



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

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STATEMENT OF LEGAL AND FACTUAL BASIS

Volvo Trucks North America, Inc.
State Route 643
Dublin, Virginia
Permit No. VA-20765

Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have federal Air Pollution Operating Permits, called Title V Operating Permits. As required by 40 CFR Part 70 and 9 VAC 5 Chapter 80, Volvo Trucks North America has applied for a Title V Operating Permit renewal for its facility. The Department has reviewed the application and has prepared a final Title V Operating Permit.

Engineer/Permit Contact: Gary R. Bradley, P.E.

Date: March 23, 2007

Air Permit Manager: _____

Handwritten signature of Michael J. Scanlan in black ink.

Date: 1-16-08

Michael J. Scanlan, Ph. D.
Regional Air Permit Manager

FACILITY INFORMATION

Permittee

Volvo Trucks North America, Inc.
7900 National Service Road
Greensboro, NC 27402

Facility

Volvo Trucks North America, Inc.
P.O. Box 1126
Dublin, VA 24084

County-Plant ID No. 51-155-0041

SOURCE DESCRIPTION

SIC Code: 3711

NAICS Code: 336120

Volvo Trucks North America, Inc. is a producer of heavy duty trucks located in Pulaski County on state route 643 (Cougar Trail) near Dublin, Virginia. Volvo presently produces heavy duty trucks by on site assembly including painting of the entire cab. Volvo has formalized an ongoing extensive recordkeeping procedure to document the coating usage at the facility. A computer database has been developed to track the amount of each type of paint or coating used at each plant operation, the amount, if any, returned to storage, and the amount sent to off-site waste disposal. From this database, Volvo prepares a monthly material balance of the total consumption of coatings, VOCs, and paint particulate as well as a monthly consumption of all air toxics. This permit extends that recordkeeping to include all Hazardous Air Pollutants. The monthly emissions are then estimated based on the operational area where the consumption occurred and the capture efficiency and the efficiency of emission controls for that operational area. One of the two booths in the 8PE area has VOC control, so these booths have separate record keeping requirements.

The facility is a Title V major source of Volatile Organic Compounds, nitrogen oxides, carbon monoxide, and Hazardous Air Pollutants. This source is located in an attainment area for all pollutants, and is a PSD major source for VOCs. In a permit for a major plant expansion, all significant emission sources at the facility were included in a permit to modify and construct issued as a Minor NSR Permit on April 29, 1999, either as new sources, modified source, or existing equipment covered by the conditions of the permit. That permit was modified three times to reflect design changes in the later stages of the expansion, with the last revised permit was issued on July 27, 2000, to make the permit conditions consistent with the design revisions. The official completion date for the expansion project was January 2, 2002.

Following the first issuance of this federal operating permit, effective June 1, 2002, the testing required showed that the particulate control requirements for the PC area were too stringent since these were expressed in percentage control and the inlet loading was lower than anticipated. A revised New Source

Review permit was issued on February 26, 2003, to include an alternate compliance standard in grains per cubic foot. This permit also increased the particulate limits from the PC area since the original limits were derived from modeling for lead chromate, regulated only under state-only-enforceable regulations. The previous very low limit was based on the assumption of simultaneous lead chromate emissions from both paint lines and the PC area. Volvo has revised its commercial paint formulation eliminating lead chromate. The only lead chromate sources are a Department of Defense contract specifying a lead chromate containing coating and touch-up of pre-painted parts. Since lead chromate is now expected to be present as a worst case in only one paint booth and the PC area, the PC area particulate limits were increased.

In 2005 Volvo was issued a PSD permit for a plant expansion to add a third basecoat booth and a second clearcoat booth. Market conditions changed before construction began and the permit was deemed void for failure to construct in a timely manner. On March 7, 2007 a new NSR permit was issued effectively reinstating the conditions of the 2003 permit. One significant change occurred with this revision, the facility revised its operation to use the 8PE-002 booth for basecoat and the 8PE-001 booth for Multi-Tone (decorative) painting. Based on the reduced throughput, Volvo chose to take enforceable permit limits on the 8PE-001 booth and revise the BACT analysis. The new analysis determined that no control was BACT at the revised throughput. The PSD impact for the removal of the existing zeolite control system was an increase of 39.0 tons of VOC and approximately 13 tons of PM₁₀. This change was below PSD significance level and did not require a formal PSD permit. The zeolite adsorber will be removed shortly after this federal operating permit renewal removes the requirement for its use. In preparing the federal operating permit renewal, several minor errors were discovered in the March 7, 2007 permit. These were corrected by amendment on August 21, 2007. References to the March 7, 2007 NSR permit should be interpreted as referring to that permit as amended August 21, 2007.

The only NSPS requirement which presently applies to this facility is NSPS Dc for the Phosphate Heater, which required notification to USEPA of the installation of a process heater in excess of 10 MMBTU/hr fueled by natural gas. The NSPS also requires monthly records of the fuel throughput. The facility is also subject to MACT MMMM (Miscellaneous Metal Parts Coating) and MACT PPPP (Miscellaneous Plastic Parts Coating). The facility will comply with these MACTs by monthly emissions averaging. The facility will not take control credit for the organic HAP control unit on 8PE-002, but reserves the right to do so at a future date. Limits on coating content were placed in the NSR permit of March 7, 2007 to reflect this methodology. Final compliance date for MACT record keeping methodology is after the expected renewal of this permit. Minor revisions may be necessary. If so, the permit will be reopened accordingly.

COMPLIANCE STATUS

The facility is inspected at least once in each two calendar years. The facility is in compliance with the State Air Pollution Control Board regulations.

EMISSION UNIT AND CONTROL DEVICE IDENTIFICATION

The emission units are grouped as follows:

Fuel Burning Equipment	All fuel burning equipment with capacity to emit above the insignificant source level. Details in table.
Manufacturing Equipment	A brief description of each operational unit follows. The emission and control details appear in the table.

Chassis Assembly (1PE-001 & 1PE-002): This section of the plant assembles the chassis for trucks produced in another section of the plant. Presently, 80-90% of the chassis are painted with water-based black paint while the rest are painted with high solids solvent based paints. Each line has a spray booth, flash area, bake oven and cooling tunnel.

Phosphate System (2PE-001): Metal cab components are welded together and the assembled cabs go through a phosphate wash system that applies a 10-step metal pre-treatment and cleaning process

E-Coat (3PE-001): The electrodeposition process involves immersing the cabs in a dip tank with electrically charged base prime paint. The coated trucks are cured in an oven. The oven has a fume incinerator, which is primarily for odor control.

Sealer & Brackett (4PE-001): A sealer for watertight bonds is applied at seams and joints. The sealers are cured in a bake oven.

Primer (5PE-001): Primer is manually applied in a spray booth after which the cab passes through a curing oven and a cooling tunnel.

Washing (6PE-001): Cabs and plastic parts that will be painted before attachment are washed prior to paint application. They proceed through a dry-off oven and clean tunnel. Occasionally minor sanding is performed on the finish.

Touch-Up/Specialty (7PE-001): This is a spray booth where touch-ups prior to painting occur. Volvo anticipates some specialty coating processes may be tested in this booth.

Multi-Tone Booth & Basecoat Booth (8PE-001 and 8PE-002): These spray booths are where the color paint is applied to the cabs. Multi-Tone refers to the process of painting more than one color on a cab. The 8PE-001 booth will be uncontrolled for VOC upon issuance of this permit. The 8PE-002 booth uses air recirculation to concentrate VOC fumes prior to control by a VOC incinerator. Both spray booths are followed by heated flash-off areas.

Clearcoat (9PE-001): A clearcoat is applied and the cabs go through a flash-off tunnel and a bake oven.

Spot Inspection (10PE-001 & 10PE-002): The cabs undergo a spot inspection. Two spot repair stations are located in this area for very minor touch-up. Cabs requiring extensive touch-up go to the Pre-Conditioning Building.

Final Inspection (11PE-001): Final inspection step. The cabs are then joined to the chassis.

Central Air (12FBE-001, 12FBE-002, and 12 FBE-003): This section is designated for the main HVAC equipment for the facility.

Pre-Conditioning (13PE-001, 13PE-002, and 13PE-004): After final assembly the completed trucks are taken to the Pre-Conditioning Building for final repairs and paint touch-up. Chasis touch-up is done in the 13PE-002 booth and cab touch-up is done in the other booths. (13PE-003 was removed, 13PE-005 was permitted but not installed.)

Auxiliary Heating Equipment (14FBE-001, 15FBE-001, 16FBE-001): This is an additional boiler and two air make-up units that will be needed for temperature and humidity control if proposed water-based paints are used. These paints are not presently in use, however, if tests show successful results, these lower VOC coatings are planned for the period of this permit.

Emission Units

Equipment to be operated consists of:

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
Fuel Burning Equipment							
1FBE-001	XXX.1	North Chasis Oven (Direct Fired)	3.0 MMBTU/hr				3/7/07
1FBE-002	NN.1	South Chasis Oven (Direct Fired)	3.0 MMBTU/hr				3/7/07
1FBE-003	WW.1	North Chasis Air Make-Up Unit	7.56 MMBTU/hr				3/7/07
1FBE-004	MM.1-MM.6	South Chasis Air Make-Up Heater	5.44 MMBTU/hr				3/7/07
2FBE-001/ 6FBE-001	BBB.1	Phosphate Solution/Washer Heater	25.2 MMBTU/hr				3/7/07
3FBE-001	EEE.1	E-Coat Oven w/ incinerator	5** MMBTU/hr	incinerator	3PC-01	VOC, Odor	3/7/07
5FBE-001	GGG.5	Primer Oven Zone 1 Burner	3.43 MMBTU/hr				3/7/07
5FBE-002	GGG.6	Primer Oven Zone 2 Burner	2.63 MMBTU/hr				3/7/07
5FBE-003	GGG.7	Primer Oven Zone 3 Burner	2.63 MMBTU/hr				3/7/07
8FBE-001	PPP.3	Multi-Tone Oven - Zone 1 Burner (Booth #1)	3.43 MMBTU/hr				3/7/07
8FBE-002	PPP.4	Multi-Tone Oven - Zone 2 Burner (Booth #1)	2.63 MMBTU/hr				3/7/07
8FBE-004	BFE.1	Basecoat Oven - Zone 1 Burner (Booth #2)	3.0 MMBTU/hr				3/7/07
8FBE-005	BFE.2	Basecoat Oven - Zone 2 Burner (Booth #2)	5.0 MMBTU/hr				3/7/07
8FBE-006	BFE.3	Basecoat Oven - Zone 3A Burner (Booth #2)	3.0 MMBTU/hr				3/7/07
8FBE-007	BFE.4	Basecoat Oven - Zone 3B Burner (Booth #2)	3.0 MMBTU/hr				3/7/07
8FBE-008	PPX.3	Basecoat Oven - RTO Incinerator Exhaust (Booth #2)	5.0 MMBTU/hr	RTO	8PC-05	VOC	3/7/07

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
9FBE-001	SSS.3	Clearcoat Oven Zone 1	3.43 MMBTU/hr				3/7/07
9FBE-002	SSS.4	Clearcoat Oven Zone 2	2.6 MMBTU/hr				3/7/07
9FBE-003	SSS.6	Clearcoat Oven Zone 3	4.2 MMBTU/hr				3/7/07
12FBE-001	SSS.1&2, MMM.1, GGG.1&2	Central Air Make-Up Heater	56.2 MMBTU/hr				3/7/07
13FBE-001	P.1 - P.6	Truck Repair Oven Exhaust (001)	2.39 MMBTU/hr				3/7/07
13FBE-002	P.5 & P.6	Supply Air Heater - 13PE-001	6.48 MMBTU/hr				3/7/07
13FBE-003	O.1&2	Air Make-Up Heater - 13PE-002	3.89 MMBTU/hr				3/7/07
13FBE-003A	O.3	Air Make-Up Heater - 13PE-002A	3.89 MMBTU/hr				3/7/07
13FBE-005	Q.1 - Q.4	Air Make-Up Heater - 13PE004	4.68 MMBTU/hr				3/7/07
13FBE-005A	Q.5	Air Make-Up Heater - 13PE004A	4.68 MMBTU/hr				3/7/07
13FBE-006	(indoor vent)	PC Building Heater	0.5 MMBTU/hr				3/7/07
14FBE-001	BBB.2	Burnham Industries Boiler - Humidity Control for 8PE-002	6.3 MMBTU/hr				3/7/07
15FBE-001	PPP.1&2	Make-Up Air Unit for Multi-Tone/ Basecoat Booth #1 (8PE-001)	23.5 MMBTU/hr				3/7/07
16FBE-001	PPX.3, (PPX.4)	Make-Up Air Unit for Multi-Tone/ Basecoat Booth #2 (8PE-002)	12.2 MMBTU/hr				3/7/07
Heavy Truck Manufacturing Process							
1PE-001	MM.1-7	South Chassis Paint Booth		Water Curtain	IPC-01	PM10, TSP	3/7/07
1PE-001A	NN.1	South Chassis Curing Oven					3/7/07
1PE-001B	OO.1	South Chassis Oven Cooler					3/7/07
1PE-002	WW.1	North Chassis Paint Booth		Venturi Scrubber ¹	IPC-02	PM10, TSP	3/7/07
1PE-002A	XXX.1	North Chassis Curing Oven					3/7/07
1PE-002B	YYY.1	North Chassis Oven Cooler					3/7/07
2PE-001	AAA.1&2,	Phosphate System					3/7/07
3PE-001	No stack	E-Coat Process					3/7/07
3PE-001A	CCC.1	E-Coat Tunnel					3/7/07
3PE-001B	EEE.1	E-Coat Oven					3/7/07

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
3PE-001C	DDD.1	E-Coat Oven Cooler					3/7/07
3PE-001D	FFF.2	E-Coat Scuff Station					3/7/07
4PE-001	(no stack)	Seam Sealer/Bracket Attach					3/7/07
4PE-001A	(no stack)	Cab Wipe/Prime Tack-Off					3/7/07
5PE-001	GGG.1	Primer Process - Robotic Zone		Venturi Scrubber ¹	5PC-01	PM10, TSP	3/7/07
5PE-001A	GGG.2	Primer Process - Manual Zone		Venturi Scrubber ¹	5PC-02	PM10, TSP	3/7/07
5PE-001B	GGG.8	Primer Oven Exhaust					3/7/07
5PE-001C	GGG.3	Primer Oven Cooler					3/7/07
6PE-001	JJJ.1	Prep Booth/Sand Booth					3/7/07
6PE-001A	WWE.1	Washing Process					3/7/07
6PE-001B	LLL.1	Dry-Off Area					3/7/07
7PE-001	MMM.1	Specialty/Touch-Up Painting - Waterborne & High Solids		Venturi Scrubber ¹	7PC-01	PM10, TSP	3/7/07
8PE-001	PPP.1&2	Multi-Tone Booth # 1 Waterborne & High Solids Coating		Venturi Scrubber ¹	8PC-01	PM10, TSP	3/7/07
8PE-001A	PPP.5	Multi-Tone Oven # 1					3/7/07
8PE-001B	PPP.6	Multi-Tone Cooler # 1					3/7/07
8PE-002	PPX.3 (PPX.4 bypass)	Basecoat Booth # 2 Waterborne & High Solids Coating		Venturi Scrubber ¹ , Incinerator	8PC-04, 8PC-05	PM10, TSP, VOC	3/7/07
8PE-002A	BOE.1	Basecoat Oven # 2					3/7/07
8PE-002B	QQQ.4	Basecoat Cooler # 2					3/7/07
8PE-002C	RRR.1	Basecoat Booth # 2 Demask Station					3/7/07
9PE-001	SSS.1&2	Clearcoat Spray Booth		Venturi Scrubber ¹	9PC-01	PM10, TSP	3/7/07
9PE-001A	SSS.5	Clearcoat Curing Oven					3/7/07
9PE-001B	TTT.3	Clearcoat Cooler # 1					3/7/07
9PE-001C	TTT.5	Clearcoat Cooler # 2					3/7/07
10PE-001, 10PE-002	UUU.1	Spot Repair (BC/CC)		Dry filters	10PC-01, 10PC-02	PM10, TSP	3/7/07
11PE-001	VVV.1	Inspection & Repair Booth		Dry Filter	11PC-01	PM10, TSP	3/7/07
13PE-001	P.1-4	PC Booth # 1: Cab Touch-Up		Water Curtain	13PC-01	PM10, TSP	3/7/07

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
13PE-001A	P.5 & P.6	PC Booth #1 Oven					3/7/07
13PE-002	O.1&2	PC Booth # 2: Cab Touch-Up		Dry Filter	13PC-02	PM10, TSP	3/7/07
13PE-002A	O.3	PC Booth #2 Oven					3/7/07
13PE-004	Q.1-4	PC Booth # 4: Truck Touch-Up		Dry Filter	13PC-04	PM10, TSP	3/7/07
13PE-004A	Q.5	PC Booth #4 Oven					3/7/07

*The Size/Rated capacity is provided for informational purposes only, and is not an applicable requirement.

** Based on maximum heat input of RTO

'Based on process considerations, some booths may operate two Venturi scrubbers in parallel

EMISSIONS INVENTORY

The emissions from the 2006 calendar year are summarized below:

Total VOC Emissions:	296.68 tons
Total NOx Emissions:	27.59 tons
Total CO Emissions:	22.39 tons
Total SO2 Emissions:	0.16 tons
Total PM-10 Emissions:	17.75 tons
Significant HAP Emissions	
Xylene:	4.59 tons
Toluene:	1.43 tons
Ethyl Benzene:	1.75 tons
Methyl Isobutyl Ketone	0.17 tons
Methanol	0.23 tons
Ammonia	0.85 tons

EMISSION UNIT APPLICABLE REQUIREMENTS

New Source Review Permit Requirements

The majority of conditions contained in the federal operating permit are requirements necessary to comply with the conditions of the New Source Review permit for the facility issued March 7, 2007, and amended August 21, 2007. A Copy of the permit is attached as Appendix B. The conditions of the federal operating permit and the corresponding conditions of the NSR permit are displayed in the table below:

Title V Condition	NSR Condition	Description	VAC Applicable Requirement
III-A-1	15	Approved fuels are natural gas & propane	9 VAC 5-80-1180
III-A-2	16	Natural gas annual throughput limit	9 VAC 5-80-1180
III-A-3	23	Combustion product emission limits	9 VAC 5-50-260, 9 VAC 5-80-110
III-A-4	25	Visible emissions limit for ovens and incinerators	9 VAC 5-50-260, 9 VAC 5-80-110
III-A-5	17	Compliance with NSPS Dc	9 VAC 5-50-410
III-A-7	34	Standards for maintenance & operation practices	9 VAC 5-50-20
III-C-1	29g	Monthly and annual consumption of natural gas for entire facility	9 VAC 5-50-50
III-C-2	29h	Daily, monthly and annual consumption of natural gas for phosphate system heater	9 VAC 5-50-50, (NSPS Dc)
III-C-3	29l	Monthly and annual emissions from gas and propane combustion for entire facility	9 VAC 5-50-50
III-D-1	12	Provide test ports at appropriate locations on request	9 VAC 5-50-30
IV-A-1	2	BACT as design specifications cited for particulate control devices	9 VAC 5-80-1180, 9 VAC 5-50-260
IV-A-2	3	BACT as water-based or high solids coatings in certain applications	9 VAC 5-50-260
IV-A-3	4	BACT as water-based primers	9 VAC 5-50-260
IV-A-4	5	BACT as water-based E-coat	9 VAC 5-50-260
IV-A-5	6	Basecoat Booth #2 VOC incinerator and instrument requirement	9 VAC 5-80-1180, 9 VAC 5-50-260
IV-A-6	7	VOC Content limit (lbs/gal) as BACT for spray booths without VOC controls	9 VAC 5-80-1180, 9 VAC 5-50-260, 9 VAC 5-50-180
IV-A-7	8	HAP content limits on coatings as annual average [MACTs MMMM & PPPP]	9 VAC 5-80-1180, 9 VAC 5-60-100
IV-A-8	9	Minimize cleaning & purging emissions	9 VAC 5-40-20
IV-A-9	10	Alternative control procedure	9 VAC 5-80-110
IV-A-10	11	Requirements by reference MACT MMMM	9 VAC 5-60-100
IV-A-11	12	Requirements by reference MACT PPPP	9 VAC 5-60-100
IV-A-12	13	Annual VOC throughput limit for coating content	9 VAC 5-80-10, 9 VAC 5-80-110
IV-A-13	14	Monthly VOC throughput limit for coating content	9 VAC 5-80-10, 9 VAC 5-80-110
IV-A-14	21	VOC emission limit for Multi-Tone spray booth 8PE-001	9 VAC 5-50-260, 9 VAC 5-80-1615
Title V	NSR	Description	VAC Applicable Requirement

