

Federal Operating Permit Article 1

This permit is based upon the requirements of Title V of the Federal Clean Air Act and Chapter 80, Article 1 of the Commonwealth of Virginia Regulations for the Control and Abatement of Air Pollution. Until such time as this permit is reopened and revised, modified, revoked, terminated or expires, the permittee is authorized to operate in accordance with the terms and conditions contained herein. This permit is issued under the authority of Title 10.1, Chapter 13, §10.1-1322 of the Air Pollution Control Law of Virginia. This permit is issued consistent with the Administrative Process Act and 9 VAC 5-80-50 through 9 VAC 5-80-300 of the State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution of the Commonwealth of Virginia.

Authorization to operate a Stationary Source of Air Pollution as described in this permit is hereby granted to:

Permittee Name:	General Dynamics – Armament and Technical Products, Inc.
Facility Name:	General Dynamics – Armament and Technical Products, Inc., Plant 1
Facility Location:	325 Brunswick Lane, Marion, Virginia
Registration Number:	10050
Permit Number:	SWRO10050
Effective Date:	November 18, 2007
Expiration Date:	November 17, 2012

Dallas R. Sizemore
Deputy Regional Director

November 7, 2007
Signature Date

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40 CFR 63, Subparts A, GG, MMMM

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I. Facility Information

Permittee

General Dynamics-Armament and Technical Products, Inc.
150 Johnston Road
Marion, VA 24354

Responsible Official

Mr. Greg Barton
Director, Marion Operations

Facility

General Dynamics-Armament and Technical Products, Inc.
325 Brunswick Lane
Marion, Virginia, 24354

Contact Person

Mr. Cliff Stanley
EHS Manager
(276) 783-1324

County-Plant Identification Number: 51-173-00001

Facility Description: NAICS 332311, 336412, 336413, 336419, 336992 - The company manufactures metal shelters and related products for housing military vehicles and equipment. The process includes metal cleaning, fabrication, coating and assembly of aluminum panels. The company operates an armor plate line for producing vehicle armor. The armor is made of layers of metal and fabric that are held together by adhesive. The company also manufactures radomes and other aerospace composites for various aircraft and weaponry from composite materials. These items may be of commercial or military use. The operations include the application of many coatings, resins, adhesives, fillers, or cleaners by several different methods, such as spray coating, brushing, extrusion, chemical conversion, troweling, rolling, etc. Most of the operations are labor intensive, and involve many fabrication/assembly steps. The facility also includes two gas/oil-fired boilers and various other heaters and ovens used in the process.

II. 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							
18	18	Cleaver Brooks Model D-68 gas/oil boiler – 1200 hp – 1972	50.2 MMBtu/hr	-	-	-	09/20/05
19	19	Cleaver Brooks Model CB-200-300 gas/oil boiler – 300 hp – 1985	12.5 MMBtu/hr	-	-	-	09/20/05
Heat Cleaning							
5	5	Bayco Model BB-56 Heat Cleaning Oven (gas fired)	116.4 lbs charged/hr	afterburner	-	PM, VOC	09/20/05
Shelter Coating Operations							
6, 7, 9, 11, 12, 13, 14, 21, 32, 33, 80	same	Shelter Primer/Coating mixing, spray booths, and drying operations	4,000 – 6,000 lb product/hr	Booths are equipped with filters	same	PM/PM10	09/20/05
Aerospace Coating Operations							
22, 23, 63, 65, 69a&b	same	Aerospace composite spray booths	4,000 lb product/hr	Booths are equipped with 2-stage filters	same	PM/PM10	09/20/05
Resin Impregnation/Prepreg Operations							
40, 41, 49, 81	same	Impregnation of fiberglass or other materials with various resins	200 lb product/hr each (#49-100 lb/hr)	----	----	----	09/20/05

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
Resin Transfer Molding							
96 & 97	same	96 & 97 – Tackifier Spray Booths	2 T product/hr each	Fiberglass filters (2-stage)	same	PM/PM10	09/20/05
98		Fume Hood	--	--			
110		Sanding/Trim Booth	2 T/hr	Fiberglass Filters			
Grinding/Sanding/Routing							
20, 46, 57, 58, 61, 66, 67, FWG1-11, CG1-9, 80, 107	same	Trimming panels, sanding and grinding of composite radomes	Panel trim – 600 lb product/hr sanding – 4,000 lb product/hr grinding – 200 lb product/hr	Various baghouses including Ref. #107	same	PM/PM10	09/20/05
Metal Cleaning							
1-4	same	Aluminum wash, rinse, acid wash tanks	6,000 lb product/hr	Venturi scrubbers for acid tanks	same	PM/PM10	09/20/05
Flame/Arc Spray Booth							
27	same	Flame Spraying; Arc Spraying	600 lb product/hr; 4000 lb/hr	Filters	same	PM/PM10	09/20/05
Armor Plate Line							
108	same	Grinding/Sealer Booth	4,000 lb product/hr each	Filters	same	PM/PM10	09/20/05
109		Sealer Booth		None			

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

III. Fuel Burning Equipment Requirements – Ref. #18, 19 Cleaver Brooks Boilers

A. Limitations

1. The approved fuels for the two Cleaver Brooks boilers (Ref. #18 & 19) are natural gas and distillate oil. Distillate oil is defined as fuel oil that meets the specifications for fuel oil numbers 1 or 2 under the American Society for Testing and Materials, ASTM D396-78 “Standard Specification for Fuel Oils.” A change in the fuels may require a permit to modify and operate.
(9 VAC 5-80-110 and Condition 13 of 09/20/05 NSR permit)
2. The maximum sulfur content of the oil to be burned in the boilers (Ref. #18 & 19) shall not exceed 0.5 percent by weight per shipment.
(9 VAC 5-80-110 and Condition 14 of 09/20/05 NSR permit)
3. The Cleaver Brooks boilers (Ref. #18 & 19) shall consume no more than a combined total of 90 million cubic feet of natural gas and 105,000 gallons of distillate oil per year, calculated as the sum of each consecutive twelve (12) month period.
(9 VAC 5-80-110 and Conditions 15 and 16 of 09/20/05 NSR permit)
4. Combined total emissions from the operation of the Cleaver Brooks boilers (Ref. #18 & 19) shall not exceed the limits specified below:

Sulfur Dioxide	32.2 lbs/hr	3.8 tons/yr
Nitrogen Oxides (as NO ₂)	9.0 lbs/hr	7.4 tons/yr
Carbon Monoxide	2.2 lbs/hr	1.8 tons/yr

Annual emissions shall be calculated as the sum of each consecutive 12-month period.
(9 VAC 5-80-110, 9 VAC 5-50-180, 9 VAC 5-40-930, 9 VAC 5-50-260, and Condition 24 of 09/20/05 NSR permit)

5. Emissions from the operation of the Cleaver Brooks boiler (Ref. #18) shall not exceed the limits specified below:

Particulate Matter	0.39 lb/MMBtu
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(9 VAC 5-40-900 and 9 VAC 5-80-110)

6. Emissions from the operation of the Cleaver Brooks boiler (Ref. #19) shall not exceed the limits specified below:

Particulate Matter	0.57 lb/MMBtu
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(9 VAC 5-40-900 and 9 VAC 5-80-110)

7. Visible Emissions from each of the Cleaver Brooks boiler stacks shall not exceed 20 percent opacity except during one six-minute period in any one hour in which visible emissions shall not exceed 30 percent opacity.
(9 VAC 5-50-20, 9 VAC 5-50-80, 9 VAC 5-80-110, and Condition 28 of 09/20/05 NSR permit)
8. Boiler emissions shall be controlled by proper operation and maintenance. Boiler operators shall be trained in the proper operation of all such equipment. Training shall consist of a review and familiarization of the manufacturer's operating instructions, at minimum.
(9 VAC 5-80-110 and Condition 36 of 09/20/05 NSR permit)

B. Recordkeeping

1. The permittee shall obtain a certification from the fuel supplier with each shipment of distillate oil. Each fuel supplier certification shall include the following:
 - a. The name of the fuel supplier,
 - b. The date on which the oil was received,
 - c. The volume of distillate oil delivered in the shipment,
 - d. A statement that the oil complies with the American Society for Testing and Materials specifications for fuel oil numbers 1 and 2, and
 - e. The sulfur content of the oil.
(9 VAC 5-80-110 and Condition 14 of 09/20/05 NSR permit)
2. The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. These records shall include:
 - a. The monthly and annual throughput of natural gas (in million cubic feet) and distillate oil (in 1000 gallons) for each Cleaver Brooks boiler. The annual throughput shall be calculated as the sum of each consecutive twelve (12) month period.
 - b. Daily hours of operation of the boilers.
 - c. All fuel supplier certifications.

