168(b)].

i. The permittee must monitor or secure the valve or closure mechanism controlling the bypass line in a nondiverting position in such a way that the valve or closure mechanism cannot be opened without creating a record that the valve was opened. The method used to monitor or secure the valve or closure mechanism must meet one of the requirements specified in paragraphs (b)(1)(i) through (iv) of 40 CFR 63.3168.

A. *Flow control position indicator.* Install, calibrate, maintain, and operate according to the manufacturer's specifications a flow control position indicator that takes a reading at least once every 15 minutes and provides a record indicating whether the emissions are directed to the add-on control device or diverted from the add-on control device. The time of occurrence and flow control position must be recorded, as well as every time the flow direction is changed. The flow control position indicator must be installed at the entrance to any bypass line that could divert the emissions away from the add-on control device to the atmosphere.

B. *Car-seal or lock-and-key valve closures.* Secure any bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. The permittee must visually inspect the seal or closure mechanism at least once every month to ensure that the valve is maintained in the closed position, and the emissions are not diverted away from the add-on control device to the atmosphere.

C. *Valve closure monitoring.* Ensure that any bypass line valve is in the closed (nondiverting) position through monitoring of valve position at least once every 15 minutes. The permittee must inspect the monitoring system at least once every month to verify that the monitor will indicate valve position.

D. *Automatic shutdown system.* Use an automatic shutdown system in which the coating operation is stopped when flow is diverted by the bypass line away from the add-on control device to the atmosphere when the coating operation is running. The permittee must inspect the automatic shutdown system at least once every month to verify that it will detect diversions of flow and shut down the coating operation.

ii. If any bypass line is opened, The permittee must include a description of why the bypass line was opened and the length of time it remained open in the semiannual compliance reports required in 40 CFR 63.3120.

(24) *Thermal oxidizers and catalytic oxidizers.* If the permittee is using a thermal oxidizer or catalytic oxidizer as an add-on control device (including those used to treat desorbed concentrate streams from concentrators or carbon adsorbers), the permittee must comply with the requirements in paragraphs (c)(1) through (3) of 40 CFR 63.3168 [40 CFR 63.3168(c)]:

i. For a thermal oxidizer, install a gas temperature monitor in the firebox of the thermal oxidizer or in the duct immediately downstream of the firebox before any substantial heat exchange occurs.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- ii. For all thermal oxidizers and catalytic oxidizers, the permittee must meet the requirements in paragraphs (a)(1) through (6) and (c)(3)(i) through (vii) of 40 CFR 63.3168 for each gas temperature monitoring device. For the purposes of this paragraph (c)(3), a thermocouple is part of the temperature sensor.
 - A. Locate the temperature sensor in a position that provides a representative temperature.
 - B. Use a temperature sensor with a measurement sensitivity of 4 degrees Fahrenheit or 0.75 percent of the temperature value, whichever is larger.
 - C. Shield the temperature sensor system from electromagnetic interference and chemical contaminants.
 - D. If a gas temperature chart recorder is used, it must have a measurement sensitivity in the minor division of at least 20 degrees Fahrenheit.
 - E. Perform an electronic calibration at least semiannually according to the procedures in the manufacturer's owners manual. Following the electronic calibration, the permittee must conduct a temperature sensor validation check in which a second or redundant temperature sensor placed nearby the process temperature sensor must yield a reading within 30 degrees Fahrenheit of the process temperature sensor reading.
 - F. Conduct calibration and validation checks any time the sensor exceeds the manufacturer's specified maximum operating temperature range or install a new temperature sensor.
 - G. At least monthly, inspect components for integrity and electrical connections for continuity, oxidation, and galvanic corrosion.
- (25) *Concentrators*. If the permittee is using a concentrator, such as a zeolite wheel or rotary carbon bed concentrator, the permittee must install a temperature monitor in the desorption gas stream. The temperature monitor must meet the requirements in paragraphs (a)(1) through (6) and (c)(3) of 40 CFR 63.3168 [40 CFR 63.3168(f)].
- (26) *Emission capture systems*. The capture system monitoring system must comply with the applicable requirements in paragraphs (g)(1) and (2) of 40 CFR 63.3168 [40 CFR 63.3168(g)].
 - i. For each flow measurement device, the permittee must meet the requirements in paragraphs (a)(1) through (6) and (g)(1)(i) through (iv) of 40 CFR 63.3168.
 - A. Locate a flow sensor in a position that provides a representative flow measurement in the duct from each capture device in the emission capture system to the add-on control device.
 - B. Reduce swirling flow or abnormal velocity distributions due to upstream and downstream disturbances.
 - C. Conduct a flow sensor calibration check at least semiannually.
 - D. At least monthly, inspect components for integrity, electrical connections for continuity, and mechanical connections for leakage.
 - ii. For each pressure drop measurement device, the permittee must comply with the requirements in paragraphs (a)(1) through (6) and (g)(2)(i) through (vi) of 40 CFR 63.3168.
 - A. Locate the pressure tap(s) in a position that provides a representative measurement of the pressure drop across each opening the permittee is monitoring.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- B. Minimize or eliminate pulsating pressure, vibration, and internal and external corrosion.
 - C. Check pressure tap pluggage daily.
 - D. Using an inclined manometer with a measurement sensitivity of 0.0002 inch water, check gauge calibration quarterly and transducer calibration monthly.
 - E. Conduct calibration checks any time the sensor exceeds the manufacturer's specified maximum operating pressure range or install a new pressure sensor.
 - F. At least monthly, inspect components for integrity, electrical connections for continuity, and mechanical connections for leakage.
- (27) The permittee may have capture systems or add-on control devices which the permittee chooses not to take into account when demonstrating compliance with the applicable emission limitations. For any such capture system or add-on control device, the permittee is not required to comply with the requirements of 40 CFR 63.3093, 63.3100, 63.3110, 63.3120, 63.3130, 63.3131, and 63.3160 through 63.3168 with regard to notification, reporting, recordkeeping, performance tests, monitoring, operating parameters, capture efficiency, add-on control device efficiency, destruction efficiency, or removal efficiency. If, at a later date, the permittee decides to take any such capture system or add-on control device into account when demonstrating compliance with the emission limitations, then at that time the permittee must comply with the requirements of 40 CFR 63.3093, 63.3100, 63.3110, 63.3120, 63.3130, 63.3131, and 63.3160 through 63.3168 with regard to notification, recordkeeping, performance tests, monitoring, operating parameters, capture efficiency, add-on control device efficiency, destruction efficiency, and removal efficiency, as applicable, for that capture system or add-on control device [40 CFR 63.3169].
- b. If the permittee meets the operating limits of 40 CFR 63.3092(a) or (b), they must either meet the emission limits of paragraph (a) of 40 CFR 63.3091 or limit combined organic HAP emissions to the atmosphere from primer-surfacer, topcoat, final repair, 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 added to the affected source pursuant to 40 CFR 63.3082(c) to no more than 0.132 kg/liter (1.10 lb/gal) of coating solids deposited during each month, determined according to the requirements in 40 CFR 63.3171. If the permittee does not have an electrodeposition primer system, the permittee must limit combined organic HAP emissions to the atmosphere from primer-surfacer, topcoat, final repair, 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 added to the affected source pursuant to 40 CFR 63.3082(c) to no more than 0.132 kg/liter (1.10 lb/gal) of coating solids deposited during each month, determined according to the requirements in 40 CFR 63.3171 [40 CFR 63.3091(b)].

Compliance Demonstration Method for 40 CFR 63.3091 (b) [Combined Primer-Surfacer, Topcoat, Final Repair, Glass Bonding Primer, and Glass Bonding Adhesive and Separate Electrodeposition Primer]:

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- (1) *Existing affected sources.* For an existing affected source, the permittee must meet the requirements of paragraphs (b)(1) through (3) of 40 CFR 63.3160 [40 CFR 63.3170(b)].
- (2) The permittee must meet all of the requirements of 40 CFR 63.3171 to demonstrate initial compliance. To demonstrate initial compliance, the organic HAP emissions from the combined primer-surfacer, topcoat, final repair, 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 added to the affected source pursuant to 40 CFR 63.3082(c) must meet the applicable emission limitation in 40 CFR 63.3090(b) or 40 CFR 63.3091(b); the organic HAP emissions from the electrodeposition primer operation must meet the applicable emissions limitations in 40 CFR 63.3092(a) or (b); and the permittee must meet the applicable operating limits and work practice standards in 40 CFR 63.3093 and 63.3094 [40 CFR 63.3171(a)].
- (3) *Compliance with operating limits.* Except as provided in 40 CFR 63.3160(a)(4), the permittee must establish and demonstrate continuous compliance during the initial compliance period with the operating limits required by 40 CFR 63.3093, using the procedures specified in 40 CFR 63.3167 and 63.3168 [40 CFR 63.3171(b)].
- (4) *Compliance with work practice requirements.* The permittee must develop, implement, and document their implementation of the work practice plans required by 40 CFR 63.3094(b) and (c) during the initial compliance period, as specified in 40 CFR 63.3130 [40 CFR 63.3171(c)].
- (5) *Compliance with emission limits.* The permittee must follow the procedures in 40 CFR 63.3161(e) through (n), excluding materials used in electrodeposition primer operations, to demonstrate compliance with the applicable emission limit in 40 CFR 63.3090(b) or 40 CFR 63.3091(b). The permittee must follow the procedures in paragraph (e) of 40 CFR 63.3171 to demonstrate compliance with the emission limit in 40 CFR 63.3092(a), or paragraphs (f) through (g) of 40 CFR 63.3171 to demonstrate compliance with the emission limitations in 40 CFR 63.3092(b) [40 CFR 63.3171(d)].
- (6) *Determine the mass fraction of each organic HAP in each material used in the electrodeposition primer operation.* The permittee must determine the mass fraction of each organic HAP for each material used in the electrodeposition primer operation during the compliance period by using one of the options in paragraphs (e)(1) through (3) of 40 CFR 63.3171 [40 CFR 63.3171(e)].
 - i. *Method 311 (appendix A to 40 CFR part 63).* The permittee may use Method 311 for determining the mass fraction of each organic HAP.
 - ii. *Alternative method.* The permittee may use an alternative test method for determining the mass fraction of organic HAP once the Administrator has approved it. The permittee must follow the procedure in 40 CFR 63.7(f) to submit an alternative test method for approval.
 - iii. *Information from the supplier or manufacturer of the material.* The permittee may rely on information other than that generated by the test methods specified in paragraphs (e)(1) and (2) of 40 CFR 63.3171, such as manufacturer's formulation data, if it represents each organic HAP in Table 5 to 40 CFR 63 subpart IIII that is present at 0.1 percent by mass, and at 1.0 percent by mass or more for other compounds. If there is a disagreement between such information and results of a test conducted according to paragraph (e)(1) or (2) of 40 CFR 63.3171, then the test

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

method results will take precedence unless after consultation, the facility demonstrates to the satisfaction of the enforcement authority that the facility's data are correct.

- (7) *Compliance demonstration.* To demonstrate initial compliance, the organic HAP emissions from the combined primer-surfacer, topcoat, final repair, 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 added to the affected source pursuant to 40 CFR 63.3082(c) must meet the applicable emission limitation in 40 CFR 63.3090(b) or 40 CFR 63.3091(b); the organic HAP emissions from the electrodeposition primer operation must meet the applicable emissions limitations in 40 CFR 63.3092(a) or (b). The permittee must keep all records as required by 40 CFR 63.3130 and 63.3131. As part of the Notification of Compliance Status required by 40 CFR 63.3110, the permittee must submit a statement that the coating operation(s) was (were) in compliance with the emission limitations during the initial compliance period because the organic HAP emission rate from the combined primer-surfacer, topcoat, final repair, 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 added to the affected source pursuant to 40 CFR 63.3082(c) was less than or equal to the applicable emission limit in 40 CFR 63.3090(b) or 40 CFR 63.3091(b), and the organic HAP emissions from the electrodeposition primer operation met the applicable emissions limitations in 40 CFR 63.3092(a) or (b), and the permittee achieved the operating limits required by 40 CFR 63.3093 and the work practice standards required by 40 CFR 63.3094 [40 CFR 63.3171(h)].
- (8) To demonstrate continuous compliance with the applicable emission limit in 40 CFR 63.3090(b) or 40 CFR 63.3091(b), the organic HAP emission rate for each compliance period determined according to the procedures in 40 CFR 63.3171 must be equal to or less than the applicable emission limit in 40 CFR 63.3090(b) or 40 CFR 63.3091(b). A compliance period consists of 1 month. Each month after the end of the initial compliance period described in 40 CFR 63.3170 is a compliance period consisting of that month. The permittee must perform the calculations in 40 CFR 63.3171 on a monthly basis [40 CFR 63.3173(a)].
- (9) If the organic HAP emission rate for any 1 month compliance period exceeded the applicable emission limit in 40 CFR 63.3090(b) or 40 CFR 63.3091(b), this is a deviation from the emission limitation for that compliance period and must be reported as specified in 40 CFR 63.3110(c)(6) and 63.3120(a)(6) [40 CFR 63.3173(b)].
- (10) The permittee may have capture systems or add-on control devices which the permittee chooses not to take into account when demonstrating compliance with the applicable emission limitations. For any such capture system or add-on control device, the permittee is not required to comply with the requirements of 40 CFR 63.3093, 63.3100, 63.3110, 63.3120, 63.3130, 63.3131, and 63.3160 through 63.3168 with regard to notification, reporting, recordkeeping, performance tests, monitoring, operating parameters, capture efficiency, add-on control device efficiency, destruction efficiency, or removal efficiency. If, at a later date, the permittee decides to take any such capture system or add-on control device into account when demonstrating

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- compliance with the emission limitations, then at that time the permittee must comply with the requirements of 40 CFR 63.3093, 63.3100, 63.3110, 63.3120, 63.3130, 63.3131, and 63.3160 through 63.3168 with regard to notification, reporting, recordkeeping, performance tests, monitoring, operating parameters, capture efficiency, add-on control device efficiency, destruction efficiency, and removal efficiency, as applicable, for that capture system or add-on control device [40 CFR 63.3174].
- c. The permittee must limit average organic HAP emissions from all adhesive and sealer materials other than materials used as components of glass bonding systems to no more than 0.010 kg/kg (lb/lb) of adhesive and sealer material used during each month [40 CFR 63.3091(c)].
 - d. The permittee must limit average organic HAP emissions from all deadener materials to no more than 0.010 kg/kg (lb/lb) of deadener material used during each month [40 CFR 63.3091(d)].

Compliance Demonstration Method for 40 CFR 63.3091 (c) and (d) [Adhesive, Sealers and Deadeners]:

- (1) The permittee must complete the initial compliance demonstration for the initial compliance period according to the requirements of 40 CFR 63.3151. 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 compliance 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. The permittee must determine the mass average organic HAP content of the materials used each month for each group of materials for which an emission limitation is established in 40 CFR 63.3090(c) and (d) or 40 CFR 63.3091(c) and (d). The initial compliance demonstration includes the calculations according to 40 CFR 63.3151 and supporting documentation showing that during the initial compliance period, the mass average organic HAP content for each group of materials was equal to or less than the applicable emission limits in 40 CFR 63.3090(c) and (d) or 40 CFR 63.3091(c) and (d) [40 CFR 63.3150].
- (2) The permittee must separately calculate the mass average organic HAP content of the materials used during the initial compliance period for each group of materials for which an emission limit is established in 40 CFR 63.3090(c) and (d) or 40 CFR 63.3091(c) and (d). If every individual material used within a group of materials meets the emission limit for that group of materials, the permittee may demonstrate compliance with that emission limit by documenting the name and the organic HAP content of each material used during the initial compliance period. If any individual material used within a group of materials exceeds the emission limit for that group of materials, the permittee must determine the mass average organic HAP content according to the procedures of paragraph (d) of 40 CFR 63.3151 [40 CFR 63.3151].
 - i. *Determine the mass fraction of organic HAP for each material used.* The permittee must determine the mass fraction of organic HAP for each material used during the

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

compliance period by using one of the options in paragraphs (a)(1) through (5) of 40 CFR 63.3151 [40 CFR 63.3151(a)].

- A. *Method 311 (appendix A to 40 CFR part 63).* The permittee may use Method 311 for determining the mass fraction of organic HAP. Use the procedures specified in paragraphs (a)(1)(i) and (ii) of 40 CFR 63.3151 when performing a Method 311 test.
 - 1) Count each organic HAP in table 5 to 40 CFR 63 subpart IIII that is present at 0.1 percent by mass or more and at 1.0 percent by mass or more for other compounds. For example, if toluene (not listed in table 5 to 40 CFR 63 subpart IIII) is measured to be 0.5 percent of the material by mass, the permittee does not have to count it. Express the mass fraction of each organic HAP the permittee counts as a value truncated to four places after the decimal point (e.g., 0.3791).
 - 2) Calculate the total mass fraction of organic HAP in the test material by adding up the individual organic HAP mass fractions and truncating the result to three places after the decimal point (e.g., 0.7638 truncates to 0.763).
- B. *EPA Method 24 (appendix A-7 to 40 CFR part 60).* For coatings, the permittee may use EPA Method 24 to determine the mass fraction of nonaqueous volatile matter and use that value as a substitute for mass fraction of organic HAP. As an alternative to using EPA Method 24, the permittee may use ASTM D2369-10 (Reapproved 2015)^e (incorporated by reference, *see* 40 CFR 63.14).
- C. *Alternative method.* The permittee may use an alternative test method for determining the mass fraction of organic HAP once the Administrator has approved it. The permittee must follow the procedure in 40 CFR 63.7(f) to submit an alternative test method for approval.
- D. *Information from the supplier or manufacturer of the material.* The permittee may rely on information other than that generated by the test methods specified in paragraphs (a)(1) through (3) of 40 CFR 63.3151, such as manufacturer's formulation data, if it represents each organic HAP in table 5 to 40 CFR 63 subpart IIII that is present at 0.1 percent by mass or more and at 1.0 percent by mass or more for other compounds. For example, if toluene (not listed in table 5 of 40 CFR 63 subpart IIII) is 0.5 percent of the material by mass, the permittee does not have to count it. If there is a disagreement between such information and results of a test conducted according to paragraphs (a)(1) through (3) of 40 CFR 63.3151, then the test method results will take precedence, unless after consultation, the facility demonstrates to the satisfaction of the enforcement authority that the facility's data are correct.
- E. *Solvent blends.* Solvent blends may be listed as single components for some materials in data provided by manufacturers or suppliers. Solvent blends may contain organic HAP which must be counted toward the total organic HAP mass fraction of the materials. When neither test data nor manufacturer's data for solvent blends are available, the permittee may use the default values for the mass fraction of organic HAP in the solvent blends listed in Table 3 or 4 to 40 CFR 63 subpart IIII. If the permittee uses the tables, the permittee must use the values in Table 3 for all solvent blends that match Table 3 entries, and the

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

permittee may only use Table 4 if the solvent blends in the materials the permittee uses do not match any of the solvent blends in Table 3 and the permittee only knows whether the blend is aliphatic or aromatic. However, if the results of a Method 311 test indicate higher values than those listed on Table 3 or 4 to 40 CFR 63 subpart IIII, the Method 311 results will take precedence, unless after consultation, the facility demonstrates to the satisfaction of the enforcement authority that the data from Table 3 or 4 are correct.

- ii. *Determine the density of each material used.* Determine the density of each material used during the compliance period from test results using ASTM D1475-13 (incorporated by reference, *see* 40 CFR 63.14) or for powder coatings, test method A or test method B of ASTM D5965-02 (Reapproved 2013) (incorporated by reference, *see* 40 CFR 63.14), or information from the supplier or manufacturer of the material. If there is disagreement between ASTM D1475-13 test results or ASTM D5965-02 (Reapproved 2013), test method A or test method B test results and the supplier's or manufacturer's information, the test results will take precedence unless after consultation, the facility demonstrates to the satisfaction of the enforcement authority that the facility's data are correct [40 CFR 63.3151(b)].
- iii. *Determine the volume of each material used.* Determine the volume (liters) of each material used during each month by measurement or usage records [40 CFR 63.3151(c)].
- iv. *Determine the mass average organic HAP content for each group of materials.* Determine the mass average organic HAP content of the materials used during the initial compliance period for each group of materials for which an emission limit is established in 40 CFR 63.3090(c) and (d) or 40 CFR 63.3091(c) and (d), using Equations 1 and 2 of 40 CFR 63.3151 [40 CFR 63.3151(d)].
 - A. Calculate the mass average organic HAP content of adhesive and sealer materials other than components of the glass bonding system used in the initial compliance period using Equation 1 of 40 CFR 63.3151:

$$C_{avg,as} = \frac{\sum_{j=1}^r (Vol_{as,j})(D_{as,j})(W_{as,j})}{\sum_{j=1}^r (Vol_{as,j})(D_{as,j})} \quad (\text{Eq. 1})$$

Where:

$C_{avg, as}$ = Mass average organic HAP content of adhesives and sealer materials used, kg/kg.

$Vol_{as, j}$ = Volume of adhesive or sealer material, j, used, liters.

$D_{as, j}$ = Density of adhesive or sealer material, j, used, kg per liter.

$W_{as, j}$ = Mass fraction of organic HAP in adhesive or sealer material, j, kg/kg.

r = Number of adhesive and sealer materials used.

- B. Calculate the mass average organic HAP content of deadener materials used in the initial compliance period using Equation 2 of 40 CFR 63.3151:

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

$$C_{avg,d} = \frac{\sum_{m=1}^s (Vol_{d,m})(D_{d,m})(W_{d,m})}{\sum_{m=1}^s (Vol_{d,m})(D_{d,m})} \quad (\text{Eq. 2})$$

Where:

$C_{avg,d}$ = Mass average organic HAP content of deadener material used, kg/kg.

$Vol_{d,m}$ = Volume of deadener material, m, used, liters.

$D_{d,m}$ = Density of deadener material, m, used, kg per liter.

$W_{d,m}$ = Mass fraction of organic HAP in deadener material, m, kg/kg.

s = Number of deadener materials used.