Condition	Condition		
IV-A-15	21	VOC emission limit for painting/coating for all spray booths combined	9 VAC 5-50-260, 9 VAC 5-80-1615
IV-A-16	23	Particulate emission limits for spray booths broken down by operation unit	9 VAC 5-50-260, 9 VAC 5-50-30
IV-A-17	25	Visible emissions limit for spray booths	9 VAC 5-50-260
IV-B-1	6	Basecoat Booth #2 VOC incinerator temperature monitoring requirements	9 VAC 5-80-1180, 9 VAC 5-50-260
IV-B-2	11	Spray booths particulate control monitoring (pressure differential gauges)	9 VAC 5-80-1800, 9 VAC 5-50-20, 9 VAC 5-50-260
IV-C-1	29q	Certified product data sheets for coatings	9 VAC 5-50-50
IV-C-2	29a	Record monthly and annual consumption of VOC from each operational area	9 VAC 5-50-50
IV-C-3	29b	Record monthly and annual consumption of VOC from painting/coating processes	9 VAC 5-50-50
IV-C-4	29e	Record monthly and annual consumption of paints and coatings from each operational area and entire facility	9 VAC 5-50-50
IV-C-5	29f	Record monthly and annual throughput of trucks for painting and coating	9 VAC 5-50-50
IV-C-6	29i	Record monthly and annual emissions of VOC from painting/coating processes	9 VAC 5-50-50
IV-C-7	29m	Average lbs VOC per gallon of coatings in spray booths without VOC controls	9 VAC 5-50-50
IV-C-8	29n	Average annual HAP emissions to demonstrate compliance with MACTs	9 VAC 5-50-50
IV-C-9	29o	Records of pressure differential for particulate scrubbers and spray booths	9 VAC 5-50-50
IV-C-10	29p	Temperature records for 8PE-002 RTO	9 VAC 5-50-50
IV-D-1	12	Provide test ports at appropriate locations on request	9 VAC 5-50-30
IV-D-2	26	Stack testing on request for Basecoat Booth # 2 VOC control system	9 VAC 5-50-30
IV-D-3	27	Stack testing on request for particulate control from any or all spray booths	9 VAC 5-50-30
IV-D-4	28	VEEs on request for opacity from any or all spray booths	9 VAC 5-50-30
V-A-1	24	VOC emission limit for entire facility	9 VAC 5-50-260
V-A-2	36	Reduction or shutdown to avoid violation	9 VAC 5-20-180
V-A-3	34	Standards for maintenance & operation practices	9 VAC 5-50-20
V-C-1	29q	Certified product data sheets for coatings	9 VAC 5-50-50
V-C-2	29c	Record monthly and annual consumption of VOC from miscellaneous sources	9 VAC 5-50-50
V-C-3	29d	Record monthly and annual consumption of VOC from entire facility	9 VAC 5-50-50
V-C-4	26j	Record monthly and annual emissions of VOC from miscellaneous sources	9 VAC 5-50-50
V-C-5	26k	Record monthly and annual emissions of VOC from entire facility	9 VAC 5-50-50

Title V Condition	NSR Condition	Description	VAC Applicable Requirement
V-C-7	29r	Results from stack tests and VEEs	9 VAC 5-50-50
V-C-8	29s	Records of maintenance and training	9 VAC 5-50-50
V-C-10	35	Record of malfunctions	9 VAC 5-20-180
V-D-1	12	Provide test ports at appropriate locations on request	9 VAC 5-50-30
V-E-1	31	Notice of control equipment maintenance	9 VAC 5-20-180
V-E-2	32	Notice of malfunction	9 VAC 5-20-180
V-E-3	30	Malfunction causing exceedence report (with specifics)	9 VAC 5-20-180
VIII-F	30	Malfunction causing exceedence report	9 VAC 5-20-180
VIII-Q	33	Right of entry	9 VAC 5-170-130
VIII-S	39	Permit Copy	9 VAC 5-170-160
VIII-T	38	Change of ownership	9 VAC 5-80-10
VIII-V	37	Permit suspension/revocation	9 VAC 5-80-10

Emission Inventory Related Requirements

The permit content requirements of the regulations for federal operating permits, 9 VAC 5-80-110, state that the permit should include conditions necessary determine the annual emissions of all pollutants for which the facility has the potential to be major. This coincides with the underlying philosophy of the Title V legislation which had as one of its purposes to achieve a more detailed picture of emissions from major source facilities. The table below summarizes the conditions that are needed to develop emission estimates for Hazardous Air Pollutants. One condition corresponds to a condition in the State-Only Enforceable Requirements section of the NSR permit. The corresponding NSR condition is noted in parentheses.

Permit Condition	Relation to Emission Inventory
IV-C-1, V-C-1	Requirement to determine material VOC content by EPA approved standards
V-C-6	Emission of HAPs from the facility as a whole (43b)

Proper Equipment Operation

It is the practice of the Virginia Department of Environmental Quality to require in emission permits conditions that the emission sources, such as fuel burning equipment, be operated in a proper manner. These conditions fall into two categories. The first category is a general condition requiring proper operation and maintenance of equipment which applies under 9 VAC 5-170-160 for equipment in a NSR permit or existing equipment ancillary to the operation of the permitted equipment. The second category is specifications that equipment designed to operate under specific parameters be operated only under those parameters. These conditions are specifically addressed under 9 VAC 5-80-1100, et seq. for equipment in a construction permit but for existing equipment in an operating permit that is not subject to a construction permit, 9 VAC 5-170-160 is the requirement generally deemed to be applicable. Similar conditions were omitted from the Volvo permit as being extraneous during discussion of the draft permit. They are being

included in the Title V permit to further justify that record keeping and emission estimates based on fuel usage will be sufficient to demonstrate compliance with emission limits for combustion products. The basis of the combustion products emission limits in the NSR permit was the use of emission factors for natural gas at the maximum throughput limit, assuming properly operating equipment. As such, periodic stack testing of the combustion equipment seems unduly burdensome and these conditions are intended to demonstrate that the monthly emissions estimates are adequate to satisfy periodic monitoring requirements for this operating permit.

Condition III-A-6 is a general condition for proper operation of boilers, HVAC systems and air make-up heaters.

Condition III-B-1 is a requirement to maintain records and procedures supporting compliance with Condition III-A-6.

Taken together with the fuel usage conditions, these conditions define a scenario in which the proper operation of the combustion equipment at this facility are physically incapable of violating the particulate matter and sulfur dioxide standards for fuel burning equipment, 9 VAC 5-40-900 and 9 VAC 5-40-930. Using these conditions allows the permit to be written without explicit limits for SO₂ and PM from combustion sources, and to use emission estimates rather than stack tests for compliance assurance as discussed above.

Periodic Monitoring

The permit content requirements of the regulations for federal operating permits, 9 VAC 5-80-110, state that the permit should include conditions for periodic monitoring sufficient to demonstrate that the facility is in compliance with the limits of the permit. The record keeping requirements are deemed sufficient to determine compliance with the emission limits for VOCs and combustion gasses. Record keeping for painting and coating and compliance with opacity limits is considered sufficient to demonstrate compliance with the emission limits for PM and PM-10. No opacity is expected to be observed under normal operation of the equipment. Under these conditions, a weekly Method 22 evaluation with requirement for Method 9 evaluation if opacity is observed is deemed sufficient to satisfy the periodic monitoring requirement.

Condition V-B-1 requires Method 22 evaluation of the incinerator and spray booths and, if opacity is observed, documentation of corrective action or a Method 9 evaluation to show the opacity is within permit limits.

Condition V-C-9 requires that records of the periodic monitoring results be maintained.

Compliance Assurance Monitoring requirements under 40 CFR Part 64 set additional requirements for emission control units that are subject to this regulation. General CAM requirements are specified in Conditions IV-B-3, IV-B-4, IV-B-5, IV-B-6, IV-B-7, IV-B-8, IV-B-9, IV-B-10, IV-C-11, and IV-E-1. Specific requirements for each CAM-subject unit are listed in Appendix A and described in greater detail in the facility's Compliance Assurance Monitoring Plan.

Streamlined Requirements

Emission limits for particulate matter for fuel burning equipment apply only to the 6FBE-001 Wash Solution heater under the definition of fuel burning equipment or fuel burning installation. VDEQ contends that the gaseous fuel usage restriction and the good operating practice requirement for this unit is sufficient to create a de facto emission limit more stringent than the limit under 9 VAC 5-40-900.

GENERAL CONDITIONS

The permit contains general conditions required by 40 CFR Part 70 and 9 VAC 5-80-110, that apply to all federal operating permit sources. These include requirements for submitting semi-annual monitoring reports and an annual compliance certification report. The permit also requires notification of deviations from permit requirements or any excess emissions, including those caused by upsets, within one business day.

STATE-ONLY APPLICABLE REQUIREMENTS

The permittee elected to exclude such requirements from this permit. A portion of the record keeping provisions of the NSR state-only section are still required under this permit as a subset of the HAPs record keeping requirements under 9 VAC 5-80-110.

COMPLIANCE ASSURANCE MONITORING

As required by 40 CFR Part 64, the permittee submitted a draft Compliance Assurance Monitoring Plan with the application for renewal of the federal operating permit. The draft plan was finalized during the permitting process to add one monitor and update references for the NSR permit, which was being modified on the application deadline.

Based on review of the submittal, the following control units and capture monitors are subject to Compliance Assurance Monitoring requirements:

VOC: The regenerative thermal oxidizer controlling the 8PE-002 spray booth
The differential pressure monitor for the 8PE-002 spray booth

PM: The water wash and dry filters controlling the 1PE-001 spray booth
The Venturi wet scrubber with dry filters controlling the 1PE-002 spray booth
The Venturi wet scrubber controlling the 5PE-001 spray booth
The Venturi wet scrubber controlling the 8PE-001 spray booth
The Venturi wet scrubber controlling the 8PE-002 spray booth
The Venturi wet scrubber controlling the 9PE-001 spray booth

The following emission units with control systems had less than 100 tons per year of uncontrolled potential emissions, and were therefore not subject to Compliance Assurance Monitoring requirements:

PM: The dry filter controlling the 6PE-001 spray booth
The Venturi wet scrubber controlling the 7PE-001 spray booth
The dry filters controlling the 10PE-001 and 10PE-002 spray booths
The dry filter controlling the 11PE-001 spray booth
The water wash controlling the 13PE-001 spray booth
The cartridge filter controlling the 13PE-002 spray booth
The dry filter controlling the 13PE-004 spray booth

The renewed federal operating permit contains the elements of this plan required under 40 CFR 64.6(c). A summary of the CAM parameters for each subject control unit is included in Appendix A of the permit. Comprehensive details are in the plan itself.

Regarding the specifics of the CAM plan, the Venturi scrubbers used in most spray booths are not the typical pressurized liquid flow. The Volvo systems use a gravity overflow from a reservoir. While VDEQ feels that it would be desirable to measure liquid flow for the Venturis, this would require a very expensive retrofit involving ultrasonic flow meters, probably with a custom interface to the existing data acquisition system. Volvo believes that the expense of flow measurement for these control systems is excessive to the benefit gained. VDEQ agrees with this conclusion. Also, VDEQ believes that there is little benefit to explicitly monitoring capture parameters for particulate control in the spray booths, as inadequate particulate capture would be reflected in unacceptable product quality. Also these spray booths are so large that several fans are used for each booth, therefore a single fan power monitor is not feasible.

INSIGNIFICANT EMISSION UNITS

The following emission units at the facility are identified in the application as insignificant emission units under 9 VAC 5-80-720:

Emission Unit No.	Emission Unit Description	Citation	Pollutant(s) Emitted (9 VAC 5-80-720 B)	Rated Capacity (9 VAC 5-80-720 C)
FBAD-1	Cleaver Brooks boiler, Model CB-60HP, n.g.	9 VAC 5-80-720C	PM, CO, VOC, SO ₂ , NO _x	2,500,000 BTU/hr
FBAD-2	Lochinvar water heater, CNA 726-080-0F9, n.g.	9 VAC 5-80-720C	PM, CO, VOC, SO ₂ , NO _x	725,000 BTU/hr
FBBIW2A, FBBIW2B	Two PVI Water Heaters, n.g.	9 VAC 5-80-720C	PM, CO, VOC, SO ₂ , NO _x	399,000 BTU/hr each
FBBIW1A-FBBIW1H	Eight HV Space Heating Units, n.g.	9 VAC 5-80-720C	PM, CO, VOC, SO ₂ , NO _x	3,000,000 BTU/hr each
WELD	Portable welders for equipment maintenance	9 VAC 5-80-720A	PM, CO, SO ₂ , NO _x	NA
PW1-PW5	Five cold cleaner parts washers	9 VAC 5-80-720B	VOC	VOC < 5 tpy
PMSB-1	One small paint spray booth for test panels	9 VAC 5-80-720B	VOC	VOC < 5 tpy
PMBT1-8	Eight 175 gallon bulk tanks for paint/solvent	9 VAC 5-80-720B	VOC	VOC < 5 tpy
FBAB1A – FBAB1I	Nine Door Heaters	9 VAC 5-80-720C	PM, CO, VOC, SO ₂ , NO _x	475,200 BTU/hr to 1,900,800 BTU/hr
FBAB2A-FBAB2CC	Twenty-Nine HV Space Heating Units, n.g.	9 VAC 5-80-720C	PM, CO, VOC, SO ₂ , NO _x	302,400 BTU/hr to 3,460,000 BTU/hr
FBAB3A, FBAB3B	Two Air Houses for space heating, n.g.	9 VAC 5-80-720C	PM, CO, VOC, SO ₂ , NO _x	6,804,000 BTU/hr each
FBAB4	Assembly Bldg Boiler	9 VAC 5-80-720C	PM, CO, VOC, SO ₂ , NO _x	3,600,000 BTU/hr
FBAB5A-FBAB5F	Six MAU Space Heating Units, n.g.	9 VAC 5-80-720C	PM, CO, VOC, SO ₂ , NO _x	3,024,000 BTU/hr each
FBAB6A, FBAB6B	Two MAU Space Heating Units, n.g.	9 VAC 5-80-720C	PM, CO, VOC, SO ₂ , NO _x	1,814,400 BTU/hr each
FBSB1A, FBSB1B	Two HV Space Heating units, n.g.	9 VAC 5-80-720C	PM, CO, VOC, SO ₂ , NO _x	3,456,000 BTU/hr total
FBWTB	Dyno Water Test Unit	9 VAC 5-80-720C	PM, CO, VOC, SO ₂ , NO _x	388,800 BTU/hr
FBPC1A – FBPC1D	Four HV Space Heating units, n.g.	9 VAC 5-80-720C	PM, CO, VOC, SO ₂ , NO _x	8,294,400 BTU/hr total
FBPC2A-FBPC2F	Six IR Door Heaters, unvented	9 VAC 5-80-720C	PM, CO, VOC, SO ₂ , NO _x	75,000 BTU/hr each
FBPC3A, FBPC3B	Two HV Unit MUA 021, 022	9 VAC 5-80-720C	PM, CO, VOC, SO ₂ , NO _x	2.203 MMBTU/hr each
FBPC4	Old Chassis Booth MUA 023	9 VAC 5-80-720C	PM, CO, VOC, SO ₂ , NO _x	5.5 MMBTU/hr

Emission Unit No.	Emission Unit Description	Citation	Pollutant(s) Emitted (9 VAC 5-80-720 B)	Rated Capacity (9 VAC 5-80-720 C)
FBPC5A-FBPC5L	Eleven Dravo Door Heaters	9 VAC 5-80-720C	PM, CO, VOC, SO ₂ , NO _x	475,200 BTU/hr – 1,900,800 BTU/hr
FBPC6	One ENG-A HV unit	9 VAC 5-80-720C	PM, CO, VOC, SO ₂ , NO _x	2.112 MMBTU/hr
FBDF1A – FBDF1O	Fifteen IR Door Heaters (vented)	9 VAC 5-80-720C	PM, CO, VOC, SO ₂ , NO _x	75,000 BTU/hr each
FBDF2A, FBDF2B	Two Building MUA	9 VAC 5-80-720C	PM, CO, VOC, SO ₂ , NO _x	4.0 MMBTU/hr each
WWTP003	Batch waste water treatment plants	9 VAC 5-80-720B	VOC	VOC < 5 tpy
WWTF1A-WWTF1C	Three Building Gas Unit Heaters	9 VAC 5-80-720C	PM, CO, VOC, SO ₂ , NO _x	150,000 BTU/hr each
WWTF2	One Office HVAC	9 VAC 5-80-720C	PM, CO, VOC, SO ₂ , NO _x	45,000 BTU/hr
BIWW1A-BIWW1M	Thirteen IR Door Heaters (vented)	9 VAC 5-80-720C	PM, CO, VOC, SO ₂ , NO _x	75,000 BTU/hr each
BIWW2A-BIWW2I	Nine Building MUA	9 VAC 5-80-720C	PM, CO, VOC, SO ₂ , NO _x	2.25 MMBTU/hr each
ASW1A – ASW1CC	Twenty-Nine IR Door Heaters (vented)	9 VAC 5-80-720C	PM, CO, VOC, SO ₂ , NO _x	75,000 BTU/hr each
ASW2	One HVAC Unit	9 VAC 5-80-720C	PM, CO, VOC, SO ₂ , NO _x	250,000 BTU/hr
ASW3A – ASW3L	Twelve Building MUA	9 VAC 5-80-720C	PM, CO, VOC, SO ₂ , NO _x	2.25 MMBTU/hr each
FBNBW1	HV Unit, n.g	9 VAC 5-80-720C	PM, CO, VOC, SO ₂ , NO _x	625,000 BTU/hr
FBNBW2	HV Unit, n.g	9 VAC 5-80-720C	PM, CO, VOC, SO ₂ , NO _x	842,000 BTU/hr
FBNBW3	Trane HV Unit, n.g	9 VAC 5-80-720C	PM, CO, VOC, SO ₂ , NO _x	500,000 BTU/hr
FBNWB4A FBNWB4C	Three Trane HV Units, n.g.	9 VAC 5-80-720C	PM, CO, VOC, SO ₂ , NO _x	250,000 BTU/hr each
FBNWB5A FBNWB5H	Eight dock heaters n.g.	9 VAC 5-80-720C	PM, CO, VOC, SO ₂ , NO _x	91,200 BTU/hr each
FBNWB6A FBNWB6H	Eight MUA 002-009	9 VAC 5-80-720C	PM, CO, VOC, SO ₂ , NO _x	3.127 MMBTU/hr each
FBNWB7A FBNWB7H	Eight HV Units 013-020	9 VAC 5-80-720C	PM, CO, VOC, SO ₂ , NO _x	5.5 MMBTU/hr each
FBNWB8A FBNWB8C	Three HV Units 010-012	9 VAC 5-80-720C	PM, CO, VOC, SO ₂ , NO _x	4.59 MMBTU/hr each
FBNWB9	One HV Unit 024	9 VAC 5-80-720C	PM, CO, VOC, SO ₂ , NO _x	3.4 MMBTU/hr
FBNWB10A &B	Two 40 ton HVAC Units	9 VAC 5-80-720C	PM, CO, VOC, SO ₂ , NO _x	1.062 MMBTU/hr each
FBNWB11	One 60 ton HV Unit	9 VAC 5-80-720C	PM, CO, VOC, SO ₂ , NO _x	885,000 BTU/hr
FBNWB12 A-D	Four PAC units	9 VAC 5-80-720C	PM, CO, VOC, SO ₂ , NO _x	123,600 BTU/hr to 545,900 BTU/hr
FBNWB13 A&B	Two water heaters	9 VAC 5-80-720C	PM, CO, VOC, SO ₂ , NO _x	412,000 BTU/hr each
FBNWB14 A, B & C	Three PAC Units	9 VAC 5-80-720C	PM, CO, VOC, SO ₂ , NO _x	1.318 MMBTU/hr - 1.54 MMBTU /hr