These records shall be available on site for inspection by the DEQ and shall be current for the most recent five (5) years.

(9 VAC 5-50-50, 9 VAC 5-80-110, and Condition 31 of 09/20/05 NSR permit)

3. The permittee shall maintain records of the required training including a statement of time, place and nature training provided. The permittee shall have available good written operating procedures and a maintenance schedule for the boilers. These procedures shall be based on the manufacturer's recommendations, at minimum. All records required by this condition shall be kept on site and made available for inspection by the DEQ.
(9 VAC 5-80-110 and Conditions 31 & 36 of 09/20/05 NSR permit)

C. Testing

1. The permitted facility shall be constructed so as to allow for emissions testing at any time using appropriate methods. Upon request from the Department, test ports shall be provided at the appropriate locations.
(9 VAC 5-50-30, 9 VAC 5-80-110, and Condition 12 of 09/20/05 NSR permit)
2. If testing is conducted in addition to the monitoring specified in this permit, the permittee shall use the following methods in accordance with procedures approved by the DEQ as follows:

Pollutant	Test Method (40 CFR Part 60, Appendix A)
PM	EPA Method 5
NO _x	EPA Method 7
SO ₂	EPA Method 6
CO	EPA Method 10
Visible Emission	EPA Method 9

(9 VAC 5-80-110)

IV. Heat Cleaning Oven Requirements – Ref. #5

A. Limitations

1. Particulate matter emissions from the Bayco heat cleaning oven (Ref. #5) shall be controlled by an afterburner or equivalent. The control system shall be provided with adequate access for inspection.
(9 VAC 5-80-110, 9 VAC 5-50-260, and Condition 7 of 09/20/05 NSR permit)
2. The Bayco heat cleaning oven (Ref. #5) shall process no more than 116.4 pounds per hour and 16.4 tons per year of metal hooks/hangers, calculated as the sum of each consecutive 12-month period.
(9 VAC 5-80-110 and Condition 17 of 09/20/05 NSR permit)
3. Visible emissions from the Bayco heat cleaning oven (Ref. #5) shall not exceed 20 percent opacity except during one six-minute period in any one hour in which visible emissions shall not exceed 30 percent opacity. This standard applies at all times, except for periods of start-up, shutdown, and malfunction.
(9 VAC 5-50-20, 9 VAC 5-50-80, and 9 VAC 5-80-110)

4. Emissions from the operation of the Bayco heat cleaning oven (Ref. #5) shall not exceed the limits specified below:

Particulate Matter 0.10 gr/dscf @ 12% CO₂

(9 VAC 5-80-110, 9 VAC 5-50-260 and Condition 26 of 09/20/05 NSR permit)

B. Monitoring

1. The permittee shall perform inspections of the Bayco heat cleaning oven (Ref. #5) stack to determine the presence of visible emissions. Visible emissions checks shall be conducted at least weekly during periods of normal facility operation for a sufficient time interval to determine if there are any visible emissions. If visible emissions are observed, a visible emissions evaluation (VEE) in accordance with 40 CFR Part 60, Appendix A, Method 9 shall be conducted. The VEE shall be conducted for a minimum period of six (6) minutes. If any of the observations exceed the applicable opacity limit, the observation period shall continue until a total of sixty (60) minutes of observation has been completed. A Method 9 evaluation shall not be required if the visible emissions condition is corrected in a timely manner such that no visible emissions are present; the emissions unit is operating at normal operating conditions; and the cause and corrective measures taken are recorded.
(9 VAC 5-80-110)
2. The permittee shall determine the flue gas temperature in the afterburner chamber in order to assess proper operation. The afterburner operating temperature shall be recorded once during each batch cycle. An afterburner operating temperature of 1400°F or greater is recommended by the manufacturer, and represents proper operation. If the temperature is observed to be lower than 1400°F, the permittee shall take measures to correct operation. In such event, the unit shall not be operated until corrections have been made to restore it to proper operation.
(9 VAC 5-80-110)

C. Recordkeeping

The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. These records shall include:

1. Annual throughput of metal hooks, calculated monthly as the sum of each consecutive twelve (12) month period.
2. Results of weekly visible emission evaluations to include observations, date and time of observation, observer's name, and corrective action taken.
3. Results of afterburner temperature measurements to include temperature, date and time of observation, observer's name, and any corrective action taken.
4. Daily hours of operation of the heat cleaning oven.

These records shall be available on site for inspection by the DEQ and shall be current for the most recent five (5) years.

(9 VAC 5-50-50, 9 VAC 5-80-110 and Condition 31 of 09/20/05 NSR permit)

D. Testing

1. The permitted facility shall be constructed so as to allow for emissions testing at any time using appropriate methods. Upon request from the Department, test ports shall be provided at the appropriate locations.

(9 VAC 5-50-30, 9 VAC 5-80-110, and Condition 12 of 09/20/05 NSR permit)

2. If testing is conducted in addition to the monitoring specified in this permit, the permittee shall use the following test methods in accordance with procedures approved by the DEQ as follows:

Pollutant	Test Method (40 CFR Part 60, Appendix A)
PM/PM-10	EPA Method 5, 17
Visible Emission	EPA Method 9

(9 VAC 5-80-110)

V. Resin Impregnation and Prepreg Operation Requirements – Ref. #40, 41, 49, 81

A. Limitations

Combined VOC throughput and emissions from the operation of the resin impregnation and prepreg process (Ref. #40, 41, 49, 81) shall not exceed the limits specified below:

Volatile Organic Compounds 25.4 lbs/hr 6.0 tons/yr

Annual emissions shall be calculated as the sum of each consecutive 12-month period. (9 VAC 5-80-110, 9 VAC 5-50-260, and Condition 23 of 09/20/05 NSR permit)

B. Monitoring and Recordkeeping

The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Director, Southwest Regional Office. These records shall include, but are not limited to:

1. Annual throughput of materials used in the operation, calculated monthly as the sum of each consecutive twelve (12) month period.
2. Material Safety Data Sheets (MSDS) or other manufacturer's formulation data for each material used.

3. Hourly, monthly and annual material balance of VOC throughput and emissions from the process.
4. Daily hours of operation of the process.

These records shall be available on site for inspection by the DEQ and shall be current for the most recent five (5) years.

(9 VAC 5-50-50, 9 VAC 5-80-110 and Condition 31 of 09/20/05 NSR permit)

C. Testing

1. The permitted facility shall be constructed so as to allow for emissions testing at any time using appropriate methods. Upon request from the Department, test ports shall be provided at the appropriate locations.
(9 VAC 5-50-30, 9 VAC 5-80-110 and Condition 12 of 09/20/05 NSR permit)
2. If testing is conducted in addition to the monitoring specified in this permit, the permittee shall use the following test methods in accordance with procedures approved by the DEQ as follows:

Pollutant	Test Method (40 CFR Part 60, Appendix A)
VOC	EPA Methods 18, 25, 25a
VOC Content	EPA Methods 24, 24a

(9 VAC 5-80-110)

VI. Metal Cleaning Requirements - Ref. #1-4

A. Limitations

Acid fume emissions from the metal cleaning system (Ref. #1-4) shall be controlled by a venturi scrubber or equivalent. The control system shall be provided with adequate access for inspection.

(9 VAC 5-80-110, 9 VAC 5-50-260, and Condition 9 of 09/20/05 NSR permit)

B. Monitoring

Scrubber operation shall be verified once per shift by visual observation via a monitoring port. If the scrubber is not operating properly, the permittee shall take corrective action to restore proper operating conditions.

(9 VAC 5-80-110)

C. Recordkeeping

The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. These records shall include:

1. Annual throughput of materials used in the process, calculated monthly as the sum of each consecutive twelve (12) month period.

2. Material Safety Data Sheets or other manufacturer's formulation data for each material used.
3. Scrubber observations including unit status, date, time, observer's name, and corrective actions taken.
4. Daily hours of operation of the process.

