



# COMMONWEALTH of VIRGINIA

Molly Joseph Ward  
Secretary of Natural Resources

DEPARTMENT OF ENVIRONMENTAL QUALITY

Blue Ridge Regional Office

[www.deq.virginia.gov](http://www.deq.virginia.gov)

David K. Paylor  
Director

Robert J. Weld  
Regional Director

**Lynchburg Office**

7705 Timberlake Road  
Lynchburg, Virginia 24502  
(434) 582-5120  
Fax (434) 582-5125

**Roanoke Office**

3019 Peters Creek Road  
Roanoke, Virginia 24019  
(540) 562-6700  
Fax (540) 562-6725

**PREVENTION OF SIGNIFICANT DETERIORATION PERMIT  
STATIONARY SOURCE PERMIT TO CONSTRUCT AND OPERATE  
This permit includes designated equipment subject to New Source Performance Standards  
(NSPS).**

This permit supersedes your permit dated March 7, 2007 as amended August 21, 2007 and  
April 21, 2010.

In compliance with the Federal Clean Air Act and the Commonwealth of Virginia  
Regulations for the Control and Abatement of Air Pollution,

Volvo Group North America, LLC  
4881 Cougar Trail Road  
Dublin, Virginia 24084  
Registration No.: 20765

is authorized to construct and operate

a heavy-duty truck production facility  
located at

4881 Cougar Trail Road in Pulaski County near Dublin, Virginia

in accordance with the Conditions of this permit.

Approved on January 19, 2016.

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Robert J. Weld  
Regional Director

Permit consists of 33 pages.  
Permit Conditions 1 to 74.  
Source Testing Report Format.

## **INTRODUCTION**

This permit document is based on and combines permit terms and conditions in accordance with 9 VAC 5-80-1255 and 9 VAC 5-80-1915 from the following permit approvals and the respective permit applications:

- Prevention of Significant Deterioration Permit approval dated January 19, 2016 based on permit application dated August 28, 2014, and supplemental/amended information dated October 21, 2014; December 19, 2014; February 13, 2015; March 5, 2015; April 23, 2015; June 22, 2015; July 13, 2015; September 22, 2015; December 9, 2015; December 15, 2015; January 4, 2016 and January 11, 2016.
- Minor NSR Permit approval dated January 19, 2016 based on permit application dated August 28, 2014, and supplemental/amended information dated October 21, 2014; December 19, 2014; February 13, 2015; March 5, 2015; April 23, 2015; June 22, 2015; July 13, 2015; September 22, 2015; December 9, 2015; December 15, 2015; January 4, 2016 and January 11, 2016.
- Minor new source review permit approval dated April 21, 2010 based on the permit application dated November 6, 2009 including supplemental information dated April 12, 2010 including permit amendment approved January 19, 2016, based on application dated August 28, 2014, and supplemental/amended information dated October 21, 2014; December 19, 2014; February 13, 2015; March 5, 2015; April 23, 2015; June 22, 2015; July 13, 2015; September 22, 2015; December 9, 2015; December 15, 2015; January 4, 2016 and January 11, 2016.

Any changes in the permit application specifications or any existing facilities which alter the impact of the facility on air quality may require a permit. Failure to obtain such a permit prior to construction may result in enforcement action.

Words or terms used in this permit shall have meanings as provided in 9 VAC 5-10-20 of the State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution. The regulatory reference or authority for each condition is listed in parentheses ( ) after each condition. The most recent effective date for a term or condition is listed in brackets [ ]. When identical conditions on approval for an emission unit or units are combined, the effective date listed in this permit does not alter the prior effective date(s) for any such conditions as issued in a previous permit approval. In accordance with 9VAC5-80-1120F, any condition not marked as state-only enforceable (SOE) is state and federally enforceable.

Annual requirements to fulfill legal obligations to maintain current stationary source emissions data will necessitate a prompt response by the permittee to requests by the VDEQ or the Board for information to include, as appropriate: process and production data; changes in control equipment; and operating schedules. Such requests for information from the VDEQ will either be in writing or by personal contact.

The availability of information submitted to the VDEQ or the Board will be governed by applicable provisions of the Freedom of Information Act, §§ 2.2-3700 through 2.2-3714 of the Code of Virginia, § 10.1-1314 (addressing information provided to the Board) of the Code of Virginia, and 9 VAC 5-170-60 of the State Air Pollution Control Board Regulations. Information provided to federal officials is subject to appropriate federal law and regulations governing confidentiality of such information.

Table A represents the facility at the time the permit is issued and Conditions 1 to 17 are applicable at the time the permit is issued. Tables B and C represents the equipment at the facility upon completion of all modifications/construction associated with the January 19, 2016 permit approval. Conditions 18 to 51 become applicable as the equipment is modified/constructed. Conditions 52 to 74 are applicable at all times.

**SECTION I:** The conditions of this section apply upon issuance of the permit and continue to apply up until replaced by the conditions of Section II and provided in Section II.  
 (9VAC5-80-1180 and 9 VAC 5-80-1985E)

**Equipment List** - Equipment at this facility consists of the following:

<b>A. Equipment permitted prior to the date of this permit</b>		
<b>Reference No.</b>	<b>Equipment Description</b>	<b>Federal Requirements</b>
1PE-001	Chassis Paint Booth	-
1PE-001A	Chassis Curing Oven	-
1PE-001B	Chassis Oven Cooler	-
2PE-001	Phosphate System & Heater	NSPS Dc
3PE-001	E-Coat Process	-
3PE-001A	E-Coat Tunnel	-
3PE-001B	E-Coat Oven	-
3PE-001C	E-Coat Oven Cooler	-
3PE-001D	E-Coat Scuff Station	-
4PE-001	Seam Sealer/Bracket Attach	-
4PE-001A	Cab Wipe/Prime Tack-Off	-
5PE-001	Primer Process – Robotic Zone	-
5PE-001A	Primer Process – Manual Zone	-
5PE-001B	Primer Oven Exhaust	-
5PE-001C	Primer Oven Cooler	-
7PE-001	Specialty/Touch-Up Painting Booth	-
8PE-001	Multi-Tone Booth # 1	-
8PE-001A	Multi-Tone Oven # 1	-
8PE-001B	Multi-Tone Cooler # 1	-
8PE-002	Basecoat Booth # 2	-
8PE-002A	Basecoat Oven # 2	-
8PE-002B	Basecoat Cooler # 2	-
8PE-002C	Basecoat Booth # 2 Demask Station	-
9PE-001	Clearcoat Spray Booth	-
9PE-001A	Clearcoat Curing Oven	-
9PE-001B	Clearcoat Cooler # 1	-
9PE-001C	Clearcoat Cooler # 2	-
10PE-001, 002	Spot Repair (BC/CC)	-
11PE-001	Final Inspection/Repair	-
13PE-001	PC Booth # 1: Cab Touch-Up	-
13PE-001A	PC Booth #1 Oven	-
13PE-002	PC Booth # 2: Cab Touch-Up	-
13PE-002A	PC Booth #2 Oven	-
13PE-004	PC Booth # 4: Truck Touch-Up	-
13PE-004A	PC Booth #4 Oven	-

Specifications included in the above table are for informational purposes only and do not form enforceable terms or conditions of the permit.

**PROCESS REQUIREMENTS**

1. **Emission Controls and Control Requirements** - Particulate emissions from paint spray booths shall be controlled as tabulated below, or DEQ approved equivalent, to achieve the designated concentrations:

<b>Paint/Coating Process</b>		<b>Control Equipment</b>	<b>Maximum Emission</b>
Chassis	1PE-001	Water Wash Spray Booth with dry filters	0.005 gr/scf
Cab Prime	5PE-001, 5PE-001A	Venturi Wet Scrubbers	0.003 gr/scf
Special Projects	7PE-001	Venturi Wet Scrubber	0.003 gr/scf
Cab Multi-Tone	8PE-001	Venturi Wet Scrubber	0.003 gr/scf
Cab Basecoat	8PE-002	Venturi Wet Scrubber	0.003 gr/scf
Cab Clearcoat	9PE-001	Venturi Wet Scrubber	0.003 gr/scf
Spot Repair (BC/CC)	10PE-001	Dry Filter	0.005 gr/scf
Spot Repair (BC/CC)	10PE-002	Dry Filter	0.005 gr/scf
Inspection & Repair	11PE-001	Dry Filter	0.005 gr/scf
P-C Cab Repair/Touch-Up	13PE-001	Water Wash Spray Booth	0.005 gr/scf
P-C Cab Repair/Touch-Up	13PE-002	Cartridge Filter	0.005 gr/scf
P-C Cab Repair/Touch-Up	13PE-004	Dry Filter or equivalent	0.005 gr/scf

The over-spray particulate controls for the paint spray booths shall be provided with adequate access for inspection.

(9 VAC 5-50-260 and 9 VAC 5-80-1180)[April 21, 2010]

2. **Emission Controls** - Volatile organic compound (VOC) emissions from the following painting/coating processes shall be controlled by the use of waterborne, high-solids coatings, zero-VOC solvent borne coatings, or VDEQ approved equivalent:

Chassis	1PE-001
Cab Clearcoat	9PE-001
Inspection & Repair	11PE-001

(9 VAC 5-50-260 and 9 VAC 5-80-1180) [April 21, 2010]

3. **Emission Controls** - Volatile organic compound (VOC) emissions from the cab prime processes 5PE-001 shall be controlled by the use of waterborne coatings or VDEQ approved equivalent.