- v. *Compliance demonstration.* The mass average organic HAP content for the compliance period must be less than or equal to the applicable emission limit in 40 CFR 63.3090(c) and (d) or 40 CFR 63.3091(c) and (d). The permittee must keep all records as required by 40 CFR 63.3130 and 63.3131. As part of the Notification of Compliance Status required by 40 CFR 63.3110, the permittee must submit a statement that the coating operations were in compliance with the emission limitations during the initial compliance period because the mass average organic HAP content was less than or equal to the applicable emission limits in 40 CFR 63.3090(c) and (d) or 40 CFR 63.3091(c) and (d), determined according to 40 CFR 63.3151 [40 CFR 63.3151(e)].
 - (3) To demonstrate continuous compliance, the mass average organic HAP content for each compliance period, determined according to 40 CFR 63.3151(a) through (d), must be less than or equal to the applicable emission limit in 40 CFR 63.3090(c) and (d) or 40 CFR 63.3091(c) and (d). A compliance period consists of 1 month. Each month after the end of the initial compliance period described in 40 CFR 63.3150 is a compliance period consisting of that month [40 CFR 63.3152(a)].
 - (4) If the mass average organic HAP emission content for any compliance period exceeds the applicable emission limit in 40 CFR 63.3090(c) and (d) or 40 CFR 63.3091(c) and (d), this is a deviation from the emission limitations for that compliance period and must be reported as specified in 40 CFR 63.3110(c)(6) and 63.3120(a)(5) [40 CFR 63.3152(b)].
- e. For coatings and thinners used in coating operations added to the affected source pursuant to 40 CFR 63.3082(c) [40 CFR 63.3091(e)]:
 - (1) Adhesive and sealer materials that are not components of glass bonding systems are subject to and must be included in the demonstration of compliance for paragraph (c) of 40 CFR 63.3091.
 - (2) Deadener materials are subject to and must be included in the demonstration of compliance for paragraph (d) of 40 CFR 63.3091.
 - (3) All other coatings and thinners are subject to and must be included in the demonstration of compliance for paragraphs (a) or (b) of 40 CFR 63.3091.
- f. If the permittee's electrodeposition primer system meets the requirements of either paragraph (a) or (b) of 40 CFR 63.3092, the permittee may choose to comply with the

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

emission limits of 40 CFR 63.3090(b) or 40 CFR 63.3091(b) instead of the emission limits of 40 CFR 63.3090(a) or 40 CFR 63.3091(a) [40 CFR 63.3092].

(1) Each individual material added to the electrodeposition primer system contains no more than [40 CFR 63.3092(a)]:

i. 1.0 percent by weight of any organic HAP; and

(2) Emissions from all bake ovens used to cure electrodeposition primers must be captured and ducted to a control device having a destruction or removal efficiency of at least 95 percent [40 CFR 63.3092(b)].

g. The permittee shall be in compliance with the emission limitations in 40 CFR 63.3090 and 63.3091 at all times, as determined on a monthly basis [40 CFR 63.3100(a)].

3. Testing Requirements:

Compliance Demonstration Method for 40 CFR 63.3091 (a) [Combined Electrodeposition Primer, Primer-Surfacer, Topcoat, Final Repair, Glass Bonding Primer, and Glass Bonding Adhesive]:

a. *Determine the volume fraction of coating solids for each coating.* The permittee must determine the volume fraction of coating solids (liter of coating solids per liter of coating) for each coating used during the compliance period by a test or by information provided by the supplier or the manufacturer of the material, as specified in paragraphs (f)(1) and (2) of 40 CFR 63.3161. For electrodeposition primer operations, the volume fraction of solids must be determined for each material added to the tank or system during each month. If test results obtained according to paragraph (f)(1) of 40 CFR 63.3161 do not agree with the information obtained under paragraph (f)(2) of 40 CFR 63.3161, the test results will take precedence unless, after consultation, the facility demonstrates to the satisfaction of the enforcement authority that the facility's data are correct [40 CFR 63.3161(f)].

(1) *ASTM Method D2697-03 (Reapproved 2014) or ASTM Method D6093-97 (Reapproved 2016).* The permittee may use ASTM D2697-03 (Reapproved 2014) (incorporated by reference, *see* 40 CFR 63.14), or ASTM D6093-97 (Reapproved 2016) (incorporated by reference, *see* 40 CFR 63.14), to determine the volume fraction of coating solids for each coating. Divide the nonvolatile volume percent obtained with the methods by 100 to calculate volume fraction of coating solids.

(2) *Information from the supplier or manufacturer of the material.* The permittee may obtain the volume fraction of coating solids for each coating from the supplier or manufacturer.

b. *Determine the transfer efficiency for each coating.* The permittee must determine the transfer efficiency for each primer-surfacer and topcoat coating, and for all coatings, except for deadener and for adhesive and sealer that are not components of glass bonding systems, used in coating operations added to the affected source pursuant to 40 CFR 63.3082(c) using ASTM D5066-91 (Reapproved 2017) (incorporated by reference, *see* 40 CFR 63.14) or the guidelines presented in "Protocol for Determining the Daily Volatile Organic Compound Emission Rate of Automobile and Light-Duty Truck Topcoat Operations," EPA-450/3-88-018 (incorporated by reference, *see* 40 CFR 63.14). The permittee may conduct transfer efficiency testing on representative coatings and for representative spray

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

booths as described in “Protocol for Determining the Daily Volatile Organic Compound Emission Rate of Automobile and Light-Duty Truck Topcoat Operations,” EPA-450/3-88-018. The permittee may assume 100-percent transfer efficiency for electrodeposition primer coatings, glass bonding primers, and glass bonding adhesives. For final repair coatings, the permittee may assume 40-percent transfer efficiency for air atomized spray and 55-percent transfer efficiency for electrostatic spray and high volume, low pressure spray. For blackout, chip resistant edge primer, interior color, in-line repair, lower body anti-chip coatings, or underbody anti-chip coatings, the permittee may assume 40-percent transfer efficiency for air atomized spray, 55-percent transfer efficiency for electrostatic spray and high volume-low pressure spray, and 80-percent transfer efficiency for airless spray [40 CFR 63.3161(g)].

- c. The permittee must demonstrate continuous compliance with each operating limit required by 40 CFR 63.3093 that applies to the permittee, as specified in table 1 to 40 CFR 63 subpart IIII, and the permittee must conduct performance tests as specified in paragraph (c)(3) of 40 CFR 63.3163 [40 CFR 63.3163(c)].
 - (1) If an operating parameter is out of the allowed range specified in Table 1 to 40 CFR 63 subpart IIII, this is a deviation from the operating limit that must be reported as specified in 40 CFR 63.3110(c)(6) and 63.3120(a)(6).
 - (2) If an operating parameter deviates from the operating limit specified in Table 1 to 40 CFR 63 subpart IIII, then the permittee must assume that the emission capture system and add-on control device were achieving zero efficiency during the time period of the deviation except as provided in 40 CFR 63.3161(p).
 - (3) Except for solvent recovery systems for which the permittee conducts liquid-liquid material balances according to 40 CFR 63.3161(k) for controlled coating operations, the permittee must conduct periodic performance tests of add-on controls and establish the operating limits required by 40 CFR 63.3093 within 5 years following the previous performance test. The permittee must conduct the first periodic performance test before July 8, 2023, unless the permittee has already required to complete periodic performance tests as a requirement of renewing the facility's operating permit under 40 CFR part 70 or 40 CFR part 71 and have conducted a performance test on or after July 8, 2022. Thereafter the permittee must conduct a performance test no later than 5 years following the previous performance test. Operating limits must be confirmed or reestablished during each performance test. For any control device for which the permittee is using the catalytic oxidizer control option at 40 CFR 63.3167(b) and following the catalyst maintenance procedures in 40 CFR 63.3167(b)(6), the permittee is not required to conduct periodic control device performance testing as specified by this paragraph. For any control device for which instruments are used to continuously measure organic compound emissions, the permittee is not required to conduct periodic control device performance testing as specified by this paragraph. The requirements of this paragraph do not apply to measuring emission capture system efficiency.
- d. The permittee must conduct each applicable performance test required by 40 CFR 63.3160, 63.3163, and 63.3171 according to the requirements in 40 CFR 63.7(e)(1) and under the conditions in 40 CFR 63.3164 unless the permittee obtains a waiver of the performance test according to the provisions in 40 CFR 63.7(h) [40 CFR 63.3164(a)].

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- (1) *Representative coating operation operating conditions.* The permittee must conduct the performance test under representative operating conditions for the coating operation. On and after January 5, 2021, operations during periods of startup, shutdown, or nonoperation do not constitute representative conditions for purposes of conducting a performance test. The owner or operator may not conduct performance tests during periods of malfunction. The permittee must record the process information that is necessary to document operating conditions during the test and explain why the conditions represent normal operation. Upon request, the permittee must make available to the Administrator such records as may be necessary to determine the conditions of performance tests.
 - (2) *Representative emission capture system and add-on control device operating conditions.* The permittee must conduct the performance test when the emission capture system and add-on control device are operating at a representative flow rate, and the add-on control device is operating at a representative inlet concentration. The permittee must record information that is necessary to document emission capture system and add-on control device operating conditions during the test and explain why the conditions represent normal operation.
- e. The permittee must conduct each performance test of an emission capture system according to the requirements in 40 CFR 63.3165. The permittee must conduct each performance test of an add-on control device according to the requirements in 40 CFR 63.3166 [40 CFR 63.3164(b)].
 - f. The permittee must use the procedures and test methods in 40 CFR 63.3165 to determine capture efficiency as part of the performance test required by 40 CFR 63.3160 and 63.3163. For purposes of 40 CFR 63 subpart IIII, a spray booth air seal is not considered a natural draft opening in a PTE or a temporary total enclosure provided the permittee demonstrates that the direction of air movement across the interface between the spray booth air seal and the spray booth is into the spray booth. For purposes of 40 CFR 63 subpart IIII, a bake oven air seal is not considered a natural draft opening in a PTE or a temporary total enclosure provided the permittee demonstrates that the direction of air movement across the interface between the bake oven air seal and the bake oven is into the bake oven. The permittee may use lightweight strips of fabric or paper, or smoke tubes to make such demonstrations as part of showing that the permittee's capture system is a PTE or conducting a capture efficiency test using a temporary total enclosure. The permittee cannot count air flowing from a spray booth air seal into a spray booth as air flowing through a natural draft opening into a PTE or into a temporary total enclosure unless the permittee elects to treat that spray booth air seal as a natural draft opening. The permittee cannot count air flowing from a bake oven air seal into a bake oven as air flowing through a natural draft opening into a PTE or into a temporary total enclosure unless the permittee elects to treat that bake oven air seal as a natural draft opening [40 CFR 63.3165].
 - (1) *Assuming 100 percent capture efficiency.* The permittee may assume the capture system efficiency is 100 percent if both of the conditions in paragraphs (a)(1) and (2) of 40 CFR 63.3165 are met [40 CFR 63.3165(a)]:

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- i. The capture system meets the criteria in Method 204 of appendix M to 40 CFR part 51 for a PTE and directs all the exhaust gases from the enclosure to an add-on control device.
 - ii. All coatings and thinners used in the coating operation are applied within the capture system, and coating solvent flash-off and coating curing and drying occurs within the capture system. For example, this criterion is not met if parts enter the open shop environment when being moved between a spray booth and a curing oven.
- (2) *Measuring capture efficiency.* If the capture system does not meet both of the criteria in paragraphs (a)(1) and (2) of 40 CFR 63.3165, then the permittee must use one of the five procedures described in paragraphs (c) through (g) of 40 CFR 63.3165 to measure capture efficiency. The capture efficiency measurements use TVH capture efficiency as a surrogate for organic HAP capture efficiency. For the protocols in paragraphs (c) and (d) of 40 CFR 63.3165, the capture efficiency measurement must consist of three test runs. Each test run must be at least 3 hours duration or the length of a production run, whichever is longer, up to 8 hours. For the purposes of this test, a production run means the time required for a single part to go from the beginning to the end of production, which includes surface preparation activities and drying or curing time [40 CFR 63.3165(b)].
- (3) *Liquid-to-uncaptured-gas protocol using a temporary total enclosure or building enclosure.* The liquid-to-uncaptured-gas protocol compares the mass of liquid TVH in materials used in the coating operation to the mass of TVH emissions not captured by the emission capture system. Use a temporary total enclosure or a building enclosure and the procedures in paragraphs (c)(1) through (6) of 40 CFR 63.3165 to measure emission capture system efficiency using the liquid-to-uncaptured-gas protocol [40 CFR 63.3165(c)].
- i. Either use a building enclosure or construct an enclosure around the coating operation where coatings and thinners are applied, and all areas where emissions from these applied coatings and thinners subsequently occur, such as flash-off, curing, and drying areas. The areas of the coating operation where capture devices collect emissions for routing to an add-on control device, such as the entrance and exit areas of an oven or spray booth, must also be inside the enclosure. The enclosure must meet the applicable definition of a temporary total enclosure or building enclosure in Method 204 of appendix M to 40 CFR part 51.
 - ii. Use Method 204A or F of appendix M to 40 CFR part 51 to determine the mass fraction of TVH liquid input from each coating and thinner used in the coating operation during each capture efficiency test run. To make the determination, substitute TVH for each occurrence of the term volatile organic compounds (VOC) in the methods.
 - iii. Use Equation 1 of 40 CFR 63.3165 to calculate the total mass of TVH liquid input from all the coatings and thinners used in the coating operation during each capture efficiency test run.

$$TVH_{used} = \sum_{i=1}^n (TVH_i)(Vol_i)(D_i) \quad (Eq. 1)$$

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Where:

TVH_i = Mass fraction of TVH in coating or thinner, i , used in the coating operation during the capture efficiency test run, kg TVH per kg material.

Vol_i = Total volume of coating or thinner, i , used in the coating operation during the capture efficiency test run, liters.

D_i = Density of coating or thinner, i , kg material per liter material.

n = Number of different coatings and thinners used in the coating operation during the capture efficiency test run.

- iv. Use Method 204D or E of appendix M to 40 CFR part 51 to measure the total mass, kg, of TVH emissions that are not captured by the emission capture system; they are measured as they exit the temporary total enclosure or building enclosure during each capture efficiency test run. To make the measurement, substitute TVH for each occurrence of the term VOC in the methods.
 - A. Use Method 204D if the enclosure is a temporary total enclosure.
 - B. Use Method 204E if the enclosure is a building enclosure. During the capture efficiency measurement, all organic compound emitting operations inside the building enclosure, other than the coating operation for which capture efficiency is being determined, must be shut down, but all fans and blowers must be operating normally.
- v. For each capture efficiency test run, determine the percent capture efficiency of the emission capture system using Equation 2 of 40 CFR 63.3165:

$$CE = \frac{(TVH_{used} - TVH_{uncaptured})}{TVH_{used}} \times 100 \quad (Eq. 2)$$

Where:

CE = Capture efficiency of the emission capture system vented to the add-on control device, percent.

TVH_{used} = Total mass of TVH liquid input used in the coating operation during the capture efficiency test run, kg.

$TVH_{uncaptured}$ = Total mass of TVH that is not captured by the emission capture system and that exits from the temporary total enclosure or building enclosure during the capture efficiency test run, kg.

- vi. Determine the capture efficiency of the emission capture system as the average of the capture efficiencies measured in the three test runs.
- (4) *Gas-to-gas protocol using a temporary total enclosure or a building enclosure.* The gas-to-gas protocol compares the mass of TVH emissions captured by the emission capture system to the mass of TVH emissions not captured. Use a temporary total enclosure or a building enclosure and the procedures in paragraphs (d)(1) through (5) of 40 CFR 63.3165 to measure emission capture system efficiency using the gas-to-gas protocol [40 CFR 63.3165(d)].
- i. Either use a building enclosure or construct an enclosure around the coating operation where coatings and thinners are applied, and all areas where emissions from these applied coatings and thinners subsequently occur, such as flash-off, curing, and drying areas. The areas of the coating operation where capture devices

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

collect emissions generated by the coating operation for routing to an add-on control device, such as the entrance and exit areas of an oven or a spray booth, must also be inside the enclosure. The enclosure must meet the applicable definition of a temporary total enclosure or building enclosure in Method 204 of appendix M to 40 CFR part 51.

- ii. Use Method 204B or C of appendix M to 40 CFR part 51 to measure the total mass, kg, of TVH emissions captured by the emission capture system during each capture efficiency test run as measured at the inlet to the add-on control device. To make the measurement, substitute TVH for each occurrence of the term VOC in the methods.
 - A. The sampling points for the Method 204B or C measurement must be upstream from the add-on control device and must represent total emissions routed from the capture system and entering the add-on control device.
 - B. If multiple emission streams from the capture system enter the add-on control device without a single common duct, then the emissions entering the add-on control device must be simultaneously or sequentially measured in each duct, and the total emissions entering the add-on control device must be determined.
- iii. Use Method 204D or E of appendix M to 40 CFR part 51 to measure the total mass, kg, of TVH emissions that are not captured by the emission capture system; they are measured as they exit the temporary total enclosure or building enclosure during each capture efficiency test run. To make the measurement, substitute TVH for each occurrence of the term VOC in the methods.
 - A. Use Method 204D if the enclosure is a temporary total enclosure.
 - B. Use Method 204E if the enclosure is a building enclosure. During the capture efficiency measurement, all organic compound emitting operations inside the building enclosure, other than the coating operation for which capture efficiency is being determined, must be shut down, but all fans and blowers must be operating normally.
- iv. For each capture efficiency test run, determine the percent capture efficiency of the emission capture system using Equation 3 of 40 CFR 63.3165:

$$CE = \frac{TVH_{\text{captured}}}{(TVH_{\text{captured}} + TVH_{\text{uncaptured}})} \times 100 \quad (\text{Eq. 3})$$

Where:

CE = Capture efficiency of the emission capture system vented to the add-on control device, percent.

TVH_{captured} = Total mass of TVH captured by the emission capture system as measured at the inlet to the add-on control device during the emission capture efficiency test run, kg.

TVH_{uncaptured} = Total mass of TVH that is not captured by the emission capture system and that exits from the temporary total enclosure or building enclosure during the capture efficiency test run, kg.

- v. Determine the capture efficiency of the emission capture system as the average of the capture efficiencies measured in the three test runs.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(5) *Panel testing to determine the capture efficiency of flash-off or bake oven emissions.*

The permittee may conduct panel testing to determine the capture efficiency of flash-off or bake oven emissions using ASTM D5087-02 (incorporated by reference, *see* 40 CFR 63.14), ASTM D6266-00a (Reapproved 2017) (incorporated by reference, *see* 40 CFR 63.14), or the guidelines presented in “Protocol for Determining the Daily Volatile Organic Compound Emission Rate of Automobile and Light-Duty Truck Topcoat Operations,” EPA-450/3-88-018 (incorporated by reference, *see* 40 CFR 63.14). The permittee may conduct panel testing on representative coatings as described in “Protocol for Determining the Daily Volatile Organic Compound Emission Rate of Automobile and Light-Duty Truck Topcoat Operations,” EPA-450/3-88-018. The results of these panel testing procedures are in units of mass of VOC per volume of coating solids deposited and must be converted to a percent value for use in 40 CFR 63 subpart IIII. If the permittee panel tests representative coatings, then the permittee may convert the panel test result for each representative coating either to a unique percent capture efficiency for each coating grouped with that representative coating by using coating specific values for the volume of coating solids deposited per volume of coating used, mass of VOC per volume of coating, volume fraction solids, transfer efficiency, density and mass fraction VOC in Equations 4 through 6 of 40 CFR 63.3165; or to a composite percent capture efficiency for the group of coatings by using composite values for the group of coatings for the volume of coating solids deposited per volume of coating used and for the mass of VOC per volume of coating, and average values for the group of coatings for volume fraction solids, transfer efficiency, density and mass fraction VOC in Equations 4 through 6 of 40 CFR 63.3165. If the permittee panel tests each coating, then the permittee must convert the panel test result for each coating to a unique percent capture efficiency for that coating by using coating specific values for the volume of coating solids deposited per volume of coating used, mass of VOC per volume of coating, volume fraction solids, transfer efficiency, density, and mass fraction VOC in Equations 4 through 6 of 40 CFR 63.3165. Panel test results expressed in units of mass of VOC per volume of coating solids deposited must be converted to percent capture efficiency using Equation 4 of 40 CFR 63.3165. An alternative for using panel test results expressed in units of mass of VOC per mass of coating solids deposited is presented in paragraph (e)(3) of 40 CFR 63.3165 [40 CFR 63.3165(e)].

- i. Calculate the volume of coating solids deposited per volume of coating used for coating, i, or the composite volume of coating solids deposited per volume of coating used for the group of coatings including coating, i, used during the month in the spray booth(s) preceding the flash-off area or bake oven for which the panel test is conducted using Equation 5 of 40 CFR 63.3165:

$$V_{sdep,i} = (V_{s,i})(TE_{c,i}) \quad (Eq. 5)$$

Where:

$V_{sdep, i}$ = Volume of coating solids deposited per volume of coating used for coating, i, or composite volume of coating solids deposited per volume of coating used for the group of coatings including coating, i, in the spray booth(s) preceding the flash-off area or bake oven for which the panel

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

test is conducted, liter of coating solids deposited per liter of coating used.

$V_{s,i}$ = Volume fraction of coating solids for coating, i, or average volume fraction of coating solids for the group of coatings including coating, i, liter coating solids per liter coating, determined according to 40 CFR 63.3161(f).

$TE_{c,i}$ = Transfer efficiency of coating, i, or average transfer efficiency for the group of coatings including coating, i, in the spray booth(s) for the flash-off area or bake oven for which the panel test is conducted determined according to 40 CFR 63.3161(g), expressed as a decimal, for example 60 percent must be expressed as 0.60. (Transfer efficiency also may be determined by testing representative coatings. The same coating groupings may be appropriate for both transfer efficiency testing and panel testing. In this case, all of the coatings in a panel test grouping would have the same transfer efficiency.)

- ii. Calculate the mass of VOC per volume of coating for coating, i, or the composite mass of VOC per volume of coating for the group of coatings including coating, i, used during the month in the spray booth(s) preceding the flash-off area or bake oven for which the panel test is conducted, kg, using Equation 6 of 40 CFR 63.3165:

$$VOC_i = \{D_{c,i}\} \{W_{voc_{c,i}}\} \quad (Eq. 6)$$

Where:

VOC_i = Mass of VOC per volume of coating for coating, i, or composite mass of VOC per volume of coating for the group of coatings including coating, i, used during the month in the spray booth(s) preceding the flash-off area or bake oven for which the panel test is conducted, kg VOC per liter coating.

$D_{c,i}$ = Density of coating, i, or average density of the group of coatings, including coating, i, kg coating per liter coating, density determined according to 40 CFR 63.3151(b).

$W_{voc_{c,i}}$ = Mass fraction of VOC in coating, i, or average mass fraction of VOC for the group of coatings, including coating, i, kg VOC per kg coating, determined by EPA Method 24 (appendix A-7 to 40 CFR part 60) or the guidelines for combining analytical VOC content and formulation solvent content presented in Section 9 of "Protocol for Determining the Daily Volatile Organic Compound Emission Rate of Automobile and Light-Duty Truck Topcoat Operations," EPA-450/3-88-018 (incorporated by reference, *see* 40 CFR 63.14).

- iii. As an alternative, the permittee may choose to express the results of their panel tests in units of mass of VOC per mass of coating solids deposited and convert such results to a percent using Equation 7 of 40 CFR 63.3165. If the permittee panel tests representative coatings, then the permittee may convert the panel test result for each representative coating either to a unique percent capture efficiency for each coating grouped with that representative coating by using coating specific values for the mass of coating solids deposited per mass of coating used, mass fraction VOC,

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

transfer efficiency, and mass fraction solids in Equations 7 and 8 of 40 CFR 63.3165; or to a composite percent capture efficiency for the group of coatings by using composite values for the group of coatings for the mass of coating solids deposited per mass of coating used and average values for the mass of VOC per volume of coating, average values for the group of coatings for mass fraction VOC, transfer efficiency, and mass fraction solids in Equations 7 and 8 of 40 CFR 63.3165. If the permittee panel tests each coating, then the permittee must convert the panel test result for each coating to a unique percent capture efficiency for that coating by using coating specific values for the mass of coating solids deposited per mass of coating used, mass fraction VOC, transfer efficiency, and mass fraction solids in Equations 7 and 8 of 40 CFR 63.3165. Panel test results expressed in units of mass of VOC per mass of coating solids deposited must be converted to percent capture efficiency using Equation 7 of 40 CFR 63.3165:

$$CE_i = (P_{m,i})(W_{dep,i})(100)/(W_{voc,i}) \quad (\text{Eq. 7})$$

Where:

CE_i = Capture efficiency for coating, i, or for the group of coatings including coating, i, for the flash-off area or bake oven for which the panel test is conducted, percent.