These records shall be available on site for inspection by the DEQ and shall be current for the most recent five (5) years.

(9 VAC 5-50-50, 9 VAC 5-80-110 and Condition 31 of 09/20/05 NSR permit)

D. Testing

1. The permitted facility shall be constructed so as to allow for emissions testing at any time using appropriate methods. Upon request from the Department, test ports shall be provided at the appropriate locations.
(9 VAC 5-50-30, 9 VAC 5-80-110 and Condition 12 of 09/20/05 NSR permit)
2. If testing is conducted in addition to the monitoring specified in this permit, the permittee shall use the following test methods in accordance with procedures approved by the DEQ as follows:

Pollutant	Test Method (40 CFR Part 60, Appendix A)
PM/PM-10	EPA Method 5, 17
Visible Emission	EPA Method 9

(9 VAC 5-80-110)

VII. Grinding/Sanding/Routing Requirements - Ref. #20, 46, 57, 58, 61, 66, 67, 80, 108, 110, FWG1-11, CG1-9

A. Limitations

1. Particulate matter emissions from the sanding and trimming (Ref. #20, 46, 57, 58, 66, 67, 80, 110, FWG1-11, CG1-9) shall be controlled by dry filters or fabric filter baghouses or equivalent. The control systems shall be provided with adequate access for inspection.
(9 VAC 5-80-110, 9 VAC 5-50-260, and Condition 8 of 09/20/05 NSR permit)
2. Visible emissions from the baghouse exhausts shall not exceed 5% opacity. This standard applies at all times, except for periods of start-up, shutdown, and malfunction.
(9 VAC 5-50-20, 9 VAC 5-50-260, 9 VAC 5-80-110, and Condition 27 of 09/20/05 NSR permit)

3. Combined emissions from the material and product processing operation, including the routing, grinding, and sanding operations (Ref. #20, 46, 57, 58, 66, 67, 80, 110, FWG1-11, CG1-9) shall not exceed the limits specified below:

PM-10

30.1 lbs/hr

18.4 tons/yr

Annual emissions shall be calculated as the sum of each consecutive 12-month period.

(9 VAC 5-50-180, 9 VAC 5-50-260, 9 VAC 5-80-110 and Condition 25 of 09/20/05 NSR permit)

B. Monitoring

The permittee shall perform inspections of the baghouse stacks to determine the presence of visible emissions. Visible emissions checks shall be conducted at least weekly during periods of normal facility operation for a sufficient time interval to determine if there are any visible emissions. If visible emissions are observed, a visible emissions evaluation (VEE) in accordance with 40 CFR Part 60, Appendix A, Method 9 shall be conducted. The VEE shall be conducted for a minimum period of six (6) minutes. If any of the observations exceed the applicable opacity limit, the observation period shall continue until a total of sixty (60) minutes of observation has been completed. A Method 9 evaluation shall not be required if the visible emissions condition is corrected in a timely manner such that no visible emissions are present; the emissions unit is operating at normal operating conditions; and the cause and corrective measures taken are recorded.

(9 VAC 5-80-110)

C. Recordkeeping

The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Director, Southwest Regional Office. These records shall include, but are not limited to:

1. Annual throughput of materials used in the process, calculated monthly as the sum of each consecutive twelve (12) month period.
2. Hourly, monthly and annual material balance of particulate matter throughput and emissions from the process. Emissions estimates shall account for type and number of parts processed and controls.
3. Results of weekly visible emission evaluations to include observations, date and time of observation, observer's name, and corrective action taken.
4. Daily hours of operation of the process.

These records shall be available on site for inspection by the DEQ and shall be current for the most recent five (5) years.

(9 VAC 5-50-50, 9 VAC 5-80-110 and Condition 31 of 09/20/05 NSR permit)

D. Testing

1. The permitted facility shall be constructed so as to allow for emissions testing at any time using appropriate methods. Upon request from the Department, test ports shall be provided at the appropriate locations.
 (9 VAC 5-50-30, 9 VAC 5-80-110, and Condition 12 of 09/20/05 NSR permit)

2. If testing is conducted in addition to the monitoring specified in this permit, the permittee shall use the following test methods in accordance with procedures approved by the DEQ as follows:

Pollutant	Test Method (40 CFR Part 60, Appendix A)
PM/PM-10	EPA Method 5, 17
Visible Emission	EPA Method 9

(9 VAC 5-80-110)

VIII. Flame/Arc Spray Booth Requirements - Ref. #27

A. Limitations

1. Particulate matter emissions from the flame and arc spray booth (Ref. #27) shall be controlled by dry filters, fabric filter baghouses, or equivalent. The control system shall be provided with adequate access for inspection.
 (9 VAC 5-50-260, 9 VAC 5-80-110, and Condition 8 of 09/20/05 NSR permit)

2. The flame spray operation (Ref. #27) shall consume no more than 10 pounds per hour and 4 tons per year of metal, calculated as the sum of each consecutive twelve (12) month period.
 (9 VAC 5-80-110 and Condition 18 of 09/20/05 NSR permit)

3. The arc spray operation (Ref. #27) shall consume no more than 4 pounds per hour and 0.5 tons per year of tin/zinc, calculated as the sum of each consecutive twelve (12) month period.
 (9 VAC 5-80-110 and Condition 19 of 09/20/05 NSR permit)

4. Particulate matter emissions from the operation of the spray booth (Ref. #27) shall not exceed the limits given by the formula below:

$$E = 4.10 P^{0.67}$$

, where P is the hourly process weight rate of material being coated; and E is the particulate matter emission rate in lb/hr.
 (9 VAC 5-40-260 and 9 VAC 5-80-110 B)

5. Visible emissions from the flame and arc spray booth (Ref #27) exhausts shall not exceed 5% opacity. This standard applies at all times, except for periods of start-up, shutdown, and malfunction.
 (9 VAC 5-50-20, 9 VAC 5-50-260, and 9 VAC 5-80-110 and Condition 27 of 09/20/05 NSR permit)

B. Monitoring

1. The spray booth (Ref. #27) shall be equipped with a device to continuously measure the differential pressure drop across the filter/baghouse or equivalent. The 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. The monitoring device shall be provided with adequate access for inspection and shall be in operation during booth operations. The device shall be installed in an accessible location and shall be maintained by the permittee such that it is in proper working order at all times.

(9 VAC 5-80-1180, 9 VAC 5-50-260, 9 VAC 5-80-110 and Condition 11 of 09/20/05 NSR permit)

2. The permittee shall perform inspections of the spray booth stack to determine the presence of visible emissions. Visible emissions checks shall be conducted at least weekly during periods of normal facility operation for a sufficient time interval to determine if there are any visible emissions. If visible emissions are observed, a visible emissions evaluation (VEE) in accordance with 40 CFR Part 60, Appendix A, Method 9 shall be conducted. The VEE shall be conducted for a minimum period of six (6) minutes. If any of the observations exceed the applicable opacity limit, the observation period shall continue until a total of sixty (60) minutes of observation has been completed. A Method 9 evaluation shall not be required if the visible emissions condition is corrected in a timely manner such that no visible emissions are present; the emissions unit is operating at normal operating conditions; and the cause and corrective measures taken are recorded.

(9 VAC 5-80-110)

C. Recordkeeping

The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Director, Southwest Regional Office. These records shall include, but are not limited to:

1. Annual throughput of metal used in the flame spray and arc spray operations (Ref. #27), calculated monthly as the sum of each consecutive twelve (12) month period.
2. Hourly, monthly and annual material balance of particulate matter throughput and emissions from the process. Emissions estimates shall account for transfer efficiency and controls. Hourly emissions shall be determined by dividing monthly emissions by hours of operation.
3. Hourly particulate matter emission limit calculations described in Condition VIII.A.4 based on monthly weight of material being coated in the booths divided by hours of operation.
4. Material Safety Data Sheets or other manufacturer's formulation data for each material used.

5. Results of weekly visible emission evaluations to include observations, date and time of observation, observer's name, and corrective action taken.
6. Daily hours of operation of the processes.