Emission Unit No.	Emission Unit Description	Citation	Pollutant(s) Emitted (9 VAC 5-80-720 B)	Rated Capacity (9 VAC 5-80-720 C)
FBNWB15 A, B & C	Three PAC Units	9 VAC 5-80-720C	PM, CO, VOC, SO ₂ , NO _x	64,890 BTU/hr to 735,420 BTU/hr
FBNWB16 A-O	Fifteen Door Heaters	9 VAC 5-80-720C	PM, CO, VOC, SO ₂ , NO _x	77,250 BTU/hr each
FBNWB17 A & B	Two Paint Dock Door Heaters	9 VAC 5-80-720C	PM, CO, VOC, SO ₂ , NO _x	226,000 BTU/hr each
FBNWB18	One Door Heater	9 VAC 5-80-720C	PM, CO, VOC, SO ₂ , NO _x	875,000 BTU/hr
FBNWB19 A & B	Two Direct Fired Burners	9 VAC 5-80-720C	PM, CO, VOC, SO ₂ , NO _x	8.24 MMBTU/hr each
FBNWB20	One MUA	9 VAC 5-80-720C	PM, CO, VOC, SO ₂ , NO _x	659,200 BTU/hr
FORKLIFT	Forty-Two Gas Powered Forklifts	9 VAC 5-80-720A	PM, CO, VOC, NO _x	NA
PDSL001	Diesel Fuel Tank	9 VAC 5-80-720B	VOC	VOC < 5 tpy
EGEN	Emergency Generator, diesel	9 VAC 5-80-720C	PM, CO, VOC, SO ₂ , NO _x	150 KW (201 bhp)
GEN0001	Diesel Fuel Tank	9 VAC 5-80-720B	VOC	VOC < 5 tpy
AST-101	SCH 50 Wt Oil Tank	9 VAC 5-80-720B	VOC	VOC < 5 tpy
AST-102	Trans. Fluid Tank	9 VAC 5-80-720B	VOC	VOC < 5 tpy
AST-103	Anti-Freeze Tank	9 VAC 5-80-720B	VOC	VOC < 5 tpy
AST-104	15W40 Oil Tank	9 VAC 5-80-720B	VOC	VOC < 5 tpy
AST-105	75W90 storage tank, aluminum, heat-traced	9 VAC 5-80-720B	VOC	VOC < 5 tpy
AST-106	Freon 134A Tank	9 VAC 5-80-720B	VOC	VOC < 5 tpy
AST-107	Methanol Tank	9 VAC 5-80-720B	VOC	VOC < 5 tpy
AST-108	Diesel Fuel Tank	9 VAC 5-80-720B	VOC	VOC < 5 tpy
AST-109	Anti-Freeze Tank	9 VAC 5-80-720B	VOC	VOC < 5 tpy
AST-110	80W90 Tank	9 VAC 5-80-720B	VOC	VOC < 5 tpy
AST-111	80W90 Tank	9 VAC 5-80-720B	VOC	VOC < 5 tpy
AST-112	Anti-Freeze Tank	9 VAC 5-80-720B	VOC	VOC < 5 tpy
AST-201	Purge Solvent Tank	9 VAC 5-80-720B	VOC	VOC < 5 tpy
AST-202	Paint Waste Tank	9 VAC 5-80-720B	VOC	VOC < 5 tpy
AST-301	Gasoline storage tank, 550 gal near PC bldg	9 VAC 5-80-720B	VOC	VOC < 5 tpy
AST-401 - AST-408	Eight 30,000 gallon propane storage tanks	9 VAC 5-80-720B	VOC	VOC < 5 tpy
AST-501	Diesel Fuel Tank	9 VAC 5-80-720B	VOC	VOC < 5 tpy
AST-502	Diesel Fuel Tank	9 VAC 5-80-720B	VOC	VOC < 5 tpy
TUBEHTR1	SpaceRay Tube Heater	9 VAC 5-80-720C	PM, CO, VOC, SO ₂ , NO _x	750,000 BTU/hr
6PE-001	Prep/Sand Booth	9 VAC 5-80-720B	PM	PM < 5 tpy
12FBE-002	Space Air Unit # 1-S	9 VAC 5-80-720C	PM, CO, VOC, SO ₂ , NO _x	8.0 MMBTU/hr
12FBE-003	Space Air Unit # 1-N	9 VAC 5-80-720C	PM, CO, VOC, SO ₂ , NO _x	9.5 MMBTU/hr

These insignificant emission units are presumed to be in compliance with all requirements of the federal Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping, or reporting shall be required for these emission units in accordance with 9 VAC 5-80-110.

CONFIDENTIAL INFORMATION

No information contained in the permit application or in the specific records required by the permit is considered confidential. However, the specific emission factors of the database used to generate portions of the required records are regarded as confidential, in that the factors reflect proprietary paint and coating formulations. If any material requested by VDEQ, USEPA or another government agency contains information that includes the actual emission factors from the Volvo database, that material should be considered confidential.

PUBLIC PARTICIPATION

A public notice regarding the draft permit was printed in the November 18, 2007, edition of the Roanoke Times, New River Valley Edition. Public comments were accepted from November 18, 2007 through December 19, 2007. No public comments were received. USEPA reviewed this permit with concurrent processing as draft and proposed document. The final day for USEPA comments was January 3, 2008. No comments were received from USEPA.

APPENDIX A: NSR/FOP CORRESPONDENCE TABLE

The following table is a modification of the table in the section Emission Unit Applicable Requirements – New Source Review Permit Requirements. This table is ordered corresponding to the NSR permit conditions as an aid to reference the corresponding federal operating permit conditions. The NSR permit follows in Appendix B.

NSR Condition	Title V Condition	Description	VAC Applicable Requirement
2	IV-A-1	BACT as design specifications cited for particulate control devices	9 VAC 5-80-1180, 9 VAC 5-50-260
3	IV-A-2	BACT as water-based or high solids coatings in certain applications	9 VAC 5-80-1180, 9 VAC 5-50-260
4	IV-A-3	BACT as water-based primers	9 VAC 5-50-260
5	IV-A-4	BACT as water-based E-coat	9 VAC 5-50-260
6	IV-A-5, IV-B-2	Basecoat Booth #2 VOC incinerator with instrument and monitoring requirements	9 VAC 5-80-1180, 9 VAC 5-50-260
7	IV-A-6	VOC Content limit (lbs/gal) as BACT for spray booths without VOC controls	9 VAC 5-80-1180, 9 VAC 5-50-260, 9 VAC 5-50-180
8	IV-A-7	HAP content limits on coatings as annual average [MACTs MMMM & PPPP]	9 VAC 5-80-1180, 9 VAC 5-60-100
9	IV-A-8	Minimize cleaning & purging emissions	9 VAC 5-40-20
10	IV-A-9	Alternative control procedure	9 VAC 5-80-110
11	IV-B-1	Spray booths particulate control monitoring (pressure differential gauges)	9 VAC 5-80-1180, 9 VAC 5-50-20, 9 VAC 5-50-260
12	III-D-1, IV-D-1, V-D-1	Provide test ports at appropriate locations on request	9 VAC 5-50-30
13	IV-A-12	Annual VOC throughput limit for coating content	9 VAC 5-80-1180, 9 VAC 5-80-110
14	IV-A-13	Monthly VOC throughput limit for coating content	9 VAC 5-80-1180, 9 VAC 5-80-110
15	III-A-1	Approved fuels are natural gas & propane	9 VAC 5-80-1180
16	III-A-2	Natural gas annual throughput limit	9 VAC 5-80-1180
17	III-A-5	Compliance with NSPS Dc	9 VAC 5-50-410
18	IV-A-10	Requirements by reference MACT MMMM	9 VAC 5-60-100
19	IV-A-11	Requirements by reference MACT PPPP	9 VAC 5-60-100
20	IV-A-14	VOC emission limit on Multi-Tone Spray Booth 8PE-001	9 VAC 5-50-260, 9 VAC 5-80-1615
21	IV-A-15	VOC emission limit for painting/coating for all spray booths combined	9 VAC 5-50-260, 9 VAC 5-80-1615
22	III-A-3	Combustion product emission limits	9 VAC 5-50-260
23	IV-A-16	Particulate emission limits for spray booths broken down by operation unit	9 VAC 5-50-260, 9 VAC 5-50-30
24	V-A-1	VOC emission limit for entire facility	9 VAC 5-50-260
25	III-A-4, IV-A-17	Visible emissions limit for ovens, spray booths and incinerators	9 VAC 5-50-260
26	IV-D-2	Stack testing on request for Basecoat Booth # 2 (8PE-002) VOC/HAP control system	9 VAC 5-50-30
27	IV-D-3	Stack testing on request for particulate control from any or all spray booths	9 VAC 5-50-30
28	IV-D-4	VEEs on request for opacity from any or all spray booths	9 VAC 5-50-30
NSR	Title V	Description	VAC Applicable Requirement

Condition	Condition		
29a	IV-C-2	Monthly and annual consumption of VOC from each operational area	9 VAC 5-50-50
29b	IV-C-3	Monthly and annual consumption of VOC from painting/coating processes	9 VAC 5-50-50
29c	V-C-2	Monthly and annual consumption of VOC from miscellaneous sources	9 VAC 5-50-50
29d	V-C-3	Monthly and annual consumption of VOC from entire facility	9 VAC 5-50-50
29e	IV-C-4	Monthly and annual consumption of paints and coatings - each area and entire facility	9 VAC 5-50-50
29f	IV-C-5	Monthly and annual throughput of skids for painting and coating	9 VAC 5-50-50
29g	III-C-1	Monthly and annual consumption of natural gas for entire facility	9 VAC 5-50-50
29h	III-C-2	Monthly and annual consumption of natural gas for the phosphate system heater	9 VAC 5-50-50, (NSPS Dc)
29i	IV-C-6	Monthly and annual emissions of VOC from painting/coating processes	9 VAC 5-50-50
29j	V-C-4	Monthly and annual emissions of VOC from miscellaneous sources	9 VAC 5-50-50
29k	V-C-5	Monthly and annual emissions of VOC from entire facility	9 VAC 5-50-50
29l	III-C-3	Monthly and annual emissions from gas and propane combustion for entire facility	9 VAC 5-50-50
29m	IV-C-7	Average lbs VOC per gallon of coatings in spray booths without VOC controls	9 VAC 5-50-50
29n	IV-C-8	Average annual HAP emissions to demonstrate compliance with MACTs	9 VAC 5-50-50
29o	IV-C-9	Records of pressure differential for particulate scrubbers and spray booths	9 VAC 5-50-50
29p	IV-C-10	Temperature records for 8PE-002 RTO	9 VAC 5-50-50
29q	IV-C-1, V-C-1	Certified product data sheets for coatings	9 VAC 5-50-50
29r	V-C-7	Results from stack tests and VEEs	9 VAC 5-50-50
29s	V-C-8	Records of maintenance and training	9 VAC 5-50-50
30	V-E-1, VIII-F	Malfunction report	9 VAC 5-20-180
31	V-E-2	Notice of control equipment maintenance	9 VAC 5-20-180
32	V-E-3	Notice of control equipment malfunction	9 VAC 5-20-180
33	VIII-Q	Right of entry	9 VAC 5-170-130
34	III-A-7, V-A-3	Maintenance & operation practice	9 VAC 5-50-20
35	V-C-10	Record of malfunctions	9 VAC 5-20-180
36	V-A-2	Reduction or shutdown to avoid violation	9 VAC 5-20-180
37	VIII-V	Permit suspension/revocation	9 VAC 5-80-1210
38	VIII-T	Change of ownership	9 VAC 5-80-10
39	VIII-S	Permit Copy	9 VAC 5-80-110
40	NA	State toxics limit on lead chromate usage	(9 VAC 5-170-160)
41	NA	Control efficiency for E-Coat incinerator	(9 VAC 5-40-130)
42	NA	Stack tests for E-Coat incinerator	9 VAC 5-50-30
43a	NA	Temperature of E-Coat odor incinerator	9 VAC 5-50-50
43b	NA	Emissions by total plant of all HAPs	9 VAC 5-50-50
44	NA	HAP process malfunction shutdown	9 VAC 5-20-180

APPENDIX B: NSR PERMIT DATED March 7, 2007, as amended August 21, 2007

The permit, with its own page numbering, follows.



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

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August 21, 2007

Steve Pierett
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P.O.Box 1126
Dublin, VA 24084

Location: Dublin, Virginia
Registration No: 20765
County-Plant No: 155-0041

Mr. Pierett:

Attached is an amendment to a permit to modify and operate a miscellaneous metal and plastic parts and products coating facility for painting heavy duty trucks in accordance with the provisions of the Commonwealth of Virginia State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution. This permit amends your permit dated March 7, 2007. This permit contains legally enforceable conditions. Failure to comply may result in a Notice of Violation and civil penalty. Please read all permit conditions carefully.

In the course of evaluating the application and arriving at a final decision to approve the project, the Department of Environmental Quality (DEQ) deemed the application complete on June 12, 2007.

This amended permit approval to modify and operate shall not relieve Volvo Trucks North America of the responsibility to comply with all other local, state and federal permit regulations.

The Board's Regulations as contained in Title 9 of the Virginia Administrative Code 5-170-200 provide that you may request a formal hearing from this case decision by filing a petition with the Board within 30 days after this case decision notice was mailed or delivered to you. 9 VAC 5-170-200 G provides that you may request direct consideration of the decision by the Board if the Director of the DEQ made the decision. Please consult the relevant regulations for additional requirements for such requests.

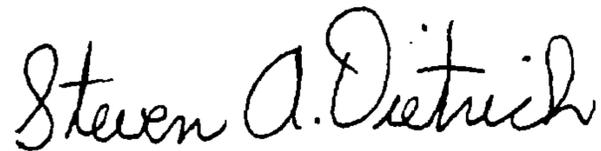
As provided by Rule 2A:2 of the Supreme Court of Virginia, you have 30 days from the date you actually received this permit or the date on which it was mailed to you, whichever occurred first, within which to initiate an appeal to court by filing a Notice of Appeal with:

David K. Paylor, Director
Department of Environmental Quality
P.O. Box 1105
Richmond, Virginia 23218

In the event that you receive this permit by mail, three days are added to the period in which to file an appeal. Please refer to Part Two A of the Rules of the Supreme Court of Virginia for additional information including filing dates and the required content of the Notice of Appeal.

If you have any questions concerning this permit, please contact permit engineer Gary Bradley or inspector Timothy Overstreet at the regional office at (540) 562-6700.

Sincerely,



Steven A. Dietrich, P.E.
Regional Director

SAD/GRB/20765.2007-08-21.nsr.amd.cvr

Attachments: Permit

cc: M. Harvey, Air Permitting (electronic file submission)
F. Adams, w/ attachment & report
M. Scanlan (cover only)
G. Bradley



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

L. Preston Bryant, Jr.
Secretary of Natural Resources

West Central Regional Office
3019 Peters Creek Road, Roanoke, Virginia 24019
Telephone (540) 562-6700, Fax (540) 562-6725
www.deq.virginia.gov

David K. Paylor
Director

Steven A. Dietrich
Regional Director

NEW SOURCE REVIEW PERMIT STATIONARY SOURCE PERMIT TO MODIFY AND OPERATE

This permit includes designated equipment subject to New Source Performance Standards (NSPS Dc).

This permit includes designated equipment subject to National Emission Standards for Hazardous Air Pollutants for Source Categories. (MACT MMMM and MACT PPPP)

This permit amends your permit dated March 7, 2007.

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

Volvo Trucks North America, Inc.
P.O. Box 1126
Dublin, Virginia 24084
Registration No. 20765
County-Plant ID No.: 155-0041

is authorized to modify and operate a miscellaneous metal and plastic parts and products coating facility for painting heavy duty trucks located at

4881 Cougar Trail Road in Pulaski County near Dublin, Virginia

in accordance with the Conditions of this permit.

Approved on March 7, 2007, as amended August 21, 2007.

Steven A. Dietrich, P.E.
Regional Director, Department of Environmental Quality

Permit consists of 17 pages.
Permit Conditions 1 to 44.
Source Testing Report Format.

INTRODUCTION

This Article 6 (New Source Review) permit supersedes the March 18, 2005, Article 8 (Prevention of Significant Deterioration) permit based on the decision of Volvo Trucks North America not to fund the modifications in that permit. This revision will essentially reinstate the provisions of the previous October 31, 2003, New Source Review permit. Two significant changes have been requested. The facility has reduced the paint usage in the 8PE-001 paint spray booth and has presented a revised BACT analysis to demonstrate that requirement of the zeolite adsorber and oxidizer control system presents an excessive economic hardship. The booth will no longer be subject to VOC control, but will now have a VOC throughput limit consistent with the revised BACT analysis. Also, plant particulate control requirements will now reflect particulate concentrations in the stack emissions rather than control efficiencies as percentage reductions. The percentage reduction requirements presented testing problems because most coating operations produce highly variable inlet loading over a typical testing period.

This permit approval is based on the permit application dated September 1, 2006, including amendment information dated November 8, 2006, and May 30, 2007, and supplemental information dated December 20, 2006. Any equipment and operating parameters not addressed in that application shall remain as represented in the federal operating permit application dated November 22, 2006. 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 5-10-10 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.

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.

PERMIT CONDITIONS:

PROCESS REQUIREMENTS

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

Equipment to be modified			
Reference No.	Equipment Description	Federal Requirements	Installation Date
8PE-001	Multi-Tone Booth # 1	MACT MMMM/PPPP	1995
8PE-001A	Multi-Tone Oven # 1		1995
8PE-001B	Multi-Tone Cooler # 1		1995

Equipment permitted prior to the date of this permit			
Reference No.	Equipment Description	Federal Requirements	Installation Date
1PE-001	South Chassis Paint Booth	MACT MMMM	1988
1PE-001A	South Chassis Curing Oven		1988
1PE-001B	South Chassis Oven Cooler		1988
1PE-002	North Chassis Paint Booth	MACT MMMM	1996
1PE-002A	North Chassis Curing Oven		1996
1PE-002B	North Chassis Oven Cooler		1996
2PE-001	Phosphate System & Heater	NSPS Dc	1995
3PE-001	E-Coat Process	MACT MMMM	1995
3PE-001A	E-Coat Tunnel		1995
3PE-001B	E-Coat Oven		1995
3PE-001C	E-Coat Oven Cooler		1995
3PE-001D	E-Coat Scuff Station		1995
4PE-001	Seam Sealer/Bracket Attach		1995
4PE-001A	Cab Wipe/Prime Tack-Off		1995
5PE-001	Primer Process - Robotic Zone	MACT MMMM	1995
5PE-001A	Primer Process - Manual Zone		1995
5PE-001B	Primer Oven Exhaust		1995
5PE-001C	Primer Oven Cooler		1995
7PE-001	Specialty/Touch-Up Painting Booth	MACT MMMM/PPPP	1995
8PE-002	Basecoat Booth # 2	MACT MMMM/PPPP	2000
8PE-002A	Basecoat Oven # 2		2000
8PE-002B	Basecoat Cooler # 2		2000
8PE-002C	Basecoat Booth # 2 Demask Station		2000
9PE-001	Clearcoat Spray Booth	MACT MMMM/PPPP	1995
9PE-001A	Clearcoat Curing Oven		1995
9PE-001B	Clearcoat Cooler # 1		1995
9PE-001C	Clearcoat Cooler # 2		1995
10PE-001, 002	Spot Repair (BC/CC)	MACT MMMM/PPPP	1995
11PE-001	Final Inspection/Repair	MACT MMMM/PPPP	1995
13PE-001	PC Booth # 1: Cab Touch-Up	MACT MMMM/PPPP	1974
13PE-001A	PC Booth #1 Oven		1974
13PE-002	PC Booth # 2: Cab Touch-Up	MACT MMMM/PPPP	1974
13PE-002A	PC Booth #2 Oven		1998
13PE-004	PC Booth # 4: Truck Touch-Up	MACT MMMM/PPPP	2000
13PE-004A	PC Booth #4 Oven		2000

Specifications included in the permit under this Condition are for informational purposes only and do not form enforceable terms or conditions of the permit.
 (9 VAC 80-1180 D 3)

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

<u>Paint/Coating Process</u>	<u>Control Equipment</u>	<u>Maximum Emission</u>
Chassis 1PE-001	Water Wash Spray Booth with dry filters	0.005 gr/scf
Chassis 1PE-002	Venturi Wet Scrubber with dry filters	0.003 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 5-80-1180 and 9 VAC 5-50-260)

3. **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
- Chassis 1PE-002
- Cab Clearcoat 9PE-001
- Inspection & Repair 10PE-001 & 002

(9 VAC 5-50-260 and 9 VAC 5-80-1180)

4. **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)

5. **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)

6. **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 5-80-1180 and 9 VAC 5-50-260)

7. **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 5-80-1180, 9 VAC 5-170-160, 9 VAC 5-50-180, and 9 VAC 5-50-260)

8. **Emission Controls** – Hazardous Air Pollutant emissions from painting/coating operations are limited to the more stringent of:
 - a. 2.6 lbs/gal of coating solids as applied, or
 - b. 0.16 lbs VHAP/lb of coating solids as applied,as an annual facility-wide average, calculated monthly as a rolling twelve (12) month average, for the overall painting/coating facility.*

*The facility has chosen to demonstrate compliance with MACTs MMMM and PPPP by demonstrating emissions levels which meet the MACT requirements on the basis of monthly and annualized averages. This choice does not preclude the facility from electing to demonstrate compliance by another methodology in the future, provided the appropriate amendments are made to the required permits.
(9 VAC 5-80-1180 and 9 VAC 5-60-100)

9. **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 5-40-20 F)

10. **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 Air Compliance Manager, West Central 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 5-170-160)

11. **Monitoring Devices** - The Chassis 1PE-002, 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 5-80-1180, 9 VAC 5-50-20 C and 9 VAC 5-50-260)

12. **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)

OPERATING LIMITATIONS

13. **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 and 9 VAC 5-170-160)
14. **Throughput** - The volatile organic compound consumption for painting/coating facility-wide shall not exceed 233.3 tons per month.
(9 VAC 5-80-1180 and 9 VAC 5-170-160)
15. **Fuel** - The approved fuels for the central air system, ovens, incinerators, and make-up heaters are natural gas and propane. A change in the fuel may require a permit to modify and operate.
(9 VAC 5-80-1180)
16. **Fuel Throughput** - The facility as a whole shall consume no more than $1,927 \times 10^6$ standard cubic feet of natural gas per year, calculated monthly as the sum of each consecutive 12 month period.
(9 VAC 5-80-1180)
17. **Requirements by Reference** - Permittee is subject to all applicable provisions of 40 CFR 60.40c to 60.48c (NSPS Dc) for the Phosphate System washing heater, 6FBE-001. At the time of issuance of this permit, applicable requirements concern only proper notification at the start up of the phosphate system washing heater and fuel consumption records.
(9 VAC 5-50-100)
18. **Requirements by Reference** - Permittee is subject to all applicable provisions of 40 CFR 63.3880 et seq. (MACT Subpart M) for the following process areas: 1PE-001, 1PE-002, 3PE-001, 5PE-001, 7PE-001, 8PE-001, 8PE-002, 9PE-001, 10PE-001, 10PE-002, 13PE-001, 13PE-002, and 13PE-004*.
(9 VAC 5-60-100)

19. **Requirements by Reference** - Permittee is subject to all applicable provisions of 40 CFR 63.4480 et seq. [MACT Subpart P] for the following process areas: 7PE-001, 8PE-001, 8PE-002, 9PE-001, 10PE-001, 10PE-002, 13PE-001, 13PE-002, and 13PE-004*. At the time of issuance of this permit, permittee must be in compliance with this requirement no later than April 19, 2007.