$P_{m,i}$ = Panel test result for coating, i, or for the coating representing coating, i, in the panel test, kg of VOC per kg of coating solids deposited.

$W_{dep,i}$ = Mass of coating solids deposited per mass of coating used for coating, i, or composite mass of coating solids deposited per mass of coating used for the group of coatings, including coating, i, in the spray booth(s) preceding the flash-off area or bake oven for which the panel test is conducted, kg of solids deposited per kg of coating used, from Equation 8 of 40 CFR 63.3165.

$W_{voc,i}$ = Mass fraction of VOC in coating, i, or average mass fraction of VOC for the group of coatings, including coating, i, kg VOC per kg coating, determined by EPA Method 24 (appendix A-7 to 40 CFR part 60) or the guidelines for combining analytical VOC content and formulation solvent content presented in Section 9 of "Protocol for Determining the Daily Volatile Organic Compound Emission Rate of Automobile and Light-Duty Truck Topcoat Operations," EPA-450/3-88-018 (incorporated by reference, *see* 40 CFR 63.14).

- iv. Calculate the mass of coating solids deposited per mass of coating used for each coating or the composite mass of coating solids deposited per mass of coating used for each group of coatings used during the month in the spray booth(s) preceding the flash-off area or bake oven for which the panel test is conducted using Equation 8 of 40 CFR 63.3165:

$$W_{dep,i} = (W_{s,i})(TE_{c,i}) \quad (\text{Eq. 8})$$

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Where:

$W_{sdep, i}$ = Mass of coating solids deposited per mass of coating used for coating, i , or composite mass of coating solids deposited per mass of coating used for the group of coatings including coating, i , in the spray booth(s) preceding the flash-off area or bake oven for which the panel test is conducted, kg coating solids deposited per kg coating used.

$W_{s, i}$ = Mass fraction of coating solids for coating, i , or average mass fraction of coating solids for the group of coatings including coating, i , kg coating solids per kg coating, determined by EPA Method 24 (appendix A-7 to 40 CFR part 60) or the guidelines for combining analytical VOC content and formulation solvent content presented in "Protocol for Determining the Daily Volatile Organic Compound Emission Rate of Automobile and Light-Duty Truck Topcoat Operations," EPA-450/3-88-018 (incorporated by reference, *see* 40 CFR 63.14).

$TE_{c, i}$ = Transfer efficiency of coating, i , or average transfer efficiency for the group of coatings including coating, i , in the spray booth(s) for the flash-off area or bake oven for which the panel test is conducted determined according to 40 CFR 63.3161(g), expressed as a decimal, for example 60 percent must be expressed as 0.60. (Transfer efficiency also may be determined by testing representative coatings. The same coating groupings may be appropriate used for both transfer efficiency testing and panel testing. In this case, all of the coatings in a panel test grouping would have the same transfer efficiency.)

(6) *Alternative capture efficiency procedure.* As an alternative to the procedures specified in paragraphs (c) through (e) and (g) of 40 CFR 63.3165, the permittee may determine capture efficiency using any other capture efficiency protocol and test methods that satisfy the criteria of either the DQO or LCL approach as described in appendix A to subpart KK of 40 CFR Part 63 [40 CFR 63.3165(f)].

(7) *Panel testing to determine the capture efficiency of spray booth emissions from solvent-borne coatings.* The permittee may conduct panel testing to determine the capture efficiency of spray booth emissions from solvent-borne coatings using the procedure in appendix A to 40 CFR 63 subpart IIII [40 CFR 63.3165(g)].

g. The permittee must use the procedures and test methods in 40 CFR 63.3166 to determine the add-on control device emission destruction or removal efficiency as part of the performance test required by 40 CFR 63.3160, 40 CFR 63.3163, or 40 CFR 63.3171. The permittee must conduct three test runs as specified in 40 CFR 63.7(e)(3), and each test run must last at least 1 hour [40 CFR 63.3166].

(1) For all types of add-on control devices, use the test methods specified in paragraphs (a)(1) through (5) of 40 CFR 63.3166 [40 CFR 63.3166(a)].

- i. Use EPA Method 1 or 1A of appendix A-1 to 40 CFR part 60, as appropriate, to select sampling sites and velocity traverse points.
- ii. Use EPA Method 2, 2A, 2C, 2D, or 2F of appendix A-1, or 2G of appendix A-2 to 40 CFR part 60, as appropriate, to measure gas volumetric flow rate.
- iii. Use EPA Method 3, 3A, or 3B of appendix A-2 to 40 CFR part 60, as appropriate, for gas analysis to determine dry molecular weight. The ANSI/ASME PTC 19.10-

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- 1981 (incorporated by reference, *see* 40 CFR 63.14), may be used as an alternative to EPA Method 3B.
- iv. Use EPA Method 4 of appendix A-3 to 40 CFR part 60 to determine stack gas moisture.
 - v. Methods for determining gas volumetric flow rate, dry molecular weight, and stack gas moisture must be performed, as applicable, during each test run.
- (2) Measure total gaseous organic mass emissions as carbon at the inlet and outlet of the add-on control device simultaneously, using either EPA Method 25 or 25A of appendix A-7 to 40 CFR part 60, as specified in paragraphs (b)(1) through (4) of 40 CFR 63.3166. The permittee must use the same method for both the inlet and outlet measurements [40 CFR 63.3166(b)].
- i. Use Method 25 if the add-on control device is an oxidizer and the permittee expects the total gaseous organic concentration as carbon to be more than 50 parts per million by volume (ppmv) at the control device outlet.
 - ii. Use Method 25A if the add-on control device is an oxidizer and the permittee expects the total gaseous organic concentration as carbon to be 50 ppmv or less at the control device outlet.
 - iii. Use Method 25A if the add-on control device is not an oxidizer.
 - iv. The permittee may use EPA Method 18 of appendix A-6 to 40 CFR part 60 to subtract methane emissions from measured total gaseous organic mass emissions as carbon.
- (3) If two or more add-on control devices are used for the same emission stream, then the permittee must measure emissions at the outlet of each device. For example, if one add-on control device is a concentrator with an outlet for the high-volume, dilute stream that has been treated by the concentrator, and a second add-on control device is an oxidizer with an outlet for the low-volume, concentrated stream that is treated with the oxidizer, the permittee must measure emissions at the outlet of the oxidizer and the high volume dilute stream outlet of the concentrator [40 CFR 63.3166(c)].
- (4) For each test run, determine the total gaseous organic emissions mass flow rates for the inlet and the outlet of the add-on control device, using Equation 1 of 40 CFR 63.3166. If there is more than one inlet or outlet to the add-on control device, the permittee must calculate the total gaseous organic mass flow rate using Equation 1 of 40 CFR 63.3166 for each inlet and each outlet and then total all of the inlet emissions and total all of the outlet emissions [40 CFR 63.3166(d)].

$$M_f = Q_{sd} C_c (12)(0.0416)(10^{-6}) \quad (\text{Eq. 1})$$

Where:

M_f = Total gaseous organic emissions mass flow rate, kg per hour (kg/h).

C_c = Concentration of organic compounds as carbon in the vent gas, as determined by Method 25 or Method 25A, ppmv, dry basis.

Q_{sd} = Volumetric flow rate of gases entering or exiting the add-on control device, as determined by Method 2, 2A, 2C, 2D, 2F, or 2G, dry standard cubic meters per hour (dscm/h).

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

0.0416 = Conversion factor for molar volume, kg-moles per cubic meter (mol/m³) (@ 293 Kelvin (K) and 760 millimeters of mercury (mmHg)).

- (5) For each test run, determine the add-on control device organic emissions destruction or removal efficiency using Equation 2 of 40 CFR 63.3166 [40 CFR 63.3166(e)]:

$$DRE = \frac{M_{fi} - M_{fo}}{M_{fi}} (100) \quad (\text{Eq. 2})$$

Where:

DRE = Organic emissions destruction or removal efficiency of the add-on control device, percent.

M_{fi} = Total gaseous organic emissions mass flow rate at the inlet(s) to the add-on control device, using Equation 1 of 40 CFR 63.3166, kg/h.

M_{fo} = Total gaseous organic emissions mass flow rate at the outlet(s) of the add-on control device, using Equation 1 of 40 CFR 63.3166, kg/h.

- (6) Determine the emission destruction or removal efficiency of the add-on control device as the average of the efficiencies determined in the three test runs and calculated in Equation 2 of 40 CFR 63.3166 [40 CFR 63.3166(f)].
- h. During the performance tests required by 40 CFR 63.3160, 63.3163, and 63.3171 (and described in 40 CFR 63.3164 and 63.3166), the permittee must establish the operating limits required by 40 CFR 63.3093 according to 40 CFR 63.3167, unless the permittee has received approval for alternative monitoring and operating limits under 40 CFR 63.8(f) as specified in 40 CFR 63.3093 [40 CFR 63.3167].
- (1) *Thermal oxidizers*. If the permittee's add-on control device is a thermal oxidizer, establish the operating limit according to paragraphs (a)(1) through (3) of 40 CFR 63.3167 [40 CFR 63.3167(a)].
- i. During the performance test, the permittee must monitor and record the combustion temperature at least once every 15 minutes during each of the three test runs. The permittee must monitor the temperature in the firebox of the thermal oxidizer or immediately downstream of the firebox before any substantial heat exchange occurs.
 - ii. Use all valid data collected during the performance test to calculate and record the average combustion temperature maintained during the performance test. This average combustion temperature is the minimum 3-hour average operating limit for the permittee's thermal oxidizer.
 - iii. As an alternative, if the latest operating permit issued before April 26, 2007, for the thermal oxidizer at the permittee's facility contains recordkeeping and reporting requirements for the combustion temperature that are consistent with the requirements for thermal oxidizers in 40 CFR 60.395(c), then the permittee may set the minimum operating limit for the combustion temperature for each such thermal oxidizer at the affected source at 28 degrees Celsius (50 degrees Fahrenheit) below the average combustion temperature during the performance test of that thermal oxidizer. If the permittee does not have an operating permit for the thermal oxidizer at the facility and the latest construction permit issued before April 26, 2007, for

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

the thermal oxidizer at the facility contains recordkeeping and reporting requirements for the combustion temperature that are consistent with the requirements for thermal oxidizers in 40 CFR 60.395(c), then the permittee may set the minimum operating limit for the combustion temperature for each such thermal oxidizer at the affected source at 28 degrees Celsius (50 degrees Fahrenheit) below the average combustion temperature during the performance test of that thermal oxidizer. If the permittee uses 28 degrees Celsius (50 degrees Fahrenheit) below the combustion temperature maintained during the performance test as the minimum operating limit for a thermal oxidizer, then the permittee must keep the combustion temperature set point on that thermal oxidizer no lower than 14 degrees Celsius (25 degrees Fahrenheit) below the lower of that set point during the performance test for that thermal oxidizer and the average combustion temperature maintained during the performance test for that thermal oxidizer.

- (2) *Concentrators*. If the permittee's add-on control device includes a concentrator, the permittee must establish operating limits for the concentrator according to paragraphs (e)(1) and (2) of 40 CFR 63.3167 [40 CFR 63.3167(e)].
 - i. During the performance test, the permittee must monitor and record the desorption gas inlet temperature at least once every 15 minutes during each of the three runs of the performance test.
 - ii. Use all valid data collected during the performance test to calculate and record the average desorption gas inlet temperature. The minimum operating limit for the concentrator is 8 degrees Celsius (15 degrees Fahrenheit) below the average desorption gas inlet temperature maintained during the performance test for that concentrator. The permittee must keep the set point for the desorption gas inlet temperature no lower than 6 degrees Celsius (10 degrees Fahrenheit) below the lower of that set point during the performance test for that concentrator and the average desorption gas inlet temperature maintained during the performance test for that concentrator.
- (3) *Emission capture systems*. For each capture device that is not part of a PTE that meets the criteria of 40 CFR 63.3165(a) and that is not capturing emissions from a downdraft spray booth or from a flash-off area or bake oven associated with a downdraft spray booth, establish an operating limit for either the gas volumetric flow rate or duct static pressure, as specified in paragraphs (f)(1) and (2) of 40 CFR 63.3167. The operating limit for a PTE is specified in Table 1 to 40 CFR 63 subpart III [40 CFR 63.3167(f)].
 - i. During the capture efficiency determination required by 40 CFR 63.3160 and 63.3163 and described in 40 CFR 63.3164 and 63.3165, the permittee must monitor and record either the gas volumetric flow rate or the duct static pressure for each separate capture device in the permittee's emission capture system at least once every 15 minutes during each of the three test runs at a point in the duct between the capture device and the add-on control device inlet.
 - ii. Calculate and record the average gas volumetric flow rate or duct static pressure for the three test runs for each capture device, using all valid data. This average gas volumetric flow rate or duct static pressure is the minimum operating limit for that specific capture device.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Compliance Demonstration Method for 40 CFR 63.3091 (b) [Combined Primer-Surfacer, Topcoat, Final Repair, Glass Bonding Primer, and Glass Bonding Adhesive and Separate Electrodeposition Primer]:

- a. *Capture of electrodeposition bake oven emissions.* The permittee must show that the electrodeposition bake oven meets the criteria in sections 5.3 through 5.5 of Method 204 of appendix M to 40 CFR part 51 and directs all of the exhaust gases from the bake oven to an add-on control device. For purposes of this showing, an electrodeposition bake oven air seal is not considered a natural draft opening provided the permittee demonstrate that the direction of air movement across the interface between the bake oven air seal and the bake oven is into the bake oven. The permittee may use lightweight strips of fabric or paper, or smoke tubes to make such demonstrations. The permittee cannot count air flowing from an electrodeposition bake oven air seal into an electrodeposition bake oven as air flowing through a natural draft opening unless the permittee elects to treat that electrodeposition bake oven air seal as a natural draft opening [40 CFR 63.3171(f)].
- b. *Control of electrodeposition bake oven emissions.* Determine the efficiency of each control device on each electrodeposition bake oven using the procedures in 40 CFR 63.3164 and 63.3166 [40 CFR 63.3171(g)].

4. Specific Monitoring Requirements:

See Subsection 2. Emission Limitations Compliance Demonstration Methods.

5. Specific Recordkeeping Requirements:

- a. Copies of the current work practice plans developed in accordance with paragraphs (b) and (c) of 40 CFR 63.3094, as well as plans developed within the preceding 5 years must be available on-site for inspection and copying by the permitting authority [40 CFR 63.3094(f)].
- b. The permittee must collect and keep records of the data and information specified in 40 CFR 63.3130. Failure to collect and keep these records is a deviation from the applicable standard.
 - (1) A copy of each notification and report that the permittee submitted to comply with 40 CFR 63 subpart IIII, and the documentation supporting each notification and report [40 CFR 63.3130(a)].
 - (2) A current copy of information provided by materials suppliers or manufacturers, such as manufacturer's formulation data, or test data used to determine the mass fraction of organic HAP, the density and the volume fraction of coating solids for each coating, the mass fraction of organic HAP and the density for each thinner, and the mass fraction of organic HAP for each cleaning material. If the permittee conducted testing to determine mass fraction of organic HAP, density, or volume fraction of coating solids, the permittee must keep a copy of the complete test report. If the permittee uses information provided to the permittee by the manufacturer or supplier of the material that was based on testing, the permittee must keep the summary sheet of results provided to the permittee by the manufacturer or supplier. If the permittee uses the results of an analysis conducted by an outside testing lab, the permittee must keep a

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

copy of the test report. The permittee is not required to obtain the test report or other supporting documentation from the manufacturer or supplier [40 CFR 63.3130(b)].

- (3) For each month, the records specified in paragraphs (c)(1) through (6) of 40 CFR 63.3130 [40 CFR 63.3130(c)].
- i. For each coating used for electrodeposition primer, primer-surfacer, topcoat, final repair, glass bonding primer, and glass bonding adhesive operations and for each coating, except for deadener and for adhesive and sealer that are not components of glass bonding systems, used in coating operations added to the affected source pursuant to 40 CFR 63.3082(c), a record of the volume used in each month, the mass fraction organic HAP content, the density, and the volume fraction of solids.
 - ii. For each thinner used for electrodeposition primer, primer-surfacer, topcoat, final repair, glass bonding primer, and glass bonding adhesive operations and for each thinner, except for thinner used for deadener and for adhesive and sealer that are not components of glass bonding systems, used in coating operations added to the affected source pursuant to 40 CFR 63.3082(c), a record of the volume used in each month, the mass fraction organic HAP content, and the density.
 - iii. For each deadener material and for each adhesive and sealer material, a record of the mass used in each month and the mass organic HAP content.
 - iv. A record of the calculation of the organic HAP emission rate for electrodeposition primer, primer-surfacer, topcoat, final repair, glass bonding primer, and glass bonding adhesive 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 added to the affected source pursuant to 40 CFR 63.3082(c) for each month if subject to the emission limit of 40 CFR 63.3090(a) or 40 CFR 63.3091(a). This record must include all raw data, algorithms, and intermediate calculations. If the guidelines presented in “Protocol for Determining the Daily Volatile Organic Compound Emission Rate of Automobile and Light-Duty Truck Topcoat Operations,” EPA-450/3-88-018 (incorporated by reference, *see* 40 CFR 63.14), are used, the permittee must keep records of all data input to this protocol. If these data are maintained as electronic files, the electronic files, as well as any paper copies must be maintained. These data must be provided to the permitting authority on request on paper, and in (if calculations are done electronically) electronic form.
 - v. A record of the calculation of the organic HAP emission rate for primer-surfacer, topcoat, final repair, glass bonding primer, and glass bonding adhesive 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 added to the affected source pursuant to 40 CFR 63.3082(c) for each month if subject to the emission limit of 40 CFR 63.3090(b) or 40 CFR 63.3091(b), and a record of the weight fraction of each organic HAP in each material added to the electrodeposition primer system if subject to the limitations of 40 CFR 63.3092(a). This record must include all raw data, algorithms, and intermediate calculations. If the guidelines presented in “Protocol for Determining Daily Volatile Organic Compound Emission Rate of Automobile and Light-Duty Truck Topcoat Operations,” EPA-450/3-88-018 (incorporated by reference, *see* 40 CFR 63.14) are used, the permittee must keep records of all data input to this protocol.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

If these data are maintained as electronic files, the electronic files, as well as any paper copies must be maintained. These data must be provided to the permitting authority on request on paper, and in (if calculations are done electronically) electronic form.

- vi. A record, for each month, of the calculation of the average monthly mass organic HAP content of:
 - A. Sealers and adhesives; and
 - B. Deadeners.
- (4) A record of the name and volume of each cleaning material used during each month [40 CFR 63.3130(d)].
- (5) A record of the mass fraction of organic HAP for each cleaning material used during each month [40 CFR 63.3130(e)].
- (6) A record of the density for each cleaning material used during each month [40 CFR 63.3130(f)].
- (7) Before January 5, 2021, a record of the date, time, and duration of each deviation, and for each deviation, a record of whether the deviation occurred during a period of SSM. On and after January 5, 2021, for each deviation from an emission limitation, operating limit, or work practice plan reported under 40 CFR 63.3120(a)(5) through (9), a record of the information specified in paragraphs (g)(1) through (4) of 40 CFR 63.3130, as applicable [40 CFR 63.3130(g)].
 - i. The date, time, and duration of the deviation, and for each deviation, the information as reported under 40 CFR 63.3120(a)(5) through (9).
 - ii. A list of the affected sources or equipment for which the deviation occurred and the cause of the deviation, as reported under 40 CFR 63.3120(a)(5) through (9).
 - iii. An estimate of the quantity of each regulated pollutant emitted over any applicable emission limit in 40 CFR 63.3090(a) through (d) or 40 CFR 63.3091(a) through (d) or any applicable operating limit in table 1 to 40 CFR 63 subpart III, and a description of the method used to calculate the estimate, as reported under 40 CFR 63.3120(a)(5) through (9).
 - iv. A record of actions taken to minimize emissions in accordance with 40 CFR 63.3100(d) and any corrective actions taken to return the affected unit to its normal or usual manner of operation.
- (8) Before January 5, 2021, the records required by 40 CFR 63.6(e)(3)(iii) through (v) related to SSM. On and after January 5, 2021, the provisions of this paragraph no longer apply [40 CFR 63.3130(h)].
- (9) For each capture system that is a PTE, the data and documentation the permittee used to support a determination that the capture system meets the criteria in Method 204 of appendix M to 40 CFR part 51 for a PTE and has a capture efficiency of 100 percent, as specified in 40 CFR 63.3165(a) [40 CFR 63.3130(i)].
- (10) For each capture system that is not a PTE, the data and documentation the permittee used to determine capture efficiency according to the requirements specified in 40 CFR 63.3164 and 63.3165(b) through (g), including the records specified in paragraphs (j)(1) through (4) of 40 CFR 63.3130 that apply to the permittee [40 CFR 63.3130(j)].
 - i. *Records for a liquid-to-uncaptured-gas protocol using a temporary total enclosure or building enclosure.* Records of the mass of total volatile hydrocarbon (TVH), as measured by Method 204A or F of appendix M to 40 CFR part 51, for each material

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- used in the coating operation, and the total TVH for all materials used during each capture efficiency test run, including a copy of the test report. Records of the mass of TVH emissions not captured by the capture system that exited the temporary total enclosure or building enclosure during each capture efficiency test run, as measured by Method 204D or E of appendix M to 40 CFR part 51, including a copy of the test report. Records documenting that the enclosure used for the capture efficiency test met the criteria in Method 204 of appendix M to 40 CFR part 51 for either a temporary total enclosure or a building enclosure.
- ii. *Records for a gas-to-gas protocol using a temporary total enclosure or a building enclosure.* Records of the mass of TVH emissions captured by the emission capture system, as measured by Method 204B or C of appendix M to 40 CFR part 51, at the inlet to the add-on control device, including a copy of the test report. Records of the mass of TVH emissions not captured by the capture system that exited the temporary total enclosure or building enclosure during each capture efficiency test run, as measured by Method 204D or E of appendix M to 40 CFR part 51, including a copy of the test report. Records documenting that the enclosure used for the capture efficiency test met the criteria in Method 204 of appendix M to 40 CFR part 51 for either a temporary total enclosure or a building enclosure.
 - iii. *Records for panel tests.* Records needed to document a capture efficiency determination using a panel test as described in 40 CFR 63.3165(e) and (g), including a copy of the test report and calculations performed to convert the panel test results to percent capture efficiency values.
 - iv. *Records for an alternative protocol.* Records needed to document a capture efficiency determination using an alternative method or protocol, as specified in 40 CFR 63.3165(f), if applicable.
- (11) The records specified in paragraphs (k)(1) and (2) of 40 CFR 63.3130 for each add-on control device organic HAP destruction or removal efficiency determination as specified in 40 CFR 63.3166[40 CFR 63.3130(k)].
- i. Records of each add-on control device performance test conducted according to 40 CFR 63.3164 and 63.3166.
 - ii. Records of the coating operation conditions during the add-on control device performance test showing that the performance test was conducted under representative operating conditions.
- (12) Records of the data and calculations the permittee used to establish the emission capture and add-on control device operating limits as specified in 40 CFR 63.3167 and to document compliance with the operating limits as specified in Table 1 to 40 CFR 63 subpart IIII [40 CFR 63.3130(l)].
- (13) Records of the data and calculations the permittee used to determine the transfer efficiency for primer-surfacer and topcoat coatings and for all coatings, except for deadener and for adhesive and sealer that are not components of glass bonding systems, used in coating operations added to the affected source pursuant to 40 CFR 63.3082(c) [40 CFR 63.3130(m)].
- (14) A record of the work practice plans required by 40 CFR 63.3094(b) and (c) and documentation that the permittee is implementing the plans on a continuous basis. Appropriate documentation may include operational and maintenance records, records of documented inspections, and records of internal audits [40 CFR 63.3130(n)].