(9 VAC 5-50-260 and 9 VAC 5-80-1180) [April 21, 2010]

4. **Emission Controls** - Volatile organic compound (VOC) emissions from the electro-deposition (E-coat immersion) process shall be controlled by the use of electrodeposited waterborne coatings.

(9 VAC 5-50-260 and 9 VAC 5-80-1180) [April 21, 2010]

5. **Emission Controls and Control Efficiency** - Volatile organic compound (VOC) emissions from the Cab Basecoat Spray Booth 8PE-002 shall be controlled by air recirculation to concentrate VOCs inside the booth followed by a thermal VOC fume incinerator with a minimum incinerator VOC destruction efficiency of 95%. The air recirculation system and incinerator shall be provided with adequate access for inspection. During operation of this painting process, the minimum incinerator chamber temperature shall be maintained at 1400 °F with a minimum 0.5 second retention time, or maintained at a minimum operating temperature determined by emissions testing necessary to achieve an overall 95 percent destruction of volatile organic compounds entering the incinerator. The incinerator shall be equipped with automatic thermostats to maintain the required chamber temperature and with a continuous temperature sensor at or near the chamber exit to monitor, indicate, and record the chamber temperature.  
[Note: for purposes of estimating VOC emissions from Basecoat, use of control efficiencies derived from the most recent performance testing demonstrating compliance are an acceptable method, rather than using the minimum efficiencies cited above.]  
(9 VAC 5-50-260 and 9 VAC 5-80-1180) [April 21, 2010]
6. **Emission Controls** - Volatile organic compound emissions from painting/coating operations in spray booths not controlled by VOC incineration (spray booths other than Basecoat 8PE-002), are limited to 3.5 lbs/gal of coating as applied as a monthly facility-wide average and as a consecutive twelve (12) month average for the overall painting/coating facility.  
(9 VAC 5-50-260 and 9 VAC 5-80-1180) [April 21, 2010]
7. **Emission Controls** - Reasonable precautions shall be taken to minimize volatile organic compound (VOC) emissions from cleaning and purging operations. Reasonable precautions may include the following:
  - a. The use of capture or control devices or both.
  - b. The use of detergents, high pressure water, or other non-volatile cleaning methods.
  - c. The minimization of the quantity of the volatile organic compounds used to clean lines.
  - d. The adjustment of production schedules to minimize coatings changes thereby reducing the need for frequent cleaning or purging of the system.  
(9 VAC 5-50-20 F and 9 VAC 5-80-1180) [April 21, 2010]
8. **Alternative Emission Controls** - The 8PE-002 incinerator may be bypassed for maintenance of the control equipment without cessation of operations in the Basecoat 8PE-002 Spray Booth provided that:
  - a. The exact dates and times when emissions commence and cease being routed through the bypass(es) are documented.

- b. The VOC emissions during the bypass period are tabulated and recorded as uncontrolled emissions.
- c. The differential air pressure reading for the venturi scrubber particulate control device is recorded at least once per hour while paint operations are ongoing.
- d. The emissions from the bypassed operation do not violate any other conditions of this permit.
- e. The Blue Ridge Regional Office is notified within two weeks of the bypass that this action has occurred, the duration or anticipated duration of the action, and the reason for the action.

(9 VAC 5-80-1180) [April 21, 2010]

9. **Monitoring Devices** - The Cab Prime 5PE-001, Special Projects 7PE-001, Cab Multi-Tone 8PE-001, Cab Basecoat 8PE-002 and Cab Clearcoat 9PE-001 spray booths shall be equipped with differential pressure gauges to continuously measure the differential pressure across the Venturi wet scrubbers. The Chassis 1PE-001 spray booth shall be equipped with a differential pressure gauge to continuously measure the differential pressure across the water curtain. The 8PE-002 spray booth shall be equipped with differential pressure gauges to continuously measure the differential pressure between the spray booth and the building air outside the booth and to measure the differential pressure across the recirculation air filters. Each monitoring device shall be installed, maintained, calibrated and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations. Each monitoring device shall be provided with adequate access for inspection and shall be in operation when the spray booth is operating.

(9 VAC 5-50-20 C, 9 VAC 5-50-260 and 9 VAC 5-80-1180) [April 21, 2010]

### **OPERATING LIMITS**

10. **Throughput** - The volatile organic compound consumption for painting/coating facility-wide shall not exceed 1,400 tons per year, calculated monthly as the sum of the previous consecutive twelve month period.

(9 VAC 5-80-1180) [April 21, 2010]

11. **Throughput** - The volatile organic compound consumption for painting/coating facility-wide shall not exceed 233.3 tons per month.

(9 VAC 5-80-1180) [April 21, 2010]

### **EMISSION LIMITS**

12. **Emission Limits** - Emissions from the operation of the 8PE-001 Cab Multi-Tone Spray Booth shall not exceed the limits specified below:

Volatile Organic Compounds 43.7 tons/yr

Annual emissions calculated monthly as the sum of the previous consecutive twelve month period.

(9 VAC 5-50-260 and 9 VAC 5-80-1180) [April 21, 2010]

13. **Emission Limits** - Emissions from the operation of truck painting/coating shall not exceed the limits specified below:

Volatile Organic Compounds 493.5 tons/yr

Annual emissions calculated monthly as the sum of the previous consecutive twelve month period.

(9 VAC 5-50-260 and 9 VAC 5-80-1180) [April 21, 2010]

14. **Emission Limits** – Particulate emissions from the operation of truck painting/coating shall not exceed the limits specified below:

Chassis Spray	1PE-001	8.5 tons/yr
Cab Prime Spray	5PE-001	4.4 tons/yr
Special Projects/Touch-Up Spray	7PE-001	1.0 tons/yr
Cab Multi-Tone Spray	8PE-001	13.3 tons/yr
Cab Basecoat Spray	8PE-002	3.1 tons/yr
Cab Clearcoat Spray	9PE-001	7.3 tons/yr
Spot Repair Booths Combined	10PE-001 & 002	7.7 tons/yr
Inspection & Repair	11PE-001	3.0 tons/yr
P-C Building Spray Combined	13PE-001, 002, & 004	8.8 tons/yr

Annual emissions calculated monthly as the sum of the previous consecutive twelve month period.

(9 VAC 5-50-30 and 9 VAC 5-50-260) [April 21, 2010]



15. **Plantwide Emission Limits** - Total emissions from the facility, including all truck painting/ coating and all miscellaneous sources, shall not exceed the limits specified below:

Volatile Organic Compounds 493.5 tons/yr

Annual emissions calculated monthly as the sum of the previous consecutive twelve month period.

(9 VAC 5-50-260 and 9 VAC 5-80-1180) [April 21, 2010]

16. **Visible Emission Limit** - Visible emissions from the facility's spray booths, ovens, and incinerators shall not exceed five (5) percent opacity, except for one six minute period in any one hour of not more than ten (10) percent, as determined by EPA Method 9 (reference 40 CFR 60, Appendix A). The opacity standard shall apply at all times, except during periods of malfunction, start up, and shut down.  
(9 VAC 5-50-260 and 9 VAC 5-80-1180) [April 21, 2010]

## **RECORDS AND REPORTING**

17. **On Site Records** - The permittee shall develop a data base record keeping system, or equivalent methodology acceptable to the Department, to maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. VOC emissions should not include the amount of VOC that is not emitted due to VOC incineration emissions controls, VOC returned to vendor, VOC removed for off-site disposal, etc. Separate records shall be kept for each operational area, such as a spray booth and associated ovens, cooling areas, flash-off areas, etc. (Note: The PC area may be treated as a single operational area where emission records for booths 13PE-001, 002, & 004 and emissions from operations outside the booths may be combined as a single data record.) The content of and format of such records shall be arranged with the Blue Ridge Regional Office. These records shall include, but are not limited to:
- a. Monthly and annual consumption of VOC for each operational area, including separate tabulations for 8PE-001 and 8PE-002. Annual consumption and throughput shall be calculated monthly as the sum of the previous consecutive 12 month period.
  - b. Monthly and annual consumption of VOC for overall truck painting/coating. Annual consumption and throughput shall be calculated monthly as the sum of the previous consecutive 12 month period.
  - c. Monthly and annual consumption of VOC from all other miscellaneous VOC sources other than truck painting/coating for the total plant. Annual consumption shall be calculated monthly as the sum of the previous consecutive 12 month period.
  - d. Monthly and annual consumption of all VOC combined for the total plant. Annual consumption shall be calculated monthly as the sum of the previous consecutive 12 month period.