These records shall be available on site for inspection by the DEQ and shall be current for the most recent five (5) years.
 (9 VAC 5-50-50, 9 VAC 5-80-110 and Condition 31 of 09/20/05 NSR permit)

D. Testing

1. The permitted facility shall be constructed so as to allow for emissions testing at any time using appropriate methods. Upon request from the Department, test ports shall be provided at the appropriate locations.
 (9 VAC 5-50-30, 9 VAC 5-80-110 and Condition 12 of 09/20/05 NSR permit)
2. If testing is conducted in addition to the monitoring specified in this permit, the permittee shall use the following test methods in accordance with procedures approved by the DEQ as follows:

Pollutant	Test Method (40 CFR Part 60, Appendix A)
PM/PM-10	EPA Method 5, 17
Visible Emission	EPA Method 9

(9 VAC 5-80-110)

IX. Shelter Coating Requirements - Ref. #6, 7, 9, 11, 12, 13, 14, 21, 32; and Aerospace/Composite Coating Requirements - Ref. #22, 23, 63, 65, and 69 a&b; Resin Transfer Molding – Ref. #96, 97, 98; Armor Plate Line – Ref. #108 & 109;

A. Limitations

Shelter, Aerospace/Composite and Resin Transfer Molding (RTM) Coating Operations and Armor Plate Line

1. Particulate matter emissions from the shelter spray coating operations (Ref. #6, 7, 9, 11, 12, 13, 14, and 21, and 32) shall be controlled by Kraft paper filters or equivalent. The Kraft paper filters shall be provided with adequate access for inspection.
 (9 VAC 5-50-260, 9 VAC 5-80-110, and Condition 5 of 09/20/05 NSR permit)
2. Particulate emissions from the tactifier (adhesive) spray booths (Ref. #96.a, 96.b, and 97) shall be controlled by fiberglass filters or equivalent. The filters shall be provided with adequate access for inspection.
 (9 VAC 5-50-260 and Condition 4 of 09/20/05 NSR permit)

3. Volatile organic compound (VOC) emissions from cleaning or purging operations (Ref. #6, 7, 9, 11, 12, 13, 14, 21, 22, 23, 32, 63, 65, 69 a&b, 96, and 97, 108, & 109) shall be minimized by the use of detergents, high pressure water, non-volatile compounds, reduced use of volatile organic compounds, or adjustment of production schedules to minimize coating changes.
(9 VAC 5-50-260 and Condition 10 of 09/20/05 NSR permit)
4. Visible emissions from the shelter, composite, and tackifier spray booths (Ref. #6, 7, 9, 11, 12, 13, 14, 21, 22, 23, 32, 63, 65, 69 a&b, 96, and 97) shall not exceed 5 percent opacity. This standard applies at all times, except for periods of start-up, shutdown, and malfunction.
(9 VAC 5-50-20, 9 VAC 5-50-260, 9 VAC 5-80-110 and Condition 27 of 09/20/05 NSR permit)
5. Combined throughput and emissions from the operation of the shelter and composite coating booths, the resin transfer molding process, and the armor plate process (Ref. #6, 7, 9, 11, 12, 13, 14, 21, 22, 23, 32, 80, 63, 65, 69 a&b, 96, 97, and 98, 108, & 109) shall not exceed the limits specified below:

Volatile Organic Compounds	916.26 lbs/hr	239.51 tons/yr
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Annual emissions shall be calculated as the sum of each consecutive twelve (12) month period.

(9 VAC 5-50-260, 9 VAC 5-80-110 and Condition 21 of 09/20/05 NSR permit)

6. Particulate matter and PM10 emissions from the shelter and composite coating operations and the resin transfer molding operation (Ref. #6, 7, 9, 11, 12, 13, 14, 21, 22, 23, 32, 80, 63, 65, 69 a&b, 96, 97, and 98) shall not exceed the limits specified below:

PM/PM10	4.17 lbs/hr	3.11 tons/yr
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Annual emissions shall be calculated as the sum of each consecutive twelve (12) month period.

(9 VAC 5-50-260, 9 VAC 5-80-110 and Condition 22 of 09/20/05 NSR permit)

7. The production of armor plates shall not exceed 9,600 tons per year, calculated monthly as the sum of each consecutive 12 month period.
(9 VAC 5-80-1180 and Condition 20 of 09/20/05 NSR permit)

Aerospace/Composite/RTM Coating Operations

8. Particulate matter emissions from the aerospace spray coating operations (Ref. #22, 23, 63, 65, 69 a&b, 96, and 97) shall be controlled by MACT GG compliant 2-stage filters or equivalent. The filters shall be provided with adequate access for inspection.
(40 CFR 63.745(g), 9 VAC 5-50-260, 9 VAC 5-80-110, and Condition 6 of 09/20/05 NSR permit)

9. The permittee shall operate the affected facilities in compliance with applicable National Emission Standards for Hazardous Air Pollutants, Subpart GG, National Emission Standards for Aerospace Manufacturing and Rework Facilities, 40 CFR 63.741 through 40 CFR 63.753, including 40 CFR 63 Subpart A, General Provisions. (9 VAC 5-60-20, 9 VAC 5-60-90, 9 VAC 5-60-100 Subpart GG, 9 VAC 5-80-110, and Condition 29 of 09/20/05 NSR permit)
10. The organic hazardous air pollutant (HAP) and VOC content limit of uncontrolled primers (except as specified in 40 CFR 63.741 e-j) shall not exceed 350 g/L (2.9 lb/gal less water for HAP; and less water and exempt solvents for VOC) as applied. Compliance will be determined through: (1) use of coatings below content limits, or (2) using monthly volume-weighted averaging (primers only) specified in 40 CFR 63.745(e) to meet content limits.
(9 VAC 5-60-100 Subpart GG, 40 CFR 63.745(c), and 9 VAC 5-80-110)
11. The organic HAP and VOC content limit of uncontrolled topcoats (except as specified in 40 CFR 63.741 e-j), including self-priming topcoats, shall not exceed 420 g/L (3.5 lb/gal less water for HAP; and less water and exempt solvents for VOC) as applied. Compliance will be determined through: (1) use of coatings below content limits, or (2) using monthly volume-weighted averaging (topcoats only) to meet content limits.
(9 VAC 5-60-100 Subpart GG, 40 CFR 63.745(c), and 9 VAC 5-80-110)
12. The handling and transfer of primers and topcoats to or from containers, tanks, vats, vessels, and piping systems shall be conducted in such a manner that minimizes spills, as specified in 40 CFR 63.745 (b).
(9 VAC 5-60-100 Subpart GG, 40 CFR 63.745(b), and 9 VAC 5-80-110)
13. New or existing primer and topcoat application operations (including self-priming topcoats) subject to Subpart GG in which any of the coatings contain organic HAP or VOC shall use one or more of the following application techniques: (1) flow/curtain, (2) dip coat, (3) roll coating, (4) brush coating, (5) cotton-tipped swab, (6) electrodeposition coating, (7) HVLP spraying, (8) electrostatic spray, or (9) other coating methods that achieve emission reductions equivalent to HVLP or electrostatic spray application methods, as determined by the requirements in 40 CFR 63.750(i), except as specified in 40 CFR 63.745(f)(3). All application equipment shall be operated according to manufacturer's specifications, company procedures, or locally specified operating procedures (whichever is most stringent).
(9 VAC 5-60-100 Subpart GG, 40 CFR 63.745(f), and 9 VAC 5-80-110)
14. Primers or topcoats (except as specified in 40 CFR 63.741 e-j) that contain inorganic HAP shall be applied in a booth or hangar with air flow controlled by particulate filters meeting or exceeding the efficiency data in Tables 1 through 4 of 40 CFR 63.745 or by waterwash system, except as specified in 40 CFR 63.745(g)(4).
(9 VAC 5-60-100 Subpart GG, 40 CFR 63.745(g), and 9 VAC 5-80-110)