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- (15) For each add-on control device and for each continuous parameter monitoring system, a copy of the equipment operating instructions must be maintained on-site for the life of the equipment in a location readily available to plant operators and inspectors. The permittee may prepare their own equipment operating instructions, or they may be provided to the permittee by the equipment supplier or other third party [40 CFR 63.3130(o)].
- (16) On and after January 5, 2021, any records required to be maintained by 40 CFR 63 subpart IIII that are submitted electronically via the EPA's CEDRI may be maintained in electronic format. This ability to maintain electronic copies does not affect the requirement for facilities to make records, data, and reports available upon request to a delegated air agency or the EPA as part of an on-site compliance evaluation [40 CFR 63.3130(p)].
- c. The permittee's records must be in a form suitable and readily available for expeditious review according to 40 CFR 63.10(b)(1). Where appropriate, the records may be maintained as electronic spreadsheets or as a database. On and after January 5, 2021, any records required to be maintained by 40 CFR 63 subpart IIII that are submitted electronically via the EPA's CEDRI may be maintained in electronic format. This ability to maintain electronic copies does not affect the requirement for facilities to make records, data, and reports available upon request to a delegated air agency or the EPA as part of an on-site compliance evaluation [40 CFR 63.3131(a)].
- d. Except as provided in 40 CFR 63.3130(o), the permittee must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record, as specified in 40 CFR 63.10(b)(1) [40 CFR 63.3131(b)].
- e. Except as provided in 40 CFR 63.3130(o), the permittee must keep each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record according to 40 CFR 63.10(b)(1). The permittee may keep the records off site for the remaining 3 years [40 CFR 63.3131(c)].

6. Specific Reporting Requirements:

- a. ***Notification of compliance status.*** If the permittee has an existing source, the permittee must submit the Notification of Compliance Status required by 40 CFR 63.9(h) no later than 30 days following the end of the initial compliance period described in 40 CFR 63.3160. If the permittee has a new source, the permittee must submit the Notification of Compliance Status required by 40 CFR 63.9(h) no later than 60 days after the first day of the first full month following completion of all applicable performance tests. The Notification of Compliance Status must contain the information specified in paragraphs (c)(1) through (12) of 40 CFR 63.3110 and in 40 CFR 63.9(h) [40 CFR 63.3110(c)].
 - (1) Company name and address.
 - (2) Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report.
 - (3) Date of the report and beginning and ending dates of the reporting period. The reporting period is the initial compliance period described in 40 CFR 63.3160 that applies to the permittee's affected source.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- (4) Identification of the compliance option specified in 40 CFR 63.3090(a) or (b) or 40 CFR 63.3091(a) or (b) that the permittee used for electrodeposition primer, primer-surfacer, topcoat, final repair, 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 added to the affected source pursuant to 40 CFR 63.3082(c) in the affected source during the initial compliance period.
- (5) Statement of whether or not the affected source achieved the emission limitations for the initial compliance period.
- (6) If the permittee had a deviation, include the information in paragraphs (c)(6)(i) and (ii) of 40 CFR 63.3110.
 - i. A description and statement of the cause of the deviation.
 - ii. If the permittee failed to meet any of the applicable emission limits in 40 CFR 63.3090 or 40 CFR 63.3091, include all the calculations the permittee used to determine the applicable emission rate or applicable average organic HAP content for the emission limit(s) that the permittee failed to meet. The permittee does not need to submit information provided by the materials suppliers or manufacturers, or test reports.
- (7) All data and calculations used to determine the monthly average mass of organic HAP emitted per volume of applied coating solids from:
 - i. The combined primer-surfacer, topcoat, final repair, 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 added to the affected source pursuant to 40 CFR 63.3082(c) if the permittee was eligible for and chose to comply with the emission limits of 40 CFR 63.3090(b) or 40 CFR 63.3091(b); or
 - ii. The combined electrodeposition primer, primer-surfacer, topcoat, final repair, 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 added to the affected source pursuant to 40 CFR 63.3082(c).
- (8) All data and calculations used to determine compliance with the separate limits for electrodeposition primer in 40 CFR 63.3092(a) or (b) if the permittee was eligible for and chose to comply with the emission limits of 40 CFR 63.3090(b) or 40 CFR 63.3091(b).
- (9) All data and calculations used to determine the monthly mass average HAP content of materials subject to the emission limits of 40 CFR 63.3090(c) or (d) or the emission limits of 40 CFR 63.3091(c) or (d).
- (10) All data and calculations used to determine the transfer efficiency for primer-surfacer and topcoat coatings, and for all coatings, except for deadener and for adhesive and sealer that are not components of glass bonding systems, used in coating operations added to the affected source pursuant to 40 CFR 63.3082(c).
- (11) The permittee must include the information specified in paragraphs (c)(11)(i) through (iii) of 40 CFR 63.3110.
 - i. For each emission capture system, a summary of the data and copies of the calculations supporting the determination that the emission capture system is a

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

permanent total enclosure (PTE) or a measurement of the emission capture system efficiency. Include a description of the procedure followed for measuring capture efficiency, summaries of any capture efficiency tests conducted, and any calculations supporting the capture efficiency determination. If the permittee uses the data quality objective (DQO) or lower confidence limit (LCL) approach, the permittee must also include the statistical calculations to show they meet the DQO or LCL criteria in appendix A to subpart KK of 40 CFR Part 63. The permittee does not need to submit complete test reports.

- ii. A summary of the results of each add-on control device performance test. The permittee does not need to submit complete test reports unless requested.
 - iii. A list of each emission capture system's and add-on control device's operating limits and a summary of the data used to calculate those limits.
- (12) A statement of whether or not the permittee developed and implemented the work practice plans required by 40 CFR 63.3094(b) and (c).

- b. ***Semiannual compliance reports.*** The permittee must submit semiannual compliance reports for each affected source according to the requirements of paragraphs (a)(1) through (9) of 40 CFR 63.3120. The semiannual compliance reporting requirements may be satisfied by reports required under other parts of the CAA, as specified in paragraph (a)(2) of 40 CFR 63.3120 [40 CFR 63.3120(a)].

(1) *Dates.* Unless the Administrator has approved a different schedule for submission of reports under 40 CFR 63.10(a), the permittee must prepare and submit each semiannual compliance report according to the dates specified in paragraphs (a)(1)(i) through (iv) of 40 CFR 63.3120.

- i. The first semiannual compliance report must cover the first semiannual reporting period which begins the day after the end of the initial compliance period described in 40 CFR 63.3160 that applies to the permittee's affected source and ends on June 30 or December 31, whichever occurs first following the end of the initial compliance period.
 - ii. Each subsequent semiannual compliance report must cover the subsequent semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.
 - iii. Each semiannual compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.
 - iv. For each affected source that is subject to permitting regulations pursuant to 40 CFR part 70 or 40 CFR part 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), the permittee may submit the first and subsequent compliance reports according to the dates the permitting authority has established instead of according to the date specified in paragraph (a)(1)(iii) of 40 CFR 63.3120.
- (2) *Inclusion with title V report.* If the permittee has obtained a title V operating permit pursuant to 40 CFR part 70 or 40 CFR part 71, the permittee must report all deviations as defined in 40 CFR 63 subpart IIII in the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A). If the permittee submits a semiannual compliance report pursuant to 40 CFR 63.3120 along with, or as part of,

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), and the semiannual compliance report includes all required information concerning deviations from any emission limit, operating limit, or work practice in 40 CFR 63 subpart IIII, its submission shall be deemed to satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submission of a semiannual compliance report shall not otherwise affect any obligation the permittee may have to report deviations from permit requirements to the permitting authority.
- (3) *General requirements.* The semiannual compliance report must contain the information specified in paragraphs (a)(3)(i) through (iv) of 40 CFR 63.3120, and the information specified in paragraphs (a)(4) through (9) and (c)(1) of 40 CFR 63.3120 that are applicable to the permittee's affected source.
- i. Company name and address.
 - ii. Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report.
 - iii. Date of report and beginning and ending dates of the reporting period. The reporting period is the 6-month period ending on June 30 or December 31.
 - iv. Identification of the compliance option specified in 40 CFR 63.3090(b) or 40 CFR 63.3091(b) that the permittee used for electrodeposition primer, primer-surfacer, topcoat, final repair, 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 added to the affected source pursuant to 40 CFR 63.3082(c) in the affected source during the initial compliance period.
- (4) *No deviations.* If there were no deviations from the emission limits, operating limits, or work practices in 40 CFR 63.3090, 63.3091, 63.3092, 63.3093, and 63.3094 that apply to the permittee, the semiannual compliance report must include a statement that there were no deviations from the applicable emission limitations during the reporting period. If the permittee used control devices to comply with the emission limits, and there were no periods during which the CPMS were out of control as specified in 40 CFR 63.8(c)(7), the semiannual compliance report must include a statement that there were no periods during which the CPMS were out of control during the reporting period.
- (5) *Deviations: adhesive, sealer, and deadener.* On and after January 5, 2021, if there was a deviation from the applicable emission limits in 40 CFR 63.3090(c) and (d) or 40 CFR 63.3091(c) and (d), the semiannual compliance report must contain the information in paragraphs (a)(5)(i) through (v) of 40 CFR 63.3120.
- i. The beginning and ending dates of each month during which the monthly average organic HAP content exceeded the applicable emission limit in 40 CFR 63.3090(c) and (d) or 40 CFR 63.3091(c) and (d).
 - ii. The volume and organic HAP content of each material used that is subject to the applicable organic HAP content limit.
 - iii. The calculation used to determine the average monthly organic HAP content for the month in which the deviation occurred.
 - iv. The reason for the deviation (including unknown cause, if applicable).

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- v. On and after January 5, 2021, the number of deviations and, for each deviation, a list of the affected source or equipment, an estimate of the quantity of each regulated pollutant emitted over the applicable emission limit in 40 CFR 63.3090(c) and (d) or 40 CFR 63.3091(c) and (d), and a description of the method used to estimate the emissions.
- (6) *Deviations*: combined electrodeposition primer, primer-surfacer, topcoat, final repair, glass bonding primer and glass bonding adhesive, or combined primer-surfacer, topcoat, final repair, glass bonding primer, and glass bonding adhesive 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 added to the affected source pursuant to 40 CFR 63.3082(c). On and after January 5, 2021, if there was a deviation from the applicable emission limits in 40 CFR 63.3090(a) or (b) or 40 CFR 63.3091(a) or (b) or the applicable operating limit(s) in table 1 to 40 CFR 63 subpart IIII, the semiannual compliance report must contain the information in paragraphs (a)(6)(i) through (xv) of 40 CFR 63.3120.
 - i. The beginning and ending dates of each month during which the monthly organic HAP emission rate from combined electrodeposition primer, primer-surfacer, topcoat, final repair, glass bonding primer, and glass bonding adhesive 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 added to the affected source pursuant to 40 CFR 63.3082(c) exceeded the applicable emission limit in 40 CFR 63.3090(a) or 40 CFR 63.3091(a); or the monthly organic HAP emission rate from combined primer-surfacer, topcoat, final repair, glass bonding primer, and glass bonding adhesive 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 added to the affected source pursuant to 40 CFR 63.3082(c) exceeded the applicable emission limit in 40 CFR 63.3090(b) or 40 CFR 63.3091(b).
 - ii. The calculation used to determine the monthly organic HAP emission rate in accordance with 40 CFR 63.3161 or 40 CFR 63.3171. The permittee does not need to submit the background data supporting these calculations, for example information provided by materials suppliers or manufacturers, or test reports.
 - iii. The date and time that each malfunction of the capture system or add-on control devices used to control emissions from these operations started and stopped.
 - iv. A brief description of the CPMS.
 - v. The date of the latest CPMS certification or audit.
 - vi. On and after January 5, 2021, for each instance that the CPMS was inoperative, except for zero (low-level) and high-level checks, the date, time, and duration that the CPMS was inoperative; the cause (including unknown cause) for the CPMS being inoperative; and descriptions of corrective actions taken.
 - vii. On and after January 5, 2021, for each instance that the CPMS was out of control, as specified in 40 CFR 63.8(c)(7), the date, time, and duration that the CPMS was out-of-control; the cause (including unknown cause) for the CPMS being out-of-control; and descriptions of corrective actions taken.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- viii. On and after January 5, 2021, the date, time, and duration of each deviation from an operating limit in table 1 to 40 CFR 63 subpart IIII; and the date, time, and duration of each bypass of an add-on control device.
 - ix. A summary of the total duration and the percent of the total source operating time of the deviations from each operating limit in Table 1 to 40 CFR 63 subpart IIII and the bypass of each add-on control device during the semiannual reporting period.
 - x. On and after January 5, 2021, a breakdown of the total duration of the deviations from each operating limit in table 1 to 40 CFR 63 subpart IIII and bypasses of each add-on control device during the semiannual reporting period into those that were due to control equipment problems, process problems, other known causes, and other unknown causes.
 - xi. A summary of the total duration and the percent of the total source operating time of the downtime for each CPMS during the semiannual reporting period.
 - xii. A description of any changes in the CPMS, coating operation, emission capture system, or add-on control devices since the last semiannual reporting period.
 - xiii. On and after January 5, 2021, for deviations from the work practice standards, the number of deviations, and, for each deviation, the information in paragraphs (a)(6)(xiii)(A) and (B) of 40 CFR 63.3120.
 - A. A description of the deviation, the date, time, and duration of the deviation; and the actions the permittee took to minimize emissions in accordance with 40 CFR 63.3100(d).
 - B. A list of the affected sources or equipment for which a deviation occurred, the cause of the deviation (including unknown cause, if applicable), and any corrective actions taken to return the affected unit to its normal or usual manner of operation.
 - xiv. On and after January 5, 2021, for deviations from an emission limitation in 40 CFR 63.3090(a) or (b) or 40 CFR 63.3091(a) or (b) or operating limit in table 1 of 40 CFR 63 subpart IIII, a statement of the cause of each deviation (including unknown cause, if applicable).
 - xv. On and after January 5, 2021, for each deviation from an emission limitation in 40 CFR 63.3090(a) or (b), or 40 CFR 63.3091(a) or (b), or operating limit in table 1 to 40 CFR 63 subpart IIII, a list of the affected sources or equipment for which a deviation occurred, an estimate of the quantity of each regulated pollutant emitted over any emission limit in 40 CFR 63.3090(a) or (b) or 40 CFR 63.3091(a) or (b), and a description of the method used to estimate the emissions.
- (7) *Deviations: Separate electrodeposition primer organic HAP content limit.* On and after January 5, 2021, if the permittee used the separate electrodeposition primer organic HAP content limits in 40 CFR 63.3092(a), and there was a deviation from these limits, the semiannual compliance report must contain the information in paragraphs (a)(7)(i) through (iv) of 40 CFR 63.3120.
- i. Identification of each material used that deviated from the emission limit, and the date, time, and duration each was used.
 - ii. The determination of mass fraction of each organic HAP for each material identified in paragraph (a)(7)(i) of 40 CFR 63.3120. The permittee does not need to submit background data supporting this calculation, for example, information provided by material suppliers or manufacturers, or test reports.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- iii. A statement of the cause of each deviation (including unknown case, if applicable).
 - iv. On and after January 5, 2021, the number of deviations, a list of the affected source or equipment, an estimate of the quantity of each regulated pollutant emitted over any emission limit in 40 CFR 63.3092(a), and a description of the method used to estimate the emissions.
- (8) *Deviations: Separate electrodeposition primer bake oven capture and control limitations.* On and after January 5, 2021, if the permittee used the separate electrodeposition primer bake oven capture and control limitations in 40 CFR 63.3092(b), and there was a deviation from the limitations in 40 CFR 63.3092(b) or the applicable operating limit in table 1 to 40 CFR 63 subpart IIII, the semiannual compliance report must contain the information in paragraphs (a)(8)(i) through (xiv) of 40 CFR 63.3120.
- i. The beginning and ending dates of each month during which there was a deviation from the separate electrodeposition primer bake oven capture and control limitations in 40 CFR 63.3092(b).
 - ii. The date and time that each malfunction of the capture systems or control devices used to control emissions from the electrodeposition primer bake oven started and stopped.
 - iii. A brief description of the CPMS.
 - iv. The date of the latest CPMS certification or audit.
 - v. On and after January 5, 2021, for each instance that the CPMS was inoperative, except for zero (low-level) and high-level checks, the date, time, and duration that the CPMS was inoperative; the cause (including unknown cause) for the CPMS being inoperative; and descriptions of corrective actions taken.
 - vi. On and after January 5, 2021, for each instance that the CPMS was out of control, as specified in 40 CFR 63.8(c)(7), the date, time, and duration that the CPMS was out-of-control; the cause (including unknown cause) for the CPMS being out-of-control; and descriptions of corrective actions taken.
 - vii. On and after January 5, 2021, the date, time, and duration of each deviation from an operating limit in table 1 to 40 CFR 63 subpart IIII; and the date, time, and duration of each bypass of an add-on control device.
 - viii. A summary of the total duration and the percent of the total source operating time of the deviations from each operating limit in Table 1 to 40 CFR 63 subpart IIII and the bypasses of each add-on control device during the semiannual reporting period.
 - ix. On and after January 5, 2021, a breakdown of the total duration of the deviations from each operating limit in table 1 to 40 CFR 63 subpart IIII and bypasses of each add-on control device during the semiannual reporting period into those that were due to control equipment problems, process problems, other known causes, and other unknown causes.
 - x. A summary of the total duration and the percent of the total source operating time of the downtime for each CPMS during the semiannual reporting period.
 - xi. A description of any changes in the CPMS, coating operation, emission capture system, or add-on control devices since the last semiannual reporting period.
 - xii. A statement of the cause of each deviation (including unknown cause, if applicable).

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- (9) *Deviations: Work practice plans.* On and after January 5, 2021, if there were deviations from an applicable work practice plan developed in accordance with 40 CFR 63.3094(b) or (c), the semiannual compliance report must contain the number of deviations, and, for each deviation, the information in paragraphs (a)(9)(i) through (iii) of 40 CFR 63.3120.
- i. On and after January 5, 2021, the date, time, and duration of the deviation.
 - ii. On and after January 5, 2021, the nature of the deviation, including a list of the affected sources or equipment for which the deviation occurred, and the cause of the deviation (including unknown cause, if applicable).
 - iii. The corrective action(s) taken to bring the applicable work practices into compliance with the work practice plan.
- c. ***Performance test reports.*** If the permittee uses add-on control devices, the permittee must submit reports of performance test results for emission capture systems and add-on control devices no later than 60 days after completing the tests as specified in 40 CFR 63.10(d)(2). the permittee must submit reports of transfer efficiency tests no later than 60 days after completing the tests as specified in 40 CFR 63.10(d)(2) [40 CFR 63.3120(b)].
- d. ***Performance test reports.*** On and after January 5, 2021, the permittee must submit the results of the performance test required in paragraph (b) of 40 CFR 63.3120 following the procedure specified in paragraphs (d)(1) through (3) of 40 CFR 63.3120 [40 CFR 63.3120(d)].
- (1) For data collected using test methods supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT website (<https://www.epa.gov/electronic-reporting-air-emissions/electronic-reporting-tool-ert>) at the time of the test, the permittee must submit the results of the performance test to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI). (CEDRI can be accessed through the EPA's Central Data Exchange (CDX) (<https://cdx.epa.gov/>)). Performance test data must be submitted in a file format generated through the use of the EPA's ERT or an alternate electronic file format consistent with the extensible markup language (XML) schema listed on the EPA's ERT website.
 - (2) For data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT website at the time of the test, the permittee must submit the results of the performance test to the Administrator at the appropriate address listed in 40 CFR 63.13, unless the Administrator agrees to or specifies an alternate reporting method.
 - (3) If the permittee claims that some of the performance test information being submitted under paragraph (c)(1) of 40 CFR 63.3120 is Confidential Business Information (CBI), the permittee must submit a complete file generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT website, including information claimed to be CBI, on a compact disc, flash drive, or other commonly used electronic storage medium to the EPA. The electronic medium must be clearly marked as CBI and mailed to U.S. EPA/OAPQS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT or alternate file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described in paragraph (c)(1) of 40 CFR 63.3120.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- e. ***Initial notification reports.*** On and after January 5, 2021, the owner or operator shall submit the initial notifications required in 40 CFR 63.9(b) and the notification of compliance status required in 40 CFR 63.9(h) and 63.3110(c) to the EPA via the CEDRI. The CEDRI interface can be accessed through the EPA's CDX (<https://cdx.epa.gov/>). The owner or operator must upload to CEDRI an electronic copy of each applicable notification in portable document format (PDF). The applicable notification must be submitted by the deadline specified in 40 CFR 63 subpart IIII, regardless of the method in which the reports are submitted. Owners or operators who claim that some of the information required to be submitted via CEDRI is CBI shall submit a complete report generated using the appropriate form in CEDRI or an alternate electronic file consistent with the XML schema listed on the EPA's CEDRI website, including information claimed to be CBI, on a compact disc, flash drive, or other commonly used electronic storage medium to the EPA. The electronic medium shall be clearly marked as CBI and mailed to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same file with the CBI omitted shall be submitted to the EPA via the EPA's CDX as described earlier in this paragraph [40 CFR 63.3120(e)].
- f. ***Semiannual compliance reports.*** On and after January 5, 2021, or once the reporting template has been available on the CEDRI website for 1 year, whichever date is later, the owner or operator shall submit the semiannual compliance report required in paragraph (a) of 40 CFR 63.3120 to the EPA via the CEDRI. The CEDRI interface can be accessed through the EPA's CDX (<https://cdx.epa.gov/>). The owner or operator must use the appropriate electronic template on the CEDRI Web for 40 CFR 63 subpart IIII or an alternate electronic file format consistent with the XML schema listed on the CEDRI website (<https://www.epa.gov/electronic-reporting-air-emissions/compliance-and-emissions-data-reporting-interface-cedri>). If the reporting form for the semiannual compliance report specific to 40 CFR 63 subpart IIII is not available in CEDRI at the time that the report is due, the permittee must submit the report to the Administrator at the appropriate addresses listed in 40 CFR 63.13. Once the form has been available in CEDRI for 1 year, the permittee must begin submitting all subsequent reports via CEDRI. The reports must be submitted by the deadlines specified in 40 CFR 63 subpart IIII, regardless of the method in which the reports are submitted. Owners or operators who claim that some of the information required to be submitted via CEDRI is CBI shall submit a complete report generated using the appropriate form in CEDRI or an alternate electronic file consistent with the XML schema listed on the EPA's CEDRI website, including information claimed to be CBI, on a compact disc, flash drive, or other commonly used electronic storage medium to the EPA. The electronic medium shall be clearly marked as CBI and mailed to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same file with the CBI omitted shall be submitted to the EPA via the EPA's CDX as described earlier in this paragraph [40 CFR 63.3120(f)].
- g. ***Reporting during EPA system outages.*** If the permittee is required to electronically submit a report through the CEDRI in the EPA's CDX, and due to a planned or actual outage of either the EPA's CEDRI or CDX systems within the period of time beginning 5 business

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

days prior to the date that the submission is due, the permittee will be or are precluded from accessing CEDRI or CDX and submitting a required report within the time prescribed, the permittee may assert a claim of the EPA system outage for failure to timely comply with the reporting requirement. The permittee must submit notification to the Administrator in writing as soon as possible following the date the permittee first knew, or through due diligence should have known, that the event may cause or caused a delay in reporting. The permittee must provide to the Administrator a written description identifying the date, time and length of the outage; a rationale for attributing the delay in reporting beyond the regulatory deadline to the EPA system outage; describe the measures taken or to be taken to minimize the delay in reporting; and identify a date by which the permittee proposes to report, or if the permittee has already met the reporting requirement at the time of the notification, the date the permittee reported. In any circumstance, the report must be submitted electronically as soon as possible after the outage is resolved. The decision to accept the claim of the EPA system outage and allow an extension to the reporting deadline is solely within the discretion of the Administrator [40 CFR 63.3120(g)].