- e. Monthly and annual consumption of gallons of paints/coatings for each operational area, including separate tabulations for 8PE-001 and 8PE-002, and for overall truck painting/coating. The waterborne/ exempt solvent paints/coatings shall be reported on both bases of with water and exempt solvent and less water and exempt solvents. Annual consumption shall be calculated monthly as the sum of the previous consecutive 12 month period.
- f. Monthly and annual throughput of skids for overall painting/coating. Annual throughput shall be calculated monthly as the sum of the previous consecutive 12 month period.
- g. Monthly and annual emissions of particulate matter from each spray booth or set of booths with limits in Condition 14.
- h. Monthly and annual emissions of VOC from overall truck painting/coating. Annual emissions shall be calculated monthly as the sum of the previous consecutive 12 month period.
- i. Monthly and annual VOC emissions from all miscellaneous VOC sources for the total plant. Annual emissions shall be calculated monthly as the sum of the previous consecutive 12 month period.
- j. Monthly and annual emissions of VOC from the total plant (painting/coating and all other miscellaneous sources). Annual emissions shall be calculated monthly as the sum of the previous consecutive 12 month period.
- k. Average monthly and annual VOC emissions in pounds/gallon as an average from overall truck painting/coating, except for spray booths controlled by VOC fume incineration, - accounting for waterborne/exempt solvent paints/coatings on both bases of with water and exempt solvents and less water and exempt solvents. Annual emissions shall be calculated monthly as the sum of the previous consecutive 12 month period.
- l. Records of the differential pressure readings for the venturi scrubbers controlling particulate emissions from the following spray booths: Cab Prime 5PE-001, Special Projects 7PE-001, Cab Multi-Tone 8PE-001, Cab Basecoat 8PE-002, and Cab Clearcoat 9PE-001; for the water curtain controlling particulate emissions from the Chassis 1PE-001 spray booth; for the recirculation filters in the 8PE-002 spray booth; and differential pressure readings between the factory floor and the Cab Basecoat 8PE-002 spray booth. Readings shall be recorded at least once per shift during process operations.
- m. Records of the temperature of the regenerative thermal oxidizer controlling VOC emissions from Cab Basecoat spray booth 8PE-002. One-hour averages of the

continuously monitored temperature shall be recorded at least once per hour during process operations.

- n. Material Safety Data Sheets (MSDS), Certified Product Data Sheets (CPDS) or other vendor information approved by VDEQ showing VOC content, HAP content, water content, and solids content for each coating, adhesive, thinner, cleaning solution, etc. used in the truck production process.
- o. Results of all stack tests, visible emission evaluations and performance evaluations.
- p. Scheduled and unscheduled maintenance and operator training.

These records shall be available for inspection by the VDEQ and shall be current for the most recent five years.

(9 VAC 5-50-50 and 9 VAC 5-80-1180) [April 21, 2010]

**SECTION II:** Conditions 19, 21, 28, 32, 43 and 50 become applicable upon commencement of construction on any new or modified unit as part of the project approved by the permit dated January 19, 2016. Requirements of Conditions 18, 20, 22-27, 29- 31, 33-37, 44, 45, and 51 specific to emissions units identified in an individual condition are effective upon initial startup of the new or modified emissions unit. Conditions 19 - 42 become applicable as described in each individual condition. Once a piece of equipment has applicable requirements in Section II the requirements in Section I for that piece of equipment are inapplicable.

**Equipment List** – After completion of the project that resulted in this permit the facility consists of the following equipment:

<b>B. Equipment permitted prior to the date of this permit:</b>			
<b>Reference No.</b>	<b>Equipment Description</b>	<b>Rated Capacity</b>	<b>Federal Requirements</b>
<b>Chassis Paint Booth (1PE-001)</b>			
1PE-001	Chassis Paint Booth	17.5 skids/hr	-
	Chassis Flash	-	-
1PE-001A	Chassis Curing Oven	17.5 skids/hr	-
1PE-001B	Chassis Oven Cooler	-	-
<b>CCC Final Repair &amp; Touch Up (13PE-001, -002 &amp; -004)</b>			
13PE-001	PC Booth # 1: Cab Touch-Up	17.5 skids/hr	-
13PE-001A	PC Booth #1 Oven	17.5 skids/hr	-
13PE-002	PC Booth # 2: Cab Touch-Up	17.5 skids/hr	-
13PE-002A	PC Booth #2 Oven	17.5 skids/hr	-
13PE-004	PC Booth # 4: Truck Touch-Up	17.5 skids/hr	-
13PE-004A	PC Booth #4 Oven	17.5 skids/hr	-
<b>Cavity Wax (11PE-001)</b>			
11PE-001	Cavity Wax		

<b>C. Equipment being constructed or modified in the project:</b>			
<b>Reference No.</b>	<b>Equipment Description</b>	<b>Rated Capacity</b>	<b>Federal Requirements</b>
<b>Assembly/Washing (2PE-001)</b>			
2PE-001	10-Stage Pretreat Phosphate System	-	-
2FBE-001/6FBE-001	Phosphate solution/ Washer Boiler, natural gas – shared with 6PE-001	25.2 MMBtu/hr	NSPS Dc
<b>Plastics 5-Stage Washing Process (2PE-002)</b>			
2PE-002	5-Stage Washing Process	-	-
2FBE-002	Plastics Washer Boiler	5.5 MMBtu/hr	-
<b>E-Coat (3PE-001)</b>			
3PE-001	E-Coat Dip Tank	13.3 skids/hr	-
3PE-001A	E-Coat Tunnel	-	-

3PE-001B	E-Coat Oven	-	-
3PE-001C	E-Coat Oven Cooler	-	-
3FBE-001	E-Coat Oven burners with Incinerator	1 MMBtu/hr & 4.5 MMBtu/hr	-
3PE-001D	E-Coat Scuff Station	-	-
<b>Seam Sealer (4PE-001)</b>			
4PE-001	Seam Sealer/Bracket Attach	-	-
4PE-001A	Cab Wipe/Prime Tack-Off	-	-
<b>Cab Prime (5PE-001)</b>			
5PE-001	Cab Primer Process – Robotic Zone	18.6 skids/hr	-
5PE-001A	Cab Primer Process –Manual Zone	-	-
5PE-001D	Cab Primer Flash	-	-
5PE-001C	Cab Primer Oven Cooler	-	-
5PE-001B: 5FBE-001 5FBE-002 5FBE-003	Cab Primer Oven, Zones 1-3 burners	3.43 MMBtu/hr 2.63 MMBtu/hr 2.63 MMBtu/hr	-
12FBE-001	Air Supply House Heater for Prime (5PE-001) & Specialty Repair (7PE-001)	33MMBtu/hr	-
<b>Prep/Sand Booth (6PE-001)</b>			
6PE-001	Prep Booth/Sand Booth	-	-
6PE-001A	Washing Process	-	-
6PE-001B	Dry-off Area	-	-
2FBE-001/6FBE-001	Phosphate solution/ Washer Heater, natural gas – shared with 2PE-001	See 2PE-001	-
<b>Specialty Painting/Touchup (7PE-001)</b>			
7PE-001	Specialty/Touch-Up Painting Booth	19.25 skids/hr	-
12FBE-001	Air Supply House Heater for Prime (5PE-001) & Specialty Repair (7PE-001)	See 5PE-001	-
<b>Cab BC (8PE-001)</b>			
8PE-001	Cab Basecoat Spray Booth	18.2 skids/hr	-
8PE-001A	Cab Basecoat Flash	18.2 skids/hr	-
8FBE-009 8FBE-010	Recirculation Air Supply House (RASH)	2.6 MMBtu/hr 2.6 MMBtu/hr	-
9FBE-011	Cab Basecoat (8PE-001)/Clearcoat (9PE-001) RTO	10.0 MMBtu/hr	-
<b>MT/BC/CC (8PE-002)</b>			
8PE-002	Multitone/Basecoat/Clearcoat	11.14 skids/hr	-

	Spray		
8PE-002A	Multitone/Basecoat/Clearcoat Flash	11.14 skids/hr	-
8PE-002B: 8FBE-004 8FBE-005 8FBE-006 8FBE-007	Multitone/Basecoat/Clearcoat Oven, Zones 1, 2, 3A & 3B	3.0 MMBtu/hr 5.0 MMBtu/hr 3.0 MMBtu/hr 3.0 MMBtu/hr	-
8PE-002C	Multitone/Basecoat/Clearcoat Cooler	-	-
8PE-002D	Multitone/Basecoat/Clearcoat Demask	-	-
14FBE-001	Burnham Ind. Boiler – humidity control for 8PE-002	6.32 MMBtu/hr	-
16FBE-001	Air Supply House for 8PE-002	12.2 MMBtu/hr	-
8FBE-008	Multitone/Basecoat/Clearcoat RTO	8.0 MMBtu/hr	-
<b>Plastics BC (8PE-003)</b>			
8PE-003	Plastics Basecoat Spray Booth	36.39 skids/hr	-
8PE-003A	Plastics Basecoat Flash	36.39 skids/hr	-
9FBE-009	Plastics BC (8PE-003)/Plastics CC (9PE-002) Central Process Air Supply Heater	7.5 MMBtu/hr	-
9FBE-010	Plastics Basecoat(8PE-003)/Clearcoat (9PE-002) RTO	10.0 MMBtu/hr	-
<b>Cab CC (9PE-001)</b>			
9PE-001	Cab Clearcoat Spray Booth	18.2 skids/hr	-
9PE-001A	Cab Clearcoat Flash	18.2 skids/hr	-
9PE-001 B: 9FBE-001 9FBE-002 9FBE-003	Cab Clearcoat Oven, Zones 1-3 burners	3.43 MMBtu/hr 2.6 MMBtu/hr 4.2 MMBtu/hr	-
9FBE-011	Cab Basecoat (8PE-001)/Clearcoat (9PE-001) RTO	See 8PE-001	-
9FBE-004 9FBE-005	Air Supply House Heater	2.6 MMBtu/hr 2.6 MMBtu/hr	-
<b>Plastics CC (9PE-002)</b>			
9PE-002	Plastics Clearcoat Spray Booth	36.39 skids/hr	-
9PE-002A	Plastics Clearcoat Flash	-	-
9FBE-005 9FBE-006 9FBE-007	Plastics Clearcoat Curing Oven plus 10% of basecoat VOC emissions	2.5 MMBtu/hr 2.5 MMBtu/hr	-