15. Housekeeping measures for cleaning solvents (except semi-aqueous solvent containing greater than 60% water) shall consist of storage in closed containers; cleaning solvent-laden cloth, paper, or other absorbent applicators shall be placed in bags or other closed containers upon completing their use, unless the cleaning solvent is identified in Table I of 40 CFR 63.744 or contains HAP or VOC below the de minimis levels specified in 40 CFR 63.741(f).
(9 VAC 5-60-100 Subpart GG, 40 CFR 63.744(a), and 9 VAC 5-80-110)
16. Hand-wipe cleaning solvents (except for cleaning of spray gun equipment) shall meet a composition requirement specified in Table 1 of 40 CFR 63.744, or have a vapor pressure of 45 mm mercury or less at 20 degrees Celsius, or meet the 60% volume reduction requirements specified in an alternative compliance plan, except as specified for the 13 cleaning operations in 40 CFR 63.744(e), which are exempt from these requirements.
(9 VAC 5-60-100 Subpart GG, 40 CFR 63.744(b), and 9 VAC 5-80-110)
17. Spray gun cleaning shall be performed using (1) enclosed system, (2) non-atomized cleaning, (3) disassembled spray gun cleaning, or (4) atomizing cleaning, or their equivalent, as specified in 40 CFR 63.744(c). Leaks found in enclosed spray gun cleaners during required monthly inspections shall be repaired as soon as practicable, but no later than 15 days after the leak was found. Spray gun cleaning solutions containing HAP and VOC below the de minimis levels, specified in 40 CFR 63.741 (f), are exempt from spray gun cleaning requirements.
(9 VAC 5-60-100 Subpart GG, 40 CFR 63.744(c), and 9 VAC 5-80-110)
18. Used flush cleaning solvents (excluding those in which 40 CFR 63.744 Table 1 or semi-aqueous solvents are used) shall be emptied after each aerospace part, assembly, or component is flush cleaned (with the exception of spray guns) into enclosed containers, collection system, or system with equivalent emission control.
(9 VAC 5-60-100 Subpart GG, 40 CFR 63.744(d), and 9 VAC 5-80-110)

Shelter Coating Operations

19. Organic HAP emissions from general use coatings shall not exceed 2.6 lb per gallon of coating solids used during each 12 month compliance period. This standard applies to all coatings, thinners, and/or other additives, and cleaning materials used in the coating operation. Compliance with the emission limit shall be demonstrated on a monthly basis, calculated as a rolling 12-month emission rate.
(9 VAC 5-60-100 Subpart MMMM, 40 CFR 63.3890(b), 40 CFR 63.3891(b), and 9 VAC 5-80-110)

B. Monitoring

Shelter, Aerospace/Composite, and RTM Coating Operations

1. The shelter spray booths (Ref. #6, 7, 9, 11, 12, 13, 14, 21, and 32) shall be equipped with devices to continuously measure the differential pressure drop across the filter. The monitoring devices 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. The monitoring devices shall be provided with adequate access for inspection and shall be in operation during booth operations. The device shall be installed in an accessible location and shall be maintained by the permittee such that it is in proper working order at all times.

(9 VAC 5-80-1180, 9 VAC 5-50-260, 9 VAC 5-80-110 and Condition 11 of 09/20/05 NSR permit)

2. The permittee shall perform inspections of the spray booth stacks (Ref. #6, 7, 9, 11, 12, 13, 14, 21, 22, 23, 32, 63, 65, 69 a&b, 96, and 97) to determine the presence of visible emissions. Visible emissions checks shall be conducted at least weekly during periods of normal facility operation for a sufficient time interval to determine if there are any visible emissions. If visible emissions are observed, a visible emissions evaluation (VEE) in accordance with 40 CFR Part 60, Appendix A, Method 9 shall be conducted. The VEE shall be conducted for a minimum period of six (6) minutes. If any of the observations exceed the applicable opacity limit, the observation period shall continue until a total of sixty (60) minutes of observation has been completed. A Method 9 evaluation shall not be required if the visible emissions condition is corrected in a timely manner such that no visible emissions are present; the emissions unit is operating at normal operating conditions; and the cause and corrective measures taken are recorded.
(9 VAC 5-80-110)
3. The permittee shall calculate monthly VOC emissions from all coating operations by material balance. Except as required in Condition IX.B.4, the VOC content of each coating, cleaning, and adhesive material as supplied shall be determined from formulation data provided in the Material Safety Data Sheet (MSDS) or other manufacturer's formulation data. If the VOC content is given as a range of values, the maximum value shall be used to calculate emissions.
(9 VAC 5-80-110)
4. If the monthly recordkeeping, as required in Condition IX.C.1, indicates that annual VOC emissions are equal to or greater than 75% of the allowable limit in Condition IX.A.5, the VOC content of each material used, as supplied, shall be determined quarterly using approved EPA test methods, and such content shall be used for the purpose of calculating emissions. The permittee or the supplier shall conduct testing for each product formulation received after such emissions level is determined. Each material shipment received shall be clearly identified by a product formulation number that may be correlated to approved EPA test method results. The most recent test results for each formulation shall be used in emissions calculations. Quarterly testing may be discontinued after actual VOC emissions are demonstrated to be below 75% of the allowable limit in Condition IX.A.5 for three consecutive months. If quarterly testing is discontinued, the VOC content determined in the latest test for each formulation shall be used in lieu of the MSDS value or other manufacturer's formulation data in emissions calculations. Quarterly testing of a material is not required if MSDS, manufacturer or vendor information indicates that VOC content of the material has been determined by approved EPA test methods. Quarterly testing of a material is not required if 100% VOC content by weight, for that particular material, is used in emissions calculations.
(9 VAC 5-80-110)

Aerospace/Composite and RTM Coating Operations (Ref. #22, 23, 63, 65, 69 a&b, 96, and 97)

5. The permittee shall monitor the pressure drop continuously across the dry particulate system used to meet the requirements of 40 CFR 63.745(g)(2) while primer or topcoat application operations are occurring, and read and record the pressure drop once per shift following the recordkeeping requirements of 40 CFR 63.752(d). (9 VAC 5-60-100 Subpart GG, 40 CFR 63.751(c), and 9 VAC 5-80-110)
6. Visual leak inspections shall be conducted monthly for enclosed spray gun cleaners. The visual inspection shall consist of inspecting the seals and all other potential sources of leaks associated with the enclosed spray cleaner system. Each inspection shall occur while the system is in operation. (9 VAC 5-60-100 Subpart GG, 40 CFR 63.751(a), and 9 VAC 5-80-110)

Shelter Coating Operations

7. The permittee shall demonstrate initial compliance according to 40 CFR 63.3951. The initial compliance period extends from January 3, 2007 through January 31, 2008. For this period, the permittee shall:
 - a. Determine the mass fraction of organic HAP for each material according to 40 CFR 63.3941(a);
 - b. Determine the volume fraction of coating solids according to 40 CFR 63.3941(b);
 - c. Determine the density of each material according to 40 CFR 63.3951(c);
 - d. Determine the volume of each material according to 40 CFR 63.3951(d);
 - e. Calculate the monthly mass of organic HAP emissions according to 40 CFR 63.3951(e);
 - f. Calculate the total volume of coating solids used according to 40 CFR 63.3951(f);
 - g. Calculate the organic HAP emission rate for the compliance period according to 40 CFR 63.3951(g); and
 - h. Determine compliance according to 40 CFR 63.3951(h). (9 VAC 5-60-100 Subpart MMMM, 40 CFR 63.3951, and 9 VAC 5-80-110)
8. The permittee shall demonstrate continuous compliance by showing that the organic HAP emission rate determined by 40 CFR 63.3951 is less than or equal to the applicable emission limit in 40 CFR 63.3890 for each compliance period. Any organic HAP emission rate during a 12-month compliance period that exceeds the applicable emission limit is considered a deviation. (9 VAC 5-60-100 Subpart MMMM, 40 CFR 63.3952, and 9 VAC 5-80-110)

C. Recordkeeping

Shelter, Aerospace/Composite, and RTM Coating Operations

The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. These records shall include:

1. Hourly, monthly, and annual material balance including total throughput and emissions of particulate matter (PM/PM10) and VOC, accounting for material transfer and control. Annual emissions shall be calculated monthly as the sum of each consecutive 12-month period. Hourly emissions shall be calculated by dividing monthly emissions by hours of operation.
2. The quantities and characteristics of waste materials which are used in mass balance calculations shall be documented. Records of shipped waste materials shall be maintained and updated with each shipment.
3. Material Safety Data Sheets or other manufacturer's formulation data for each material used.
4. Results of VOC content determinations as required by Conditions IX.B.3 and IX.B.4.
5. Results of weekly visible emission evaluations to include observations, date and time of observation, observer's name, and corrective action taken.
6. Daily hours of operation of the process.

These records shall be available on site for inspection by the DEQ and shall be current for the most recent five (5) years.