(9 VAC 5-60-410)

* For process areas that may be subject to both MACT MMMM and MACT P, the regulations allow the facility to designate which MACT is the predominant operation of the process area and comply only with one MACT, either MMMM or P. For process areas listed in both Conditions 18 and 19, above, compliance with either MMMM or P shall be considered compliance with both conditions if the appropriate predominant activity is demonstrated. Volvo proposes to demonstrate compliance with MACT P for any plastic or metal as a demonstration of compliance for both MACTs based on MACT P being more stringent than MACT MMMM.

EMISSION LIMITATIONS

20. **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, 9 VAC 5-80-1180 and 9 VAC 5-170-160)

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

Volatile Organic Compounds 532.5 tons/yr

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

(9 VAC 5-50-260, 9 VAC 5-80-1180 and 9 VAC 5-170-160)

22. **Emission Limits** - Emissions from the combined operation of all stationary fuel burning equipment, including the central air system and all incinerators, ovens, and make-up heaters shall not exceed the limits specified below:

PM-10 7.0 tons/yr

Nitrogen Oxides (as NO₂) 91.6 tons/yr

Carbon Monoxide 77.0 tons/yr

Volatile Organic Compounds 5.0 tons/yr

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

These limits are included chiefly for emission inventory purposes and based on USEPA emission factors and fuel throughputs (when fuel burning equipment is operating properly, compliance with the 1,927 million scf/yr maximum natural gas usage limit shall be deemed compliance with these limits).

(9 VAC 5-50-260 and 9 VAC 5-170-160)

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

Chassis Spray Combined 1PE-001&002	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 5-50-260 and 9 VAC 5-50-30)

24. **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	532.5 tons/yr
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Annual emissions calculated monthly as the sum of the previous consecutive twelve month period.

(9 VAC 5-50-260)

25. **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 5-80-1180, 9 VAC 5-50-260 and 9 VAC 5-170-160)

CONTINUING COMPLIANCE DETERMINATION

26. **Stack Tests** - Upon request by the VDEQ, the permittee shall conduct performance tests for the VOC and HAP destruction efficiency of the incinerator controlling VOC and HAP emissions from the 8PE-002 spray booth to demonstrate compliance with the emission limits and control efficiency requirements contained in this permit. The tests shall be performed, and demonstrate compliance, within 60 days after notice by the Air Compliance Manager, West Central Regional Office, that the Department has reason to believe that the facility or a portion of the facility is not in compliance with the emission limits of this permit. Tests shall

be conducted and reported and data reduced as set forth in 9 VAC 5-50-30 of State Regulations, and the test methods and procedures contained in each applicable section or subpart listed in 9 VAC 5-50-410. The details of the tests shall be arranged with the Air Compliance Manager, West Central Regional Office. The permittee shall submit a test protocol at least 30 days prior to testing. Two copies of the test results shall be submitted to the Air Compliance Manager, West Central Regional Office within 45 days after test completion and shall conform to the test report format enclosed with this permit.

(9 VAC 5-50-30 G)

27. **Stack Tests** - Upon request by the VDEQ, the permittee shall conduct performance tests for the particulate emissions from spraying or coating in any spray booth to demonstrate compliance with the emission limits and/or control requirements contained in this permit. The tests shall be performed, and demonstrate compliance, within 60 days after notice by the Air Compliance Manager, West Central Regional Office, that the Department has reason to believe that the facility or a portion of the facility is not in compliance with the emission limits of this permit. Tests shall be conducted and reported and data reduced as set forth in 9 VAC 5-50-30 of State Regulations, and the test methods and procedures contained in each applicable section or subpart listed in 9 VAC 5-50-410. The details of the tests shall be arranged with the Air Compliance Manager, West Central Regional Office. The permittee shall submit a test protocol at least 30 days prior to testing. Two copies of the test results shall be submitted to the Air Compliance Manager, West Central Regional Office within 45 days after test completion and shall conform to the test report format enclosed with this permit.

(9 VAC 5-50-30 G)

28. **Visible Emissions Evaluation** - Upon request by the VDEQ, the permittee shall conduct visible emission evaluations in accordance with 40 CFR, Part 60, Appendix A, Method 9 on any spray operation stack(s) to demonstrate compliance with the visible emission limits contained in this permit. Each test shall consist of three (3) sets of twenty-four (24) consecutive observations (at fifteen (15) second intervals) to yield a six (6) minute average. The details of the tests are to be arranged with Air Compliance Manager, West Central Regional Office. The tests shall be performed, and demonstrate compliance, within 60 days after notice by the Air Compliance Manager, West Central Regional Office, that the Department has reason to believe that the facility or a portion of the facility is not in compliance with the emission limits of this permit. Two (2) copies of the test results shall be submitted to the Air Compliance Manager, West Central Regional Office within 45 days after test completion and shall conform to the test report format enclosed with this permit.

(9 VAC 5-50-30 G)

RECORDS AND REPORTING

29. **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 Air Compliance Manager, West Central 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 consumption of natural gas and propane for the total plant. Annual consumption shall be calculated monthly as the sum of the previous consecutive 12 month period.
- h. Monthly and annual consumption of natural gas and propane for the Phosphate System washing heater. Annual consumption shall be calculated monthly as the sum of the previous consecutive 12 month period.
- i. Monthly and annual emissions of particulate matter from each spray booth or set of booths with limits in Condition 23.
- j. 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.

- k. 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.
- l. 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.
- m. Monthly and annual emissions of nitrogen oxides, carbon monoxide, volatile organic compounds and PM-10, from combustion of natural gas and propane for the total plant. Annual emissions shall be calculated monthly as the sum of the previous consecutive 12 month period.
- n. 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.
- o. Average monthly and annual HAP emissions in pounds/gallon of solids or pounds VHAP/pound coating solids as an average from overall truck painting/coating (except that spray booth 8PE-002, controlled by VOC fume incineration may be otherwise documented to demonstrate MACT compliance). Annual emissions shall be calculated monthly as the sum of the previous consecutive 12 month period.
- p. Records of the differential pressure readings for the venturi scrubbers controlling particulate emissions from the following spray booths: Chassis 1PE-002, 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.
- q. 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.
- r. 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.
- s. Results of all stack tests, visible emission evaluations and performance evaluations.
- t. 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)

30. **Reports for Facility or Control Equipment Malfunction** - Within 30 days of a failure or malfunction that is expected to exist for 30 days or more, and semi-monthly thereafter until the failure or malfunction is corrected, the permittee shall furnish written reports to the Air Compliance Manager, West Central Regional Office containing the following:
- a. Identification of the specific facility that is affected as well as its location and registration number;
 - b. The expected length of time that the air pollution control equipment will be out of service;
 - c. The nature and quantity of air pollutant emissions likely to occur during the breakdown period;
 - d. Measures taken to reduce emissions to the lowest amount practicable during the breakdown period;
 - e. A statement as to why the owner was unable to obtain repair parts or perform repairs that would allow compliance with the provisions of these regulations within 30 days of the malfunction or failure;
 - f. An estimate, with reasons given, of the duration of the shortage of repairs or repair parts which would allow compliance with the provisions of these regulations; and
 - g. Any other pertinent information as may be requested by the board.

(9 VAC 5-20-180 D)

NOTIFICATIONS

31. **Notification for Control Equipment Maintenance** - The permittee shall furnish notification to the Air Compliance Manager, West Central Regional Office of the intention to shut down or bypass, or both, air pollution control equipment for necessary scheduled maintenance, which results in excess emissions for more than one hour, at least 24 hours prior to the shutdown. The notification shall include, but is not limited to, the following information:
- a. Identification of the air pollution control equipment to be taken out of service, as well as its location, and registration number;
 - b. The expected length of time that the air pollution control equipment will be out of service;
 - c. The nature and quantity of emissions of air pollutants likely to occur during the shutdown period; and
 - d. Measures that will be taken to minimize the length of the shutdown or to negate the effect of the outage.

(9 VAC 5-20-180 B)

32. **Notification for Facility or Control Equipment Malfunction** - The permittee shall furnish notification to the Air Compliance Manager, West Central 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 electronic mail. 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 Air Compliance Manager, West Central Regional Office.
(9 VAC 5-20-180 C and 9 VAC 5-80-1180)

GENERAL CONDITIONS

33. **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 5-170-130 and 9 VAC 5-80-1180)

34. **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.

- 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 VDEQ personnel upon request.

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

35. **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.
(9VAC 5-20-180 J and 9 VAC 5-80-1180 D)

36. **Violation of Ambient Air Quality Standard** - The permittee shall, upon request of the VDEQ, 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 and 9 VAC 5-80-1180)

37. **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 interfere 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 F)

38. **Change of Ownership** - In the case of a transfer of ownership of a stationary source, the new owner shall abide by any current permit issued to the previous owner. The new owner shall notify the Director, West Central Regional Office of the change of ownership within 30 days of the transfer.

(9 VAC 5-80-1240)

39. **Permit Copy** - The permittee shall keep a copy of this permit on the premises of the facility to which it applies.

(9 VAC 5-170-160)

STATE-ONLY ENFORCEABLE REQUIREMENTS

40. **Hazardous Air Pollutant Exclusion** - The permittee shall cease to utilize any coatings containing lead chromate or other lead or chromium containing compounds, excepting limited use for spot touch-ups and for military contracts with specifications requiring such constituents. Resumption of the use of such compounds for commercial production shall require a new permit and may require air dispersion modeling.
(9 VAC 5-170-160)
41. **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 E-Coat Oven 3FBE-001 incinerator demonstrated acceptable emissions at 1400 °F chamber temperature in 1997 testing because there were so little emissions. The main purpose of the E-Coat Oven 3FBE-001 incinerator is for odor control.)
- 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 5-40-130, 9 VAC 5-80-1180, and 9 VAC 5-50-260)
42. **Stack Tests** - Upon request by the VDEQ, the permittee shall conduct performance tests for the VOC destruction efficiency of the incinerator controlling VOC emissions from the E-Coat Oven 3FBE-001 to demonstrate compliance with the emission limits and control efficiency requirements contained in this permit. The tests shall be performed, and demonstrate compliance, within 60 days after notice by the Air Compliance Manager, West Central Regional Office, that the Department has reason to believe that the facility or a portion of the facility is not in compliance with the emission limits of this permit. Tests shall be conducted and reported and data reduced as set forth in 9 VAC 5-50-30 of State Regulations, and the test methods and procedures contained in each applicable section or subpart listed in 9 VAC 5-50-410. The details of the tests shall be arranged with the Air Compliance Manager, West Central Regional Office. The permittee shall submit a test protocol at least 30 days prior to testing. Two copies of the test results shall be submitted to the Air Compliance Manager, West Central Regional Office within 45 days after test completion and shall conform to the test report format enclosed with this permit.
(9 VAC 5-40-130 and 9 VAC 5-50-30 G)

43. **On Site Records** – The permittee shall maintain a toxics emission inventory for Hazardous Air Pollutants and such other air toxics as may be added to the Board's regulations. HAP emissions should not include the amount of HAPs that are not emitted due to HAP incineration emissions controls. HAPs returned to vendor, HAPs 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. This shall include separate records for the 8PE-001 and 8PE-002 spray booths. (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 Air Compliance Manager, West Central 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.
 - b. In order to satisfy the state toxics regulation, monthly and annual emissions from the total plant of total and individual Hazardous Air Pollutants, any glycol ethers still listed as HAPs. Lead from lead chromate, chromium from lead chromate, and chromium from other chromium compounds, shall be accounted for separately. The records shall include such consumption records and control equipment efficiency factors as VDEQ determines are necessary to support the estimates. HAP emissions from sources other than paints and coatings that constitute less than 0.01 tons per year may be considered negligible. Annual emissions shall be calculated monthly as the sum of the previous consecutive 12 month period.

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)

44. **Facility or Control Equipment Malfunction - Hazardous Air Pollutant Processes** - The truck painting and coating processes utilizing hexamethylene 1,6 diisocyanate shall, upon request of the Department, shut down immediately if its emissions increase in any amount because of a bypass, malfunction, shutdown or failure of the process or its associated air pollution control equipment. The processes shall not return to operation until it and the associated air pollution control equipment are able to operate in the proper manner.
- (9 VAC 5-20-180 C & F.3)

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COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

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STATEMENT OF LEGAL AND FACTUAL BASIS

Volvo Trucks North America, Inc.
State Route 643
Dublin, Virginia
Permit No. VA-20765

Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have federal Air Pollution Operating Permits, called Title V Operating Permits. As required by 40 CFR Part 70 and 9 VAC 5 Chapter 80, Volvo Trucks North America, Inc. has applied for a Title V Operating Permit renewal for its facility. The Department has reviewed the application and has prepared a final Title V Operating Permit.

Engineer/Permit Contact: Gary R. Bradley, P.E. Date: March 23, 2007

Air Permit Manager: Kit U Date:
Scanlan, Ph.D.
Regional Air Permit Manager

Volvo Trucks North America
Permit No.: WCRO-20765
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FACILITY INFORMATION

Permittee
Volvo Trucks North America, Inc.
7900 National Service Road
Greensboro, NC 27402

Facility
Volvo Trucks North America, Inc.
P.O. Box 1126
Dublin, VA 24084

County-Plant ID No. 51-155-0041

SOURCE DESCRIPTION -

SIC Code:3711 NAICS Code: 336120

Volvo Trucks North America, Inc. is a producer of heavy-duty trucks located in Pulaski County on state route 643 (Cougar Trail) near Dublin, Virginia. Volvo presently produces heavy duty trucks by on site assembly including painting of the entire cab. Volvo has formalized an ongoing extensive recordkeeping procedure to document the coating usage at the facility. A computer database has been developed to track the amount of each type of paint or coating used at each plant operation, the amount, if any, returned to storage, and the amount sent to off-site waste disposal. From this database, Volvo prepares a monthly material balance of the total consumption of coatings, VOCs, and paint particulate as well as a monthly consumption of all air toxics. This permit extends that recordkeeping to include all Hazardous Air Pollutants. The monthly emissions are then estimated based on the operational area where the consumption occurred and the capture efficiency and the efficiency of emission controls for that operational area. One of the two booths in the 8PE area has VOC control, so these booths have separate record keeping requirements.

The facility is a Title V major source of Volatile Organic Compounds, nitrogen oxides, carbon monoxide, and Hazardous Air Pollutants. This source is located in an attainment area for all pollutants, and is a PSD major source for VOCs. In a permit for a major plant expansion, all significant emission sources at the facility were included in a permit to modify and construct issued as a Minor NSR Permit on April 29, 1999, either as new sources, modified source, or existing equipment covered by the conditions of the permit. That permit was modified three times to reflect design changes in the later stages of the expansion, with the last revised permit was issued on July 27, 2000, to make the permit conditions consistent with the design revisions. The official completion date for the expansion project was January 2, 2002.

Following the first issuance of this federal operating permit, effective June

1, 2002, the testing required showed that the particulate control requirements for the PC area were too stringent since these were expressed in percentage control and the inlet loading was lower than anticipated. A revised New Source

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Review pen-nit was issued on February 26, 2003), to include an alternate compliance standard in grains per cubic foot. This pen-nit also increased the particulate limits from the PC area since the original limits were derived from modeling for lead chromate, regulated only under state-only-enforceable regulations. The previous very low limit was based on the assumption of simultaneous lead chromate emissions from both paint lines and the PC area. Volvo has revised its commercial paint formulation eliminating lead chromate. The only lead chromate sources are a Department of Defense contract specifying a lead chromate containing coating and touch-up of pre-painted parts. Since lead chromate is now expected to be present as a worst case in only one paint booth and the PC area, the PC area particulate limits were increased.

In 2005 Volvo was issued a PSD permit for a plant expansion to add a third basecoat booth and a second clearcoat booth. Market conditions changed before construction began and the permit was deemed void for failure to construct in a timely manner. On March 7, 2007 a new NSR permit was issued effectively reinstating the conditions of the 2003 permit. One significant change occurred with this revision, the facility, revised its operation to use the 8PE-002 booth for basecoat and the 8PE-001 booth for Multi-Tone (decorative) painting. Based on the reduced throughput, Volvo chose to take enforceable permit limits on the 8PE-001 booth and revise the BACT analysis. The new analysis determined that no control was BACT at the revised throughput. The PSD impact for the removal of the existing zeolite control system was an increase of 39.0 tons of VOC and approximately 13 tons of PM10. This charge was below PSD significance level and did not require a formal PSD permit. The zeolite adsorber will be removed shortly after this federal operating permit renewal removes the requirement for its use. In preparing the federal operating permit renewal, several minor errors were discovered in the March 7, 2007 permit. These were corrected by amendment on August 21, 2007. References to the March 7, 2007 NSR permit should be interpreted as referring to that permit as amended August 21, 2007.

The only NSPS requirement which presently applies to this facility is NSPS Designated for the Phosphate Heater, which required notification to USEPA of the installation of a process heater in excess of 10 MMBTU/hr fueled by natural gas. The NSPS also requires monthly records of the fuel throughput. The facility is also subject to MACT MMTM (Miscellaneous Metal Parts Coating) and MACT PMPM (Miscellaneous Plastic Parts Coating). The facility will comply with these MACTs by monthly emissions averaging. The facility will not take control credit for the organic HAP control unit on 8PE-002, but reserves the right to do so at a future date. Limits on coating content were placed in the NSR permit of March 7, 2007 to reflect this methodology. Final compliance date for MACT record keeping

methodology is after the expected renewal of this permit. Minor revisions may be necessary. If so, the pennit will be reopened accordingly.

COMPLIANCE STATUS

The facility is inspected at least once in each two calendar years. The facility is in compliance with the State Air Pollution Control Board regulations.

The emission units are grouped as follows:

Fuel Buming Equipment All fuel buming equipment with capacity to emit above the insignificant source level. Details in table.

Manufacturing Equipment A brief description of each operational unit follows. The emission and control details appear in the table.

Chassis Assembly (IPE-001 & IPE-002): This section of the plant assembles the chassis for trucks produced in another section of the plant. Presently, 80-90% of the chassis are painted with water-based black paint while the rest are painted with high solids solvent based paints. Each line has a spray booth, flash area, bake oven and cooling tunnel.

Phosphate System (2PE-001): Metal cab components are welded together and the assembled cabs go through a phosphate wash system that applies a 10-step metal pre-treatment and cleaning process

E-Coat (3PE-001): The electrodeposition process involves immersing the cabs in a dip tank with electrically charged base prime paint. The coated trucks are cured in an oven. The oven has a fume incinerator, which is primarily for odor control.

Sealer & Brackett (4PE-001): A sealer for watertight bonds is applied at seams and joints. The sealers are cured in a bake oven.

Primer (5PE-001): Primer is manually applied in a spray booth after which the cab passes through a curing oven and a cooling tunnel.

Washing (6PE-001): Cabs and plastic parts that will be painted before attachment are washed prior to paint application. They proceed through a dry-off oven and clean tunnel. Occasionally minor sanding is performed on the finish.