9FBE-008	Plastics Clearcoat Dry-Off Oven	2.5 MMBtu/hr	-
9FBE-009	Plastics BC (8PE-003)/CC (9PE-001) Central Air Supply Heater	See 8PE-003	-
9FBE-010	Plastics Basecoat (8PE-003)/Clearcoat (9PE-002) RTO	See 8PE-003	-
<b>Spot Repair (10PE-001/002)</b>			
10PE-001 & -002	Spot Repair (BC/CC) Area	18.6 skids/hr	-

Specifications included in the above tables are for informational purposes only and do not form enforceable terms or conditions of the permit.

**PROCESS REQUIREMENTS**

18. **Emission Controls** – NOx emissions from the following equipment shall be controlled by low NOx burners:

**Plastics 5-Stage Washing Process (2PE-002)**

Plastics Washer Boiler 2FBE-002

**Cab Prime (5PE-001) and Specialty Painting/Touchup (7PE-001)**

Primer/Repair ASH Heating 12FBE-001

**Cab BC (8PE-001)**

Cab BC Recirc Air Supply House (RASH) 8FBE-009 and 8FBE-010  
 Cab Basecoat/Clearcoat RTO (shared with 9PE-001) 9FBE-011

**Plastics BC 8PE-003**

Central Process ASH (shared with 9PE-002) 9FBE-009  
 Plastics Basecoat/Clearcoat RTO (shared with 9PE-002) 9FBE-010

**Cab CC 9PE-001**

Recirc Air Supply House (RASH) 9FBE-004 & 005

**Plastics CC 9PE-002**

CC Oven 9FBE-006 & 007  
 Dry off oven 9FBE-008

The control devices shall be provided with adequate access for inspection and shall be in operation when the processes are operating.

(9 VAC 5-50-260 and 9 VAC 5-80-1180) [January 19, 2016]

19. **Emission Controls and Control Requirements** - Particulate emissions from paint spray booths shall be controlled as tabulated below, or DEQ approved equivalent, to achieve the designated concentrations:

<u>Paint/Coating Process</u>		<u>Control Equipment</u>	<u>Control</u>
Chassis	1PE-001	Water Wash Spray Booth with dry cartridge filters	0.005 gr/scf
Cab Prime (Manual)	5PE-001A	Venturi Wet Scrubber	0.0027 gr/scf <sup>1</sup>
Cab Prime (Robotic)	5PE-001	Venturi Wet Scrubber	0.0027 gr/scf <sup>1</sup>
Specialty Painting/Touchup	7PE-001	Venturi Wet Scrubber	0.003 gr/scf
Cab BC	8PE-001	Venturi Wet Scrubber	0.003 gr/scf
MT/BC/CC	8PE-002	Venturi Wet Scrubber	0.003 gr/scf
Cab Clearcoat	9PE-001	Venturi Wet Scrubber	0.003 gr/scf
Spot Repair (BC/CC)	10PE-001	Dry Cartridge Filter	0.005 gr/scf
Spot Repair (BC/CC)	10PE-002	Dry Cartridge Filter	0.005 gr/scf
Cavity Wax	11PE-001	Dry Cartridge Filter	0.005 gr/scf
P-C Cab Repair/Touch-Up	13PE-001	Water Wash Spray Booth	0.005 gr/scf
P-C Cab Repair/Touch-Up	13PE-002	Dry Cartridge Filter	0.005 gr/scf
P-C Cab Repair/Touch-Up	13PE-004	Dry Cartridge Filter or equivalent	0.005 gr/scf

The over-spray particulate controls for the paint spray booths shall be provided with adequate access for inspection.  
 (9 VAC 5-50-260, 9 VAC 5-80-1180 and 9 VAC 5-1985 E) [January 19, 2016]

20. **Emission Controls and Control Requirements** – PM10 and PM2.5 emissions from the following paint spray booths shall be controlled as listed below. The control devices shall be provided with adequate access for inspection and shall be in operation when the processes are operating.

<u>Paint/Coating Process</u>		<u>Control Equipment</u>	<u>Control</u>
Cab Prime (Manual)	5PE-001A	Venturi Wet Scrubber	0.0027 gr/scf
Cab Prime (Robotic)	5PE-001	Venturi Wet Scrubber	0.0027 gr/scf
Prep/Sand Booth	6PE-001	Dry Cartridge Filter	0.005 gr/scf
Special Projects	7PE-001	Venturi Wet Scrubber	0.003 gr/scf
Cab BC	8PE-001	Venturi Wet Scrubber	0.003 gr/scf
MT/BC/CC	8PE-002	Venturi Wet Scrubber	0.003 gr/scf
Plastics BC	8PE-003	Precoated Dry Filter System	0.0001 gr/scf
Cab Clearcoat	9PE-001	Venturi Wet Scrubber	0.003 gr/scf
Plastics CC	9PE-002	Precoated Dry Filter System	0.0001 gr/scf
Spot Repair (BC/CC)	10PE-001	Dry Cartridge Filter	0.005 gr/scf
Spot Repair (BC/CC)	10PE-002	Dry Cartridge Filter	0.005 gr/scf

(9 VAC 5-50-280, 9 VAC 5-80-1705 and 9 VAC 5-1985 E) [January 19, 2016]

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<sup>1</sup> The 9VAC5-80-1985E citation applies to the limits for Cab Prime Manual and Robotic zones.



21. **Emission Controls (1PE-001 & 11PE-001)** - Volatile organic compound (VOC) emissions from the following painting/coating processes shall be controlled by the use of waterborne, high-solids coatings, zero-VOC solvent borne coatings, or DEQ approved equivalent:

Chassis	1PE-001
Cavity Wax	11PE-001

(9 VAC 5-50-260, 9 VAC 5-50-280 and 9 VAC 5-80-1180) [January 19, 2016]

22. **Emission Controls (5PE-001)** - Volatile organic compound (VOC) emissions from Cab Prime (5PE-001) shall be controlled by the use of waterborne coatings or DEQ approved equivalent.  
(9 VAC 5-50-260, 9 VAC 5-80-1180, 9 VAC 5-50-280, 9 VAC 5-80-1705 and 9 VAC 5-1985 E) [January 19, 2016]
23. **Emission Controls (3PE-001)** - Volatile organic compound (VOC) emissions from the electro-deposition (E-coat immersion) process shall be controlled by the use of electrodeposited waterborne coatings.  
(9 VAC 5-50-260, 9 VAC 5-80-1180, 9 VAC 5-50-280, 9 VAC 5-80-1705 and 9 VAC 5-1985 E) [January 19, 2016]
24. **Emission Controls (8PE-001/9PE-001 & 8PE-003/9PE-002)** - Volatile organic compound (VOC) emissions from the Cab BC (8PE-001) and Cab CC (9PE-001) spray booths shall be controlled by air recirculation to concentrate VOCs inside the booth followed by a regenerative thermal oxidizer (RTO) (9FBE-011) and VOC emissions from the Plastics BC (8PE-003) & Plastics CC (9PE-002) spray booths shall be controlled by air recirculation to concentrate VOCs inside the booths followed by a RTO (9FBE-010). The air recirculation systems and oxidizers shall be provided with adequate access for inspection and shall be in operation when the emission units that it controls are operating. The minimum combustion chamber temperature for each RTO shall be maintained at 1400 degree F when the process that each is controlling is in operation.  
(9 VAC 5-50-280, 9 VAC 5-80-1705 and 9 VAC 5-1985 E) [January 19, 2016]
25. **Control Efficiency (8PE-001/9PE-001 and 8PE-003/9PE-002)** – The RTO (9FBE-011) controlling emissions from Cab BC (8PE-001) and Cab CC (9PE-001) and the RTO (9FBE-010) controlling emissions from Plastics BC (8PE-003) & Plastics CC (9PE-002) shall each maintain a control efficiency for VOC of no less than 95%, to be demonstrated by stack test.  
(9 VAC 5-50-280, 9 VAC 5-80-1705 and 9 VAC 5-1985 E) [January 19, 2016]
26. **Emission Controls (8PE-002)** - Volatile organic compound (VOC) emissions from the MT/BC/CC (8PE-002) shall be controlled by air recirculation to concentrate VOCs inside the booth followed by a RTO (8FBE-008). The air recirculation system and oxidizer shall be provided with adequate access for inspection and shall be in operation when the

emission unit that it controls is operating. The minimum combustion chamber temperature shall be maintained at 1400 degree F when the process that the RTO is controlling is in operation.