- h. ***Reporting during force majeure events.*** If the permittee is required to electronically submit a report through CEDRI in the EPA's CDX and a force majeure event is about to occur, occurs, or has occurred or there are lingering effects from such an event within the period of time beginning 5 business days prior to the date the submission is due, the owner or operator may assert a claim of force majeure for failure to timely comply with the reporting requirement. For the purposes of 40 CFR 63.3120, a force majeure event is defined as an event that will be or has been caused by circumstances beyond the control of the affected facility, its contractors, or any entity controlled by the affected facility that prevents the permittee from complying with the requirement to submit a report electronically within the time period prescribed. Examples of such events are acts of nature (*e.g.*, hurricanes, earthquakes, or floods), acts of war or terrorism, or equipment failure or safety hazard beyond the control of the affected facility (*e.g.*, large scale power outage). If the permittee intends to assert a claim of force majeure, the permittee must submit notification to the Administrator in writing as soon as possible following the date the permittee first knew, or through due diligence should have known, that the event may cause or caused a delay in reporting. The permittee must provide to the Administrator a written description of the force majeure event and a rationale for attributing the delay in reporting beyond the regulatory deadline to the force majeure event; describe the measures taken or to be taken to minimize the delay in reporting; and identify a date by which the permittee propose to report, or if the permittee has already met the reporting requirement at the time of the notification, the date the permittee reported. In any circumstance, the reporting must occur as soon as possible after the force majeure event occurs. The decision to accept the claim of force majeure and allow an extension to the reporting deadline is solely within the discretion of the Administrator [40 CFR 63.3120(h)].

7. Specific Control Equipment Operating Conditions:

See subsections **1. Operating Limitations**, **2. Emission Limitations**, and **3. Testing Requirements**.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Group Requirements

401 KAR 59:185 Affected Sources

LIST of POINTS

A06 Non-Process Cleaning Activities

B06 Non-Process Cleaning Activities

M07 Non-Process Cleaning Activities

K07 Non-Process Cleaning Activities

J04 Non-Process Cleaning Activities

L04 Non-Process Cleaning Activities

C12 Non-Process Cleaning Activities

D09 Non-Process Cleaning

E13R Non-Process Cleaning Activities, including caustic stripping, grate coating, water blasting, line purging, shot blasting, cold cleaner and surface cleaning

F13 Non-Process Cleaning Activities, including, grate coating, water blasting, line purging, cold cleaner and surface cleaning

G19 Non-Process Cleaning Activities, including paint stripping, water blasting, line purging, surface cleaning cold cleaner, jig cleaning and chemical honing

H05 Non Process Solvent Cleaning Operations, including, CIPG and other areas

APPLICABLE REGULATIONS:

401 KAR 59:185, *New solvent metal cleaning equipment*

1. Operating Limitations:

- a. The cleaner shall be equipped with a cover. If the solvent volatility is greater than fifteen (15) mm Hg measured at 100°F or if the solvent is agitated or heated, then the cover shall be designed so that it can be easily operated with one (1) hand [401 KAR 59:185 Section 4(1)(a)].
- b. The cleaner shall be equipped with a drainage facility so that solvent that drains off parts removed from the cleaner will return to the cleaner. If the solvent volatility is greater than thirty-two (32) mm Hg measured at 100°F then the drainage facility shall be internal so that parts are enclosed under the cover while draining. The drainage facility may be external if the Cabinet determines that an internal type cannot fit into the cleaning system [401 KAR 59:185 Section 4(1)(b)].
- c. A permanent, conspicuous label, summarizing the operating requirements specified in 401 KAR 59:185 Section 4(2) shall be installed on or near the cleaner [401 KAR 59:185 Section 4(1)(c)].
 - (1) Waste solvent shall not be disposed of or transferred to another party so that greater than twenty (20) percent by weight of the waste solvent can evaporate into the atmosphere. Waste solvent shall be stored only in covered containers [401 KAR 59:185, Section 4(2)(a)].
 - (2) The degreaser cover shall be closed if not handling parts in the cleaner [401 KAR 59:185 Section 4(2)(b)].

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- (3) Cleaned parts shall be drained for a minimum of fifteen (15) seconds, or until dripping ceases, whichever is longer [401 KAR 59:185, Section 4(2)(c)].
 - (4) The flushing of parts with a flexible hose or other flushing device shall be performed only within the freeboard area of the cold cleaner. The solvent flow shall be directed downward to avoid turbulence at the air-solvent interface so as to prevent the solvent from splashing outside of the cold cleaner [401 KAR 59:185, Section 4(2)(d)].
 - (5) Work area fans shall be positioned so that air is not directed across the opening of the cold cleaner [401 KAR 59:185, Section 4(2)(e)].
 - (6) The use of an air-agitated solvent bath is prohibited. A pump-agitated solvent bath shall be operated so as to produce no observable splashing of the solvent against either the tank wall or the parts that are being cleaned [401 KAR 59:185, Section 4(2)(f)].
 - (7) The cold cleaner shall be free of all liquid leaks. Auxiliary cleaning equipment such as pumps, water separators, steam traps, or distillation units shall not have any visible leaks, tears, or cracks [401 KAR 59:185, Section 4(2)(g)].
 - (8) Spills that occur during solvent transfer shall be cleaned immediately. Wipe rags, or other absorbent equipment and materials, used to clean the spill shall be stored in a covered container for disposal unless storage of these items is prohibited by fire protection authorities [401 KAR 59:185, Section 4(2)(h)].
- d. The solvent spray shall be a fluid stream, not a fine, atomized or shower type spray, and at a pressure that does not cause excessive splashing [401 KAR 59:185, Section 4(1)(d)].
 - e. Each cold cleaner shall not use a solvent with a vapor pressure that exceeds one (1.0) mm Hg (0.019 psi) measured at 20° C (68°F) [401 KAR 59:185, Section 4(3)(b)].
 - f. Pursuant to 401 KAR 59:185 Section 4(1)(e), if the solvent volatility is greater than thirty-two (32) mm Hg measured at 100°F or if the solvent is heated above 120°F, then one (1) of the following control devices shall be used:
 - (1) Freeboard height that gives a freeboard ratio greater than or equal to seven-tenths (0.7)
 - (2) Water cover, solvent shall be insoluble in and heavier than water
 - (3) Other systems of equivalent control, such as a refrigerated chiller or carbon adsorption.

2. Emission Limitations:

None

3. Testing Requirements:

Testing shall be conducted at such times as may be requested by the Cabinet [401 KAR 50:045, Section 1].

4. Specific Monitoring Requirements:

The permittee shall monitor the amount of makeup solvent added to the parts washers.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

5. Specific Recordkeeping Requirements:

- a. Any individual or entity subject to the provisions of Section 4(3)(b) of 401 KAR 59:185 shall maintain records for a minimum of five (5) years that include the following information for each solvent purchase [401 KAR 59:185 Section 4(4)(b)]:
 - (1) The name and address of the solvent supplier;
 - (2) The date of the purchase;
 - (3) The type of solvent; and
 - (4) The vapor pressure of the solvent measured in mm Hg at 20°C (68°F).

6. Specific Reporting Requirements:

The permittee shall report the amount of make-up solvent added to the parts washers, as a part of the semiannual reporting as required in Section F (5) & (6).

7. Specific Control Equipment Operating Conditions:

None

SECTION C - INSIGNIFICANT ACTIVITIES

The following listed activities have been determined to be insignificant activities for this source pursuant to 401 KAR 52:020, Section 6. Although these activities are designated as insignificant the permittee must comply with the applicable regulation. Process and emission control equipment at each insignificant activity subject to an opacity standard shall be inspected monthly and a qualitative visible emissions evaluation made. Results of the inspection, evaluation, and any corrective action shall be recorded in a log.

No.	SHOP	EMISSION UNIT	DESCRIPTION	Applicable Regulations
1	Assembly #1	A05	Fluid Filling Operations	401 KAR 59:010
2		A08	Process Lubrication	401 KAR 59:010
3		A12	Miscellaneous Assembly Operations	401 KAR 59:010
4	Assembly #2	B05	Fluid Filling Operations	401 KAR 59:010
5		B08	Process Lubrication	401 KAR 59:010
6		B12	Miscellaneous Assembly Operations	401 KAR 59:010
7	Body Operations	C01	Die Construction	401 KAR 59:010
8		C11	Process Lubrication	401 KAR 59:010
9		C13	Fuel Tank Cleaning	401 KAR 59:010
10	Facilities Control	D02	Wastewater Pretreatment	401 KAR 59:010
11		D05	Cooling Towers	401 KAR 59:010
12		D08	Combustion Process <1 MMBtu/hr (combined 100.7597 MMBtu/hr total)	N/A
13	Paint #1	E03R	Metal Finishing Line	401 KAR 59:010
14		E08R	Inspection Lines	401 KAR 59:010
15		E10R	Moon Roof Installation	401 KAR 59:010
16		E16R	Robot Teaching Booth	401 KAR 59:010
17		E17R	Masking Booth	401 KAR 59:010
18	Paint #2	F03	Metal Finishing Line	401 KAR 59:010
19		F08	Inspection Lines	401 KAR 59:010
20		F10	Moon Roof Installation	401 KAR 59:010
21		F15	Water/Wastewater Treatment Operations	401 KAR 59:010
22		F16	Robot Teaching Booth	401 KAR 59:010
23		F17	Two Tone Masking Booths	401 KAR 59:010
24		F27	Dry Sand Booths	401 KAR 59:010
25	Plastics	G25	Manifold Assembly Operation	401 KAR 59:010
26		G29	Four Plasma Robots	N/A
27	Power Train	H13	Operational Support	401 KAR 59:010
28		H18	Plasma Cleaning Activities	401 KAR 59:010
29		H19	Laser Cladding Process with two integral dust collectors	401 KAR 59:010
30	Production Control	K01	Dock Unloading Areas	401 KAR 59:010
31		K02	Parts Conveyance	401 KAR 59:010
32		K03	Shipping Preparation	401 KAR 59:010
33		K04	Fork Truck Repair Painting	401 KAR 59:010
34		K05	Cross Dock	401 KAR 59:010
35		K06	Battery Charging Stations	401 KAR 59:010
36	Quality Control	J01	Audit Lab	401 KAR 59:010
37		J02	Raw Material Test Lab	401 KAR 59:010
38		J03	Test Track Operations	401 KAR 59:010
39		J05	Team Member Training Activities: Injection Molding Welding Machining	401 KAR 59:010 401 KAR 63:020

SECTION C - INSIGNIFICANT ACTIVITIES (CONTINUED)

No.	SHOP	EMISSION UNIT	DESCRIPTION	Applicable Regulations
40	Toyota Logistics	L02	Accessory Installation	401 KAR 59:010
41		L03	Shipping Preparation	401 KAR 59:010
42	Assembly #3	M10	Miscellaneous Assembly Operations	401 KAR 59:010

SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS

1. As required by Section 1b of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26; compliance with annual emissions and processing limitations contained in this permit, shall be based on emissions and processing rates for any twelve (12) consecutive months.
2. Emissions, measured by applicable reference methods, or an equivalent or alternative method specified in 40 C.F.R. Chapter I, or by a test method specified in the state implementation plan shall not exceed the respective limitations specified herein.
3. **Compliance Demonstration Method for Transfer Efficiency Testing:**
 - (1) For affected facilities that use transfer efficiency in the determination of kilograms of VOC per liter of applied solids the permittee shall:
 - i. Use the transfer efficiency value specified in 40 CFR 60.393 for the application method used; or
 - ii. Use a transfer efficiency value determined through engineering evaluations¹ or representative testing approved by the Division. Previous transfer efficiency tests may be accepted if the following conditions are met:
 - A. The previous test must have been conducted using methods and conditions approved by the Division.
 - B. Either no process or equipment changes have been made since the previous test was performed or the owner or operator must be able to demonstrate that the results of the performance test, reliably demonstrate compliance despite process or equipment changes.
 - C. Either the required operating parameters were established in the previous test or sufficient data were collected in the previous test to establish the operating parameters.

Compliance Demonstration Method for Carry Over Efficiency Testing:

- (2) For affected facilities that use carry over efficiency in the determination of VOC emissions the permittee shall:
 - i. Use a carryover efficiency value determined through engineering evaluations¹ or representative testing approved by the Division. Previous carry over efficiency tests may be accepted if the following conditions are met:
 - A. The previous test must have been conducted using methods and conditions approved by the Division.
 - B. Either no process or equipment changes have been made since the previous test was performed or the owner or operator must be able to demonstrate that the results of the performance test, reliably demonstrate compliance despite process or equipment changes.
 - C. Either the required operating parameters were established in the previous test or sufficient data were collected in the previous test to establish the operating parameters.

SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS (CONTINUED)

Compliance Demonstration Method for Capture Efficiency Testing:

- (3) For affected facilities that use capture efficiency in the determination of VOC emissions the permittee shall:
- i. Use a capture efficiency value determined through engineering evaluations¹ or representative testing approved by the Division. Previous capture efficiency tests may be accepted if the following conditions are met:
 - A. The previous test must have been conducted using methods and conditions approved by the Division.
 - B. Either no process or equipment changes have been made since the previous test was performed or the owner or operator must be able to demonstrate that the results of the performance test, reliably demonstrate compliance despite process or equipment changes.
 - C. Either the required operating parameters were established in the previous test or sufficient data were collected in the previous test to establish the operating parameters.

Compliance Demonstration Method for Standard Gallons per Job Calculation:

- (4) The permittee shall notify the Division of any changes to the methodology for determining the standard gallons of material per job for the purposes of calculating emissions.

¹Engineering Evaluations shall be submitted to the permit review branch of the Division.

SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS (CONTINUED)

4. Synthetic Minor Limits on PM_{2.5}, NO_x and CO_{2e} Emissions to preclude applicability of 401 KAR 51:017

- (a) PM_{2.5} emissions from Line 3 Operations shall not exceed 9.0 tons per year based on a 12-month rolling total.

Compliance Demonstration Method:

PM_{2.5} emissions from Line 3 Operations = $\sum$ [Welding Operations, C15] + $\sum$ [Surface Coating Operations, Paint #2, F19 through F26 & Plastics, G26] + $\sum$ [Natural Gas Combustion Units, D11A & D11B] + $\sum$ [Assembly #3] + $\sum$ [Insignificant Activities, IA #24]

PM_{2.5} emissions are calculated as follows:

$$[M_{\text{wire}} \rho_{\text{wire}} \times (1 - \text{C.E.})] + [M_{\text{coating}} \rho_{\text{coating}} \times (1 - \text{T.E.}) \times (1 - \text{C.E.*})] + [M_{\text{N.G.}} \times \rho_{\text{N.G.}}] + [V \times \text{EF}_{\text{PM}}]$$

Where;

- M_{wire} = Pounds of welding wire used
- ρ_{wire} = PM_{2.5} emission factor of welding wire, (lb/lb)
- C.E. = Control efficiency of the PM/PM₁₀/PM_{2.5} control equipment
- M_{coating} = Gallons of coating material used
- ρ_{coating} = PM_{2.5} content of coating material, (lbs/gallon)
- T.E. = Transfer efficiency of the application equipment
- M_{N.G.} = Natural gas used (10⁶scf)
- ρ_{N.G.} = The most recent finalized AP-42 PM_{2.5} emission factor (lb/10⁶scf)
- V = Number of vehicles tested
- EF_{PM} = PM_{2.5} emission factor (lb/test)

*Control efficiency for scrubber shall be calculated using the following equation:

$$\text{C.E. of scrubber} = 1 - \{ \text{PM emission rate} / [M_{\text{coating}} \rho_{\text{coating}} \times (1 - \text{T.E.})] \}$$

PM emission rate shall be obtained from stack test every five years. See Periodic Monitoring Table in Section B.

Transfer efficiency shall be obtained from initial performance demonstration.

- (b) NO_x emissions from Line 3 Operations shall not exceed 39.8 tons per year based on a 12-month rolling total.

Compliance Demonstration Method:

NO_x emissions from Line 3 Operations = $\sum$ [Natural Gas Combustion Units, D11A & D11B] + $\sum$ [Assembly #3, M04]

NO_x emissions are calculated as follows:

$$[M_{\text{N.G.}} \times \rho_{\text{NO}_x}] + [V \times \text{EF}_{\text{NO}_x}]$$

SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS (CONTINUED)

4. Synthetic Minor Limits on PM_{2.5}, NO_x and CO₂e Emissions to preclude applicability of 401 KAR 51:017 (continued)

- Where;
- M_{N.G.} = Natural gas used (10⁶scf)
 - ρ_{NO_x} = The most recent finalized AP-42 NO_x emission factor (lb/10⁶scf)
 - V = Number of vehicles tested
 - EF_{NO_x} = NO_x emission factor (lb/test)

(c) **CO₂e** emissions from Line 3 Operations shall not exceed 47,570 tons per year based on a 12-month rolling total.

Compliance Demonstration Method:

CO₂e emissions from Line 3 Operations = Σ [Welding Operations, C15] + Σ [Natural Gas Combustion Units, D11A & D11B] + Σ [Assembly #3, M04]

CO₂e –based emissions are calculated as follows:

[Carbon Dioxide (tons) x GWP for CO₂] + [Nitrous Oxide (tons) x GWP for N₂O] + [Methane (tons) x GWP for CH₄]

The most recent finalized emission factors for greenhouse gas (GHG) listed in AP-42 or 40 CFR Part 98 *Mandatory Greenhouse Gas Reporting*, Subpart C shall be used for natural gas combustion units.

<u>GHG</u>	<u>Global Warming Potential (GWP)</u>
Carbon Dioxide (CO ₂)	1
Nitrous Oxide (N ₂ O)	298
Methane (CH ₄)	25

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS

Pursuant to 401 KAR 50:055, Section 2(5), at all times, including periods of startup, shutdown and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Division which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

40 CFR 64, Compliance Assurance Monitoring (CAM) is applicable to a pollutant-specific emissions unit (PSEU) at a major source that uses a control device to achieve compliance with an applicable emission limitation and has potential pre-control device emissions of the applicable regulated air pollutant that are equal to or greater than 100 percent of the amount, in tons per year, required for a source to be classified as a major source.

a. MONITORING APPROACH FOR PAINT # 1, Primer Booth (EP# E05R) and TOPCOAT (EP# E07R)

1. PM/PM₁₀ Background for Emission Point E05R and E07R (Line D and E)

Emission Unit

Emission point E05R Primer Line (Lines D & E) & E07R Topcoat Lines (Lines D & E)

Description:

Wet on Wet Painting system used to paint metal vehicle bodies. System will apply Primer, Basecoat and Clearcoat. Paint Curing will occur from the Heated Flash zones following Primer and Basecoat spray booths and the systems curing oven that will follow the Clearcoat Spray booths. Overspray emissions from the coating applicators in the booths are routed to the tower wet scrubber.

Pollutant: PM/PM₁₀

Applicable Regulations:

401 KAR 51:017:

Emission Limitations:

The permittee shall not cause the discharge into the atmosphere of more than 4.02 lbs of PM per hour for E05R Primer Lines and 7.43 lbs of PM per hour for E07R Topcoat Lines.

401 KAR 59:010 Section 3

Emission Limitations: Particulate emissions shall not exceed the emission rate determined by the process weight rule. (The emissions limitations required by BACT are more stringent, therefore compliance with the BACT limit ensures compliance with the 401 KAR 59:010.)

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS (CONTINUED)

i. Continuous Assurance Monitoring Approach Summary for the Tower Wet Scrubbers TS11 and TS12 Controlling PM/PM₁₀ Emissions from Emissions Point E05R and E07R (Line D and E):

Indicator

Parameter:

Water flow in the tower

Measurement Approach:

Continuous water flow meter with an alarm will ensure the tower is in the proper operating range of particulate removal.

Indicator Range: The water flow alarm will be set based upon ratio of water flow to exhaust gas flow rate by weight, determined by manufacturer specification.

Performance Criteria:

Data Representativeness:

The particulate emissions by coating applicators are forced through the water scrubber before venting to the atmosphere. The degree to which the wet scrubber is able to control particulate emissions is largely dependent upon the rate of water flow being sprayed in the tower in relation to the exhaust gas weight. The flow rate of water being within manufacturer's specifications demonstrates that the tower is operating properly.

Verification of Operational Status:

The permittee shall maintain Status Records of water flow rate and the 5-year stack test are maintained on site.

QA and QC Practices and Criteria:

The permittee shall follow the manufacturer's recommendations for installation, operation, and maintenance of the wet scrubber system and flow meter. Stack testing equipment is calibrated every 5 years

Monitoring Frequency and Data Collection Procedures:

The permittee shall record water flow (hourly) and alarms and maintain logs of such inspections on site.

Corrective Action:

When an alarm is activated, the site operators take corrective actions to adjust the flow to the correct rate. If the flow rate cannot be rectified, the site operator shall remedy the malfunction as soon as is practicable.

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS (CONTINUED)

2. VOC Background for Emission Point E05R and E07R (Line D and E)

Emission Unit

Emission point E05R Primer Line (Lines D & E) & E07R Topcoat Lines (Lines D and E)

Description:

Wet on Wet Painting system used to paint metal vehicle bodies. System will apply Primer, Basecoat and Clearcoat. Paint Curing will occur from the Heated Flash zones that following Primer and Basecoat spray booths and the systems curing oven that will follow the Clearcoat Spray booths. Thermal oxidizer is utilized to control the VOC exhaust gas streams from the Primer/Basecoat Heated Flash zones, Clearcoat Booths and Bake Oven. The alternate operating scenario for VOC abatement is a combination of a VOC concentrator and Thermal oxidizer.