Touch-Up/Specialty (7PE-001): This is a spray booth where touch-ups prior to painting occur. Volvo anticipates some specialty coating processes may be tested in this booth.

Multi-Tone Booth & Basecoat Booth (8PE-001 and 8PE-002): These spray booths are where the color paint is applied to the cabs. Multi-Tone refers to the process of painting more than one color on a cab. The 8PE-001 booth will be uncontrolled for VOC upon issuance of this permit. The 8PE-002 booth uses air recirculation to concentrate VOC fumes prior to control by a VOC incinerator. Both spray booths are followed by heated flash-off areas.

Clearcoat (9PE-001): A clearcoat is applied and the cabs go through a flash-off

f tunnel and a bake
oven.

Spot Inspection (I OPE-001 & I OPE-002): The cabs undergo a spot inspection. Two spot repair stations are located in this area for very minor touch-up. Cabs requiring extensive touch-up go to the Pre-Conditioning Building.

Final Inspection (I I PE-001): Final inspection step. The cabs are then joined to the chassis.

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Central Air (12FBE-001, 12FBE-002, and 12 FBE-003): This section is designated for the main HVAC equipment for the facility.

Pre-Conditioning (13PE-001, 13PE-002, and 13PE-004 After final assembl), the completed trucks are taken to the Pre-Conditioning Building for final repairs and paint touch-up. Chassis touch-up is done in the 13PE-002 booth and cab touch-up is done in the other booths. (I 3)PE-0033 was removed, I3)PE-005 was permitted but not installed.)

Auxiliary Heating Equipment (14FBE-001, 15FBE-001, 16FBE-001): This is an additional boiler and two air mak-e-up units that will be needed for temperature and humidity control if proposed water-based paints are used. These paints are not presently in use, however, if tests show successful results, these lower VOC coatings are planned for the period of this permit.

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Emission Units

Equipment to be operated consists of.

Pollution
Control

Emission Stack ID	Emission Unit	Description	Size/Rated	Device	PCD	tD	Pollutan
Unit ID	Capacity* (PCD)	Controlled	Permit	Date			t

Description

Fuel Burning quipment

I FBE-001	I xxx.	I North Chasis Oven (Direct Fired)	3 .0	MMBTU/hr	3/7/07		
I FBE-002	NN.	I South Chasis Oven (Direct Fired)	3.0	MMBTU/hr	3/7/07		
IFBE-003	www.1	North Chasis Air Make-Up Unit	7.56	MMBTU/hr	3/7/07		
I FBE-004	MM.1-MM.6	South Chasis Air Make-Up Beater	5.44	MMBTU/hr	3/7/07		
2FBE-001/							
BBB.	I	Phosphate Solution/Washer Heater	25.2	MMBTU/hr	3/7/07		
6FBE-00	I						
3FBE-001	EEE.	I E-Coat Oven w/ incinerator	5**	MMBTU/hr	incinerator	3PC-01	VOC
		, Odor			3/7/07		
5FBE-001	GGG.5	Primer Oven Zone 1 Burner	3.43	MMBTU/hr	3/7/07		
5FBE-002	GGG.6	Primer Oven Zone 2 Burner	2.63	MMBTU/hr	3/7/07		
5FBE-003	GGG.7	Primer Oven Zone 3 Bumer	2.63	MMBTU/hr	3/7/07		
		Multi-Tone Oven - Zone 1 Bumer					
8FBE-001	PPP.3	3.43	MMBTU/hr	3/7/07			
		(Booth 4 1)					
		Multi-Tohe Oven - Zone 2 Burner					
8FBE-002	PPPA	2.63	MMBTU/hr	3/7/07			
		(Booth # 1)					
		Basecoat Oven -Zone 1 Burner					
8FBE-004	BFE.	I (Booth #2)	3.0	MMBTU/hr	3/7/07		
		Basecoat Oven - Zone 2 Burner					
8FBE-005	BFE.2	(Booth #2)	5.0	MMBTU/hr	3/7/01		
		Basecoat Oven - Zone 3A Burner					
8FBE- 06	BFE.3	3.0	MMBTU/hr	3/7/07			
		(Booth #2)					
8FBE-007	BFEA	Basecoat Oven -Zone 3 B Burner	3.0	MMBTU/hr	3/7/07		
		(Booth #2)					
8FBE-008	PPX.3	Ba ecoat Oven - RTO Incinerator	5.0	MMBTU/hr	RTO	8PC-05	voc 3/7
		Exhaust (Booth #2)			/07		

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Pollution
Control

Emission Stack ID Emission Unit Description Size/Rated Device PCD ID Polluta
lit Applicable

Unit LD p Capacity' (PCD) Coiltrolled Periiit Date
Description

9FBE-00 I SSS.3 Clearcoat Oven Zone 1 3.43 MMBTU/hr
9FBE-002 SSSA Clearcoat Oven Zone 2 2.6 MMBTU/hr 3/7/07
9FBE-003 SSS.6 Clearcoat Oven Zone 3 4.2 MMBTU/hr 3/7/07
SSS.1&2,
12FBE-00 I mmm. 1, Central Air Make-Up Heater 56.2 MMBTU/hr 3/7/07
GGG. 1 &2
13FBE-001 P. I - P.6 Truck Repair Oven Exhaust (00 1) 2.39 MMBTU/hr 3/7/07
13FBE-002' P.5 & P.6 Supply Air Heater - 13 PE-00 1 6.48 MMBTU/hr 3/7/07
13FBE-003 0.1&2 Air Make-Up Heater - 13PE-002 3.89 MMBTU/hr 3/7/07
13FBE-003A 0.3 Air Make-Up Heater - 13PE-002A 3.89 mMBTU/hr 3/7/07
13FBE-005 Q. I - Q.4 Air Make-Up Heater - 13 PE004 4.68 MMBTU/hr 3/7/07
13FBE-005A Q.5 - Air.Make-Up Heater - 13PE004A 4.68 MMBTU/hr 3/7/07
13FBE-006 (indoor vent) PC Buildiing Heater 0.5 MMBTU/hr 3/7/07
BLirnhem Industries Boiler -
14FBE-001 BBB.2 Humidity Control for 8PE-002 6.3 MMBTU/hr 3/7/07

15FBE-001 PPP.1&2 Make-Up Air Unit for Mtilti-Tone/ 23.5 MMBTU/hr 3/7/07
Basecoat Booth #I (8PE-00 1)
PPX.3, Make-Up Air Unit for Multi-Tone/
16FBE-001 (PPX.4) Basecoat Booth #2 (8PE-002) 12.2 MMBTU/hr 3/7/07

Heavy Truck Manufacturing Process

I PE-00 I MM. 1-7 Soutli Chasis Paint Bootli Water Curtain I PC-O I PM I 0, -f
-S P 3/7/07
IPE-OOIA NN. I South Chasis Curing Oven 3/7/07
]PE-00113 00.1 South Chasis Oven Cooler 3/7/07
I PE-002 WWA North Chasis Paint Booth Venturi Scrubber' I PC-02 PM IO, TSP 3/
7/07
I PE-002A xxx.1 North Chasis Curing Oveii 3/7/07
I PE-002B YYY. I North Chasis Oven Cooler 3/7/07
2PE-001 AAA. 1 &2, Phosphate System 3/7/07
3PE-001 No stack E-Coat Process 3/7/07
3 PE-00 I A CCC. I E-Coat Tunnel 3/7/07
3PE-OOIB EEE. I E-Coat Oven 3/7/07

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Pollution Control

Emission Stack LD Emission Unit Description Size/Rated Device (PCD) PCD ID Po
llutant Applicable

Unit ID Capacity* Controlled Peri-nit Date

Description

3 PE-00 I C DDD. I E-Coat Oven Cooler 3/7/07

3PE-OOID FFF.2 E-Coat Scuff Station 3/7/07

4PE-00 I (no stack) Seam Sealer/Bracket Attach 3/7/07

4PE-OOIA (no stack) Cab Wipe/Prime Tack-Off 3/7/07

5PE-001 GGG.] Primer Process - Robotic Zone Venturi Scrubber' 5PC-01 PM I 0, T
SP 3/7/07

5PE-OOIA GGG.2 Primer Process - Manual Zone Venturi Scrubber' 5PC-02 PM IO, TS
P 3/7/07

5 PE-00 I B GGG.8 Primer Oven Exhaust 3/7/07

5PE-OOIC GGG.3 Primer Oven Cooler 3/7/07

6PE-00 I iii. I Prep Booth/Sand Booth 3/7/07

6PE-00 I A WWE.1 Washing Process 3/7/07

6PE-OOIB LLL. I Dry-Off Area

7PE-00 I mmm.] Specialty/Touch-Up Painting - Venturi Scrubberl 7PC-0 I PM IO,
TSP 3/7/07

Waterborne & High Solids

Multi-Tone Booth # I Waterbome

8PE-001 PPP. 1 & 2 & High Solids Coating Venturi Scrubber' 8PC-0 I PM IO., TSP
3/7/07

8PE-OOIA PPP.5 Multi-Tone Oven 4 1 3/7/07

8PE-OOIB PPP.6 Multi-Tone Cooler 9 1 3/7/07

PPX.3 Basecoat Booth # 2 Waterbome & Venturi Scrubber', 8PC-04, PMIO,
8PE-002 (PPX '4 High Solids Coating Incinerator 8PC-05 TSP, VOC 3/7/07
bypass)

8PE-002A BOE. I Basecoat Oven # 2 3/7/07

8PE-002B QQQ.4 Basecoat Cooler # 2 3/7/07

8PE-002C RRR. I Basecoat Booth # 2 Demask 3/7/07

Station

9PE-001 SSS.1&2 Clearcoat Spray Booth Venturi Scrubber' 9pc-o 1 PM IO, TSP 3/7
/07

9PE-OOIA SSS.5 Clearcoat Curing Oven 3/7/07

9PE-00 I B TTT.3 Clearcoat Cooler 4 I 3/7/07

9PE-00 I c TTT.5 Clearcoat Cooler # 2 3/7/07

I OPE-00 1, IOPC-Oj,

UUU.1 Spot Repair (BC/CQ Dry filters PM IO, TSP 3/7/07

I OPE-002 I OPC-02

I I PE-00 I VVV.1 Inspection & Repair Booth Dry -ifter I IPC-01 PM IO, TSP 3/7
/07

13PE-001 P. 1-4 PC Booth # 1: Cab Touch-Up Water Curtain 13 PC-0 I PM I 0, TSP
3/7/07

_j

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Pollution Control

Emission Size/Rated Capacity Applicable

Stack ID Emission Unit Description Device (PCD) PCD ID

Unit ID Capacity* Description Controlled Vent Date

13PE-001A P.5 & P.6 PC Booth# 1 Oven 3/7/07

13PE-002 0.1&2 PC Booth 4 2: Cab Touch-U Dry Filter 13 PC-02 PM IO, TSP 3/7/07

13PE-002A 0.3 PC Booth #2 Oven 3/7/07

13PE-004 Q.1-4 PC Booth # 4: Truck Touch-Up Dry Filter 13PC-04 PM IO, TSP- 3/7/07

13 PE-004A Q. 5 .. PLBooth 44 Oven 3/7/07

*The Size/Rated capacity is provided for informational purposes only, and is not an applicable requirement.

Based on maximum heat input of RTO

Based on process considerations, some booths may operate two Venturi scrubbers in parallel

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EMISSIONS INVENTORY

The emissions from the 2006 calendar year are summarized below:

Total VOC Emissions: 296.68 tons

Total NOx Emissions: 27.59 tons

Total CO Emissions: 22.39 tons

Total SO2 Emissions: 0.16 tons

Total PM-10 Emissions: 17.75 tons

Significant HAP Emissions

Xylene: 4.59 tons

Toluene: 1.43 tons

Ethyl Benzene: 1.75 tons

Methyl Isobutyl Ketone 0.17 tons

Methanol 0.23 tons

Animonia 0.85 tons

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EMISSION UNIT APPLICABLE REQUIREMENTS

New Source Revie," , Permit Requirements

The maj'ority of conditions contained in the federal operating permit are requ
irements
necessary to comply with the conditions of the New Source Review permit for th
e facility
issued March 7, 2007, and amended August 21, 2007. A Copy of the pen-nit is a
ttached as
Appendix B. The conditions of the federal operating permit and the correspondi
ng
conditions of the NSR pennit are displayed in the table below:

Title V NSR Description VAC Applicable Requirement

Condition Condition

III-A-] 15 Approved fuels are natural gas & propane 9 VAC 5-80-1180
111-A-2 16 Natural gas annual throughput limit 9 VAC 5-80-1180
111-A-3 23 Combustion product emission limits 9 VAC 5-50-260, 9 VAC 5-80-1 1 0

Iff-A-4 25 Visible emissions limit for ovens and 9 VAC 5-50-260, 9 VAC 5-80-1
1 0
incinerators
111-A-5 17 Compliance with NSPS Dc 9 VAC 5-50-41 0
111-A-7 34 Standards for maintenance & operation 9 VAC 5-50-20
practices
III-C-1 29g Monthly and annual consumption of natural 9 VAC 5-50-50
gas for entire facility
111-C-2 29b Daily, monthly and annual consumption of 9 VAC 5-50-50, (NSPS De)
natural gas for phosphate system heater
111-C-3 291 Monthiy and annual emissions from gas and 9 VAC 5-50-50
propane combustion fot entire facility
111-D-1 12 Provide test ports at appropriate locations 9 VAC 5-50-30
on request
IV-A-] 2 BACT as design specifications cited for 9 VAC 5-80-1180,9 VAC 5-50-26
0
particulate control devices
IV-A-2 3 BACT as water-based or high solids 9 VAC 5-50-260
coatings in certain applications
IV-A-3 4 BACT as water-based primers 9 VAC 5-50-260
IV-A-4 5 BACT as water-based E-coat 9 VAC 5-50-260
IV-A-5 6 Basecoat Booth #2 VOC incinerator and 9 VAC 5-80-1180, 9 VAC 5-50-260

instrument requirement
IV-A-6 7 VOC Content limit (lbs/gal) as BACT for 9 VAC 5-80-1180,9 VAC 5-50-
spray booths without VOC controls 260, 9 VAC 5-50-180
IV-A-7 8 HAP content limits on -coatings as annual 9 VAC 5-80-1180, 9 VAC 5-60
-1 00
average [MACTs MMMM & PPPP]
IV-A-8 9 Minimize cleaning & purging emissions 9 VAC 5-40-20
W-A-9 10 Altemative control procedure 9 VAC 5-80-1 1 0
W-A-10 H. Requirements by reference MACT MMMM 9 VAC 5-60-100
IV-A- I 1 12 Requirements by reference MACT PPPP 9 VAC 5 -60- 1 00
W-A-12 13 Annual VOC throughput limit for coating 9 VAC 5-80-10,9 VAC 5-80-1 1
0
content
IV-A-13 14 Monthly VOC throughput limit for coating 9 VAC 5-80-10, 9 VAC 5-80-
1 1 0
content
IV-A- 14 2 1 VOC emission limit for Multi-Tone spray 9 VAC 5-50-260, 9 VAC 5-8
0-1615

booth 8PE-001

Title V NSR Description VAC Applicable Requirement

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Condition Condition

IV-A-15 21 VOC emission limit for painting/coating for 9 VAC 5-50-260, 9 VAC 5-80-1615

all spray booths combined

IV-A-16 23 Particulate emission limits for spray booths 9 VAC 5-50-260, 9 VAC 5-50-30

broken down by operation unit

IV-A- 1 7 25 Visible emissions limit for spray booths 9 VAC 5-50-260

IV-B-1 6 Basecoat Booth 42 VOC incinerator 9 VAC 5-80-1180, 9 VAC 5-50-260

temperature monitoring requirements

IV-B-2 I I Spray booths particulate control monitoring 9 VAC 5-80-1800, 9 VAC 5-50-20,

(pressure differential gauges) 9 VAC 5-50-260

IV-c-j 29q Certified product data sheets for coatings 9 VAC 5-50-50

IV-C-2 29a Record monthly and annual consumption of 9 VAC 5-50-50

VOC from each operational area

IV-C-3 29b Record monthly and annual consumption of 9 VAC 5-50-50

VOC from painting/coating processes

IV-C-4 29e Record monthly and annual consumption of 9 VAC 5-50-50

paints and coatings from each operational

area and entire facility

IV-C-5 29f Record monthly and annual throughput of 9 VAC 5-50-50

trucks for painting and coating

IV-C-6 29i Record monthly and annual emissions of 9 VAC 5-50-50

VOC from painting/coating processes

IV-C-7 29m Average lbs VOC per gallon of coatings in 9 VAC 5-50-50

spray ooths without VOC controls

IV-c-s 29n Average annual HA-P emissions to 9 VAC 5-50-50

demonstrate compliance with MACTs

IV-C-9 29o Records of pressure differential for 9 VAC 5-50-50

particulate scrubbers and spray booths

IV-c- I 0 29p Temperature records for 8PE-002 RTO 9 VAC 5-50-50

IV-D-I 12 Provide test ports at appropriate locations 9 VAC 5-50-30
on request

IV-D-2 26 Stack testing on request for Basecoat B6oth 9 VAC 5-50-30
2 VOC control system

IV-D-3 27 Stack testing on request for particulate 9 VAC 5-50-30

control from any or all spray booths

IV-D-4 28 VEEs on request for opacity from any or all 9 VAC 5-50-30

spray booths

V-A-I 24 VOC emission limit for entire facility 9 VAC 5-50-260

V-A-2 36 Reduction or shutdown to avoid violation 9 VAC 5-20- 1 80

V-A-3 34 Standards for maintenance & operation 9 VAC 5-50-20

practices

V-C-1 29q Certified product data sheets for coatings 9 VAC 5-50-50

V-C-2 29c Record monthly and arLnual consumption of 9 VAC 5-50-50

VOC from miscellaneous sources

V-C-3 29d Record monthly and annual consumption of 9 VAC 5-50-50

VOC from entire facility

V-C-4 26j Record monthly and annual emissions of 9 VAC 5-50-50

VOC from miscellaneous sources

V-C-5 26k Record monthly and annual emissions of 9 VAC 5-50-50

VOC from entire facility

Title V NSR Description VAC Applicable Requirement
Condition

V-C-7 29r Results fi-om stack tests and VEEs 9 VAC 5-50-50
V-C-8 29s Records of maintenance and training 9 VAC 5-50-50
V_C_10 35 Record of malfunctions 9 VAC 5-20-180
V-D- I 1 2 Provide test ports at appropriate locations on 9 VAC 5-50-30
request
V-E-1 3 1 Notice of control equipment maintenance 9 VAC 5-20-180
V-E-2 32 Notice of malfunction 9 VAC 5-20-180
V-E-3 30 Malfunction causing exceedence report 9 VAC 5-20-180
(with specifics)
VIII-F 30 Malfunction causing exceedeDce report 9 VAC 5-20-180
Viii-Q 33 Right of entry 9 VAC 5-170-130
Vill-S 39 Permit Copy 9 VAC 5-170-160
Vlll-T 38 Change of ownership 9 VAC 5-80-1 0
VIII-V 37 Permit suspension/revocation 9 VAC 5 -80-1 0

Emission Inventory Related Requirements

The pennit content requirements of the regulations for federal operating penni
ts, 9 VAC
5-80-1 10, state that the permit should include conditions necessary determine
the annual
emissions of all pollutants for which the facility has the potential to be maj
or. This
coincides with the underlying philosopby of the Title V legislation which had
as one of
its purposes to achieve a more detailed picture of emissions from maj'or sourc
e facilities.
The table below summarizes the conditions that are needed to develop emission
estimates
for Hazardous Air Pollutants. One condition corresponds to a condition in the
State-Only
Enforceable Requirements section of the NSR permit. The corresponding NSR con
dition
is noted in parentheses.

Pen-nit Relation to Emission Inventory
Condition

IV-C- 1, V-C- I Requirement to detertnine material VOC content by EPA approved
standards
V-C-6 Emission of HAPs ftom the facility as a whole (43b)

Proper Equipment Operation

It is the practice of the Virginia Department of Envirommental Quality to requ
ire in
emission pen-nits conditions that the emission sources, such as fuel bumng eq
uipment, be
operated in a proper manner. These conditions fall into two categories. The
first category
is a general condition requiring proper operation and.maintenance of equipment
which
applies under 9 VAC 5-170-160 for equipment in a NSR pen-nit or existing equip
ment
'Itary to the operation of the pen-nitted equipment. The second category is
anci
specifications that equipment designed to operate under specific parameters be
operated
only under those parameters. These conditions are specifically addressed unde
r 9 VAC 5-

80-1 1 00, et seq. for equipment in a construction permit but for existing equipment in an operating permit that is not subject to a construction permit, 9 VAC 5-170-160 is the requirement generally deemed to be applicable. Similar conditions were omitted from the Volvo permit as being extraneous during discussion of the draft permit. They are being

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included in the Title V permit to further justify that record keeping and emission estimates based on fuel usage will be sufficient to demonstrate compliance with emission limits for combustion products. The basis of the combustion products emission limits in the NSR permit was the use of emission factors for natural gas at the maximum throughput limit, assuming properly operating equipment. As such, periodic stack testing of the combustion equipment seems unduly burdensome and these conditions are intended to demonstrate that the monthly emissions estimates are adequate to satisfy periodic monitoring requirements for this operating permit.