(9 VAC 5-50-260, 9 VAC 5-80-1180, 9 VAC 5-50-280, 9 VAC 5-80-1705 and 9 VAC 5-1985 E) [January 19, 2016]

27. **Control Efficiency (8PE-002)** – The RTO (8PE-002/8FBE-008) controlling emissions from MT/BC/CC (8PE-002) shall maintain a control efficiency for VOC of no less than 95%, to be demonstrated by stack test.  
(9 VAC 5-50-260, 9 VAC 5-80-1180, 9 VAC 5-50-280, 9 VAC 5-80-1705 and 9 VAC 5-1985 E) [January 19, 2016]
28. **Emission Controls (1PE-001 and 13PE-001, -002 & -004)** – The volatile organic content of coatings used in the Chassis Paint Booth (1PE-001) and CCC Final Repair & Touch Up (13PE-001, -002 & -004) are limited to 3.5 lbs/gal of coating as applied as a monthly average and as a consecutive twelve (12) month average. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.  
(9 VAC 5-50-260 and 9 VAC 5-80-1180) [January 19, 2016]
29. **Emission Controls** – The volatile organic content of coatings in the Cab Prime<sup>A</sup> (5PE-001), Specialty Painting/Touchup<sup>A</sup> (7PE-001), Cab BC (8PE-001), MT/BC/CC<sup>A</sup> (8PE-002), Plastics BC (8PE-003), Cab CC<sup>A</sup> (9PE-001), Plastics CC (9PE-002) and Spot Repair<sup>A</sup> (10PE-001/002) are limited to 3.5 lbs/gal of coating as applied as a monthly average.  
(9 VAC 5-50-260<sup>A</sup>, 9 VAC 5-80-1180<sup>A</sup>, 9 VAC 5-50-280, 9 VAC 5-80-1705 and 9 VAC 5-1985 E)<sup>2</sup> [January 19, 2016]
30. **Emission Controls** – The solids content of coatings applied in the Specialty Painting/Touchup (7PE-001), Cab BC (8PE-001), MT/BC/CC (8PE-002), Plastics BC (8PE-003), Cab CC (9PE-001), Plastics CC (9PE-002) and Spot Repair (10PE-001/002) are limited to a minimum of 52.5% by weight (per gallon) as applied as a monthly average. The solids content of the coatings applied in the Cab Prime (5PE-001) are limited to a minimum of 46% by weight (per gallon) as applied as a monthly average.  
(9 VAC 5-50-280, 9 VAC 5-80-1705 and 9 VAC 5-1985 E) [January 19, 2016]
31. **Emission Controls and Monitoring** – The following emission units shall have 100% capture efficiency: 8PE-001, 9PE-001, 8PE-003, 9PE-002 and 8PE-002 (spraybooth)<sup>3</sup>. The

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<sup>2</sup> Citations with superscript letters (e.g. 9 VAC 5-50-260<sup>A</sup>) apply to those units designated with the same letter. Remaining citations apply to all of the units in the permit condition.

<sup>3</sup> All of the equipment in 8PE-001, 9PE-001, 8PE-003, 9PE-002 are to have 100% capture and only the spray booth in the 8PE-002 emissions unit shall have 100% capture.

permittee shall conduct monitoring in accordance with a monitoring plan that shall address the elements below:

- a. The plan must identify the operating parameter(s) to be monitored to ensure capture efficiency measured during the initial compliance demonstration is maintained, explain why this parameter is appropriate for demonstrating compliance, and identify the specific monitoring procedures;
- b. The plan shall establish operating limits or range of values. The operating conditions must represent the conditions indicative of proper operation and maintenance of the capture system;
- c. You must conduct monitoring in accordance with the plan;
- d. Any deviation from the required operating parameters will be considered a deviation from the operating limits.

(9 VAC 5-50-280, 9 VAC 5-80-1705 and 9 VAC 5-1985 E) [January 19, 2016]

32. **Monitoring Devices** - The Chassis (1PE-001) spray booth shall be equipped with a differential pressure gauge to continuously measure the differential pressure across the water curtain. Each monitoring device shall be installed, maintained, calibrated and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations. Each monitoring device shall be provided with adequate access for inspection and shall be in operation when the spray booth is operating.  
(9 VAC 5-50-20 C and 9 VAC 5-50-260 and 9 VAC 5-80-1180) [January 19, 2016]
33. **Monitoring Devices** - The Cab Prime<sup>A</sup> (5PE-001), Special Projects<sup>A</sup> (7PE-001), , Cab BC<sup>A</sup> (8PE-001), MT/BC/CC<sup>A</sup> (8PE-002), Plastics BC (8PE-003), Cab Clearcoat<sup>A</sup> (9PE-001) and Plastics CC (9PE-002) spray booths shall be equipped with differential pressure gauges to continuously measure the differential pressure across the venturi wet scrubbers and the Precoated Dry Filter Systems and gauges to measure the pressure of the water feed to each venturi wet scrubber. Each monitoring device shall be installed, maintained, calibrated and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations. Each monitoring device shall be provided with adequate access for inspection and shall be in operation when the spray booth is operating.  
(9 VAC 5-50-260<sup>A</sup>, 9 VAC 5-80-1180 D<sup>A</sup> and 9 VAC 5-80-1985 E)<sup>2</sup>[January 19, 2016]
34. **Monitoring Devices** - The Cab BC (8PE-001), MT/BC/CC (8PE-002)<sup>A</sup>, Plastics BC (8PE-003), Cab CC (9PE-001) and Plastics CC (9PE-002) spray booths shall be equipped with differential pressure gauges to continuously measure the differential pressure between the spray booth and the building air outside the booth and to measure the differential pressure

across the recirculation air filters. Each monitoring device shall be installed, maintained, calibrated and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations. Each monitoring device shall be provided with adequate access for inspection and shall be in operation when the spray booth is operating.

(9 VAC 5-50-260<sup>A</sup>, 9 VAC 5-80-1180 D<sup>A</sup> and 9 VAC 5-80-1985 E)<sup>2</sup>[January 19, 2016]

35. **Monitoring Devices** - The Prep/Sand Booth (6PE-001) and Spot Repair Booths (10PE-001 and 10PE-002) shall be equipped with differential pressure gauges to continuously measure the differential pressure across the dry cartridge filters. Each monitoring device shall be installed, maintained, calibrated and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations. Each monitoring device shall be provided with adequate access for inspection and shall be in operation when the spray booth is operating.  
(9 VAC 5-80-1985 E)[ January 19, 2016]
36. **Monitoring Device Observation** - To ensure good performance, the differential pressure gauges listed in Condition 33, 34, and 35 used to continuously measure the pressure drop across the scrubbers/filters and the water pressure gauges listed in Condition 33 shall be observed by the permittee with a frequency of not less than once per shift. The permittee shall keep a log of the observations or continuously record measurements from the differential pressure gauges and water pressure gauges.  
(9 VAC 5-80-1985 E) [January 19, 2016]
37. **Monitoring Devices – Regenerative Thermal Oxidizers** – Each regenerative thermal oxidizer (RTO) (Conditions 24 & 26) shall be equipped with a device to continuously measure (at least one reading every 15 minutes) and record the combustion chamber temperature. Each monitoring device shall be installed, maintained, calibrated and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations. Each monitoring device shall be provided with adequate access for inspection and shall be in operation when the regenerative thermal oxidizer is operating.  
(9 VAC 5-80-1985 E)[January 19, 2016]

### **OPERATING LIMITS**

38. **Throughput** - The volatile organic compound consumption from the operation of the equipment in Table B, shall not exceed 105.8 tons per year, calculated monthly as the sum of the previous consecutive 12-month period. This limit becomes effective upon completion of the modification or construction of all of the equipment listed in Table C; until that time the limits in Condition 10 and 11 are in effect. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.  
(9 VAC 5-80-1180)[January 19, 2016]

39. **Throughput** - The throughput of volatile organic compounds from the operation of 3PE-001, 8PE-001, 8PE-002, 8PE-003, 9PE-001 and 9PE-002 shall not exceed 1,388 tons per year. The throughput of volatile organic compounds from the operation of the remaining equipment in Table C (including 5PE-001, 7PE-001, 10PE-001/002, purge, miscellaneous operations and mixing room) shall not exceed 600 tons per year. The throughputs shall be calculated monthly as the sum of each consecutive 12-month period. This limit becomes effective upon completion of the modification or construction of all of the equipment listed in Table C; until that time the limits in Condition 10 and 11 are in effect. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.  
(9 VAC 5-80-1985 E)[January 19, 2016]
40. **Operating Hours** – The following operating limits shall apply to the Cab Prime emission unit (5PE-001):
- a. During each 24-hour period that both the manual and robotic zones operate, the manual zone shall not operate more than 2 hours and 24 minutes, calculated hourly as the sum of each consecutive 24-hour period. Compliance for the consecutive 24-hour period shall be demonstrated by adding the total for the most recently completed hour to the individual hourly totals for the preceding 23 hours.
  - b. The manual zone (5PE-001A) of the Cab Prime emission unit (5PE-001) shall not operate more than 626 hours per year, calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated by adding the total for the most recently completed month to the individual monthly totals for the preceding 11 months.