Pollutant: VOC

Applicable Regulations:

401 KAR 51:017:

Emission Limitations: The permittee shall not cause the discharge into the atmosphere of more than 2.11 lbs of VOC per job for E05R Primer Lines and 3.86 lbs of VOC per job for E07R Topcoat Lines.

i. Continuous Assurance Monitoring Approach Summary for the Thermal Oxidizers (RTO-05 and RTO-06) Controlling VOC Emissions from Emissions Point E05R and E07R (Line D and E):

Indicator

Parameter: Combustion chamber temperature

Measurement Approach:

The permittee shall continuously monitor the temperature of the combustion chamber using a thermocouple to ensure that it does not fall more than 28 °C below the average combustion chamber temperature maintained during the performance test. The permittee shall also conduct a stack test every 5 years according to USEPA Method 25A to verify that the destruction efficiency has not fallen below 95%.

Indicator Range: The temperature must be maintained at no more than 28 °C below the combustion chamber temperature limit. Any 3-hour block average combustion temperature reading outside this range shall be considered an excursion.

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS (CONTINUED)

Performance Criteria:

Data Representativeness: The temperature monitoring device shall be located in the combustion zone. The tolerance of the thermocouple and the sensitivity of the recordkeeping system shall be determined based on manufacturer's recommendations.

Verification of Operational Status: The permittee shall keep records of continuous combustion temperature readings onsite and made available for inspection.

QA/QC Practices and Criteria: The permittee shall follow the manufacturer's recommendations for installation, operation, maintenance, and calibration of the temperature monitoring device. The permittee shall calibrate the thermocouple on an annual basis. To ensure that monitoring device malfunctions do not prevent the collection of accurate combustion temperature data, spare thermocouples shall be kept onsite and operators shall replace malfunctioning thermocouples if necessary as soon as is practicable once a malfunction is recognized.

Monitoring Frequency and Data Collection Procedures: The combustion temperature shall be monitored continuously and recorded in 15-minute periods. The consecutive 15-minute blocks shall be utilized to determine the 3-hour block average for compliance purposes. The permittee shall tabulate and maintain these temperature measurements in an electronic database. Records of the stack tests will be maintained on site.

Procedures Corrective Action: When an out-of-range temperature reading occurs, operators shall check the oxidizer system to ensure proper operation. If any of these checks indicate abnormal operation, the permittee shall inspect all potentially malfunctioning components of the offending system. Once the source of the malfunction is determined, the problem shall be remedied as soon as practicable after the malfunction is recognized by repairing or replacing the malfunctioning component of the system.

**SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS
(CONTINUED)**

b. MONITORING APPROACH FOR PAINT # 2, TOPCOAT A AND B (EP# F07)

1. PM/PM₁₀ Background for Emission Point F07

Emission Unit:

Emission Point F07: Topcoat Lines A and B

Description:

Topcoats are applied to autobodies in two paint booths. Each booth uses a total enclosure to capture overspray emissions, and each is equipped with a curing oven. Overspray emissions from the coating applicators in Booths A and B are routed to Wet Scrubbers TS23 and TS24, respectively. Particulate emissions from Booths A and B are also controlled by Filters TF27 and TF28.

Pollutant:

PM/PM₁₀

Applicable Regulations

401 KAR 51:017

Emission Limitations: The permittee shall not cause the discharge into the atmosphere of more than 7.42 lbs of PM per hour.

401 KAR 59:010 Section 3

Emission Limitations: Particulate emissions shall not equal or exceed the emission rate determined by the process weight rule. (The emissions limitations required by BACT are more stringent than the PWR, therefore compliance with the BACT limit ensures compliance with the 401 KAR 59:010)

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS (CONTINUED)

i. Compliance Assurance Monitoring Approach Summary for the Filter (Final Stage) Controlling PM/PM₁₀ Emissions from F07

Indicator:

Parameter: Pressure drop across final stage filter

Measurement Approach:

1. The permittee shall display pressure drop across the final stage filter using a differential pressure gauge.
2. Each week, an operator shall visually observe the monitoring devices while recording pressure drop readings.
3. Inspection and maintenance of the differential gauge shall be performed annually in accordance with manufacturer's specifications. In addition, operators shall conduct a monthly visual inspection to verify that all final filters are in place.

Indicator Range:

The differential pressure reading must remain between TBD millimeters of H₂O. Excursions trigger an inspection and potentially corrective action and reporting. Maintaining the pressure drop above 0 millimeter of H₂O indicates the absence of channeling, whereas the upper end of the pressure drop ensures that the collection efficiency of the system is operating as suggested by the manufacturer.

Performance Criteria:

Data Representativeness:

Pressure drop across the filters is an indicator of control device performance and thus can be used to ensure compliance with applicable emission limitations.

Verification of Operational Status:

Records of the weekly gauge readings, monthly filter inspections, and annual calibrations shall be maintained on site.

QA and QC Practices and Criteria:

Annual calibration of the pressure drop gauges provides verification of accurate measurements.

Monitoring Frequency and Data Collection Procedures:

The pressure drop is monitored weekly and the operator records an instantaneous measurement of pressure drop once per week.

Corrective Action:

When an out-of-range pressure drop reading occurs, operators will check the pressure gauge and filter equipment to ensure proper operation. If any of these checks indicate abnormal operation, The permittee will inspect all potentially malfunctioning components of the offending system. Once the source of the malfunction is determined, the problem will be remedied as soon as is practicable after the malfunction is recognized by repairing or replacing the malfunctioning component of the system.

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS (CONTINUED)

ii. Continuous Assurance Monitoring Approach Summary for the Wet Scrubbers Controlling PM/PM₁₀ Emissions from Emissions Point F07

Indicator:

Parameter:

Significant gaps in the water-wall coverage

Measurement Approach:

Once per week visual inspection will be made of the water-wall coverage to ensure that there are no significant gaps. The permittee shall perform stack tests every five years according to USEPA Method 17 to quantify the particulate emission rate.

Indicator Range:

No “significant” gap in the water wall is indicative of proper operation. The permittee has established with the Division the definition of a significant gap.

Performance Criteria

Data Representativeness:

All particulate emissions (i.e., overspray) generated by coating applicators are forced through the water wash system before venting through the filters for additional PM control. The degree to which the wet scrubber is able to control particulate emissions is largely dependent upon the water-wall coverage. The absence of significant gaps in the water wall demonstrates that the venturi water wall is operating properly

Verification of Operational Status:

The permittee shall maintain Status Records of weekly visual inspections for significant gaps.

QA and QC Practices and Criteria:

The permittee shall follow the manufacturer’s recommendations for installation, operation, and maintenance of the wet scrubber system. Each operator shall be trained by the permittee to recognize a significant gap in the water-wall coverage.

Monitoring Frequency and Data Collection Procedures:

The permittee shall perform weekly visual inspections to identify any significant gaps in the water-wall coverage and maintain logs of such inspections on site.

Corrective Action:

When a significant gap is found, the site operators shall take corrective actions to clear the blockage. If the blockage cannot be rectified, the site operator shall remedy the malfunction as soon as is practicable to clear the blockage.

**SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS
(CONTINUED)**

**c. MONITORING APPROACH FOR PLASTIC EXTERIOR PART PAINTING
OPERATIONS (EP# G21)**

1. PM/PM₁₀ Background for Emission Point G21 (Line B1)

Emission Unit Emission point G21: Exterior Part Painting Operations (Line B1) Description: Exterior automotive plastic components (rocker panels) are painted in the paint booth (Line B1). The booths are equipped with a pair of curing ovens. Emissions from the booths are routed to Filters RF14 (Line B1) and Wet Scrubbers RS16 for particulate control. Pollutant: PM/PM₁₀
Applicable Regulations: 401 KAR 51:017: Emission Limitations: The permittee shall not cause the discharge into the atmosphere of more than 0.99 lbs of PM per hour. 401 KAR 59:010 Section 3 Emission Limitations: Particulate emissions shall not exceed the emission rate determined by the process weight rule. (The emissions limitations required by BACT are more stringent, therefore compliance with the BACT limit ensures compliance with the 401 KAR 59:010.)

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS (CONTINUED)

i. Compliance Assurance Monitoring Approach Summary for the Filters RF14 (Line B1) Controlling PM/PM₁₀ emissions from Emission Point # G21:

Indicator: Parameter:

Pressure drop across final stage filters

Measurement Approach:

1. The permittee shall display pressure drop across the final stage filter using a differential pressure gauge.
2. Each week, an operator shall visually observe the monitoring device while recording pressure drop readings.
3. Inspection and maintenance of the differential gauge shall be performed annually in accordance with manufacturer's specifications. Visible observations of the opacity of emissions from the rooftop shall be performed by an operator on a weekly basis and logged. Every five years, The permittee shall perform a stack test according to USEPA Method 17 to measure the PM emission rate. Operators shall conduct a monthly visual inspection to verify that filter is in place. Filters are changed based on a permittee established pressure drop.

Indicator Range: The differential pressure reading must not exceed 1.1 and must be greater than 0 inches of H₂O. Excursions trigger an inspection and potentially corrective action and reporting.

Maintaining the pressure drop above TBD inches of H₂O indicates the filters are in place, whereas the upper end of the pressure drop ensures that collection efficiency of the system is operating as suggested by the manufacturer.

Performance Criteria:

Data Representativeness: Pressure drop across the filters is an indicator of control device performance and thus can be used to ensure compliance with applicable emission limitations.

Verification of Operational Status: Records of the weekly gauge readings, weekly observations, annual calibrations, 5-year stack tests, and monthly filter inspections are maintained on site.

QA/QC Practices and Criteria: Annual calibration of the pressure drop gauges provides verification of accurate measurements. Visual observations are performed weekly, and the stack test equipment is calibrated every 5 years.

Monitoring Frequency and Data Collection Procedures: The pressure drop shall be displayed continuously and the operator records an instantaneous measurement of pressure drop once per week.

Corrective Action: When an out-of-range pressure drop reading occurs, operators shall check the pressure gauge and filter equipment to ensure proper operation. If any of these checks indicate abnormal operation, The permittee shall inspect all potentially malfunctioning components of the offending system. Once the source of the malfunction is determined, the problem shall be remedied as soon as is practicable after the malfunction is recognized by repairing or replacing the malfunctioning component of the system.

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS (CONTINUED)

ii. Continuous Assurance Monitoring Approach Summary for the Tower Wet Scrubbers RS16 Controlling PM/PM₁₀ Emissions from Emissions Point G21 (Line B1):

Indicator

Parameter:

Water flow in the tower

Measurement Approach:

Continuous water flow meter with an alarm will ensure the tower is in the proper operating range of particulate removal.

Indicator Range: The water flow alarm will be set based upon ratio of water flow to exhaust gas flow rate by weight, determined by manufacturer specification.

Performance Criteria:

Data Representativeness:

The particulate emissions by coating applicators are forced through the water scrubber before venting to the atmosphere. The degree to which the wet scrubber is able to control particulate emissions is largely dependent upon the rate of water flow being sprayed in the tower in relation to the exhaust gas weight. The flow rate of water being within manufacturer's specifications demonstrates that the tower is operating properly.

Verification of Operational Status:

The permittee shall maintain Status Records of water flow rate and the 5-year stack test are maintained on site.

QA and QC Practices and Criteria:

The permittee shall follow the manufacturer's recommendations for installation, operation, and maintenance of the wet scrubber system and flow meter. Stack testing equipment is calibrated every 5 years

Monitoring Frequency and Data Collection Procedures:

The permittee shall record water flow (hourly) and alarms and maintain logs of such inspections on site.

Corrective Action:

When an alarm is activated, the site operators take corrective actions to adjust the flow to the correct rate. If the flow rate cannot be rectified, the site operator shall remedy the malfunction as soon as is practicable.

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS (CONTINUED)

2. VOC Background for Emission Point G21 (Line B1)

Emission Unit

Emission point G21: Exterior Part Painting Operations (Line B1)

Description:

Exterior automotive plastic components (rocker panels) are painted in the paint booths, Line B1. Each booth employs a capture system and each one is equipped with a curing oven. Emissions from Booths are routed to VOC Wheels RC07 and Thermal Oxidizers RT11 for VOC control.

Pollutant: VOC

Applicable Regulations:

401 KAR 51:017:

Emission Limitations: The permittee shall not cause the discharge into the atmosphere of more than 0.21 lbs of VOC per job.

i. Continuous Assurance Monitoring Approach Summary for the VOC Concentrators (RC07) Controlling VOC Emissions from G21

Indicator: Parameter:

Desorption gas inlet temperature

Measurement Approach:

The Permittee shall continuously monitor the thermocouple temperature of the desorption gas inlet to ensure that it does not fall more than 8°C below the average desorption gas inlet temperature established during the performance test. The Permittee shall keep the set point for the desorption gas inlet temperature no lower than 6°C below the lower of that set point during the performance test and the average desorption gas inlet temperature established during the performance test. Operators shall perform a monthly visual inspection to verify that the Desorption / Reactivation Fan is operating properly. Another pressure sensor with an alarm will continuously monitor the pressure drop across the adsorber trays to ensure carbon is properly flowing through the system. To test the VOC concentrator's performance, representative samples and the adsorbent activity shall be tested according to the manufacturer's recommendations on an annual basis; alternatively, portable ionization detectors may be used to conduct this annual performance test. An alarm shall alert operators of any periods during which the by-pass damper diverts flow from the VOC concentrator.

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS (CONTINUED)

Indicator Range:

The minimum operating limit for the concentrator is 8°C below the average desorption gas inlet temperature maintained during the last performance test. The set point for the desorption gas inlet temperature is no lower than 6°C below the lower of that set point during the performance test and the average desorption gas inlet temperature maintained during the performance test. Any 3-hour block average combustion temperature reading below the minimum operating limit will be considered an excursion.

Performance Criteria:

Data Representativeness:

The tolerance of the thermocouple and the sensitivity of the recordkeeping system shall be determined based on manufacturer's recommendations.

Verification of Operational Status:

The permittee shall keep records of continuous desorption gas inlet temperature readings onsite and made available for inspection.

QA and QC Practices and Criteria:

The permittee shall follow the manufacturer's recommendations for installation, operation, maintenance, and calibration of the temperature monitoring device. The permittee shall calibrate the thermocouple on an annual basis. To ensure that monitoring device malfunctions do not prevent the collection of accurate desorption gas inlet temperature data, spare thermocouples shall be kept onsite and the permittee shall replace malfunctioning thermocouples if necessary as soon as is practicable once a malfunction is recognized.

Monitoring Frequency and Data Collection Procedures:

The desorption gas inlet temperature shall be monitored continuously and recorded in 15-minute periods. The consecutive 15-minute blocks shall be utilized to determine the 3-hour block average for compliance purposes. The permittee shall tabulate and maintain these temperature measurements in an electronic database. Records of the annual performance tests will be maintained on site.

Corrective Action:

When an out-of-range temperature reading occurs, the permittee shall check the VOC concentrator to ensure proper operation. If any of these checks indicate abnormal operation, the permittee shall inspect all potentially malfunctioning components of the offending system. Once the source of the malfunction is determined, the problem shall be remedied as soon as practicable after the malfunction is recognized by repairing or replacing the malfunctioning component of the system.

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS (CONTINUED)

ii. Continuous Assurance Monitoring Approach Summary for the Thermal Oxidizers (RT11) Controlling VOC Emissions from G21 (Line B1):

Indicator

Parameter: Combustion chamber temperature

Measurement Approach:

The permittee shall continuously monitor the temperature of the combustion chamber using a thermocouple to ensure that it does not fall more than 28 °C below the average combustion chamber temperature maintained during the performance test. The permittee shall also conduct a stack test every 5 years according to USEPA Method 25A to verify that the destruction efficiency has not fallen below 95%.

Indicator Range: The temperature must be maintained at no more than 28 °C below the combustion chamber temperature limit. Any 3-hour block average combustion temperature reading outside this range shall be considered an excursion.

Performance Criteria:

Data Representativeness: The temperature monitoring device shall be located in the combustion zone. The tolerance of the thermocouple and the sensitivity of the recordkeeping system shall be determined based on manufacturer's recommendations.

Verification of Operational Status: The permittee shall keep records of continuous combustion temperature readings onsite and made available for inspection.

QA/QC Practices and Criteria: The permittee shall follow the manufacturer's recommendations for installation, operation, maintenance, and calibration of the temperature monitoring device. The permittee shall calibrate the thermocouple on an annual basis. To ensure that monitoring device malfunctions do not prevent the collection of accurate combustion temperature data, spare thermocouples shall be kept onsite and operators shall replace malfunctioning thermocouples if necessary as soon as is practicable once a malfunction is recognized.

Monitoring Frequency and Data Collection Procedures: The combustion temperature shall be monitored continuously and recorded in 15-minute periods. The consecutive 15-minute blocks shall be utilized to determine the 3-hour block average for compliance purposes. The permittee shall tabulate and maintain these temperature measurements in an electronic database. Records of the stack tests will be maintained on site.

Procedures Corrective Action: When an out-of-range temperature reading occurs, operators shall check the oxidizer system to ensure proper operation. If any of these checks indicate abnormal operation, the permittee shall inspect all potentially malfunctioning components of the offending system. Once the source of the malfunction is determined, the problem shall be remedied as soon as practicable after the malfunction is recognized by repairing or replacing the malfunctioning component of the system.

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS (CONTINUED)

d. MONITORING APPROACH FOR PLASTIC BUMPER PAINTING OPERATIONS (EP# G22)

1. PM/PM₁₀ Background for Emission Point G22

Emission Unit

Emission point G22: Bumper Painting Operations

Description:

Plastic automotive bumpers are painted in four booths (G & H). Overspray emissions are captured in the booth and each one is equipped with a curing oven. Emissions from the booths are routed to Wet Scrubbers RS14 (Booth G) and RS15 (Booth H) for particulate control.

Pollutant: PM/PM₁₀

Applicable Regulations:

401 KAR 51:017:

Emission Limitations:

The permittee shall not cause the discharge into the atmosphere of more than 5.42 lbs of PM per hour.

401 KAR 59:010 Section 3

Emission Limitations: Particulate emissions shall not exceed the emission rate determined by the process weight rule. (The emissions limitations required by BACT are more stringent than the FWR, therefore compliance with the BACT limit ensures compliance with the 401 KAR 59:010.)

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS (CONTINUED)

i. Continuous Assurance Monitoring Approach Summary for the Tower Wet Scrubbers RS14 (Booth G) and RS15 (Booth H) Controlling PM/PM₁₀ Emissions from Emissions Point G22:

Indicator

Parameter:

Water flow in the tower

Measurement Approach:

Continuous water flow meter with an alarm will ensure the tower is in the proper operating range of particulate removal.

Indicator Range: The water flow alarm will be set based upon ratio of water flow to exhaust gas flow rate by weight, determined by manufacturer specification.

Performance Criteria:

Data Representativeness:

The particulate emissions by coating applicators are forced through the water scrubber before venting to the atmosphere. The degree to which the wet scrubber is able to control particulate emissions is largely dependent upon the rate of water flow being sprayed in the tower in relation to the exhaust gas weight. The flow rate of water being within manufacturer's specifications demonstrates that the tower is operating properly.

Verification of Operational Status:

The permittee shall maintain Status Records of water flow rate and the 5-year stack test are maintained on site.

QA and QC Practices and Criteria:

The permittee shall follow the manufacturer's recommendations for installation, operation, and maintenance of the wet scrubber system and flow meter. Stack testing equipment is calibrated every 5 years

Monitoring Frequency and Data Collection Procedures:

The permittee shall record water flow (hourly) and alarms and maintain logs of such inspections on site.

Corrective Action:

When an alarm is activated, the site operators take corrective actions to adjust the flow to the correct rate. If the flow rate cannot be rectified, the site operator shall remedy the malfunction as soon as is practicable.

**SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS
(CONTINUED)**

2. VOC Background for Emission Point G22

Emission Unit Emission point G22: Bumper Painting Operations Description: Plastic automotive bumpers are painted in four booths. All booths employ a capture system and each one is equipped with a curing oven. Emissions from Booths G and H are routed to Regenerative Thermal Oxidizer RT12 for VOC Control. VOC concentrators RC04 and RC05 and Thermal Oxidizers RT08 and RT09 are used for VOC control as Alternative Operating Scenarios Only. Ovens G & H are uncontrolled. Pollutant: VOC
Applicable Regulations: 401 KAR 51:017: Emission Limitations: The permittee shall not cause the discharge into the atmosphere of more than 1.04 lbs of VOC per job.

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS (CONTINUED)

i. Continuous Assurance Monitoring Approach Summary for the VOC Concentrators (RC04 and RC05) Controlling VOC Emissions from G22 (Alternative Operating Scenario Only):

Indicator: Parameter:

Desorption gas inlet temperature

Measurement Approach:

The Permittee shall continuously monitor the thermocouple temperature of the desorption gas inlet to ensure that it does not fall more than 8°C below the average desorption gas inlet temperature established during the performance test. The Permittee shall keep the set point for the desorption gas inlet temperature no lower than 6°C below the lower of that set point during the performance test and the average desorption gas inlet temperature established during the performance test. Operators shall perform a monthly visual inspection to verify that the Desorption / Reactivation Fan is operating properly. Another pressure sensor with an alarm will continuously monitor the pressure drop across the adsorber trays to ensure carbon is properly flowing through the system. To test the VOC concentrator's performance, representative samples and the adsorbent activity shall be tested according to the manufacturer's recommendations on an annual basis; alternatively, portable ionization detectors may be used to conduct this annual performance test. An alarm shall alert operators of any periods during which the by-pass damper diverts flow from the VOC concentrator.

Indicator Range:

The minimum operating limit for the concentrator is 8°C below the average desorption gas inlet temperature maintained during the last performance test. The set point for the desorption gas inlet temperature is no lower than 6°C below the lower of that set point during the performance test and the average desorption gas inlet temperature maintained during the performance test. Any 3-hour block average combustion temperature reading below the minimum operating limit will be considered an excursion.

Performance Criteria:

Data Representativeness:

The tolerance of the thermocouple and the sensitivity of the recordkeeping system shall be determined based on manufacturer's recommendations.

Verification of Operational Status:

The permittee shall keep records of continuous desorption gas inlet temperature readings onsite and made available for inspection.

QA and QC Practices and Criteria:

The permittee shall follow the manufacturer's recommendations for installation, operation, maintenance, and calibration of the temperature monitoring device. The permittee shall calibrate the thermocouple on an annual basis. To ensure that monitoring device malfunctions do not prevent the collection of accurate desorption gas inlet temperature data, spare thermocouples shall be kept onsite and the permittee shall replace malfunctioning thermocouples if necessary as soon as is practicable once a malfunction is recognized.

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS (CONTINUED)

Monitoring Frequency and Data Collection Procedures:

The desorption gas inlet temperature shall be monitored continuously and recorded in 15-minute periods. The consecutive 15-minute blocks shall be utilized to determine the 3-hour block average for compliance purposes. The permittee shall tabulate and maintain these temperature measurements in an electronic database. Records of the annual performance tests will be maintained on site.