(9 VAC 5-50-50, 9 VAC 5-80-110 and Condition 31 of 09/20/05 NSR permit)

Aerospace/Composite and RTM Coating Operations

7. Recordkeeping for applicable primer and topcoat application operations shall consist of the following: (1) name and VOC content as received and as applied for all primers and topcoats; (2) for uncontrolled compliant coatings, organic HAP and VOC contents as applied, data/calculations and test results used to determine HAP/VOC contents, and monthly usage; (3) for low-HAP content primers with organic HAP content less than or equal to 250 g/L (2.1 lb/gal) less water as applied and VOC content less than or equal to 250 g/L (2.1 lb/gal) less water and exempt solvents as applied, manufacturer's certification for HAP and VOC content if applied as received, annual purchase records, and data/calculations and test results used to determine HAP and VOC content; (4) for averaged coatings, monthly volume-weighted average values of HAP and VOC content and data/calculations and test results used to calculate HAP and VOC content; and (5) for inorganic HAP particulate, pressure drop across filter or water flow rate through waterwash system once per shift, and acceptable operating limits.

(9 VAC 5-60-100 Subpart GG, 40 CFR 63.752(c)-(d), and 9 VAC 5-80-110)

8. Recordkeeping for aerospace hand-wipe cleaning operations shall consist of the following: (1) if complying with composition requirements, the name data/calculations, and annual volumes; (2) if complying with vapor pressure limit, the name, vapor pressure, data/calculations/test results, and monthly volumes; and, (3) for noncompliant cleaning solvents used in exempt operations, the name, monthly volumes by operation, and master list of processes.
(9 VAC 5-60-100 Subpart GG, 40 CFR 63.752(b), and 9 VAC 5-80-110)
9. Recordkeeping for spray gun cleaning shall consist of recording all leaks, including source identification and dates leaks are found and repaired.
(9 VAC 5-60-100 Subpart GG, 40 CFR 63.752(b)(5), and 9 VAC 5-80-110)
10. Recordkeeping for flush cleaning for semi-aqueous solvents shall consist of the solvent name, data/calculations, and annual volumes.
(9 VAC 5-60-100 Subpart GG, 40 CFR 63.752(b)(2), and 9 VAC 5-80-110)

Shelter Coating Operations

11. The permittee shall maintain records as described in 40 CFR 63.3930 pertaining to the emission rate without add-on controls option. These records include, but are not limited to copies of reports and notifications, manufacturer’s data, calculations, material identification and usage data, and any deviations. These records shall be maintained onsite for at least two years, and maintained on-file for at least 5 years following the date of each occurrence, record, or report, as detailed in 40 CFR 63.3931.
(9 VAC 5-60-100 Subpart MMMM, 40 CFR 63.3930, 40 CFR 63.3931, and 9 VAC 5-80-110)

D. Testing

Shelter, Aerospace/Composite, RTM, and Armor Plate Coating Operations

1. The permitted facility shall be constructed so as to allow for emissions testing at any time using appropriate methods. Upon request from the Department, test ports shall be provided at the appropriate locations.
(9 VAC 5-50-30, 9 VAC 5-80-110, and Condition 12 of 09/20/05 NSR permit)
2. If testing is conducted in addition to the monitoring specified in this permit, the permittee shall use the following test methods in accordance with procedures approved by the DEQ as follows:

Pollutant	Test Method (40 CFR Part 60, Appendix A)
VOC	EPA Methods 18, 25, 25a
VOC Content	EPA Methods 24, 24a
PM/PM-10	EPA Method 5, 17
Visible Emission	EPA Method 9

(9 VAC 5-80-110)

Aerospace/Composite and RTM Coating Operations

3. Performance test periods for uncontrolled primers and topcoats (except as specified in 40 CFR 63.741 e-j) shall consist of the following: for coatings not averaged: each 24 hour period; for averaged coatings: each 30-day period.
(9 VAC 5-60-100 Subpart GG, 40 CFR 63.749(d), and 9 VAC 5-80-110)
4. Unless otherwise required by Condition IX.B.4, the procedures specified in 40 CFR 63.750(c), (d), (e), and (f) shall be used to determine organic HAP and VOC levels for primers and topcoats (except as specified in 40 CFR 63.741 e-j).
(9 VAC 5-60-100 Subpart GG, 40 CFR 63.750, and 9 VAC 5-80-110)
5. For applicable primer and topcoats containing inorganic HAP, dry particulate filter certification shall be required using Method 319 to meet or exceed the efficiency data points in Tables 1 and 2 of 40 CFR 63.745 for existing sources, or Tables 3 and 4 of 40 CFR 63.745 for new sources.
(9 VAC 5-60-100 Subpart GG, 40 CFR 63.750, and 9 VAC 5-80-110)
6. The composition of handwipe cleaning solutions shall be determined using manufacturer's data; vapor pressure shall be determined using readily available sources (e.g. MSDS for single component; composite vapor pressure determined by manufacturer's supplied data or ASTM E 260-91, and by equation provided for multiple component solvents in 40 CFR 63.750(b)).
(9 VAC 5-60-100 Subpart GG, 40 CFR 63.750(b), and 9 VAC 5-80-110)

E. Reporting

Aerospace/Composite/RTM Coating Operations

1. Reporting for applicable primer and topcoat application operations shall consist of the following: (1) semiannual reports stating all instances where organic HAP and VOC limits were exceeded; (2) semiannual reports stating control device exceedances (out-of-compliance); (3) semiannual reports stating periods when operation not immediately shut down when the pressure drop or water flow rate was outside limits; (4) semiannual report certifying compliance; and (5) annual reports stating the number of times the filter pressure drop or water flow rate limits were exceeded. The semiannual reports shall cover the reporting periods and be submitted according to the schedule described in General Condition XII.C. The annual report shall cover the reporting period and be submitted according to the schedule described in General Condition XII.D.
(9 VAC 5-60-100 Subpart GG, 40 CFR 63.9(j), 40 CFR 63.10(a)(5), 40 CFR 63.753(c), and 9 VAC 5-80-110)
2. Reporting requirements for cleaning operations shall consist of the following: (1) for all applicable cleaning operations, semiannual report certifying compliance; (2) for handwipe cleaning, semiannual report indicating noncompliant cleaning solvents used and new cleaning solvents and their composite vapor pressure or notification of compliance with composition requirements; and (3) for spray gun cleaning, semiannual report indicating noncompliant spray gun cleaning method used, and

leaks from enclosed spray gun cleaners not repaired within 15 days. The semiannual reports shall cover the reporting periods and be submitted according to the schedule described in General Condition XII.C.

(9 VAC 5-60-100 Subpart GG, 40 CFR 63.9(j), 40 CFR 63.10(a)(5), 40 CFR 63.753(b), and 9 VAC 5-80-110)

Shelter Coating Operations

3. The permittee shall submit a notification of compliance status required by 63.9(h) no later than March 1, 2008. The notification of compliance status shall include the items listed in 40 CFR 63.3910(c) pertaining to the emission rate without add-on controls option.

(9 VAC 5-60-100 Subpart MMMM, 40 CFR 63.3910, and 9 VAC 5-80-110)

4. The permittee shall submit semiannual compliance reports as specified in 40 CFR 63.3920(a). The semiannual reports shall cover the reporting periods and be submitted according to the schedule described in General Condition XII.C. The reports shall include the information identified in 40 CFR 63.3920(a) pertaining to the emission rate without add-on controls option.

(9 VAC 5-60-100 Subpart MMMM, 40 CFR 63.3920, 40 CFR 63.9(j), 40 CFR 63.10(a)(5), and 9 VAC 5-80-110)

X. 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 (5-80-720 B)	Rated Capacity (5-80-720 C)
8, 10, 15, 16, 17, 24, 25, 26, 28, 29, 30, 31, 34, 35, 36, 37, 38, 39, 42, 43, 44, 45, 47, 71, 72, 73, 74, 75, 106	Gas-fired Drying ovens and heaters	9 VAC 5-80-720 C 2.a.		< 10 MMBtu/hr
50, 51, 52, 53, 54, 55, 56, 94, 99-105	Electric ovens and heaters	9 VAC 5-80-720 A.6 & 39		
59, 60, 62, 64, 68, 86	Steam ovens and dryers	9 VAC 5-80-720 A.39		
82, 83, 85	Vacuum Pumps	9 VAC 5-80-720 B	VOC	
48	Ignition Loss Burnout oven	9 VAC 5-80-720 A.28		
70	Lab spray booth	9 VAC 5-80-720 A.28		
89	Diesel Storage Tank	9 VAC 5-80-720 A.41		

Emission Unit No.	Emission Unit Description	Citation	Pollutant(s) Emitted (5-80-720 B)	Rated Capacity (5-80-720 C)
90	Diesel fire-suppression engine	9 VAC 5-80-720 C 4.b		< 645 Hp
107	Various grinding, buffing, trimming	9 VAC 5-80-720 B	PM	
Shop Vacs	Shop Vacuum Cleaners	9 VAC 5-80-720 A.50		

These 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.