(9 VAC5-80-1985 E) [January 19, 2016]

### **EMISSION LIMITS**

41. **Process Emission Limits** - Emissions from the operation of the equipment in Table B shall not exceed the limit specified below:

Volatile Organic Compounds	105.8 tons/yr
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This limit becomes effective upon completion of the modification or construction of all of the equipment listed in Table C; until that time the limits in Condition 12, 13 and 0 are in effect. Annual emissions calculated monthly as the sum of the previous consecutive twelve month period.

(9 VAC 5-50-260 and 9 VAC 5-80-1180)[January 19, 2016]

42. **Process Emission Limits** - Emissions from the operation of the process equipment in Table C and all miscellaneous sources (including purge losses and paint mix room emissions) shall not exceed the limit specified below:

Volatile Organic Compounds	686.8 tons/yr
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These emissions are derived from the estimated overall emission contribution from operating limits. This limit becomes effective upon completion of the modification or construction of all of the equipment listed in Table C; until that time the limits in Condition 12, 13 and 0 are in effect. Exceedance of the operating limits may be considered credible evidence of the exceedance of emission limits. Compliance with these limits may be determined as stated in Conditions 23 - 29, 37, 39 and 51.  
 (9 VAC 5-50-280, 9 VAC 5-80-1705 and 9 VAC 5-80-1985 E)[January 19, 2016]

43. **Process Emission Limits** – Particulate emissions from the operation of truck painting/coating shall not exceed the limits specified below:

<u>Spray Booth</u>	<u>Limit</u>
Chassis Spray (1PE-001)	8.5 tons/yr
Cavity Wax (11PE-001)	3.0 tons/yr
CCC Final Repair & Touch Up (Combined) (13PE-001, 002, & 004)	8.8 tons/yr

Annual emissions calculated monthly as the sum of the previous consecutive twelve month period.  
 (9 VAC 5-50-30, 9 VAC 5-50-260 and 9 VAC 5-80-1180) [January 19, 2016]

44. **Process Emission Limits** – Emissions from the operation of the following equipment in Table C shall not exceed the limit specified below:

	PM-10	PM-2.5
Cab Prime (5PE-001)	5.5 tons/yr	5.5 tons/yr
Prep/Sand Booth (6PE-001)	1.2 tons/yr	1.2 tons/yr
Special Projects/Touch-Up (7PE-001)	3.4 tons/yr	3.4 tons/yr
Cab BC (8PE-001)	2.0 tons/yr	2.0 tons/yr
MT/BC/CC (8PE-002)	4.3 tons/yr	4.3 tons/yr
Plastics BC (8PE-003)	0.1 tons/yr	0.1 tons/yr

Cab CC (9PE-001)	2.2 tons/yr	2.2 tons/yr
Plastics CC (9PE-002)	0.1 tons/yr	0.1 tons/yr
Spot Repair Booths (Combined) (10PE-001 & -002)	2.2 tons/yr	2.2 tons/yr

These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits may be considered credible evidence of the exceedance of emission limits. Compliance with these limits may be determined as stated in Conditions 20, 30, 51 and 56.

(9 VAC 5-50-280, 9 VAC 5-80-1705 and 9 VAC 5-80-1985 E) [January 19, 2016]

45. **Process Emission Limits** – Emissions from the operation of the following equipment in Table C shall not exceed the limits specified below:

	CO	NO <sub>x</sub> <sup>A</sup>
Cab BC and Cab CC (8PE-001 and 9PE-001)	2.6 lbs/hr	3.0 lbs/hr
MT/BC/CC (8PE-002)	3.4 lbs/hr	4.0 lbs/hr
Plastics BC and Plastics CC (8PE-003 and 9PE-002)	2.1 lbs/hr	2.5 lbs/hr

These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits may be considered credible evidence of the exceedance of emission limits. Compliance with these limits may be determined as stated in Conditions 50 and 55.

(9 VAC 5-50-260<sup>A</sup> and 9 VAC 5-80-1180)<sup>2</sup> [January 19, 2016]

**INITIAL COMPLIANCE DETERMINATION**

46. **Stack Test** - Initial performance tests shall be conducted for volatile organic compounds from the Cab BC (8PE-001), MT/BC/CC (8PE-002), Plastics BC (8PE-003), Cab CC (9PE-001 and Plastics CC (9PE-002) to determine compliance with the control efficiency requirements contained in Conditions 25 and 27 and tests for carbon monoxide and nitrogen oxides from the same units to determine compliance with the limits in 45. The VOC, CO and NO<sub>x</sub> tests shall be conducted concurrently for each RTO, although all three RTOs do not need to be tested concurrently. The tests shall be performed, and reported within 60 days after achieving the maximum production rate at which the facility will be operated but in no event later than 180 days after start-up of the each spray booth. Tests shall be conducted and reported and data reduced as set forth in 9 VAC 5-50-30. The details of the tests are to be arranged with the Blue Ridge Regional Office. The permittee shall submit a test protocol at least 30 days prior to testing. One copy of the test results shall be submitted to the Blue Ridge Regional Office within 60 days after test completion and shall conform to the test report format enclosed with this permit.
- (9 VAC 5-50-30 and 9 VAC 5-80-1675) [January 19, 2016]

47. **Initial Demonstrations** – Initial demonstrations showing the VOC capture efficiency for the Cab BC (8PE-001), MT/BC/CC (8PE-002), Plastics BC (8PE-003), Cab CC (9PE-001) and Plastics CC (9PE-002). The demonstrations shall be conducted and reported and data reduced as set forth in 9 VAC 5-50-30. The details of the demonstrations are to be arranged with the Blue Ridge Regional Office. The permittee shall submit a protocol at least 30 days prior to conducting the demonstrations. One copy of the results shall be submitted to the Blue Ridge Regional Office within 60 days after completion of the demonstrations. (9 VAC 5-50-30 and 9 VAC 5-80-1675) [January 19, 2016]
48. **Visible Emissions Evaluation** - Concurrently with the initial performance tests, Visible Emission Evaluations (VEE) in accordance with 40 CFR Part 60, Appendix A, Method 9, shall also be conducted by the permittee on the following equipment: Cab Basecoat (8PE-001)/Clearcoat (9PE-001) RTO (9FBE-011), Multitone/Basecoat/Clearcoat RTO (8FBE-008) and the Plastics Basecoat (8PE-003)/Clearcoat (9PE-002) RTO. Each test shall consist of 30 sets of 24 consecutive observations (at 15 second intervals) to yield a six minute average. The details of the tests are to be arranged with the Blue Ridge Regional Office. The permittee shall submit a test protocol at least 30 days prior to testing. The evaluation shall be performed, and reported within 60 days after achieving the maximum production rate at which the facility will be operated but in no event later than 180 days after start-up of the permitted facility. Should conditions prevent concurrent opacity observations, the Blue Ridge Regional Office shall be notified in writing, within seven days, and visible emissions testing shall be rescheduled within 30 days. Rescheduled testing shall be conducted under the same conditions (as possible) as the initial performance tests. One copy of the test result shall be submitted to the Blue Regional Office within 60 days after test completion and shall conform to the test report format enclosed with this permit. (9 VAC 5-50-30 and 9 VAC 5-80-1675) [January 19, 2016]
49. **Visible Emissions Evaluation** - Visible Emission Evaluations (VEE) in accordance with 40 CFR Part 60, Appendix A, Method 9, shall also be conducted by the permittee on the following equipment: Cab Prime (5PE-001), Prep/Sand Booth (6PE-001), Specialty Painting/Touchup (7PE-001), Spot Repair (10PE-001/002). Each test shall consist of 30 sets of 24 consecutive observations (at 15 second intervals) to yield a six minute average. The details of the tests are to be arranged with the Blue Ridge Regional Office. The permittee shall submit a test protocol at least 30 days prior to testing. The evaluation shall be performed, and reported within 60 days after achieving the maximum production rate at which each unit will be operated but in no event later than 180 days after start-up of each emission units. Should conditions prevent concurrent opacity observations, the Blue Ridge Regional Office shall be notified in writing, within seven days, and visible emissions testing shall be rescheduled within 30 days. Rescheduled testing shall be conducted under the same conditions (as possible) as the initial performance tests. One copy of the test result shall be submitted to the Blue Regional Office within 60 days after test completion and shall conform to the test report format enclosed with this permit. (9 VAC 5-50-30 and 9 VAC 5-80-1675) [January 19, 2016]