Corrective Action:

When an out-of-range temperature reading occurs, the permittee shall check the VOC concentrator to ensure proper operation. If any of these checks indicate abnormal operation, the permittee shall inspect all potentially malfunctioning components of the offending system. Once the source of the malfunction is determined, the problem shall be remedied as soon as practicable after the malfunction is recognized by repairing or replacing the malfunctioning component of the system.

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS (CONTINUED)

ii. Continuous Assurance Monitoring Approach Summary for the Regenerative Thermal Oxidizer (RT12) Controlling VOC Emissions from G22:

Indicator

Parameter: Combustion chamber temperature

Measurement Approach:

The permittee shall continuously monitor the temperature of the combustion chamber using a thermocouple to ensure that it does not fall more than 28 °C below the average combustion chamber temperature maintained during the performance test. The permittee shall also conduct a stack test every 5 years according to USEPA Method 25A to verify that the destruction efficiency has not fallen below 81%.

Indicator Range: The temperature must be maintained at no more than 28 °C below the combustion chamber temperature limit. Any 3-hour block average combustion temperature reading outside this range shall be considered an excursion.

Performance Criteria:

Data Representativeness: The temperature monitoring device shall be located in the combustion zone. The tolerance of the thermocouple and the sensitivity of the recordkeeping system shall be determined based on manufacturer's recommendations.

Verification of Operational Status: The permittee shall keep records of continuous combustion temperature readings onsite and made available for inspection.

QA/QC Practices and Criteria: The permittee shall follow the manufacturer's recommendations for installation, operation, maintenance, and calibration of the temperature monitoring device. The permittee shall calibrate the thermocouple on an annual basis. To ensure that monitoring device malfunctions do not prevent the collection of accurate combustion temperature data, spare thermocouples shall be kept onsite and operators shall replace malfunctioning thermocouples if necessary as soon as is practicable once a malfunction is recognized.

Monitoring Frequency and Data Collection Procedures: The combustion temperature shall be monitored continuously and recorded in 15-minute periods. The consecutive 15-minute blocks shall be utilized to determine the 3-hour block average for compliance purposes. The permittee shall tabulate and maintain these temperature measurements in an electronic database. Records of the stack tests will be maintained on site.

Procedures Corrective Action: When an out-of-range temperature reading occurs, operators shall check the oxidizer system to ensure proper operation. If any of these checks indicate abnormal operation, the permittee shall inspect all potentially malfunctioning components of the offending system. Once the source of the malfunction is determined, the problem shall be remedied as soon as practicable after the malfunction is recognized by repairing or replacing the malfunctioning component of the system.

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS (CONTINUED)

iii. Continuous Assurance Monitoring Approach Summary for the Thermal Oxidizers (RT08 and RT09) Controlling VOC Emissions from G22 (Alternative Operating Scenario Only):

Indicator

Parameter: Combustion chamber temperature

Measurement Approach:

The permittee shall continuously monitor the temperature of the combustion chamber using a thermocouple to ensure that it does not fall more than 28 °C below the average combustion chamber temperature maintained during the performance test. The permittee shall also conduct a stack test every 5 years according to USEPA Method 25A to verify that the destruction efficiency has not fallen below 95%.

Indicator Range: The temperature must be maintained at no more than 28 °C below the combustion chamber temperature limit. Any 3-hour block average combustion temperature reading outside this range shall be considered an excursion.

Performance Criteria:

Data Representativeness: The temperature monitoring device shall be located in the combustion zone. The tolerance of the thermocouple and the sensitivity of the recordkeeping system shall be determined based on manufacturer's recommendations.

Verification of Operational Status: The permittee shall keep records of continuous combustion temperature readings onsite and made available for inspection.

QA/QC Practices and Criteria: The permittee shall follow the manufacturer's recommendations for installation, operation, maintenance, and calibration of the temperature monitoring device. The permittee shall calibrate the thermocouple on an annual basis. To ensure that monitoring device malfunctions do not prevent the collection of accurate combustion temperature data, spare thermocouples shall be kept onsite and operators shall replace malfunctioning thermocouples if necessary as soon as is practicable once a malfunction is recognized.

Monitoring Frequency and Data Collection Procedures: The combustion temperature shall be monitored continuously and recorded in 15-minute periods. The consecutive 15-minute blocks shall be utilized to determine the 3-hour block average for compliance purposes. The permittee shall tabulate and maintain these temperature measurements in an electronic database. Records of the stack tests will be maintained on site.

Procedures Corrective Action: When an out-of-range temperature reading occurs, operators shall check the oxidizer system to ensure proper operation. If any of these checks indicate abnormal operation, the permittee shall inspect all potentially malfunctioning components of the offending system. Once the source of the malfunction is determined, the problem shall be remedied as soon as practicable after the malfunction is recognized by repairing or replacing the malfunctioning component of the system.

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS (CONTINUED)

e. Monitoring Approach for Each Loaded Dynamometer Engine Testing L4 Area (EP # H12-03) and V6 Area (EP # H12-06)

1. CO Background for Emission Unit H12-03 (L4 Area) and H12-06 (V6 Area)

Emission Unit ID: H12-03 (L4) and H12-06 (V6): Loaded Dynamometer Engine Testing
Pollutant: CO

Applicable Regulations 401 KAR 51:017 Section 8(3) - BACT

Emission Limitations: The permittee shall not discharge into the atmosphere during engine testing operations, any gases that contain CO in concentrations that exceed the following limits:

1. L4 Area: Loaded Dynamometer Test Cells: 6.39lb/hr/cell, based on a 3-hour average;
and
2. V6 Area: Loaded Dynamometer Test Cells: 6.39lb/hr/cell, based on a 3-hour average

i. Continuous Assurance Monitoring Approach Summary for Catalytic Converter (CC) System Controlling CO Emissions from H12-03 and H12-06

Indicator Parameter # 1: Temperature in Catalytic Converter Chamber, which is part of the CC System

Indicator Parameter # 2: Air/Fuel Ratio Prior to Catalytic Converter Chamber, which is part of the CC System

Indicator Parameter # 3: Total Hours Each Catalyst Converter Substrate is Exposed to Loaded Dynamometer Test Patterns

Rationale:

The permittee will conduct performance stack tests annually according to U.S. EPA Reference Method 10 to verify that the CC System is meeting the CO BACT limits and operating limits. Continuous assurance is provided by three (3) monitored parameters:

- 1) Continuous monitoring to ensure the maximum operating temperature of the catalyst converter does not exceed its manufacturer's recommended specification,
- 2) Continuous monitoring to ensure the air to fuel ratio is above 14.6, and
- 3) Continuous monitoring to ensure the cumulative hours of operation for each catalyst converter substrate does not exceed its manufacturer's recommended specification.

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS (CONTINUED)

ii. Continuous Assurance Monitoring Approach for Indicator #1 for each CC System Controlling CO Emissions from H12-03 and H12-06

Indicator

Parameter # 1: Temperature in Catalytic Converter Chamber of the CC System

Measurement Approach:

The permittee shall continuously monitor the temperature in each catalytic converter chamber using a thermocouple monitoring device.

Indicator Range:

The 60-minute average temperature in each catalytic converter chamber shall be maintained below the maximum temperature recommended by the manufacturer.

Performance Criteria:

Data Representativeness:

The temperature monitoring device shall be located in the catalytic converter. The tolerance of the thermocouple and the sensitivity of the recordkeeping system shall be determined based on manufacturer's recommendations.

Verification of Operational Status:

The permittee shall keep records of catalytic converter temperature readings onsite and made available for inspection.

QA/QC Practices and Criteria:

The permittee shall follow the manufacturer's recommendations for installation, operation, maintenance, and calibration of the temperature monitoring device. The permittee shall calibrate the thermocouple on an annual basis. To ensure that monitoring device malfunctions do not prevent the collection of accurate combustion temperature data, spare thermocouples shall be kept onsite and operators shall replace malfunctioning thermocouples if necessary as soon as is practicable once a malfunction is recognized.

Monitoring Frequency and Data Collection Procedures:

The catalytic converter outlet temperature shall be monitored continuously and recorded during each specific loaded dynamometer test pattern. The consecutive 15-minute blocks of temperature readings shall be recorded. The permittee shall tabulate and maintain these temperature measurements in an electronic database. Records of the annual stack test, internal inspection, and monthly external inspection shall be maintained on site.

Corrective Action:

When an out-of-range temperature reading occurs, the permittee shall check the CC System to ensure proper operation. If any of these checks indicate abnormal operation, the permittee shall inspect all potentially malfunctioning components of the offending system. Once the source of the malfunction is determined, the problem shall be remedied as soon as practicable after the malfunction is recognized by repairing or replacing the malfunctioning component of the system. If corrective actions are not successful within the subsequent 45-minute period, the loaded dynamometer test pattern shall cease.

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS (CONTINUED)

iii. Continuous Assurance Monitoring Approach for Indicator #2 for each CC System Controlling CO Emissions from H12-03 and H12-06

Indicator

Parameter # 2: Air to Fuel Ratio Prior to Each Catalytic Converter Chamber of the CC System

Measurement Approach:

The permittee shall continuously monitor the Air to Fuel ratio (A/F) prior to each catalytic converter chamber using an A/F monitoring device.

Indicator Range:

The 60-minute average A/F prior to each catalytic converter chamber shall be maintained above 14.6. The value of 14.6 was chosen because this value represents the stoichiometric ratio for complete combustion. For every pound of gasoline (or the combustion by-products which have the same mass exiting the tested engine), the CC System will supply at least 14.6 pounds of air to assist in the conversion of CO to CO₂ on the catalyst substrate.

Performance Criteria:

Data Representativeness:

The A/F monitoring device shall be located after the air blower and prior to the catalytic converter chamber. The tolerance of the A/F sensor and the sensitivity of the recordkeeping system shall be determined based on manufacturer's recommendations.

Verification of Operational Status:

The permittee shall keep records of A/F readings onsite and made available for inspection.

QA/QC Practices and Criteria:

The permittee shall follow the manufacturer's recommendations for installation, operation, maintenance, and calibration of the A/F sensor. The permittee shall calibrate the A/F sensor on a semi-annual basis. To ensure that monitoring device malfunctions do not prevent the collection of accurate air to fuel ratios, spare A/F sensors shall be kept onsite and operators shall replace malfunctioning sensors if necessary as soon as is practicable once a malfunction is recognized.

Monitoring Frequency and Data Collection Procedures:

The A/F shall be monitored continuously and recorded during each specific loaded dynamometer test pattern. The consecutive 15-minute blocks of A/F readings shall be recorded. The permittee shall tabulate and maintain these A/F measurements in an electronic database. Records of the annual stack test, internal inspection, and monthly external inspection shall be maintained on site.

Corrective Action:

When an out-of-range A/F reading occurs, the permittee shall check the CC System to ensure proper operation. If any of these checks indicate abnormal operation, the permittee shall inspect all potentially malfunctioning components of the offending system. Once the source of the malfunction is determined, the problem shall be remedied as soon as practicable after the malfunction is recognized by repairing or replacing the malfunctioning component of the system. If corrective actions are not successful within the subsequent 45-minute period, the loaded dynamometer test pattern shall cease.

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS (CONTINUED)

iv. Continuous Assurance Monitoring Approach for Indicator #3 for each CC System Controlling CO Emissions from H12-03 and H12-06

Indicator

Parameter # 3: Total Hours Each Catalytic Converter Substrate Operates While Performing Loaded Dynamometer Test Patterns

Measurement Approach:

The permittee shall continuously monitor the number of hours each catalyst converter substrate is operated while performing loaded dynamometer test patterns.

Indicator Range:

The hours of operation of each catalyst converter substrate when it is exposed to loaded dynamometer test patterns shall not exceed the total time recommended by the catalyst manufacturer or timeframe as approved by the Division. This type of threshold is necessary because each manufacturer provides specific catalyst life guarantees by which effectiveness of the catalyst converter substrate maybe reduced.

Performance Criteria:

Data Representativeness:

The hours of operation for each catalyst converter substrate will be tracked by an electronic system associated with each CC System. Prior to starting operation, an operator with administrative privileges must enter the serial number of the catalyst converter substrate used in the CC System into the electronic panel. Operation of the catalyst converter substrate is defined as any time when the engine is in operation above 200 rpm. Given that 200 rpm is well below typical idle engine speed, an engine speed of 200 rpm and greater will represent engine operation and subsequently CC System operation. The total time while the catalyst converter substrate is in operation will be monitored and recorded on a cumulative basis.

Verification of Operational Status:

The readout showing total time of operation will be clearly shown on the electronic screen on each CC System. Records of total hours shall be kept onsite and can be made available for inspection.

QA/QC Practices and Criteria:

To ensure that operator cannot alter the time allowed, it will be protected by password provided by the Administrator of the CC Systems within Powertrain. In addition, once the total time recommend by the catalyst manufacturer (e.g., 8,000 hours) has been entered into the electronic system, it serves as an upper limit. Moreover, since this upper limit will be programmed as an interlock with the dynamometer, it will prevent an operator from running loaded test patterns above it. While the total time of catalyst converter substrate operation is based on overly conservative manufacturer's recommendations/guarantees; if the catalyst converter is still fully functional and still able to achieve the required control efficiency (i.e., > 96% for CO) well past the 8,000 hours, the permittee is allowed to make a demonstration to the Division to request more hours of operation.

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS (CONTINUED)

During the change out, an operator with administrative privileges will enter the serial number of the new catalyst converter substrate into the electronic panel, thereby starting the next cumulative period for the catalytic converter substrate.

Monitoring Frequency and Data Collection Procedures:

The cumulative hours of operation shall be monitored continuously and recorded during all loaded dynamometer test patterns that have been specified. The permittee shall tabulate and maintain these cumulative operational hours by serial number in an electronic database. Records of total hours are kept onsite and can be made available for inspection.

Corrective Action:

When the total hours of operation are out-of-range, the permittee shall replace the catalytic catalyst converter substrate unless they have prior written authorization from the Division to keep operating the catalyst converter substrate for longer periods. This out-of-range value will be programmed into the electronic system as an interlock preventing the operator from running loaded test patterns.

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS (CONTINUED)

f. MONITORING APPROACH FOR PAINT # 2, TOPCOAT BOOTHS (EP# F22)

VOC Background for Emission Point F22

Emission Unit

Emission point F22: Topcoat Booths

Description: Topcoats are applied to autobodies in the basecoat and clearcoat booths. All booths employ a capture system and equip with a curing oven. Emissions from clearcoat booth automatic zone are routed to VOC concentrator TC04 and Thermal Oxidizer TT13 for VOC control. Additionally, emissions from the booths are carried over to the oven; VOC emissions from Oven are controlled by Thermal Oxidizers TT11.

Pollutant: VOC

Applicable Regulations:

401 KAR 51:017:

Emission Limitations: The permittee shall not cause the discharge into the atmosphere of more than 3.54 lbs of VOC per job.

i. Continuous Assurance Monitoring Approach Summary for the VOC Concentrators (TC04) Controlling VOC Emissions from F22

Indicator: Parameter:

Desorption gas inlet temperature

Measurement Approach:

The Permittee shall continuously monitor the thermocouple temperature of the desorption gas inlet to ensure that it does not fall more than 8°C below the average desorption gas inlet temperature established during the performance test. The Permittee shall keep the set point for the desorption gas inlet temperature no lower than 6°C below the lower of that set point during the performance test and the average desorption gas inlet temperature established during the performance test. Operators shall perform a monthly visual inspection to verify that the Desorption / Reactivation Fan is operating properly. Another pressure sensor with an alarm will continuously monitor the pressure drop across the adsorber trays to ensure carbon is properly flowing through the system. To test the VOC concentrator's performance, representative samples and the adsorbent activity shall be tested according to the manufacturer's recommendations on an annual basis; alternatively, portable ionization detectors may be used to conduct this annual performance test. An alarm shall alert operators of any periods during which the by-pass damper diverts flow from the VOC concentrator.

Indicator Range:

The minimum operating limit for the concentrator is 8°C below the average desorption gas inlet temperature maintained during the last performance test. The set point for the desorption gas inlet temperature is no lower than 6°C below the lower of that set point during the performance test and the average desorption gas inlet temperature maintained during the performance test. Any 3-hour block average combustion temperature reading below the minimum operating limit will be considered an excursion.

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS (CONTINUED)

Performance Criteria:

Data Representativeness:

The tolerance of the thermocouple and the sensitivity of the recordkeeping system shall be determined based on manufacturer's recommendations.

Verification of Operational Status:

The permittee shall keep records of continuous desorption gas inlet temperature readings onsite and made available for inspection.

QA and QC Practices and Criteria:

The permittee shall follow the manufacturer's recommendations for installation, operation, maintenance, and calibration of the temperature monitoring device. The permittee shall calibrate the thermocouple on an annual basis. To ensure that monitoring device malfunctions do not prevent the collection of accurate desorption gas inlet temperature data, spare thermocouples shall be kept onsite and the permittee shall replace malfunctioning thermocouples if necessary as soon as is practicable once a malfunction is recognized.

Monitoring Frequency and Data Collection Procedures:

The desorption gas inlet temperature shall be monitored continuously and recorded in 15-minute periods. The consecutive 15-minute blocks shall be utilized to determine the 3-hour block average for compliance purposes. The permittee shall tabulate and maintain these temperature measurements in an electronic database. Records of the annual performance tests will be maintained on site.

Corrective Action:

When an out-of-range temperature reading occurs, the permittee shall check the VOC concentrator to ensure proper operation. If any of these checks indicate abnormal operation, the permittee shall inspect all potentially malfunctioning components of the offending system. Once the source of the malfunction is determined, the problem shall be remedied as soon as practicable after the malfunction is recognized by repairing or replacing the malfunctioning component of the system.

ii. Continuous Assurance Monitoring Approach Summary for the Thermal Oxidizers (TT11 and TT13) Controlling VOC Emissions from F22:

Indicator

Parameter: Combustion chamber temperature

Measurement Approach:

The permittee shall continuously monitor the temperature of the combustion chamber using a thermocouple to ensure that it does not fall more than 28 °C below the average combustion chamber temperature maintained during the performance test. The permittee shall also conduct a stack test every 5 years according to USEPA Method 25A to verify that the destruction efficiency has not fallen below 95%.

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS (CONTINUED)

Indicator Range: The temperature must be maintained at no more than 28 °C below the combustion chamber temperature limit. Any 3-hour block average combustion temperature reading outside this range shall be considered an excursion.

Performance Criteria:

Data Representativeness: The temperature monitoring device shall be located in the combustion zone. The tolerance of the thermocouple and the sensitivity of the recordkeeping system shall be determined based on manufacturer's recommendations.

Verification of Operational Status: The permittee shall keep records of continuous combustion temperature readings onsite and made available for inspection.

QA/QC Practices and Criteria: The permittee shall follow the manufacturer's recommendations for installation, operation, maintenance, and calibration of the temperature monitoring device. The permittee shall calibrate the thermocouple on an annual basis. To ensure that monitoring device malfunctions do not prevent the collection of accurate combustion temperature data, spare thermocouples shall be kept onsite and operators shall replace malfunctioning thermocouples if necessary as soon as is practicable once a malfunction is recognized.

Monitoring Frequency and Data Collection Procedures: The combustion temperature shall be monitored continuously and recorded in 15-minute periods. The consecutive 15-minute blocks shall be utilized to determine the 3-hour block average for compliance purposes. The permittee shall tabulate and maintain these temperature measurements in an electronic database. Records of the stack tests will be maintained on site.

Procedures Corrective Action: When an out-of-range temperature reading occurs, operators shall check the oxidizer system to ensure proper operation. If any of these checks indicate abnormal operation, the permittee shall inspect all potentially malfunctioning components of the offending system. Once the source of the malfunction is determined, the problem shall be remedied as soon as practicable after the malfunction is recognized by repairing or replacing the malfunctioning component of the system.

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS (CONTINUED)

g. MONITORING APPROACH FOR PLASTIC BUMPER AND ROCKER PAINT BOOTH (EP# G26)

VOC Background for Emission Point G26

Emission Unit

Emission point G26 Plastic Bumper and Rocker Painting Operations

Description: Plastic bumpers and rockers are painted in three booths. There are heated flash off zones after the primer and basecoat booths and a curing oven after the clearcoat booth. All booths employ a capture system. Emissions from primer booth, basecoat booth and heated flash offs are routed to RT12 RTO as primary control and VOC Concentrator RC06 and Thermal Oxidizers RT10 for VOC control as backup control.

Emissions from the clearcoat booth are routed to RT12 RTO as primary control and VOC Concentrator RC03 and Thermal Oxidizer RT07 for VOC control as backup control devices.

Pollutant: VOC

Applicable Regulations:

401 KAR 51:017:

Emission Limitations: The permittee shall not cause the discharge into the atmosphere of more than 0.88 lbs of VOC per job.

i. Continuous Assurance Monitoring Approach Summary for the VOC Concentrators (RC03 & RC06) Controlling VOC Emissions from G26 (Alternate Operating Scenario Only)

Indicator: Parameter:

Desorption gas inlet temperature

Measurement Approach:

The Permittee shall continuously monitor the thermocouple temperature of the desorption gas inlet to ensure that it does not fall more than 8°C below the average desorption gas inlet temperature established during the performance test. The Permittee shall keep the set point for the desorption gas inlet temperature no lower than 6°C below the lower of that set point during the performance test and the average desorption gas inlet temperature established during the performance test. Operators shall perform a monthly visual inspection to verify that the Desorption / Reactivation Fan is operating properly. Another pressure sensor with an alarm will continuously monitor the pressure drop across the adsorber trays to ensure carbon is properly flowing through the system. To test the VOC concentrator's performance, representative samples and the adsorbent activity shall be tested according to the manufacturer's recommendations on an annual basis; alternatively, portable ionization detectors may be used to conduct this annual performance test. An alarm shall alert operators of any periods during which the by-pass damper diverts flow from the VOC concentrator.

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS (CONTINUED)

Indicator Range:

The minimum operating limit for the concentrator is 8°C below the average desorption gas inlet temperature maintained during the last performance test. The set point for the desorption gas inlet temperature is no lower than 6°C below the lower of that set point during the performance test and the average desorption gas inlet temperature maintained during the performance test. Any 3-hour block average combustion temperature reading below the minimum operating limit will be considered an excursion.

Performance Criteria:

Data Representativeness:

The tolerance of the thermocouple and the sensitivity of the recordkeeping system shall be determined based on manufacturer's recommendations.

Verification of Operational Status:

The permittee shall keep records of continuous desorption gas inlet temperature readings onsite and made available for inspection.

QA and QC Practices and Criteria:

The permittee shall follow the manufacturer's recommendations for installation, operation, maintenance, and calibration of the temperature monitoring device. The permittee shall calibrate the thermocouple on an annual basis. To ensure that monitoring device malfunctions do not prevent the collection of accurate desorption gas inlet temperature data, spare thermocouples shall be kept onsite and the permittee shall replace malfunctioning thermocouples if necessary as soon as is practicable once a malfunction is recognized.

Monitoring Frequency and Data Collection Procedures:

The desorption gas inlet temperature shall be monitored continuously and recorded in 15-minute periods. The consecutive 15-minute blocks shall be utilized to determine the 3-hour block average for compliance purposes. The permittee shall tabulate and maintain these temperature measurements in an electronic database. Records of the annual performance tests will be maintained on site.