XI. Permit Shield & Inapplicable Requirements

Compliance with the provisions of this permit shall be deemed compliance with all applicable requirements in effect as of the permit issuance date as identified in this permit. This permit shield covers only those applicable requirements covered by terms and conditions in this permit and the following requirements which have been specifically identified as being not applicable to this permitted facility:

Citation	Title of Citation	Description of Applicability
40 CFR 60, Subpart VVV	Standards of Performance for Polymeric Coating of Supporting Substrates Facilities	This regulation does not apply because the company's processes related to this were installed and operated prior to April 30, 1987.
40 CFR 60, Subpart Dc	Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units	This regulation does not apply since both boilers were installed prior to the effective date of June 9, 1989.
40 CFR 60, Subpart Kb	Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984	This regulation is applicable to larger storage tanks (40 m ³ ~ 10,500 gal). The tanks at this facility are reported to be much smaller.
40 CFR 60, Subpart FFFF	Emission Guidelines and Compliance Times for Other Solid Waste Incineration Units That Commenced Construction On or Before December 9, 2004	This regulation does not apply to industrial waste incinerator units. Therefore, it does not apply to the heat cleaning oven.
9 VAC 5 Chapter 40, Article 24	Emission Standards for Solvent Metal Cleaning Operations Using Non-halogenated Solvents	This regulation does not apply because the facility is not located in a VOC control area.

Citation	Title of Citation	Description of Applicability
9 VAC 5 Chapter 40, Article 34	Emission Standards for Miscellaneous Metal Parts and Products Coating Application Systems	This regulation does not apply because the facility is not located in a VOC control area.
9 VAC 5 Chapter 40, Article 25	Emission Standards for Volatile Organic Compound Storage and Transfer Operations	This regulation does not apply because the facility is not located in a VOC control area.
9 VAC 5 Chapter 40, Article 45	Emission Standards for Commercial/Industrial Solid Waste Incinerators	This regulation exempts rack, parts, and drum reclamation units. Therefore, the heat cleaning oven is not subject.
9 VAC 5 Chapter 60, Article 5	Emission Standards for Toxic Pollutants for New and Modified Sources	This regulation does not apply to sources in categories subject to MACT requirements.
40 CFR 63, Subpart T	National Emission Standards for Halogenated Solvent Cleaning	This regulation does not apply because the company uses an alternative solvent in a degreasing unit.
40 CFR 63, Subpart JJJJ	Paper and Other Web Coating (MACT)	40 CFR 63.3300 states that the regulation applies to flexible packaging and pressure sensitive tape operations. The company uses fabric in producing rigid composites, and is therefore not subject.
40 CFR 63, Subpart MMMM	Surface Coating of Miscellaneous Metal Parts and Products (MACT)	40 CFR 63.3881(c)(10)&(11) exclude coating of metal parts used in aerospace vehicle or component. Therefore this regulation does not apply to composite coating operations. It will apply to shelter and armor plate coating operations.
40 CFR 63, Subpart OOOO	Printing, Coating, and Dyeing of Fabrics and Other Textiles (MACT)	The company does not use HAP-containing materials in their impregnation process, and is excluded by 40 CFR 63.4281(c).
40 CFR 63, Subpart PPPP	Surface Coating of Plastic Parts and Products	40 CFR 4481(c)(11) excludes coating of plastic aerospace components at facilities subject to 40 CFR 63, Subpart GG – Aerospace Manufacture and Rework.
40 CFR 63, Subpart WWWW	Reinforced Plastic Composites Production (MACT)	The company does not use more than 1.2 T/yr of styrene-containing resins/gels, and is exempted by 40 CFR 63.5785(d).

Nothing in this permit shield shall alter the provisions of §303 of the federal Clean Air Act, including the authority of the administrator under that section, the liability of the owner for any violation of applicable requirements prior to or at the time of permit issuance, or the ability to obtain information by the administrator pursuant to §114 of the federal Clean Air Act, (ii) the Board pursuant to §10.1-1314 or §10.1-1315 of the Virginia

Air Pollution Control Law or (iii) the Department pursuant to §10.1-1307.3 of the Virginia Air Pollution Control Law.
(9 VAC 5-80-140)

XII. General Conditions

A. Federal Enforceability

All terms and conditions in this permit are enforceable by the administrator and citizens under the federal Clean Air Act, except those that have been designated as only state-enforceable.

(9 VAC 5-80-110 N)

B. Permit Expiration

This permit has a fixed term of five years. The expiration date shall be the date five years from the date of issuance. Unless the owner submits a timely and complete application for renewal to the Department consistent with the requirements of 9 VAC 5-80-80, the right of the facility to operate shall be terminated upon permit expiration.

1. The owner shall submit an application for renewal at least six months but no earlier than eighteen months prior to the date of permit expiration.
2. If an applicant submits a timely and complete application for an initial permit or renewal under this section, the failure of the source to have a permit or the operation of the source without a permit shall not be a violation of Article 1, Part II of 9 VAC 5 Chapter 80, until the Board takes final action on the application under 9 VAC 5-80-150.
3. No source shall operate after the time that it is required to submit a timely and complete application under subsections C and D of 9 VAC 5-80-80 for a renewal permit, except in compliance with a permit issued under Article 1, Part II of 9 VAC 5 Chapter 80.
4. If an applicant submits a timely and complete application under section 9 VAC 5-80-80 for a permit renewal but the Board fails to issue or deny the renewal permit before the end of the term of the previous permit, (i) the previous permit shall not expire until the renewal permit has been issued or denied and (ii) all the terms and conditions of the previous permit, including any permit shield granted pursuant to 9 VAC 5-80-140, shall remain in effect from the date the application is determined to be complete until the renewal permit is issued or denied.
5. The protection under subsections F 1 and F 5 (ii) of section 9 VAC 5-80-80 F shall cease to apply if, subsequent to the completeness determination made pursuant section 9 VAC 5-80-80 D, the applicant fails to submit by the deadline specified in writing by the Board any additional information identified as being needed to process the application.

(9 VAC 5-80-80 B, C and F, 9 VAC 5-80-110 D and 9 VAC 5-80-170 B)

C. Recordkeeping and Reporting

1. All records of monitoring information maintained to demonstrate compliance with the terms and conditions of this permit shall contain, where applicable, the following:
 - a. The date, place as defined in the permit, and time of sampling or measurements.
 - b. The date(s) analyses were performed.
 - c. The company or entity that performed the analyses.
 - d. The analytical techniques or methods used.
 - e. The results of such analyses.
 - f. The operating conditions existing at the time of sampling or measurement.
(9 VAC 5-80-110 F)
2. Records of all monitoring data and support information shall be retained for at least five years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.
(9 VAC 5-80-110 F)
3. The permittee shall submit the results of monitoring contained in any applicable requirement to DEQ no later than **March 1** and **September 1** of each calendar year. This report must be signed by a responsible official, consistent with 9 VAC 5-80-80 G, and shall include:
 - a. The time period included in the report. The time periods to be addressed are January 1 to June 30 and July 1 to December 31.
 - b. All deviations from permit requirements. For purposes of this permit, deviations include, but are not limited to:
 - (1) Exceedance of emissions limitations or operational restrictions;
 - (2) Excursions from control device operating parameter requirements, as documented by continuous emission monitoring, periodic monitoring, or compliance assurance monitoring which indicates an exceedance of emission limitations or operational restrictions; or,
 - (3) Failure to meet monitoring, recordkeeping, or reporting requirements contained in this permit.

- c. If there were no deviations from permit conditions during the time period, the permittee shall include a statement in the report that “no deviations from permit requirements occurred during this semi-annual reporting period.”