## **RECORDS AND REPORTING**

50. **On Site Records** - The permittee shall develop a data base record keeping system, or equivalent methodology acceptable to the Department, to maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit (Table B Emission Units). VOC emissions should not include the amount of VOC that is not emitted due to VOC incineration emissions controls, VOC returned to vendor, VOC removed for off-site disposal, etc. Separate records shall be kept for each emissions unit. The content of and format of such records shall be arranged with the Blue Ridge Regional Office. These records shall include, but are not limited to:
- a. Monthly and annual consumption of VOC for each emissions unit in Table B. Annual consumption and throughput shall be calculated monthly as the sum of the previous consecutive 12 month period.
  - b. Monthly and annual consumption of gallons of paints/coatings for each emissions unit in Table B. The waterborne/ exempt solvent paints/coatings shall be reported on both bases of with water and exempt solvent and less water and exempt solvents. Annual consumption shall be calculated monthly as the sum of the previous consecutive 12 month period.
  - c. Monthly and annual throughput of skids for the emission units in Table B. Annual throughput shall be calculated monthly as the sum of the previous consecutive 12 month period.
  - d. Monthly and annual emissions of particulate matter from each spray booth or set of booths with limits in Condition 43.
  - e. Monthly and annual emissions of VOC from equipment in Table B to verify compliance with the emission limitations in Condition 41. Annual emissions shall be calculated monthly as the sum of the previous consecutive 12 month period.
  - f. Average monthly and annual VOC content of coatings in pounds/gallon as an average from the emission units in Condition 28 accounting for waterborne/exempt solvent paints/coatings on both bases of with water and exempt solvents and less water and exempt solvents. Annual emissions shall be calculated monthly as the sum of the previous consecutive 12 month period.
  - g. Records of the differential pressure readings for the water curtain controlling particulate emissions from the Chassis 1PE-001 spray booth. Readings shall be recorded at least once per shift during process operations.
  - h. Material Safety Data Sheets (MSDS), Certified Product Data Sheets (CPDS) or other vendor information approved by VDEQ showing VOC content, HAP content, water

content, and solids content for each coating, adhesive, thinner, cleaning solution, etc. used in the emission units in Table B.

- i. Results of all stack tests, visible emission evaluations and performance evaluations for emission units in Table B.
- j. Scheduled and unscheduled maintenance and operator training for emission units in Table B.

These records shall be available for inspection by the VDEQ and shall be current for the most recent five years.

(9 VAC 5-50-50 and 9 VAC 5-80-1180) [January 19, 2016]

51. **On Site Records** - The permittee shall maintain records of emission data and operating parameters as necessary to demonstrate compliance with this permit for the equipment listed in Table C. The content and format of such records shall be arranged with the Blue Ridge Regional Office. These records shall include, but are not limited to:
- a. Material Safety Data Sheets (MSDS), Certified Product Data Sheets (CPDS), or other vendor information as approved by DEQ showing VOC content, HAP content, water content, and solids content for each coating, adhesive, thinner, and cleaning solution.
  - b. VOC content in pounds/gallon for the coatings used in the emission units in Condition 29 - accounting for waterborne/exempt solvent paints/coatings on both bases of with water and exempt solvents and less water and exempt solvents.
  - c. Monitoring records as required by Condition 31.
  - d. Percent solids content by weight (per gallon) for the coatings used in the emissions units in Condition 30.
  - e. Operational and control device monitoring records for the differential pressure gauges and water pressure gauges as required in Condition 36.
  - f. Operational and control device monitoring records for the RTO combustion chamber temperature measurement and recording devices as required in Condition 37.
  - g. Monthly and annual throughput in tons of VOC for each emissions unit listed in Table C. Annual throughputs shall be calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.

- h. Records of the hours of operation for the manual zone (5PE-001A) of the Cab Prime emission unit to verify compliance with the operating limitations in Condition 40.a and 40.b.
- i. Monthly emissions calculations for VOC using calculation methods approved by the Blue Ridge Regional Office to verify compliance with the emissions limitations in Condition 42. Annual emissions shall be calculated monthly as the sum of the previous 12 month period.
- j. Monthly emissions calculations for particulate matter using calculation methods approved by the Blue Ridge Regional Office to verify compliance with the emissions limitations in Condition 44. Annual emissions shall be calculated monthly as the sum of the previous 12 month period.
- k. Scheduled and unscheduled maintenance and operator training.
- l. Results of all stack tests, visible emission evaluations and performance evaluations.
- m. Copies of all notifications submitted according to Condition 63.

These records shall be available for inspection by the DEQ and shall be current for the most recent five years.

(9 VAC 5-50-50 and 9 VAC 5-80-1895 E) [January 19, 2016]

### **FACILITY WIDE CONDITIONS**

Conditions 52 - 74 are applicable to the facility at all times.  
(9 VAC 5-80-1180 and 9 VAC 5-80-1985E)

### **PROCESS REQUIREMENTS**

52. **Emission Controls** - Reasonable precautions shall be taken to minimize volatile organic compound (VOC) emissions from cleaning and purging operations. Reasonable precautions may include the following:
- a. The use of capture or control devices or both.
  - b. The use of detergents, high pressure water, or other non-volatile cleaning methods.
  - c. The minimization of the quantity of the volatile organic compounds used to clean lines.

- d. The adjustment of production schedules to minimize coatings changes thereby reducing the need for frequent cleaning or purging of the system.

(9 VAC 5-50-20 F, 9 VAC 5-80-1705 and 9 VAC 5-1985 E) [January 19, 2016]

53. **Testing/Monitoring Ports** - The permitted facility shall be constructed so as to allow for emissions testing upon reasonable notice at any time, using appropriate methods. Test ports shall be provided when requested at the appropriate locations or in accordance with the applicable performance specification (reference 40 CFR Part 60, Appendix B).  
(9 VAC 5-50-30 F and 9 VAC 5-80-1180) [January 19, 2016]

### **OPERATING LIMITS**

54. **Fuel** - The approved fuels for all fuel burning equipment is natural gas. A change in the fuel may require a permit to modify and operate.  
(9 VAC 5-80-1180 and 9 VAC 5-80-1985 E) [January 19, 2016]
55. **Fuel Throughput** - The facility as a whole shall consume no more than  $920 \times 10^6$  standard cubic feet of natural gas per year, calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.  
(9 VAC 5-80-1180 and 9 VAC 5-80-1985 E) [January 19, 2016]
56. **Hours of Operation** – The cab painting department (Emission units listed in Table C) is limited to 6,264 hours of operation per year. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.  
(9 VAC 5-80-1180 and 9 VAC 5-80-1985 E) [January 19, 2016]
57. **VOC Work Practice Standards** – At all times the disposal of volatile organic compounds shall be accomplished by taking measures, to the extent practicable, consistent with air pollution control practices for minimizing emissions. Volatile organic compounds shall not be intentionally spilled, discarded in sewers which are not connected to a treatment plant, or stored in open containers, or handled in any other manner that would result in evaporation beyond that consistent with air pollution practices for minimizing emissions.  
(9 VAC 5-50-20 F, 9 VAC 5-80-1705 and 9 VAC 5-1985 E) [January 19, 2016]
58. **Requirements by Reference** – Except where this permit is more restrictive than the applicable requirement, the Phosphate solution/ Washer Boiler (2FBE-001/6FBE-001) shall be operated in compliance with the requirements of 40 CFR Part 60, Subpart Dc.  
(9 VAC 5-50-400, 9 VAC 5-50-410 and 9 VAC 5-80-1180) [January 19, 2016]

### **EMISSION LIMITS**

59. **Visible Emission Limit** - Visible emissions from the facility's spray booths, ovens, and incinerators shall not exceed five (5) percent opacity, except for one six minute period in any one hour of not more than ten (10) percent, as determined by EPA Method 9 (reference 40 CFR 60, Appendix A). The opacity standard shall apply at all times, except during periods of malfunction, start up, and shut down.  
(9 VAC 5-50-260, 9 VAC 5-80-1180, 9 VAC 5-50-280, 9 VAC 5-80-1705 and 9 VAC 5-80-1985 E) [January 19, 2016]

### **RECORDS AND REPORTING**

60. **On Site Records** - The permittee shall maintain records of emission data and operating parameters as necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Blue Ridge Regional Office. These records shall include, but are not limited to:
- a. Annual consumption of natural gas, calculated monthly as the sum of each consecutive 12-month period to verify compliance with Condition 55. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.
  - b. Annual hours of operation of the cab painting department to verify compliance with Condition 56. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.

These records shall be available for inspection by the DEQ and shall be current for the most recent five years.

(9 VAC 5-50-50 and 9 VAC 5-80-1895) [January 19, 2016]

### **CONTINUING COMPLIANCE DETERMINATION**

61. **Stack Tests** - Upon request by the DEQ, the permittee shall conduct additional performance tests to demonstrate compliance with the emission limits and control efficiency requirements contained in this permit. The details of the tests shall be arranged with the Blue Ridge Regional Office.  
(9 VAC 5-50-30 G, 9 VAC 5-80-1200 and 9 VAC 5-80-1675) [January 19, 2016]
62. **Visible Emissions Evaluation** - Upon request by the DEQ, the permittee shall conduct additional visible emission evaluations to demonstrate compliance with the visible emission limits contained in this permit. The details of the tests shall be arranged with the Blue

Ridge Regional Office.

(9 VAC 5-50-30 G, 9 VAC 5-80-1200 and 9 VAC 5-80-1675) [January 19, 2016]

### **NOTIFICATIONS**

63. **Initial Notifications** – The permittee shall furnish the written notifications listed in a. and b. below to the Blue Ridge Regional Office for the each of the following:

2PE-001 Assembly/Washing	8PE-001 Cab BC
2PE-002 Plastics 5-Stage Washing Process	8PE-002 MT/BC/CC
3PE-001 E-Coat Oven	8PE-003 Plastics BC
5PE-001 Cab Prime	9PE-001 Cab CC
6PE-001 Prep/Sand Booth	9PE-002 Plastics CC
7PE-001 Specialty Painting/Touchup	10PE-001/002 Spot Repair

- a. The actual date on which construction or modification of each unit commenced within 30 days after such date.
- b. The actual start-up date of each unit within 15 days after such date.