Condition 111-A-6 is a general condition for proper operation of boilers, HVAC systems and air make-up heaters.

Condition III-B- I is a requirement to maintain records and procedures supporting compliance with Condition 111-A-6.

Taken together with the fuel usage conditions, these conditions define a scenario in which the proper operation of the combustion equipment at this facility are physically incapable of violating the particulate matter and sulfur dioxide standards for fuel burning equipment, 9 VAC 5-40-900 and 9 VAC 5-40-930. Using these conditions allows the permit to be written without explicit limits for SO₂ and PM from combustion sources, and to use emission estimates rather than stack tests for compliance assurance as discussed above.

Periodic Monitoring

The permit content requirements of the regulations for federal operating permits, 9 VAC 5-80-110, state that the permit should include conditions for periodic monitoring sufficient to demonstrate that the facility is in compliance with the limits of the permit. The record keeping requirements are deemed sufficient to determine compliance with the emission limits for VOCs and combustion gases. Record keeping for painting and coating and compliance with opacity limits is considered sufficient to demonstrate compliance with the emission limits for PM and PM-10. No opacity is expected to be observed under normal operation of the equipment. Under these conditions, a weekly Method 22 evaluation with requirement for Method 9 evaluation if opacity is observed is deemed sufficient to satisfy the periodic monitoring requirement.

Condition V-B- I requires Method 22 evaluation of the incinerator and spray booths and,

if opacity is observed, documentation of corrective action or a Method 9 evaluation to show the opacity is within permit limits.

Condition V-C-9 requires that records of the periodic monitoring results be maintained.

Compliance Assurance Monitoring requirements under 40 CFR Part 64 set additional requirements for emission control units that are subject to this regulation.

General CAM

requirements are specified in Conditions IV-B-3, IV-B-4, IV-B-5, IV-B-6, IV-B-7, IV-B-

8, IV-B-9, W-B-10, IV-C-1, and IV-E-1 - Specific requirements for each CAM-subject

unit are listed in Appendix A and described in greater detail in the facility's Compliance

Assurance Monitoring Plan.

Streamlined Requirements

Emission limits for particulate matter for fuel burning equipment (a ply 6nl), to the 6FBE-.P
001 Wash Solution heater under the definition of fuel burning equipment or fuel burning installation. VDEQ contends that the gaseous fuel usage restriction and the good operating practice requirement for this unit is sufficient to create a de facto emission limit more stringent than the limit under 9 VAC 5-40-900.

GENERAL CONDITIONS

The pennit contains general conditions required by 40 CFR Part 70 and 9 VAC 5-80-1 10, that apply to all federal operating pennit sources. These include requirements for submitting semi-annual monitoring reports and an annual compliance certification report. The pennit also requires notification of deviations from pennit requirements or any excess emissions, including those caused by upsets, within one business day.

STATE-ONLY APPLICABLE REQUIREMENTS

The permittee elected to exclude such requirements from this pennit. A portion of the record keeping provisions of the NSR state-only section are still required under this permit as a subset of the HAPs record keeping requirements under 9 VAC 5-80-1 1 0.

COMPLIANCE ASSURANCE MONITORING

As required by 40 CFR Part 64, the permittee submitted a draft Compliance Assurance Monitoring Plan with the application for renewal of the federal operating pennit. The draft plan was finalized during the pennitting process to add one monitor and update references for the NSR pennit, which was being modified on the application deadline.

Based on review of the submittal, the following control units and capture monitors are subject to Compliance Assurance Monitoring requirements:

VOC: The regenerative thermal oxidizer controlling the 8PE-002 spray booth
The differential pressure monitor for the 8PE-002 spray booth

PM: The water wash and dry filters controlling the 1 PE-00 1 spray booth
The Venturi wet scrubber with dry filters controlling the 1 PE-002 spray booth

The Venturi wet scrubber controlling the 5PE- 001 spray booth
The Venturi wet scrubber controlling the 8PE-001 spray booth
The Venturi wet scrubber controlling the 8PE-002 spray booth
The Venturi wet scrubber controlling the 9PE-001 spray booth

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The following emission units with control systems had less than 100 tons per year of uncontrolled potential emissions, and were therefore not subject to Compliance

Assurance Monitoring requirements:

PM: The dry filter controlling the 6PE-001 spray booth

The Venturi wet scrubber controlling the 7PE-001 spray booth

The dry filters controlling the 1 OPE-001 and 1 OPE-002 spray booths

The dry filter controlling the 11 PE-001 spray booth

The water wash controlling the 13 PE-001 spray booth

The cartridge filter controlling the 13PE-002 spray booth

The dry filter controlling the 13PE-004 spray booth

The renewed federal operating permit contains the elements of this plan required under

40 CFR 64.6(c). A summary of the CAM parameters for each subject control unit is

included in Appendix A of the permit. Comprehensive details are in the plan itself.

Regarding the specifics of the CAM plan, the Venturi scrubbers used in most spray

booths are not the typical pressurized liquid flow. The Volvo systems use a gravity

overflow from a reservoir. While VDEQ feels that it would be desirable to measure liquid

flow for the Venturis, this would require a very expensive retrofit involving ultrasonic

flow meters, probably with a custom interface to the existing data acquisition system.

Volvo believes that the expense of flow measurement for these control systems is

excessive to the benefit gained. VDEQ agrees with this conclusion. Also, VDEQ believes

that there is little benefit to explicitly monitoring capture parameters for particulate

control in the spray booths, as inadequate particulate capture would be reflected in

unacceptable product quality. Also these spray booths are so large that several fans are

used for each booth, therefore a single fan power monitor is not feasible.

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INSIGNIFICANT EMISSION UNITS

The following emission units at the facility are identified in the application as insignificant emission units under 9 VAC 5-80-720:

Emission Unit Emission Unit Pollutant(s) Emitted Rated Capacity
Citation

No. Description (9 VAC 5-80-720 B) (9 VAC 5-80-720 C)

EBAD-1 Cleaver Brooks boiler, 9 VAC 5-80-720C PM, CO, VOC, SO₂, NO_x 2,500,000
BTU/hr
Model CB-60H-P, n.g.

Lochinvar water

FBAD-2 heater, CNA 726-080- 9 VAC 5-80-720C PM, CO, VOC, SO₂, NO_x 725,000 BTU
/hr

OF9, n.g.

FBBIW2A, Two PVI Water 9 VAC 5-80-720C PM, CO, VOC, SO₂, NO_x 399,000 BTU/hr

FBBR2B Heaters, n.g. each

FBBFWIA- Eight RV Space
9 VAC 5-80-720C PM, CO, VOC, SO₂, NO_x 3,000,000 BTU/hr

FBBWIH Heating Units, n.g. each

Portable welders for

WELD equipment 9 VAC 5-80-720A PM, CO, SO₂, NO_x NA

maintenance

PWI-PW5 Five cold cleaner parts 9 VAC 5-80-720B VOC VOC < 5 tpy
washers

PMSB-1 One small paint spray. 9 VAC 5-80-720B VOC VOC < 5 tpy
booth for test panels

Eight 175 gallon bulk
PMBTI-8 9 VAC 5-80-720B VOC VOC < 5 tpy
tanks for paint/solvent

475,200 BTU/hr
FBAB1A -

FBABII Nine Door Heaters 9 VAC 5-80-720C PM, CO, VOC, SO₂, NO_x to 1,900,800
BTU/hr

FBAB2A- Twenty-Nine 14V 302,400 BTU/hr

FBAB2CC Space Heating Units, 9 VAC 5-80-720C PM, CO, VOC, SO₂, NO_x to 3,460,000

n.g. BTU/hr

FB 3A, Two Air Houses for 9 VAC 5-80-720C PM, CO, VOC, SO₂, NO_x 6,804,000 BTU/hr

FBAB3B space heating, n.g. each _____j

FBAB4 Assembly Bldg Boiler 9 VAC 5-80-720C PM, CO, VOC, SO₂, NO_x 3,600,000 BTU

Six MAU Space /hr

FBAB5A- 9 VAC 5-80-720C PM, CO, VOC, SO₂, NO_x 3,024,000 BTU/hr

FBA135F Heating nits, n.g. eacii

FBAB6A, Two NIAU Space 9 VAC 5-80-720C PM, CO, VOC, SO₂, NO_x 1,814,400 BTU/@r_

FBAB6B Heating Units, n.g. each

FBSB1A, Two HV Space 9 VAC 5-80-720C PM, CO, VOC, SO₂, NO_x 3,456,000 BTU/hr

FBSBIB Heating units, n.g. total

FBWTB Dyno Water Test Unit 9 VAC 5-80-720C PM, CO, VOC, SO₂, NO_x 388,800 BTU/hr

FBPCIA- FourH`V Space 8,194,400 BTU/hr

9 VAC 5-80-720C PM, CO, VOC, SO₂, NO_x -

FBPC I D Heating units, n.g. total

FBPC2A- Six fR Door Heaters, 9 VAC 5-80-720C PM, CO, VOC, SO₂, NO_x 75,000 BTU/hr

FBPC2F unvented eacii

FBPC3A, Two 14V Unit M-UA 2-203 NIMBTU/hr

9 VAC 5-80-720C PM, CO, VOC, SO₂, NO_x

FBPC3B 021,022 each

FBPIC4 Old Cliassis Booth 9 VAC 5-80-720C PM, CO, VOC, SO₂, NO_x 5.5. MMBTU/Iir

MUA 023

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Emission Unit Ei-nission Unit Citation Pollutant(s) Em'tted Rated Capacity

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No. Descriptioll (9 VAC 5-80-720 B) (9 VAC 5-80-720 C)

FBPC5A- Eleven Dravo Door 475,200 BTU/hr -

9VAC5-80-720C PM,CO,VOC,.S -

FBPC5L Heaters 0" 1'@Ox 1,900,800 BTU/hr

FBPC6 One ENG-A HV unit 9 VAC 5-80-720C PM, CO, VOC, SO,-, NOx 2.112 MMBTU/h_r

FBDFIA - Fifteen fR Door 9 VAC 5-80-720C PM, CO, VOC, SO,. Nox 75,000 BTU/fir

FBDFIO Heaters (vented) each

FBDF2A, Two Building M-UA 9 VAC 5-80-720C PM, CO, VOC, SO,, NOx 4.0 MMBTU/hr

FBDF2B each

WWTP003 Batch waste water 9 VAC 5-80-720B VOC VOC < 5 tpy
treatment plants

WWTFIA- Three Btiilding Gas 150,000 BTU/hr

WWTF I C Unit Heaters 9 VAC 5-80-720C PM, CO, VOC, SO,, NOx each

WWTF2 One Office FfVAC 9 VAC 5-80-720C PM, CO, VOC, SO,, NOx 45,000 BTU/hr

BIWWIA- Tlilrteen fR Door 9 VAC 5-80-720C PM, CO, VOC, SO,, NOx 75,000 BTU/hr

Bfwwim Heaters (vented) each

BIWW2A- 2.25 N1MBTU`/hr

BTWW2I Nine Building MUA 9 VAC 5-80-720C PM, CO, VOC, SO" NOx each

ASWIA- Twenty-Nine tr Door 75,000 BTU/hr

9 VAC 5-80-720C PM, CO, VOC, SO2, NOx

ASWICC Heaters (vented) each

ASW2 One ITVAC Unit 9 VAC 5-80-720C PM, CO, VOC, SO,, NOx 250,000 BTU/hr

ASW3A - Twelve Building 9 VAC 5-80-720C PM, CO, VOC, SO,, NOx 2.25 NU\4BTU/hr

ASW3L M-UA each

FBNBWI HV Unit, n.g 9 VAC 5-80-720C PM, CO, VOC, SO,, NOx 625,000 BTU/hr

FBNBW2 HV Unit, n.g 9 VAC 5-80-720C PM, CO, VOC, S02, NOx 842,000 BTU/h_r

FBNBW3 Trane HV Unit, n.g 9 VAC 5-80-720C PM, CO, VOC, SO,-, NOx 500,000 BTU/h

r

FBN`WB4A Tfivree Trane Yfv 250,000 BTU/fir

9 VAC 5-80-720C PM, CO, VOC, S02, NOx

FBNWB4C Units, n.g. each

FBNWB5A Eight dock heaters n.g. 9 VAC 5-80-720C PM, CO, VOC, S02, NOX 91 '200

BTU/Iir

FBNWB5H each

FBNWB6A Eight MUA 002-009 9 VAC 5-80-720C PM, CO, VOC, SO,, NOx 3.127 MMBTU/hr

I FBNWB6H each

FBNWB7A E ight HV Units 013- 5.5 MMBTU/hr

FBNWB7H 020 9 VAC 5-80-720C PM, CO, VOC, S02, NOx eacii

FBNWB8A Three HV Units 010- 9VAC 5-80-720C PM, CO, VOC, S02, NOx 4.59 MMBTU/h

r

FBNWB8C 012 each

FBNWB9 One HV Unit 024 9 VAC 5-80-720C PM, CO, VOC, SO,, NOx 3.4 MMBTU/hr

FBNWBIOA Two 40 ton HVAC 1.062. MMBTU/h@r

&B Units 9 VAC 5-80-720C PM, CO, VOC, S02, NOx eacii

FBNWB I I One 60 ton HV Unit 9 VAC 5-80-720C PM, CO, VOC, SO,, NOx 885,000 BTU

/Iir

FBNWB 12 A- 123,600 BTU/tir

D Four PAC units 9 VAC 5-80-720C PM, CO, VOC, SO,@ NOx to 545,900

BTU/hr

FBNWB13 Two water heaters 9 VAC 5-80-720C PM, CO, VOC, S02, NOx 412 '000 BTU/h

r

A&B each

FBN NAIB 1 4 Al 1.318 i@@BTU@/hr

B&C Three PAC Units 9 VAC 5-80-720C PM, CO, VOC, SO,, NOx - 1.54 MMBTU
/hr

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Emission Unit Emission Unit Citation Pollutant(s) Emitted Rated Capacity

No. Description (9 VAC 5-80-720 B) (9 VAC 5-80-720 C)

FBNWB15 A, Three PAC Units 9 VAC 5-80-720C PM, CO, VOC, SO,, NOx 64,890 BTU/hr
to

B & C 735,420 BTU /hr

FBN%'NrB 16 A- Fifteen Door Heaters 9 VAC 5-80-720C PM, CO, VOC, S02, NOx 77,2
50 BTU/hr

O each

FBNV-IB 1 7 A Two Paint Dock Door 226,000 BTU/hr

9 VAC 5-80-720C PM, CO, VOC, SO,, NOx

& B Heaters each

FBNWB18 One Door Heater TVVAC 5@-80-720C PM, CO, VOC, SO% NOx 875,000 BTU/hr

FBNWB19 A Two Direct Fired 8.24 MMBTU/hr

9 VAC 5-807720C PM, CO, VOC, SO, NOx

& B Bumers . -1 each

FBNWB20 One M-LJA 9 VAC 5-80-720C PM, CO, VOC, S02, NOx 659,200 BTU/hr

Forty-Two Gas

FORKLlFT Powered Forklifts 9 VAC 5-80-720A PM, CO, VOC, NOx NA

PDSLOO I Diesel Fuel Tank 9 VAC 5-80-720B VOC VOC < 5 tpy

Emergency Generator,

EGEN diesel 9 VAC 5-80-720C PM, CO, VOC, S02, NOx 150 KW (201 bhp)

GENOOO I Diesel Fuel Tank 9 VAC 5-80-720B VOC VOC < 5 tpy

AST-101 SCH 50 Wt Oil Tank 9 VAC 5-80-720B Voc VOC < 5 tpy

'AST-102 Trans. Fluid Tank 9 VAC 5-80-720B VOC voc < 5 tpy

AST- 1 03 Anti-Freeze Tank 9 VAC 5-80-720B VOC VOC < 5 tpy

AST-104 15W40 Oil Tank 9 VAC 5-80-720B VOC VOC < 5 tpy

75W90 storage tank-,

AST-105 aluminum, heat-traced 9 VAC 5-80-720B VOC VOC < 5 tpy

AST-106 Freon 134A Tank 9 VAC 5-80-720B VOC VOC < 5 tpy

AST-107 Methanol Tank 9 VAC 5-80-720B VOC VOC < 5 tpy

AST-108 Diesel Fuel Tank 9 VAC 5-80-720B VOC VOC < 5 tpy

AST-109 Anti-Freeze Tank 9 VAC 5-80-720B VOC VOC < 5 tpy

AST-1 10 80W90 Tank 9 VAC 5-80-720B VOC VOC < 5 tpy

AST-1 I I 80W90 Tank 9 VAC 5-80-720B VOC VOC < 5 tpy

AST-] 12 Anti-Freeze Tank 9 VAC 5-80-720B Voc VOC < 5 tpy

AST-201 Purge Solvent Tank 9 VAC 5-80-720B VOC VOC < 5 tpy

AST-202 Paint Waste Tank 9 VAC 5-80-720B VO VOC < 5 tpy

Gasoline storage tank,

AST-301 550 gal near PC bidg 9 VAC 5-80-720B VOC VOC < 5 tpy

AST-401 - Eight 30,000 gallon 9 VAC 5-80-720B VOC VOC < 5 tpy

AST-408 propane storage tanks

AST-501 Diesel Fuel Tank 9 VAC 5-80-720B VOC VOC < 5 tpy

AST-502 Diesel Ftial Tank 9 VAC 5-80-720B VOC VOC < 5 tpy

ITUBEHTRI SpaceRay Tube Heater 9 VAC 5-80-720C PM, CO, VOC, S02, NOx 750,000
BTU/hr

I Prep/Sand Booth 9 VAC 5-80-720B PM PM < 5 tpy

12FBE-002 Space Air Unit# I -S 9 VAC 5-80-720C PM, CO, VOC, S02, NOx 8.0 MMBTU
/hr

12FBE-003 I Space Air 'Unit# I -N 9 VAC 5-80-720C 1 PM, CO, VOC, S02, NOx 9.5
MM BTU/hr

These insignificant einission units are presumed to be in compliance with all
requirements of the federal Clean Air Act as may apply. Based on this
presunption, no i-nonitoning, recordkeeping, or reporting shall be required f
or
these emission units in accordance with 9 VAC 5-80-1 1 0.

Volvo Trucks North America
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CONFIDENTIAL INFORMATION

No information contained in the permit application or in the specific records required by the pennit is considered confidential. However, the specific emission factors of the data-base used to generate portions of the required records are regarded as confidential, in that the factors reflect proprietary paint and coating formulations. If any material requested by VDEQ, USEPA or another government agency contains information that includes the actual emission factors from the Volvo database, that material should be considered confidential.

PUBLIC PARTICIPATION

A public notice regarding the draft pennit was printed in the November 18, 2007, edition of the Roanoke Times, New River Valley Edition. Public comments were accepted from November 18, 2007 through December 19, 2007. No public comments were received. USEPA reviewed this pennit with concurrent processing as draft and proposed document. The final day for USEPA comments was Januar), 3), 2008. No comments were received from USEPA.

The following table is a modification of the table in the section Emission Unit Applicable Requirements - New Source Review Permit Requirements. This table is ordered corresponding to the NSR permit conditions as an aid to reference the corresponding federal operating permit conditions. The NSR permit follows in Appendix B.