Corrective Action:

When an out-of-range temperature reading occurs, the permittee shall check the VOC concentrator to ensure proper operation. If any of these checks indicate abnormal operation, the permittee shall inspect all potentially malfunctioning components of the offending system. Once the source of the malfunction is determined, the problem shall be remedied as soon as practicable after the malfunction is recognized by repairing or replacing the malfunctioning component of the system.

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS (CONTINUED)

ii. Continuous Assurance Monitoring Approach Summary for the Thermal Oxidizers (RT07 and RT10) Controlling VOC Emissions from G26 (Alternate Operating Scenario Only):

Indicator

Parameter: Combustion chamber temperature

Measurement Approach:

The permittee shall continuously monitor the temperature of the combustion chamber using a thermocouple to ensure that it does not fall more than 28 °C below the average combustion chamber temperature maintained during the performance test. The permittee shall also conduct a stack test every 5 years according to USEPA Method 25A to verify that the destruction efficiency has not fallen below 95%.

Indicator Range: The temperature must be maintained at no more than 28 °C below the combustion chamber temperature limit. Any 3-hour block average combustion temperature reading outside this range shall be considered an excursion.

Performance Criteria:

Data Representativeness: The temperature monitoring device shall be located in the combustion zone. The tolerance of the thermocouple and the sensitivity of the recordkeeping system shall be determined based on manufacturer's recommendations.

Verification of Operational Status: The permittee shall keep records of continuous combustion temperature readings onsite and made available for inspection.

QA/QC Practices and Criteria: The permittee shall follow the manufacturer's recommendations for installation, operation, maintenance, and calibration of the temperature monitoring device. The permittee shall calibrate the thermocouple on an annual basis. To ensure that monitoring device malfunctions do not prevent the collection of accurate combustion temperature data, spare thermocouples shall be kept onsite and operators shall replace malfunctioning thermocouples if necessary as soon as is practicable once a malfunction is recognized.

Monitoring Frequency and Data Collection Procedures: The combustion temperature shall be monitored continuously and recorded in 15-minute periods. The consecutive 15-minute blocks shall be utilized to determine the 3-hour block average for compliance purposes. The permittee shall tabulate and maintain these temperature measurements in an electronic database. Records of the stack tests will be maintained on site.

Procedures Corrective Action: When an out-of-range temperature reading occurs, operators shall check the oxidizer system to ensure proper operation. If any of these checks indicate abnormal operation, the permittee shall inspect all potentially malfunctioning components of the offending system. Once the source of the malfunction is determined, the problem shall be remedied as soon as practicable after the malfunction is recognized by repairing or replacing the malfunctioning component of the system.

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS (CONTINUED)

iii. Continuous Assurance Monitoring Approach Summary for the Regenerative Thermal Oxidizers (RT12) Controlling VOC Emissions from G26:

Indicator

Parameter: Combustion chamber temperature

Measurement Approach:

The permittee shall continuously monitor the temperature of the combustion chamber using a thermocouple to ensure that it does not fall more than 28 °C below the average combustion chamber temperature maintained during the performance test. The permittee shall also conduct a stack test every 5 years according to USEPA Method 25A to verify that the destruction efficiency has not fallen below 81%.

Indicator Range: The temperature must be maintained at no more than 28 °C below the combustion chamber temperature limit. Any 3-hour block average combustion temperature reading outside this range shall be considered an excursion.

Performance Criteria:

Data Representativeness: The temperature monitoring device shall be located in the combustion zone. The tolerance of the thermocouple and the sensitivity of the recordkeeping system shall be determined based on manufacturer's recommendations.

Verification of Operational Status: The permittee shall keep records of continuous combustion temperature readings onsite and made available for inspection.

QA/QC Practices and Criteria: The permittee shall follow the manufacturer's recommendations for installation, operation, maintenance, and calibration of the temperature monitoring device. The permittee shall calibrate the thermocouple on an annual basis. To ensure that monitoring device malfunctions do not prevent the collection of accurate combustion temperature data, spare thermocouples shall be kept onsite and operators shall replace malfunctioning thermocouples if necessary as soon as is practicable once a malfunction is recognized.

Monitoring Frequency and Data Collection Procedures: The combustion temperature shall be monitored continuously and recorded in 15-minute periods. The consecutive 15-minute blocks shall be utilized to determine the 3-hour block average for compliance purposes. The permittee shall tabulate and maintain these temperature measurements in an electronic database. Records of the stack tests will be maintained on site.

Procedures Corrective Action: When an out-of-range temperature reading occurs, operators shall check the oxidizer system to ensure proper operation. If any of these checks indicate abnormal operation, the permittee shall inspect all potentially malfunctioning components of the offending system. Once the source of the malfunction is determined, the problem shall be remedied as soon as practicable after the malfunction is recognized by repairing or replacing the malfunctioning component of the system.

SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS

1. Pursuant to Section 1b-IV-1 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26, when continuing compliance is demonstrated by periodic testing or instrumental monitoring, the permittee shall compile records of required monitoring information that include:
 - a. Date, place as defined in this permit, and time of sampling or measurements;
 - b. Analyses performance dates;
 - c. Company or entity that performed analyses;
 - d. Analytical techniques or methods used;
 - e. Analyses results; and
 - f. Operating conditions during time of sampling or measurement.
2. Records of all required monitoring data and support information, including calibrations, maintenance records, and original strip chart recordings, and copies of all reports required by the Division for Air Quality, shall be retained by the permittee for a period of 5 years and shall be made available for inspection upon request by any duly authorized representative of the Division for Air Quality [Sections 1b-IV-2 and 1a-8 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
3. In accordance with the requirements of 401 KAR 52:020, Section 3(1)h, the permittee shall allow authorized representatives of the Cabinet to perform the following during reasonable times:
 - a. Enter upon the premises to inspect any facility, equipment (including air pollution control equipment), practice, or operation;
 - b. To access and copy any records required by the permit;
 - c. Sample or monitor, at reasonable times, substances or parameters to assure compliance with the permit or any applicable requirements.Reasonable times are defined as during all hours of operation, during normal office hours; or during an emergency.
4. No person shall obstruct, hamper, or interfere with any Cabinet employee or authorized representative while in the process of carrying out official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.
5. Summary reports of any monitoring required by this permit shall be submitted to the Regional Office listed on the front of this permit at least every 6 months during the life of this permit, unless otherwise stated in this permit. For emission units that were still under construction or which had not commenced operation at the end of the 6-month period covered by the report and are subject to monitoring requirements in this permit, the report shall indicate that no monitoring was performed during the previous six months because the emission unit was not in operation [Sections 1b-V-1 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

6. The semi-annual reports are due by January 30th and July 30th of each year. All reports shall be certified by a responsible official pursuant to 401 KAR 52:020, Section 23. If continuous emission and opacity monitors are required by regulation or this permit, data shall be reported in accordance with the requirements of 401 KAR 59:005, General Provisions, Section 3(3). All deviations from permit requirements shall be clearly identified in the reports.
7. In accordance with the provisions of 401 KAR 50:055, Section 1, the owner or operator shall notify the Regional Office listed on the front of this permit concerning startups, shutdowns, or malfunctions as follows:
 - a. When emissions during any planned shutdowns and ensuing startups will exceed the standards, notification shall be made no later than three (3) days before the planned shutdown, or immediately following the decision to shut down, if the shutdown is due to events which could not have been foreseen three (3) days before the shutdown.
 - b. When emissions due to malfunctions, unplanned shutdowns and ensuing startups are or may be in excess of the standards, notification shall be made as promptly as possible by telephone (or other electronic media) and shall be submitted in writing upon request.
8. The permittee shall promptly report deviations from permit requirements, including those attributable to upset conditions as defined in the permit, the probable cause of such deviations, and any corrective actions or preventive measures taken shall be submitted to the Regional Office listed on the front of this permit. Where the underlying applicable requirement contains a definition of prompt or otherwise specifies a time frame for reporting deviations, that definition or time frame shall govern. Where the underlying applicable requirement does not identify a specific time frame for reporting deviations, prompt reporting, as required by Sections 1b-V, 3 and 4 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26, shall be defined as follows:
 - a. For emissions of a hazardous air pollutant or a toxic air pollutant (as identified in an applicable regulation) that continue for more than an hour in excess of permit requirements, the report must be made within 24 hours of the occurrence.
 - b. For emissions of any regulated air pollutant, excluding those listed in F.8.a., that continue for more than two hours in excess of permit requirements, the report must be made within 48 hours.
 - c. All deviations from permit requirements, including those previously reported, shall be included in the semiannual report required by F.6.
9. Pursuant to 401 KAR 52:020, Title V permits, Section 21, the permittee shall annually certify compliance with the terms and conditions contained in this permit, by completing and returning a Compliance Certification Form (DEP 7007CC) (or an alternative approved by the regional office) to the Regional Office listed on the front of this permit and the U.S. EPA in accordance with the following requirements:
 - a. Identification of the term or condition;
 - b. Compliance status of each term or condition of the permit;
 - c. Whether compliance was continuous or intermittent;

SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

- d. The method used for determining the compliance status for the source, currently and over the reporting period.
- e. For an emissions unit that was still under construction or which has not commenced operation at the end of the 12-month period covered by the annual compliance certification, the permittee shall indicate that the unit is under construction and that compliance with any applicable requirements will be demonstrated within the timeframes specified in the permit.
- f. The certification shall be submitted by January 30th of each year. Annual compliance certifications shall be sent to the following addresses:

Division for Air Quality
Frankfort Regional Office
300 Sower Boulevard, 1st Floor
Frankfort, KY 40601

U.S. EPA Region 4
Air Enforcement Branch
Atlanta Federal Center
61 Forsyth St. SW
Atlanta, GA 30303-8960

- 10. In accordance with 401 KAR 52:020, Section 22, the permittee shall provide the Division with all information necessary to determine its subject emissions within 30 days of the date the Kentucky Emissions Inventory System (KYEIS) emissions survey is mailed to the permittee.

SECTION G - GENERAL PROVISIONS

1. General Compliance Requirements

- a. The permittee shall comply with all conditions of this permit. Noncompliance shall be a violation of 401 KAR 52:020, Section 3(1)(b), and a violation of Federal Statute 42 USC 7401 through 7671q (the Clean Air Act). Noncompliance with this permit is grounds for enforcement action including but not limited to termination, revocation and reissuance, revision or denial of a permit [Section 1a-3 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
- b. The filing of a request by the permittee for any permit revision, revocation, reissuance, or termination, or of a notification of a planned change or anticipated noncompliance, shall not stay any permit condition [Section 1a-6 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
- c. This permit may be revised, revoked, reopened and reissued, or terminated for cause in accordance with 401 KAR 52:020, Section 19. The permit will be reopened for cause and revised accordingly under the following circumstances:
 - (1) If additional applicable requirements become applicable to the source and the remaining permit term is three (3) years or longer. In this case, the reopening shall be completed no later than eighteen (18) months after promulgation of the applicable requirement. A reopening shall not be required if compliance with the applicable requirement is not required until after the date on which the permit is due to expire, unless this permit or any of its terms and conditions have been extended pursuant to 401 KAR 52:020, Section 12;
 - (2) The Cabinet or the United States Environmental Protection Agency (U. S. EPA) determines that the permit must be revised or revoked to assure compliance with the applicable requirements;
 - (3) The Cabinet or the U. S. EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit;
 - (4) New requirements become applicable to a source subject to the Acid Rain Program.

Proceedings to reopen and reissue a permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists. Reopenings shall be made as expeditiously as practicable. Reopenings shall not be initiated before a notice of intent to reopen is provided to the source by the Division, at least thirty (30) days in advance of the date the permit is to be reopened, except that the Division may provide a shorter time period in the case of an emergency.

- d. The permittee shall furnish information upon request of the Cabinet to determine if cause exists for modifying, revoking and reissuing, or terminating the permit; or to determine compliance with the conditions of this permit [Sections 1a- 7 and 8 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
- e. Emission units described in this permit shall demonstrate compliance with applicable requirements if requested by the Division [401 KAR 52:020, Section 3(1)(c)].

SECTION G - GENERAL PROVISIONS (CONTINUED)

- f. The permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to the permitting authority [401 KAR 52:020, Section 7(1)].
- g. Any condition or portion of this permit which becomes suspended or is ruled invalid as a result of any legal or other action shall not invalidate any other portion or condition of this permit [Section 1a-14 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
- h. The permittee shall not use as a defense in an enforcement action the contention that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance [Section 1a-4 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
- i. All emission limitations and standards contained in this permit shall be enforceable as a practical matter. All emission limitations and standards contained in this permit are enforceable by the U.S. EPA and citizens except for those specifically identified in this permit as state-origin requirements. [Section 1a-15 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
- j. This permit shall be subject to suspension if the permittee fails to pay all emissions fees within 90 days after the date of notice as specified in 401 KAR 50:038, Section 3(6) [Section 1a-10 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
- k. Nothing in this permit shall alter or affect the liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance [401 KAR 52:020, Section 11(3) b].
- l. This permit does not convey property rights or exclusive privileges [Section 1a-9 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
- m. Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by the Cabinet or any other federal, state, or local agency.
- n. Nothing in this permit shall alter or affect the authority of U.S. EPA to obtain information pursuant to Federal Statute 42 USC 7414, Inspections, monitoring, and entry [401 KAR 52:020, Section 11(3) d.].
- o. Nothing in this permit shall alter or affect the authority of U.S. EPA to impose emergency orders pursuant to Federal Statute 42 USC 7603, Emergency orders [401 KAR 52:020, Section 11(3) a.].

SECTION G - GENERAL PROVISIONS (CONTINUED)

- p. This permit consolidates the authority of any previously issued PSD, NSR, or Synthetic Minor source preconstruction permit terms and conditions for various emission units and incorporates all requirements of those existing permits into one single permit for this source.
- q. Pursuant to 401 KAR 52:020, Section 11, a permit shield shall not protect the owner or operator from enforcement actions for violating an applicable requirement prior to or at the time of permit issuance. Compliance with the conditions of this permit shall be considered compliance with:
 - (1) Applicable requirements that are included and specifically identified in this permit; and
 - (2) Non-applicable requirements expressly identified in this permit.

2. Permit Expiration and Reapplication Requirements

- a. This permit shall remain in effect for a fixed term of 5 years following the original date of issue. Permit expiration shall terminate the source's right to operate unless a timely and complete renewal application has been submitted to the Division at least 6 months prior to the expiration date of the permit. Upon a timely and complete submittal, the authorization to operate within the terms and conditions of this permit, including any permit shield, shall remain in effect beyond the expiration date, until the renewal permit is issued or denied by the Division [401 KAR 52:020, Section 12].
- b. The authority to operate granted shall cease to apply if the source fails to submit additional information requested by the Division after the completeness determination has been made on any application, by whatever deadline the Division sets [401 KAR 52:020, Section 8(2)].

3. Permit Revisions

- a. A minor permit revision procedure may be used for permit revisions involving the use of economic incentive, marketable permit, emission trading, and other similar approaches, to the extent that these minor permit revision procedures are explicitly provided for in the State Implementation Plan (SIP) or in applicable requirements and meet the relevant requirements of 401 KAR 52:020, Section 14(2).
- b. This permit is not transferable by the permittee. Future owners and operators shall obtain a new permit from the Division for Air Quality. The new permit may be processed as an administrative amendment if no other change in this permit is necessary, and provided that a written agreement containing a specific date for transfer of permit responsibility coverage and liability between the current and new permittee has been submitted to the permitting authority within ten (10) days following the transfer.

SECTION G - GENERAL PROVISIONS (CONTINUED)

4. Construction, Start-Up, and Initial Compliance Demonstration Requirements

Pursuant to a duly submitted application the Kentucky Division for Air Quality hereby authorizes the construction of the equipment described herein, emission units A03, A05, A09, A10 (Case ED Coating Repair), A14, C02, C03, C06, C08, C09, C14, C17, C18, D06k, E02R, E05R, E04R, E07R, E09R, E11R, E13R, G14b, G21 and G22 as a part of the EV battery modification to Line #1, D07 addition of two 35 HP Emergency Generators, and F04 spray applicator and pumping system replacement for the Line #2 Damping Coat Area in accordance with the terms and conditions of this permit (V-20-026 R3).

- a. Construction of any process and/or air pollution control equipment authorized by this permit shall be conducted and completed only in compliance with the conditions of this permit.
- b. Within thirty (30) days following commencement of construction and within fifteen (15) days following start-up and attainment of the maximum production rate specified in the permit application, or within fifteen (15) days following the issuance date of this permit, whichever is later, the permittee shall furnish to the Regional Office listed on the front of this permit in writing, notification of the following:
 - (1) The date when construction commenced.
 - (2) The date of start-up of the affected facilities listed in this permit.
 - (3) The date when the maximum production rate specified in the permit application was achieved.
- c. Pursuant to 401 KAR 52:020, Section 3(2), unless construction is commenced within eighteen (18) months after the permit is issued, or begins but is discontinued for a period of eighteen (18) months or is not completed within a reasonable timeframe then the construction and operating authority granted by this permit for those affected facilities for which construction was not completed shall immediately become invalid. Upon written request, the Cabinet may extend these time periods if the source shows good cause.
- d. Pursuant to 401 KAR 50:055, Section 2(1)(a), an owner or operator of any affected facility subject to any standard within the administrative regulations of the Division for Air Quality shall demonstrate compliance with the applicable standard(s) within sixty (60) days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial start-up of such facility. Pursuant to 401 KAR 52:020, Section 3(3)(c), sources that have not demonstrated compliance within the timeframes prescribed in 401 KAR 50:055, Section 2(1)(a), shall operate the affected facility only for purposes of demonstrating compliance unless authorized under an approved compliance plan or an order of the cabinet.
- e. This permit shall allow time for the initial start-up, operation, and compliance demonstration of the affected facilities listed herein. However, within sixty (60) days after achieving the maximum production rate at which the affected facilities will be operated but not later than 180 days after initial start-up of such facilities, the permittee shall conduct a performance demonstration on the affected facilities in accordance with 401 KAR 50:055,

SECTION G - GENERAL PROVISIONS (CONTINUED)

General compliance requirements. Testing must also be conducted in accordance with General Provisions G.5 of this permit.

5. Testing Requirements

- a. Pursuant to 401 KAR 50:045, Section 2, a source required to conduct a performance test shall submit a completed Compliance Test Protocol form, DEP form 6028, or a test protocol a source has developed for submission to other regulatory agencies, in a format approved by the cabinet, to the Division's Frankfort Central Office a minimum of sixty (60) days prior to the scheduled test date. Pursuant to 401 KAR 50:045, Section 7, the Division shall be notified of the actual test date at least thirty (30) days prior to the test.
- b. Pursuant to 401 KAR 50:045, Section 5, in order to demonstrate that a source is capable of complying with a standard at all times, any required performance test shall be conducted under normal conditions that are representative of the source's operations and create the highest rate of emissions. If [When] the maximum production rate represents a source's highest emissions rate and a performance test is conducted at less than the maximum production rate, a source shall be limited to a production rate of no greater than 110 percent of the average production rate during the performance tests. If and when the facility is capable of operation at the rate specified in the application, the source may retest to demonstrate compliance at the new production rate. The Division for Air Quality may waive these requirements on a case-by-case basis if the source demonstrates to the Division's satisfaction that the source is in compliance with all applicable requirements.
- c. Results of performance test(s) required by the permit shall be submitted to the Division by the source or its representative within forty-five days or sooner if required by an applicable standard, after the completion of the fieldwork.

6. Acid Rain Program Requirements

- a. If an applicable requirement of Federal Statute 42 USC 7401 through 7671q (the Clean Air Act) is more stringent than an applicable requirement promulgated pursuant to Federal Statute 42 USC 7651 through 7651o (Title IV of the Act), both provisions shall apply, and both shall be state and federally enforceable.
- b. The permittee shall comply with all applicable requirements and conditions of the Acid Rain Permit and the Phase II permit application (including the Phase II NO_x compliance plan and averaging plan, if applicable) incorporated into the Title V permit issued for this source. The source shall also comply with all requirements of any revised or future acid rain permit(s) issued to this source.

7. Emergency Provisions

- a. Pursuant to 401 KAR 52:020, Section 24(1), an emergency shall constitute an affirmative defense to an action brought for the noncompliance with the technology-based emission

SECTION G - GENERAL PROVISIONS (CONTINUED)

limitations if the permittee demonstrates through properly signed contemporaneous operating logs or relevant evidence that:

- (1) An emergency occurred and the permittee can identify the cause of the emergency;
- (2) The permitted facility was at the time being properly operated;
- (3) During an emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and
- (4) Pursuant to 401 KAR 52:020, 401 KAR 50:055, and KRS 224.1-400, the permittee notified the Division as promptly as possible and submitted written notice of the emergency to the Division when emission limitations were exceeded due to an emergency. The notice shall include a description of the emergency, steps taken to mitigate emissions, and corrective actions taken.
- (5) This requirement does not relieve the source of other local, state or federal notification requirements.

- b. Emergency conditions listed in General Condition G.7.a above are in addition to any emergency or upset provision(s) contained in an applicable requirement [401 KAR 52:020, Section 24(3)].
- c. In an enforcement proceeding, the permittee seeking to establish the occurrence of an emergency shall have the burden of proof [401 KAR 52:020, Section 24(2)].

8. Ozone Depleting Substances

- a. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B:
 - (1) Persons opening appliances for maintenance, service, repair, or disposal shall comply with the required practices contained in 40 CFR 82.156.
 - (2) Equipment used during the maintenance, service, repair, or disposal of appliances shall comply with the standards for recycling and recovery equipment contained in 40 CFR 82.158.
 - (3) Persons performing maintenance, service, repair, or disposal of appliances shall be certified by an approved technician certification program pursuant to 40 CFR 82.161.
 - (4) Persons disposing of small appliances, MVACs, and MVAC-like appliances (as defined at 40 CFR 82.152) shall comply with the recordkeeping requirements pursuant to 40 CFR 82.166
 - (5) Persons owning commercial or industrial process refrigeration equipment shall comply with the leak repair requirements pursuant to 40 CFR 82.156.
 - (6) Owners/operators of appliances normally containing 50 or more pounds of refrigerant shall keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR 82.166.
- b. If the permittee performs service on motor (fleet) vehicle air conditioners containing ozone-depleting substances, the source shall comply with all applicable requirements as specified in 40 CFR 82, Subpart B, *Servicing of Motor Vehicle Air Conditioners*.

SECTION G - GENERAL PROVISIONS (CONTINUED)

9. Risk Management Provisions

- a. The permittee shall comply with all applicable requirements of 401 KAR Chapter 68, Chemical Accident Prevention, which incorporates by reference 40 CFR Part 68, Risk Management Plan provisions. If required, the permittee shall comply with the Risk Management Program and submit a Risk Management Plan to U.S. EPA using the RMP* eSubmit software.
- b. If requested, submit additional relevant information to the Division or the U.S. EPA.

Permit Number: V-20-026 R3

Page: 209 of 209

SECTION H - ALTERNATE OPERATING SCENARIOS

None

SECTION I - COMPLIANCE SCHEDULE

None