(9 VAC 5-50-50 and 9 VAC 5-80-1985 E)[January 19, 2016]

### **GENERAL CONDITIONS**

64. **Permit Invalidation** – This permit to construct or modify the equipment listed in Table C shall become invalid, unless an extension is granted by the DEQ, if:

- a. A program of continuous construction or modification is not commenced within 18 months from that date of this permit.
- b. A program of construction or modification is discontinued for a period of 18 months or more, or is not completed within a reasonable time, except for a DEQ approved period between phases of the phased construction of a new stationary source or project.

(9 VAC 5-80-1210 and 9 VAC 5-80-1925)

65. **Permit Suspension/Revocation** - This permit may be suspended or revoked if the permittee:

- a. Knowingly makes material misstatements in the permit application or any amendments to it;

- b. Fails to comply with the conditions of this permit;
- c. Fails to comply with any emission standards applicable to a permitted emissions unit;
- d. Causes emissions from the stationary source which result in violations of, or interferes with the attainment and maintenance of, any ambient air quality standard; or
- e. Fails to operate in conformance with any applicable control strategy, including any emission standards or emission limitations, in the State Implementation Plan in effect at the time an application for this permit is submitted.

(9 VAC 5-80-1210 G and 9 VAC 5-80-1985 F)

66. **Right of Entry** - The permittee shall allow authorized local, state, and federal representatives, upon the presentation of credentials:
- a. To enter upon the permittee's premises on which the facility is located or in which any records are required to be kept under the terms and conditions of this permit;
  - b. To have access to and copy at reasonable times any records required to be kept under the terms and conditions of this permit or the State Air Pollution Control Board Regulations;
  - c. To inspect at reasonable times any facility, equipment, or process subject to the terms and conditions of this permit or the State Air Pollution Control Board Regulations;  
and
  - d. To sample or test at reasonable times.

For purposes of this condition, the time for inspection shall be deemed reasonable during regular business hours or whenever the facility is in operation. Nothing contained herein shall make an inspection time unreasonable during an emergency.

(9 VAC 5-80-1180, 9 VAC 5-170-130 and 9 VAC 5-80-1985 E)

67. **Maintenance/Operating Procedures** – At all times, including periods of start-up, shutdown and malfunction, the permittee shall, to the extent practicable, maintain and operate the affected source, including associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions.

The permittee shall take the following measures in order to minimize the duration and frequency of excess emissions, with respect to air pollution control equipment and process equipment which affect such emissions:

- a. Develop a maintenance schedule and maintain records of all scheduled and non-scheduled maintenance;

- b. Maintain an inventory of spare parts;
- c. Have available written operating procedures for equipment. These procedures shall be based on the manufacturer's recommendations, at a minimum; and
- d. Train operators in the proper operation of all such equipment and familiarize the operators with the written operating procedures, prior to their first operation of such equipment. The permittee shall maintain records of the training provided including the names of trainees, the date of training and the nature of the training.

Records of maintenance and training shall be maintained on site for a period of five years and shall be made available to DEQ personnel upon request.

(9 VAC 5-50-20 E, 9 VAC 5-80-1180 D and 9 VAC 5-80-1985 E)

68. **Record of Malfunctions** – The permittee shall maintain records of the occurrence and duration of any bypass, malfunction, shutdown or failure of the facility or its associated air pollution control equipment that results in excess emissions for more than one hour. Records shall include the date, time, duration, description (emission unit, pollutant affected, cause), corrective action, preventive measures taken and name of person generating the record.

(9 VAC 5-20-180 J, 9 VAC 5-80-1180 D and 9 VAC 5-80-1985 E)

69. **Notification for Facility or Control Equipment Malfunction** - The permittee shall furnish notification to the Blue Ridge Regional Office of malfunctions of the affected facility or related air pollution control equipment that may cause excess emissions for more than one hour, by facsimile transmission, telephone or telegraph. Such notification shall be made as soon as practicable but no later than four daytime business hours after the malfunction is discovered. The permittee shall provide a written statement giving all pertinent facts, including the estimated duration of the breakdown, within two weeks of discovery of the malfunction. When the condition causing the failure or malfunction has been corrected and the equipment is again in operation, the permittee shall notify the Blue Ridge Regional Office.

(9 VAC 5-20-180 C, 9 VAC 5-80-1180 and 9 VAC 5-80-1985 E)

70. **Violation of Ambient Air Quality Standard** - The permittee shall, upon request of the DEQ, reduce the level of operation or shut down a facility, as necessary to avoid violating any primary ambient air quality standard and shall not return to normal operation until such time as the ambient air quality standard will not be violated.

(9 VAC 5-20-180 I, 9 VAC 5-80-1180 and 9 VAC 5-80-1975 B)

71. **Change of Ownership** - In the case of a transfer of ownership of a stationary source, the new owner shall abide by any current minor NSR permit issued to the previous owner. The new owner shall notify the Blue Ridge Regional Office of the change of ownership within



30 days of the transfer.  
(9 VAC 5-80-1240 and 9 VAC 5-80-1975)

72. **Permit Copy** - The permittee shall keep a copy of this permit on the premises of the facility to which it applies.  
(9 VAC 5-80-1180 and 9 VAC 5-80-1985 E)

### **STATE-ONLY ENFORCEABLE REQUIREMENTS**

Conditions 73 & 74 are included in this permit to implement the requirements of 9 VAC 5-40-130 et seq., 9 VAC 5-50-130 et seq., 9 VAC 5-60-200 et seq. and/or 9 VAC 5-60-300 et seq. and are enforceable only by the Virginia Air Pollution Control Board. Neither their inclusion in this permit nor any resulting public comment period make these terms federally enforceable.

73. **Emission Controls and Control Efficiency** - Volatile organic compound (VOC) emissions from the E-Coat Oven shall be controlled by incineration. The incinerator shall be provided with adequate access for inspection. During coating operations, the minimum chamber temperature shall be maintained at 1400 °F with a minimum 0.5 second retention time, **or alternatively** be maintained at a lower minimum operating temperature determined by emissions testing to achieve a 95% destruction of volatile organic compounds emissions from the process, **or alternatively** operate at conditions that emit no more than 0.17 lb/hr volatile organic compounds as determined by emissions testing.

The incinerator shall be equipped with automatic thermostats to maintain the required chamber temperature and with a continuous temperature sensor at or near the chamber exit to indicate the chamber temperature. The devices shall be installed in an accessible location and shall be maintained by the permittee such that they are in proper working order at all times.

(9 VAC 5-50-140 and 9 VAC 5-80-1120 F) [January 19, 2016]

74. **On Site Records** – The permittee shall maintain records of emission data and operating parameters as necessary to demonstrate compliance with this section of the permit. The content and format of such records shall be arranged with the Blue Ridge Regional Office. These records shall include, but are not limited to:

- a. Records of the temperature of the incinerator controlling the E-coat Oven (3PE-001). Readings shall be recorded at least once per hour during process operations.

These records shall be available for inspection by the VDEQ and shall be current for the most recent five years.

(9 VAC 5-60-50 and 9 VAC 5-80-1120 F) [January 19, 2016]

## SOURCE TESTING REPORT FORMAT

### Report Cover

1. Plant name and location
2. Units tested at source (indicate Ref. No. used by source in permit or registration)
3. Test Dates.
4. Tester; name, address and report date

### Certification

1. Signed by team leader/certified observer (include certification date)
2. Signed by responsible company official
3. \*Signed by reviewer

### Copy of approved test protocol

### Summary

1. Reason for testing
2. Test dates
3. Identification of unit tested & the maximum rated capacity
4. \*For each emission unit, a table showing:
  - a. Operating rate
  - b. Test Methods
  - c. Pollutants tested
  - d. Test results for each run and the run average
  - e. Pollutant standard or limit
5. Summarized process and control equipment data for each run and the average, as required by the test protocol
6. A statement that test was conducted in accordance with the test protocol or identification & discussion of deviations, including the likely impact on results
7. Any other important information

### Source Operation

1. Description of process and control devices
2. Process and control equipment flow diagram
3. Sampling port location and dimensioned cross section. Attached protocol includes: sketch of stack (elevation view) showing sampling port locations, upstream and downstream flow disturbances and their distances from ports; and a sketch of stack (plan view) showing sampling ports, ducts entering the stack and stack diameter or dimensions

### Test Results

1. Detailed test results for each run
2. \*Sample calculations
3. \*Description of collected samples, to include audits when applicable

### Appendix

1. \*Raw production data
2. \*Raw field data
3. \*Laboratory reports
4. \*Chain of custody records for lab samples
5. \*Calibration procedures and results
6. Project participants and titles
7. Observers' names (industry and agency)
8. Related correspondence
9. Standard procedures

\* Not applicable to visible emission evaluations