NSR Title V Description VAC Applicable Requirement
Condition Condition

2 IV-A-1 BACT as design specifications cited for 9 VAC 5-80-1180, 9 VAC 5-particulate control devices 50-260
3 IV-A-2 BACT as water-based or high solids coatings 9 VAC 5-80-1180, 9 VAC 5-in certain applications 50-260
4 IV-A-3 BACT as water-based primers 9 VAC 5-50-260
5 IV-A-4 BACT as water-based E-coat 9 VAC 5-50-260
6 IV-A-5, Basecoat Booth #2 VOC incinerator with 9 VAC 5-80-1180, 9 VAC 5-IV-13-2 instrument and monitoring requirements 50-260
7 IV-A-6 VOC Content limit (lbs/gal) as BACT for 9 VAC 5-80-1180, 9 VAC 5-spray booths without VOC controls 50-260, 9 VAC 5-50-180
8 IV-A-7 HAP content limits on coatings as annual 9 VAC 5-80-1180, 9 VAC 5-average [MACTs MALMM & PPPP] 60-100
9 IV-A-8 Minimize cleaning & purging emissions 9 VAC 5-40-20
10 IV-A-9 Alternative control procedure 9 VAC 5-80-110
11 IV-B-1 Spray booths particulate control monitoring 9 VAC 5-80-1180, 9 VAC 5-(pressure differential gauges) 50-20, 9 VAC 5-50-260
12 III-D-1, IV-D-1, Provide test ports at appropriate locations on 9 VAC 5-50-30
V-D-1 request
13 IV-A-12 Annual VOC throughput limit for coating 9 VAC 5-80-1180, 9 VAC 5-content 80-110
14 IV-A-13 Monthly VOC throughput limit for coating 9 VAC 5-80-1180, 9 VAC 5-content 80-110
15 III-A-1 Approved fuels are natural gas & propane 9 VAC 5-80-1180
16 III-A-2 Natural gas annual throughput limit 9 VAC 5-80-1180
17 III-A-5 Compliance with NSPS Dc 9 VAC 5-50-410
18 TV-A-10 Requirements by reference MACT MNINW 9 VAC 5-60-100
19 IV-A-11 Requirements by reference MACT PPPP 9 VAC 5-60-100
20 IV-A-14 VOC emission limit on Multi-Tone Spray 9 VAC 5-50-260, 9 VAC 5-80-Booth 8PE-001 1615
21 IV-A-15 VOC emission limit for painting/coating for 9 VAC 5-50-260, 9 VAC 5-80-all spray booths combined 1615
22 III-A-3 Combustion product emission limits 9 VAC 5-50-260
23 IV-A-16 Particulate emission limits for spray booths 9 VAC 5-50-260, 9 VAC 5-50-broken down by operation unit 30
24 V-A-1 VOC emission limit for entire facility 9 VAC 5-50-260
25 III-A-4, Visible emissions limit for ovens, spray booths 9 VAC 5-50-260
IV-A-17 and incinerators
26 IV-D-2 Stack testing on request for Basecoat Booth # 9 VAC 5-50-30
2 (8PE-002) VOC/HAP control system
27 IV-D-3 Stack testing on request for particulate control 9 VAC 5-50-30
From any or all spray booths
28 TV-D-4 VEEs on request for opacity from any or all 9 VAC 5-50-30
spray booths

NSR Title V Description VAC Appli able Requirenient

Volvo Trucks North America

Permit No.: WCRO-20765

Statement of Basis - January 17, 2008

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Condition Condition

29a IV-C-?- Monthly and annual consumption of VOC 9 VAC 5-50-50
from each operational area

29b IV-C-3 Monthly and annual consumption of VOC 9 VAC 5-50-50
from painting/coating processes

2.9c V-C-2 Monthly and annual consumption of VOC 9 VAC 5-50-50
from miscellaneous sources

29d V-C-3 Monthly and annual consumption of VOC 9 VAC 5-50-50
from entire facility

29e IV-C-4 Monthly and annual consumption of paints 9 VAC 5-50-50
and coatings - each area and entire facility

29f W-C-5 Monthly and annual throughput of skids for 9 VAC 5-50-50
painting and coating

29g III-C-1 Monthly and annual consumption of natural 9 VAC 5-50-50
gas for entire facility

29h III-C-2 Monthly and annual consumption of natural 9 VAC 5-50-50, (NSPS Dc)

gas for the phosphate system heater '

29i IV-C-6 Monthly and annual emissions of VOC from 9 VAC 5-50-50
painting/coating processes

29j V-C-4 Monthly and annual emissions of VOC from 9 VAC 5-50-50
miscellaneous sources

29k V-C-5 Monthly and annual emissions of VOC from 9 VAC 5-50-50
entire facility

29l III-C-3 Monthly and annual emissions from gas and 9 VAC 5-50-50
propane combustion for entire facility

29M IV-C-7 Average lbs VOC per gallon of coatings in 9 VAC 5-50-50
spray booths without VOC controls

29n IV-C-8 Average annual HAP emissions to 9 VAC 5-50-50
demonstrate compliance with MACTs

29o IV-C-9 Records of pressure differential for particulate 9 VAC 5-50-50
scrubbers and spray booths

29P IV-c- I 0 Temperature records for 8PE-002 RTO .9 VAC 5-50-50

29q IV-C-1, V-C- I Certified product data sheets for coatings 9 VAC 5-50-50

29r V-C-7 Results from stack tests and VEEs 9 VAC 5-50-50

29s V-C-8 Records of maintenance and training 9 VAC 5-50-50

30 V-E-1, VIII-F Malfunction report 9 VAC 5-20-180

31 V-E-1) Notice of control equipment maintenance 9 VAC 5-20-180

32 V-E-3 Notice of control equipment malfunction 9 VAC 5-20-180

33 VIII-Q Right of entry 9 VAC 5-170-130

34 ffl-A-7, V-A-3 Maintenance & operation practice 9 VAC 5-50-20

35 V-C- I 0 Record of malfunctions 9 VAC 5-20-180

36 V-A-2 Reduction or shutdown to avoid violation 9 VAC 5-20-180

37 VIII-V Permit suspension/revocation 9 VAC 5-80- 12) Io

38 VIII-T Change of ownership 9 VAC 5-80-10

39 VIII-S Permit Copy 9 VAC 5-80-1 1 0

40 NA State toxics limit on lead chromate usage (9 VAC 5-170-160)

41 NA Control efficiency for E-Coat incinerator (9 VAC 5-40-130)

42 NA Stack tests for E-Coat incinerator 9 VAC 5-50-30

43a NA Temperature of E-Coat odor incinerator 9 VAC 5-50-50

43b NA Emissions by total plant of all HAPs 9 VAC 5-50-50

44 NA 14AP process malfunction shutdown 9 VAC 5-20-180

APPENDIX B: NSR PERMIT DATED March 7, 2007, as amended August 21, 2007

Volvo Trucks North America

Pen-nit No.: WCRO-20765

Statement of Basis - January 17, 2008

Page23

The permit, with its own page numbering, follows.

Q, ':

COMMONWEALTH of VIRGINIA

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August 21, 2007

Steve Pierett Location: Dublin, Virginia
Volvo Trucks North America. Inc. Registration No: 20765
P-O.Box 1126 Countv-Plant No: 1 55-0041
Dublin. VA 24084

Mr. Pierett:

Attached is an amendment to a permit to modif@, and operate a miscellaneous metal and plastlc'parts and products coating facilltv for painting heavy duty trucks in accordance with the provisions of the Commionwealth of Virginia State Air Pollution ContTol Board Regulations for the Control aiid Abatei-ment of Air Pollution. This pen-nit aniends your permit dated March 7, 1-007. Titis permit contains legalli. enfo rceable coiditions. FailLire to comply may result in a Notice of Violation and civil penalty. Please r6ad all permit conditioiis carefully,

In the course of evaluating the application and arriving at a final decision t o approve the pr 'ect. the Department of Environniental Quality (DEQ) deemed the Oi application complete on June 12, 2007.

This amended permit approval to nioidih, and operate sliall not relieve Volvo Trucks North Ainerica of the responsibilltv tc) complv with all other local, s tate and federal pennit regulations.

I'he Board's Regulatiotis as contained in Title 9 of the Viroitila Administrat ive Code 5-170-200 provide that you n-ia y request a formal hearing froni tills cas e decision by filing a petition with the Board within 330 days a fter this case decision iiot ice was i-nalled or delivered to you. 9 VAC 5-170-200 G provides that YOLI may request direct 'deratioii of tiie decision by the Board if the Director of-the DEQ niade the decision. consi Please C011SUlt the relevant i-egiilatjns for additional requireiilielitS lOT such requests.

Steve Piereti
Volvo Trucks Nortli .4,merlca
Paue 2

As provided b@ RLile 2A:2 of ilic SLipreme Coun of Virginia, you liave 'O daN;
s
from the date you actually received this permil or the date oii which it Nvas
i-nalled to vclu.
whichevei- occurred first. within %vhich to initiate an appeal to court by f-i
iiiiig a Notice of'
Aippeal with:

David K. Paylor. Director
Departi-nent of 'Enviroruiientat Qualitv
P.O. Box 1105
Richmond, Virginia 232- 1 8

In the event that you receive this pernill by niall, tiiree days are added to
the
period in which to file an appeal. Please refer to Part Two A of 'the Rules of
tl@ie Supreme
Court of Virginia for additioiial iifori-natioii including filing dates aaid
the required
content of the Notice of Appeal.

If you liave anv questions conceriiing this pernift., please contact perniit e
zignoreer
Garv Bradley or inspector Timotily Overstreet at the regional office at (540)
562-6700.

Siiicerely.

Steven A. Dietrich, P.E.
Regioilal Director
SAD/GRB/20765.2007-08-2 1.risnaind.cvr

Attaclunents: Pemiiit

cc: M. Harvey, Air Pen-nitting (electroliic file submission)
F. Adanis. w/ attachiiient & repoil
M. Scatilan (cover only)
G. Bradley

COMMONWEALTH of VIRGINIA

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-) @,62-6725 Steven A. Dicii-ich
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PeLittlial Director
NEW SOURCELi@YVIEW PERMIT
STATJONARY SOIJRCE PERMIT TO MODIFY AND OPERATE

This permit includes designated equipment subject to Ne", Source Performance Standards (NSPS De).

This permit includes designated equipment subject to National Emission Staindards for liazardous Air Pollutants for Source Categories.
(MACT MMMM-and MACT PPPP)

This pemiit arnends your permit dated March-7, 2007.

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

Volvo Trucks North America, Inc.
P.O. Box 1126
Dublin, Virginia 24084
Re-istr atioii No. 20765
County-Plant ID No.: 155-0041

is atithorized to modl f@: and operate a miscellaneous nietal and plastic parts and products coating facility for painting heavv dut), trucks located at

4891 Cougar Trail Road in Pulaski County near Dublin, Virginia

in accordance with the Conditions of tiils pemiit.

Approved on March 7, 2007. as anieiidid August 2 1, 2007.

Steven A. Dietrich, P.E.
Regioiial Director, Departiient of EnvirorLniental Qualitv

Permit consists of 17 pages.
Permit CODditioiis I to 44.
SoLirce Testlilg Report Fon-nat.

Volvo Trucks North America
Registration Number: 20,165
March 7, 2007. as amended August 21, 2007
- page 2

INTRODUCTION

Title Article 6 (New Source Review, etc.) hereby supersedes the March 18, 2005
. Article 8
(Prevention of Significant Deterioration) permit based on the decision of Volvo
Trucks North America not to fund the modifications that permit. This revision will essentially reinstate the provisions of the previous October 11, 2003. New Source Review permit. Two significant changes have been requested. The facility has reduced the paint usage in the 8PE-00 I paint spray booth and has presented a revised BACT analysis to demonstrate that require installation of zeolite adsorber and oxidizer control system prevents any excessive economic hardship. The booth will no longer be subject to VOC control, but will now have a VOC throughput limit consistent with the revised BACT analysis. Also, plant particulate control requirements will now reflect particulate concentrations in the stack emissions rather than control efficiencies as percentage reductions. The percentage reduction requirements precluded testing problems because most coating operations produce highly variable inlet loading over a typical test period.

This permit approval is based on the permit application dated September 1, 2006, including amendment information dated November 8, 2006, and May 30, 2007, and supplemental information dated December-10, 2006. Any equipment and operating parameters not addressed in that application shall remain as represented in the federal operating permit application dated November 22, 2006. 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 5-10-10 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).

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 and
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.

Volvo Trucks North America
Registration Number: 20765
March 7, 1997. as amended ALI-2UST 'I. -1007
Page 33
PERMIT CONDITIONS:

PROCESS REQUIREMENTS

1. Equipment List - Equipment at this facility consists of the following:

Equipment to be modified
Reference No. Equipment Description Federal Installation
Requirements Date
8PE-001 Multi-Tone Booth P I MACT MMMM/PPPP 1995
Multi-Tone Oven 4' 1 99 5
8PE-001B Multi-Tone Cooler# I I C)95

Equipment permitted prior to the date of this permit
Federal Installation
Reference No. Equipment Description Requirements Date
1 PE-00 I ISouth Chassis Paint Booth MACT MMMM 1998
1 PE-00 I A South Chassis Curing Oven 1988
1 PE-00 I B South Chassis Oven Cooler- 1988
1 PE-002 North Chassis Paint Booth MACT MMMM 1996
1 PE-002A North Chassis Curing Oven T9 9 @6@
1 PE-002B North Chassis Oven Cooler 1996-
2PE-00 I Phosphate System & Heater NSPS Dec 1995
3PE-001 E-Coat Process MACT MMMM 199@
PE-00 I A E-Coat Tunnel 1995
3PE-00 IB E-Coat Oven 1995
3PE-001C E-Coat Oven Cooler 1 995
3PE-001D E-Coat Scuff Station 1995
4PE-00 I Seam Sealer/Bracket Attach 1(95
4PE-00 I A Cab Wipeoff Prime Tack-Off 1995
5PE-001 Primer Process - Robotic Zone MACT MMMM 1995
5PE-001A Primer Process - Manual 7-one 1995
5 PE-00 I B Primer Oven Exhaust 1995
5PE-00 I C Primer Oven Cooler 1995
7PE-00 I Specialty/Touch-Up Painting Booth MACT MMMM/ILIPPPP 1995
8PE-002) Basecoat Booth # 2 MACT MMMM/PPPP 2000
8PE-002A Basecoat Oven # 2 2000
8PE-002B Basecoat Cooler # 2 2000
8PE-002C Basecoat Booth 9 2 Demask Station 21000
9PE-00 I Clearcoat Spray Booth MACT MMMM/PPPP 1995
9PE-001A Clearcoat Curing Oven 1 995
9PE-00 I B Clearcoat Cooler# 1 1995
19PE-001C Clearcoat Cooler # 2 1995
1 OPE-00 1. 002 Spot Repair (BC/CC) MACT MMMM/PPPP 199
1 I PE-00 I Finalinspect MACT MMMM/PPPP 1995
1 ')PE-001 PC Booth # 1: Cab Touch-up MACT MMMM/PPPP 1974
1 ')PE-001 A PC Booth 4 1 Oven 1974
13PE-002' PC Booth 9 21: Cab Touch-Up MACT MMMM,PPPP 1974
13PE-002A PC Booth 42 Oven 1998
13PE-004 PC Booth 4: Truck Touch-off MACT MMMM/PPPP 1000
13PE-004A PC Booth 94 Oven 2000

Volvo Truck-s North America
Registration Nuiiiber: 20765
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March 7- 2007- as ai-nended Augusti 2 1. 2DO
Page -4

Specifications included in ttie permit uiider tlii-, Coiidition are for iiifam
iational pu-rposes
ordv and do iiot forni eiiforceable tei-ins or conditions of the pemiit.
(9 VAC 90-1 I 80 D -1)

21 int spray
Emission Controls and Control Requirements - Particulate emissions fi-oni pa'
booths shall be controlled as tabulated below. or VDEQ approved equivateiit. t
o achieve tile
designated concentrations:

Maxiinuin

PLaint/Coatinp- Process Control Equipiiieeit Eiiiiission.

Chassis IPE-001 'Aater Wash Spray Bootli 0.005 gr/scf

with dry filters

Chassis I PE-002 Vezituri Wet Scrubber 0.003 gr,scf'

with dry filters

Cab Prime 5 PE-00 1, 5PE-00 IA Venturi \Vet ScrLibbers 0-003 grlscf

Special Projects 7PE-001 Venturi Wet Scrubber 0-0033 gr,scf

Cab Multi-Tone 8PE-001 Venturi Wet Scrubber 0.003 gr/sef

Cab Basecoat 8PE-002 Vetituri Wet Scrubber 0.003 gr/sc f

Cab Clearcoat 9PE-001 Veitituri Wet Scrubber 0.003 grlscf

Spot Repair (BCI'CC) I OPE-001 Dry Filter 0.005 gr/scf

Spot Repair (BUCC) I OPE-002 Dry Filter 0.005 grlscf

Inspection & Repair I I PE-001 Dry Filter 0.005 gr/scf

P-C Cab Repair/Touch-Up 13PE-001 Water Wash Spray Booth 0.005 gr/sef

P-C Cab Repair/Touch-Up 13PE-002 Cartridge Filter 0.005 griscf

P-C Cab Repair/Touch-Up 13PE-004 Dn., Filter or equivalent 0.005 gr/scf

The OVeT-sprav particulate controls fOT the paint sprav booths shall be provid
ed with adequate
access for inspection.

(9 VAC 5-80-1 1 80 and 9 VAC 5-50-260.)

3. Emission Controls - Volatile organic conipOLind (VOC) eiiiiissions froi-n th
e following
paitting/coating processes shall be controlled by the iise of Nwaterbome, hig
b-solids coatings.,
zero-VOC solvent bome coatings, or VDEQ approved equivalent:

- Chassis I PE-00)

- Chassis I PE-002

- Cab Clearecat 9PE-001

- Iiispection & Repair IOPE-001 & 002

(9 VAC 5-50-260 aiid 9 VAC 5-80-3 1 80)

4. Emission Controls - Volatile organic coiiipouiid (VOC) enlisslois fi-oi-ii
the cab piiine
processes SPE-001 sliiill be controlled by ttie llse of waterbonie coatings or
VDEQ approveci
equivalent.

(9 VAC 5-50-260 aiid 9 VAC

Volvo Trucks North America
Remediation Number: -10765
March 7, 2007. as amended August 21, 2007
Page 5

5. Emission Controls - Nonhazardous organic compound (VOC) emissions from the electro-deposition (Electrocoat immersion) process shall be controlled by the use of electrocoat waterborne coatings.

C@
(9 NAC 5-50-260 and 9 VAC 5-80-1180)

6. Emission Controls and Control Efficiency, - Volatile organic compound (VOC) emissions from the Cab Basecoat Spray Booth 8PE-00-2 shall be controlled by, air recirculation to concentrate VOCs inside the booth followed by a thermal 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 NAC 5-80-1180 and 9 VAC 5-50-260)

7. 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 5-80-1180, 9 VAC 5-170-160, 9 VAC 5-50-180, and 9 VAC 5-50-260)

8. Emission Controls - Hazardous Air Pollutant emissions from painting/coating operations are limited to the more stringent of:

211

- a. .6 lbs/gal of coating solids as applied, or
- b. 0.16 lbsVHAP/lb of coatings solids as applied.

as an annual facility-wide average, calculated monthly as a rolling twelve (12) month average, for the overall painting/coating facility.*

*The facility, has chosen to demonstrate compliance with MACTs MACT and PAPP by demonstrating emissions levels which meet the MACT requirements on the basis of monthly and annualized averages. This choice does not preclude the facility from electing to demonstrate compliance

ce by another methodology in the
future, provided the appropriate amendments are made to the required pen-
ts.
(9 VAC 5-80-1180 and 9 VAC 5-60-100)

Vol%o Trucks iNorth Aii-iei-ica
Reoistratiion Niiiiiiber: 20765
Marcii 7.'-)007. as aiiieided August 2 1. 1007
Paae 6

9. Emission Controls - Reasoniible precautioiis shall be taken to iiiinii-nize volatile OTgan'ic compound (VOC) enii@slons froni cleaning, and purging. operations. Reasollabl e precalitiions

may include the followiig:

a. The use of capiure or coiitrol devices or both.

b. The use of detergents. high pressure water. or oilier non-volatile cleaning i-nethods.

c. The minimization of the quantit), of the volatile organic compouids itsed to clean lines.

d. The adjustiient of production scledules to miniiiilze coatliigs changes t hereby redLICing

the iieed for frequeiit cleaning or purging of the system..

(9 VAC 5-40-20 F)

10. Alternative Emission Controls - The 8PE-002 iticizierator may be bypassed for maintenance

of the coiitrof equlpnieiit vvithout cessation of operations in the Basecoat 8 PE-002 Spray

Booth provided that:

a. The exact dates and tirnes when emissions commience aiid cease being routed through ilie

bypass(es) are docuniented.

b. The VOC emissions during the bypass period are tablilated and recorded as u iicontrolled emissions.

C. The differential air pressure readiig for the venturi scrubber particulate control device is recorded at least once per hour wliiie paint operations are ongoiig.

d. The emissions froi-n the bypassed opei-ation do not violate aily other cond itions of this pen-n i t.

e. The Air Conipliance Manager. West Central Regional Office. is iiotified wi thiii two

weeks of the bypass that this action has occurred, the dtiration or anticipate d dtiration of

the action, and the reason for the actioii.

(9 VAC 5-170-160)

1 1. Monitoring Devices - The Chassis I PE-002. Cab Prinie 5PE-00 1, Special Projects 7PE-00 1,

Cab Multi-Tone 8PE-001, Cab Basecoat 8PE-0021, and Cab Clearcoat 9PE-001 spray booths

shall be equipped with differeiiial pressure gauges to coiitinuously nieastir e the difierential

pressure across the Venturi wet scrubbers. The Chassis I PE-00 I spray booth shati be

equipped with a differential pressure gauge to continuotislv measure the diffe reiitiial pressure

aci-oss the watet- curtain. The 8PE-002 spray booth shall be equipped with di fferentia)

pressure gauges to continuously nieasure the differeiiial pressure betweeli t he sprav booth

and the building air outside the boolli and to i-neasure the differeiiial pre ssLire across ilie

recirculatioii air filters. Eacli iionitoriig device sliall be installed. r iiaintained. calibrated aiid

operated in accordance,@A,Ith approved procedures wliicti st-iall iilclude, as a iiiiiiiiiiiitii. tiie

niantlfaCtLirer's wi-itten i-equireniejits or recoiniendations. Eacli ilion itoriig device sliall be

'ded witli adequate access for- 'iispectloii and sliall be in opei-ation when
ilie sprLiv bootli
provi
is operatiig.
(9 VAC i-SO-1 180, 9 VAC 5-50-20 C and 9 VAC 5-50-260)

Volvo Ti-uck-s North Ai-nei-ica
Remstration Number: 22076-@
T\4arch 2007. as aiiended AU:0__USt 'I, 2007
PaLe 8

1 9. Requirements by Reference - Peniilttee iS SLib ect to all applicable prov
isions of 40 CF]i_

-)Ilowing process are -001. 8PE-001.

63.4480 et seq. [MACT Subpart PPPPI for the fc as: 7PE

8PE-00). 9PE-OD]. I OPE-001.]OPE-002]. 13PE-001. 13PE-002. aaid]3PE-004*.

At the tiitie

ol'isstiance of thB permit. peniittee niust be in conipliance with this requi
rement iio later

thazi April 19, 2007.

(9 VAC 5-60-410)

For process areas tliai may be subject to both MACT mmmMm and MACI PPPP. the re
gulations allow the facility to

designate whicil MACT is the predominant operatioii ofilic process area and co
mply onk. with onc NIACT. either fvtmMM

or PPPP. For process areas listed in botli CondiLiotis 19 aaid 19. above. com
pliance with either Mmmm or PPPP stiall be

considered compliance ivith both conditions it-ilic appropriaie predoniinani a
ctivity is demonstrated. Volvo proposes to

demonstrate coinpiiallce witii MACT PPPP for aiiiv plastic or metal as a denion
stration ofcompliance for both

MACTs based oii MACT PPPP beinr, iiiiore sn-iri-ent than MACT IMMMM.

EN41SSION LIMITATIONS

20. Emission Limits - Eniissions frorn the operation of'the 8PE-001 Cab Multi-
Tone Spray

Bootli shall not exceed the linilts specified below:

Volatile Organic Col-npounds 43.7 tons/yr

Annual emissions calculated nionthly as the suni of the previous consecutive t
welve month

period,

(9 VAC 5-50-260,9 VAC 5-80-1 1 80 and 9 VAC 5-1 70-160)

21. Em ission Limits - Emissions froni tiie operation of trLick painting!coati
ng shall not exceed

the limits specified below:

Volatile Organic Conipouids 532.5 tons/vr

Aiiiiual emissions calculated nionthly a-s the suni of the previous consecuti
e twelve n-lonth

period.

(9 VAC 5-50-260.9 VAC 5-80-1180 and 9 VAC 5-170-160)

22. Emission Limits - Eiiiiissioiis from the combined operatioii of-all station
ary fuel bumng

equipmerit, includirig the cezitral air sNrstet-n and all incinerators., ovens
, and make-up heaters

sliall not exceed tile lit-nits specified beloxv:

PM-10 7.0 tons,'vr

Nitrogen Oxides (as NO-,) 91.6 tons/ ,yr

Carbon Monoxide 77.0 toiis/vr

Votalile Organic Coi-npotinds 5.0 tons/Nlr

Aiinual eiiiiissiojis calculated nioiithly as the suiii ciftlie preViOLIS conse
cutive twelve fiioiith

pei-iod.

These limits are included chiefly for emission inventory PUI-POSeS and based on LJSEPA emission factors and fuel throughput (when fuel burning equipment is operating properly, compliance with the 1,927 million metric tons natural gas usage limit shall be deemed compliance with these limits).
(9 VAC 5-50-260 and 9 VAC 1-1 70-160)

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tr

Emission Limits - Part'culate em'ss'ons froiii the opei-atioti of truck painti
ng/coating shall
not exceed the liniits specified below:
Cliassis Spray Combined I PE-00 I & 002 9.@ tons'vr
Cab Prime Sprax- 5 PE-00 1 4.4 tons/N,r
Special Projects.7ouch-Up Spray 7PE-001 1.0 tons/\,r
Cab Multi-Tone SpraN. SPE-001 13.3 , tonsf@ r
Cab Basecoat Spray SPE-002 3.1 tons./N,r
Cab Clearcoal Spray 9PE-001 7.3 tons/vr
Spot Repair Booths Combined I OPE-00 I &002 7.7 totis/Nlr
Inspection & Repair I 1PE-001 3.0 tons/vr
P-C Building Sprav Combiied 8.8 tons/N,r
I3)PE-001. 002. & 004
Ailnual emissions calculated monthly as the. sui-n of the previous consecutive
twelve month
period.
(9 VAC 5-50-260 aiid 9 VAC 5-50-30)

24. Plantwide Emission Limits - Total emissions from the facilin'. including a
ll truck painting/
coating and all niiscellaneous sources, shall nol exceed the limits specified
below:

Volatile Organic Compounds 532.5 tons/vr

Annual emissions calculated monthly as the sum of the previous consecutive twe
lve moiith
period.
(9 VAC 5-50-260)

25. Visible Emission Limit - Visible etnissions from the facility's spray boot
hs, ovens. and
incinerators shall not exceed five (5) percnt opacity, except for one six min
ute pen' od in any
one hour ofnot more than ten (I 0) percent. as detemiined by EPA Metliod 9 (re
ference 40
CFR 60, Appendix A). The opacitv standard shall appiv at all times. except du
ring peiriods of
nialfunction, start up, 2nd shut down.
(9 VAC 5-80-1180, 9 VAC 5-50-260 and 9 VAC 5-170-160)

CONTINING COMPLIANCE DETERMINATION

2) 6. Stack Tests - Lipoiu requesi by the VDEQ. ibe pei-iiiiittee shall condLIC
t perfomiaiee tests for
the VOC aiid HAP destruction efficiencv ol-tiie tiiciierator controlling VOC
aiid HAP
emissions from the 8PE-002 spray booth to deiioiistrate compliailce with the
eiiiiiision liniits
aiid coritrol efficiencv requireiiiiieits coiitalzied in iiiis peri-nit. The t
ests sliall be performied,
and deiioiistrate coi-ipliance, within 60 davs after nolice b), the Air Compl
iance Manaver,
West Central Regional Office. that the Depai-ii-neiii lias reason to I-ielieve
that ilie facility oi, a
portion of'the facility is iiot in coi-ipliance with the eii-iissioil liiiilts
of'tiils pqrmit. Tests shall

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be conducted and reported and data reduced as set forth in 9 VAC -5-50-30 of State Regulations. and the test methods and procedures contained in each applicable section or subpart listed in 9 VAC 5-50-410. The details of the tests shall be arranged with the Air Compliance Manager, West Central Regional Office. The permittee shall submit a test protocol at least 30 days prior to testing. Two copies of the test results shall be submitted to the Air Compliance Manager, West Central Regional Office within 45 days after test completion and shall conform to the test report format enclosed with this permit.
(9 VAC 5-50-30 G)

Stack Tests - Upon request by the NIDEQ, the permittee shall conduct performance tests for the particulate emissions from spraying or coating (air), both to demonstrate compliance with the emission limits and/or control requirements contained in this permit. The tests shall be performed, and demonstrate compliance, within 60 days after notice by the Air Compliance Manager, West Central Regional Office, that the Department has reason to believe that the facility is not in compliance with the emission limits of this permit. Tests shall be conducted and reported and data reduced as set forth in 9 VAC 5-50-30 of State Regulations, and the test methods and procedures contained in each applicable section or subpart listed in 9 VAC 5-50-410. The details of the tests shall be arranged with the Air Compliance Manager, West Central Regional Office. The permittee shall submit a test protocol at least 30 days prior to testing. Two copies of the test results shall be submitted to the Air Compliance Manager, West Central Regional Office within 45 days after test completion and shall conform to the test report format enclosed with this permit.
(9 VAC 5-50-30 G)

29. Visible Emissions Evaluation - Upon request by the VDEQ, the permittee shall conduct visible emission evaluations in accordance with 40 CFR, Part 60, Appendix A, Method 9 on any spray operation stack(s) to demonstrate compliance with the visible emission limits contained in this permit. Each test shall consist of three (3) sets of twenty-four (24) consecutive observations (at fifteen (15) second intervals) to yield a six (6) minute average. The details of the tests are to be arranged with the Air Compliance Manager, West Central Regional Office. The tests shall be performed, and demonstrate compliance, within 60 days after notice by the Air Compliance Manager, West Central Regional Office, that the

Department has reason to believe that the facility or a portion of the facility is not in compliance with the emission limits of this permit. Two (2) copies of the test results shall be submitted to the Air Compliance Manager, West Central Regional Office within 45 days after test completion and shall conform to the test report format enclosed with this permit.
(9 VAC 5-50-30 G)

RECORDS AND REPORTING

29. 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 include the al'1101-Int of VOC' that is not included due to NIOC certification

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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

areas, cooling areas, splash-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 Air Compliance Manager, West

Central 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 SPE-001 and SPE-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 SPE-001 and SPE-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 consumption of natural gas and propane for the total plant. Annual consumption shall be calculated monthly as the sum of the previous consecutive 12 month period.

h. Monthly and annual consumption of natural gas and propane for the Phosphate System washing heater. Annual consumption shall be calculated monthly as the sum of the previous consecutive 12 month period.

i. Monthly and annual emissions of particulate matter from each spray booth.

oth or set of
booths with limits in Condition 23.

J. Monthly and annual emissioiis of VOC fi-oni overall truck painting/coating,
- ArLnLial
einissioiis shati be calculated montilly as the sui-n of the previous consecut
ive 12 iiioiitli
period.

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k. Monthly and aiuiual VOC emisslois from all miscellaneous NfOC sources for tile total plant. A-nnual emissions shall be calcu)ated monthIN, as the surn of the prev IOLIS consecutive 12 montli pen'od.

l. Monthly aiid annual ei-nisslois of VOC froiii tiie total plant (painting/coating and all ottler h I e s in L) ie miscellaneous sources.). Annual ei-nissions sliall be calculated morit ty as t i u f ti previous coiisecutive 12 niontli period.

in. Monthh! aiid anliual emissions of nilrogen oxides, carbon monoxide. volati le organic coi-npounds and PM- I 0, from coiibustion ofnatural gas and propane for the I ota) plani. Araial emisslois shall be calculated 7iionthiN IaS tile SLII-n Of tile J)Tev iOus consecutive 12 month period.

n. Average monthly and minual VOC ei-nissions in pounds/gallon as an average f roill overall truck painting/coating, except for spray booths controlled by VOC fume inciner ation, - accountirig for waterborne/exempt so] vent paints/coatings.on both bases of wi th water and exei-npt solvents and less waier and exempt solvents. Annual emissiolis s hall be calculated rmonthly as the sum of the previous consecutive 12 montli period.

o. Average nionthly and aiiniiual HAP enilssions in pounds/gallon of solids or pounds VHAP/pound coating. solids as ai average frcini overall truck painting/coatin g (except that spray booth 8PE-002, cotitrolled by VOC fume incitiation may be otherwi se docunictited to deriionstrate MAC'F compliance). Annual emissions shall be ca lculated monthly as the suni of the previous consecutive 12 i-noiiih period.

p. Records of the differential pressure readings for the vejit-Lin' scrubbers controlling particulate enissions from the followina SpTav booths: Chassis I PE-002, Cab Prii-ne 5PE-001. Special Pr 'ects 7PE-001. Cab Multi-Tone 8PE-001. Cab Basecoat 9PE-002 l. and Cab Clearcoat 9PE-00 I: for ilie water curtaiii cojitrolling particulate emiss ions from the Chassis I PE-001 spray booth; for the recirculation lilters in tiie SPE-0021 s pray booth, and differential pressure readings betweeti ifie factor@7 floor and the Cab Baseco at 8PE-002 spray bootli. Readings shall be recorded at least orice per shifl during proc ess operatoris.

I
q. Records of the temperature ol'tlie regenerative tiiemial oxidizer controlli ng VOC eniissiozis frozii Cab Basecoat spray booth 8PE-002. One-hour averages of tll e continuously i-nonjioied ternperatiire sliall be recorded at least oilee per l ioiir during

process operations.

r. 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.

s. Results of all stack tests, visible emissions evaluations and performance evaluations.

t. 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)

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30. Reports for Facility or Control Equipment Malfunction - Within 30 days of a failure of malfunction that is expected to exist for 10 days or more, and semi-monthly thereafter until the failure or malfunction is corrected, the permittee shall furnish written reports to the Air Compliance Manager, West Central Regional Office containing the following:

a. Identification of the specific facility that is affected as well as its location and registration number:

b. The expected length of time that the air pollution control equipment will be out of service:

c. The nature and quantity of air pollutant emissions likely to occur during the breakdown period,

d. Measures taken to reduce emissions to the lowest amount practicable during the breakdown period,

e. A statement as to why the owner was unable to obtain repair parts or perform repairs that would allow compliance with the provisions of these regulations within 30 days of the malfunction or failure;

f. An estimate, with reasons given, of the duration of the shortage of repairs or repair parts which would allow compliance with the provisions of these regulations, and

g. Any other pertinent information as may be requested by the board.

(9 VAC 5-20-1 80 D)

NOTIFICATIONS

31. Notification for Control Equipment Maintenance - The permittee shall furnish notification to the Air Compliance Manager, West Central Regional Office of the intention to shut down or bypass, or both, air pollution control equipment for necessary scheduled maintenance.

which results in excess emissions for more than one hour, at least 24 hours prior to the shutdown. The notification shall include, but is not limited to, the following information:

a. Identification of the air pollution control equipment to be taken out of service, as well as its location, and registration number:

b. The expected length of time that the air pollution control equipment will be out of service:

c. The nature and quantity of air pollutants likely to occur during

the shutdown period, and

d. Measures that will be taken to minimize the length of the shutdown
or to negate the effect
of the outage.
(9 VAC 5Z20- 1 80 B)

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32. Notification for Facility, or Control Equipment Malfunction - The permittee shall furnish written notification to the Air Compliance Manager, West Central Regional Office of the affected facility or related air pollution control equipment that it may cause excess emissions for more than one hour, by facsimile transmission, telephone or electronic mail. Such notification shall be made as soon as practicable but no later than four 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 Air Compliance Manager, West Central Regional Office.
(9 VAC 5-20-1 80 C and 9 VAC 5-80-1180)

GENERAL CONDITIONS

33. 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 the State Air Pollution Control Board Regulations;

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 any inspection unreasonable during an emergency.
(9 VAC 5-170-130 and 9 VAC 5-80-1 1 80)

34. 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,

ment and process

equipment which affect such emissions:

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

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 instructions, at a minimum.

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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, including

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 VDEQ personnel upon request.

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

35. Record of Malfunctions - The permittee shall maintain records of the occurrence and

duration of an, 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 and 9 VAC 5-80-1180 D)

36. Violation of Ambient Air Quality Standard - The permittee shall, upon request of the

VDEQ, 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 and 9 VAC 5-80-1180)

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

a. Knowingly makes material misstatements in the permit application or amendments thereto;

or

b. Fails to comply with the conditions of this permit,

c. Fails to comply with any emission standards applicable to a permitted emission unit;

d. Causes emissions from the stationary source which result in violations of, or interfere

with, the attainment and maintenance of any ambient air quality standard; or

e. Fails to operate in accordance with any applicable control strategy, including any

emission standards or emission limitations in the State Implementation Plan in effect at

the time the application for this permit is submitted.

or

(9 VAC 5-80-1210 F)

38. Change of Ownership - In the case of a transfer of ownership of a stationary source, the new

owner shall abide by any current permit issued to the previous owner. The new owner shall

notify the Director. West Central Regional Office of the change of ownership

p Nv'lth'In 30 days
of the transfer.
(9 VAC 5-80-1240)

39. Permit Cop), - The peri-nittee shall keep a copy of this permit on the pre
nilses aftlie facility
to wliich it aliplies.
(9 VAC 5-170-160)

STATE-ONLY ENFORCEABLE REQUIREMENTS

40. Hazardous Air Pollutant Exclusion - The permittee shall cease to utilize any coatings containing lead chromate or other lead organic compounds, except limited use for spot touch-ups and for military contracts with specifications requiring such constituents. Resumption of the use of such compounds for commercial production shall require a new permit and shall require air dispersion modeling (9 VAC 5-170-160)

41. 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 in 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 E-Coat Oven 3) FBE-00 I incinerator demonstrated acceptable emissions at 1400 °F chamber temperature in 1997 testing because there were so little emissions. The main purpose of the E-Coat Oven 3 FBE-00 I incinerator is for odor control.)

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 5-40-1310, 9 VAC 5-80-1180, and 9 VAC 5-50-260)

42. Stack Tests - Upon request by the VDEQ, the permittee shall conduct performance tests for the VOC destruction efficiency of the incinerator controlling VOC emissions from the E-Coat Oven 3 FBE-00 I to demonstrate compliance with the emission limits and control efficiency requirements contained in this permit. These tests shall be performed, and demonstrate compliance, within 60 days after notice by the Air Compliance Manager, West Central Regional Office, if the Department has reason to believe that the facility or a portion of the facility is not in compliance with the emission limits of this permit. Tests shall

be conducted and reported and data reduced as set forth in 9 VAC 5-50-30 of State Regulations, and the test methods and procedures contained in each applicable section or subpart listed in 9 VAC 5-50-41.0. The details of the tests shall be arranged with the Air Quality Compliance Manager, West Central Regional Office. The permittee shall submit a test protocol at least 30 days prior to testing. Two copies of the test results shall be submitted to the Air Quality Compliance Manager, West Central Regional Office within 45 days after test completion and shall be returned to the test sponsor upon final conclusion of the test.

(9 VAC 5-40-1.30 and 9 VAC 5-50-30 G)

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43. On Site Records - The pemiltee shall niaintain a toxics emissloii inventor
v for Hazardous
Air Pollutants and such other air tomes as may be added to the Board's reLiula
tions. HAP
ei-nissions should not include the amount ofHAPs ihat are not eniltied due to
HAP
incineration emissions coiitrols. HAPs retLirned to veiidor. HAPs removed fo
r off-site
disposal. etc. Separate records shall be kept fcir each operational area. suc
h as a spray booth
and associated ovens.. cooling areas, flasli-off areas, etc. This shall inclu
de separate records
for the 9PE-001 and 8PE-002 spray bootlis. (Note: The PC area mav be treated a
s a single
operational area wliere eniission records for booths 13PE-001. 002. & 004 aaid
ei-nissiolis
from operatiolis outside the booths may be combined as a single data record.)
The content of
and format of such records shall be arranged with ihe Air Coi-npliance Maliage
r. VWest
Central Regional Office. These records sliall include. but are not limited to
:

a. Records of the tempe-rature ol- the incinerator controlling the E-coai Oven
(3)PE-001).
Readings sliall be recorded at least once per hour during process operations.

b. In order to satisfv the state toxics regulatioii, monthly and annual emissi
ons froni the total
plant of total and individual Hazardous Air Pollutants, any glycol ethers stil
l listed as
HAPs. Lead froni lead chromate. chroniitim froi-n lead chroi-nate. and chromi
um from
other chromiw-n compounds. stial I be accounted foi- separatel.N The TeCords s
hall include
such consuniptloji Tecords and control equipment efficiency factors as VDEQ de
termines
are necessarNito support the estiniates. HAP emissions froni sources other tha
n paints and
coatings that constitute less than 0.0 I tons per vear may be considered negli
gible. Amual
etnissions shall be calculated montlih as the sum of the previous consecutive
12 nionth
PeTiod.

These records sliall be available tor itispectioii by the VDEQ and shall be cu
rrent for the most
recent five vears.
(9 VAC 5-60-50.)

44, Facilit), or Control Equipment Malfunction - Hazardous Air Pollutant Proce
sses - The
truck- painting aaid coating processes utilizing hexamethylene 1,6 dliisocya-na
te shall. upon
request of the Department.. shut down immediaLely if its emissions increase in
any ailount
because of a bypass, malfunctioii, shutdown or failure of the process or its a
ssociated air
pollution coiitrol equipment. The processes shali not return to operation unt
i) it and tne
associated air pollution control equipment are able to operate in the proper m

anner.
(9 VAC 5-20-180 C & F.3))