(9 VAC 5-80-110 F)

D. Annual Compliance Certification

Exclusive of any reporting required to assure compliance with the terms and conditions of this permit or as part of a schedule of compliance contained in this permit, the permittee shall submit to EPA and DEQ no later than **March 1** each calendar year a certification of compliance with all terms and conditions of this permit including emission limitation standards or work practices. The compliance certification shall comply with such additional requirements that may be specified pursuant to §114(a)(3) and §504(b) of the federal Clean Air Act. This certification shall be signed by a responsible official, consistent with 9 VAC 5-80-80 G, and shall include:

1. The time period included in the certification. The time period to be addressed is January 1 to December 31.
2. The identification of each term or condition of the permit that is the basis of the certification.
3. The compliance status.
4. Whether compliance was continuous or intermittent, and if not continuous, documentation of each incident of non-compliance.
5. Consistent with subsection 9 VAC 5-80-110 E, the method or methods used for determining the compliance status of the source at the time of certification and over the reporting period.
6. Such other facts as the permit may require to determine the compliance status of the source.

One copy of the annual compliance certification shall be sent to EPA at the following address:

Clean Air Act Title V Compliance Certification (3AP00)
U. S. Environmental Protection Agency, Region III
1650 Arch Street
Philadelphia, PA 19103-2029.

(9 VAC 5-80-110 K.5)

E. Permit Deviation Reporting

The permittee shall notify the Director, Southwest Regional Office within four daytime business hours after discovery of any deviations from permit requirements which may cause excess emissions for more than one hour, including those attributable to upset conditions as may be defined in this permit. In addition, within 14 days of the discovery, the permittee shall provide a written statement explaining the problem, any corrective actions or preventative measures taken, and the estimated duration of the permit

deviation. The occurrence should also be reported in the next semi-annual compliance monitoring report pursuant to General Condition XII.C.3 of this permit.
(9 VAC 5-80-110 F.2 and 9 VAC 5-80-250)

F. Failure/Malfunction Reporting

In the event that any affected facility or related air pollution control equipment fails or malfunctions in such a manner that may cause excess emissions for more than one hour, the owner shall, as soon as practicable but no later than four daytime business hours after the malfunction is discovered, notify the Director, Southwest Regional Office by facsimile transmission, telephone or telegraph of such failure or malfunction and shall within 14 days of discovery provide a written statement giving all pertinent facts, including the estimated duration of the breakdown. Owners subject to the requirements of 9 VAC 5-40-50 C and 9 VAC 5-50-50 C are not required to provide the written statement prescribed in this paragraph for facilities subject to the monitoring requirements of 9 VAC 5-40-40 and 9 VAC 5-50-40. When the condition causing the failure or malfunction has been corrected and the equipment is again in operation, the owner shall notify the Director, Southwest Regional Office.

(9 VAC 5-20-180 C and Condition 34 of 09/20/05 NSR permit)

G. Maintenance/Operating Procedures

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, monitoring devices and process equipment which affect such emissions:

1. Develop a maintenance schedule and maintain records of all scheduled and non-scheduled maintenance.
2. Maintain an inventory of spare parts.
3. Have available written operating procedures for equipment. These procedures shall be based on the manufacturer's recommendations, at a minimum.
4. Train operators in the proper operation of all such equipment and familiarize the operators with the written operating procedures. The permittee shall maintain records of the training provided including the names of trainees, the date of training and the nature of the training.

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

(9 VAC 5-50-20 E, 9 VAC 5-170-160, and Condition 36 of 09/20/05 NSR permit)

H. Violation of Ambient Air Quality Standard

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

(9 VAC 5-20-180 I and Condition 35 of 09/20/05 NSR permit)

I. Severability

The terms of this permit are severable. If any condition, requirement or portion of the permit is held invalid or inapplicable under any circumstance, such invalidity or inapplicability shall not affect or impair the remaining conditions, requirements, or portions of the permit.

(9 VAC 5-80-110 G.1)

J. Duty to Comply

The permittee shall comply with all terms and conditions of this permit. Any permit noncompliance constitutes a violation of the federal Clean Air Act or the Virginia Air Pollution Control Law or both and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or, for denial of a permit renewal application.

(9 VAC 5-80-110 G.2)

K. Need to Halt or Reduce Activity not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

(9 VAC 5-80-110 G.3)

L. Permit Modification

A physical change in, or change in the method of operation of, this stationary source may be subject to permitting under State Regulations 9 VAC 5-80-50, 9 VAC 5-80-1100, 9 VAC 5-80-1790, or 9 VAC 5-80-2000 and may require a permit modification and/or revisions except as may be authorized in any approved alternative operating scenarios.

(9 VAC 5-80-190 and 9 VAC 5-80-260)

M. Property Rights

The permit does not convey any property rights of any sort, or any exclusive privilege.

(9 VAC 5-80-110 G.5)

N. Duty to Submit Information

1. The permittee shall furnish to the Board, within a reasonable time, any information that the Board may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Board copies of records required to be kept by the permit and, for information claimed to be confidential, the permittee shall furnish such records to the Board along with a claim of confidentiality.

(9 VAC 5-80-110 G.6)

2. Any document (including reports) required in a permit condition to be submitted to the Board shall contain a certification by a responsible official that meets the requirements of 9 VAC 5-80-80 G.

(9 VAC 5-80-110 K.1)

O. Duty to Pay Permit Fees

The owner of any source for which a permit under 9 VAC 5-80-50 through 9 VAC 5-80-300 was issued shall pay permit fees consistent with the requirements of 9 VAC 5-80-310 through 9 VAC 5-80-350. The actual emissions covered by the permit program fees for the preceding year shall be calculated by the owner and submitted to the Department by April 15 of each year. The calculations and final amount of emissions are subject to verification and final determination by the Department.
(9 VAC 5-80-110 H and 9 VAC 5-80-340 C)

P. Fugitive Dust Emission Standards

During the operation of a stationary source or any other building, structure, facility, or installation, no owner or other person shall cause or permit any materials or property to be handled, transported, stored, used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne. Such reasonable precautions may include, but are not limited to, the following:

1. Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads, or the clearing of land;
2. Application of asphalt, water, or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which may create airborne dust; the paving of roadways and the maintaining of them in a clean condition;
3. Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty material. Adequate containment methods shall be employed during sandblasting or other similar operations;
4. Open equipment for conveying or transporting material likely to create objectionable air pollution when airborne shall be covered or treated in an equally effective manner at all times when in motion; and,
5. The prompt removal of spilled or tracked dirt or other materials from paved streets and of dried sediments resulting from soil erosion.

(9 VAC 5-50-90)

Q. Startup, Shutdown, and Malfunction

At all times, including periods of startup, shutdown, soot blowing, and malfunction, owners shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with air pollution control practices for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Board, which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

(9 VAC 5-50-20 E)

R. Alternative Operating Scenarios

Contemporaneously with making a change between reasonably anticipated operating scenarios identified in this permit, the permittee shall record in a log at the permitted facility a record of the scenario under which it is operating. The permit shield described in 9 VAC 5-80-140 shall extend to all terms and conditions under each such operating scenario. The terms and conditions of each such alternative scenario shall meet all applicable requirements including the requirements of 9 VAC 5 Chapter 80, Article 1. (9 VAC 5-80-110 J)

S. Inspection and Entry Requirements

The permittee shall allow DEQ, upon presentation of credentials and other documents as may be required by law, to perform the following:

1. Enter upon the premises where the source is located or emissions-related activity is conducted, or where records must be kept under the terms and conditions of the permit.
2. Have access to and copy, at reasonable times, any records that must be kept under the terms and conditions of the permit.
3. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit.
4. Sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit or applicable requirements.

(9 VAC 5-80-110 K.2 and Condition 33 of 09/20/05 NSR permit)

T. Reopening For Cause

1. The permit shall be reopened by the Board if additional federal requirements become applicable to a major source with a remaining permit term of three years or more. Such reopening shall be completed no later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to 9 VAC 5-80-80 F.
2. The permit shall be reopened if the Board or the administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.
3. The permit shall be reopened if the administrator or the Board determines that the permit must be revised or revoked to assure compliance with the applicable requirements.

4. The permit shall not be reopened by the Board if additional applicable state requirements become applicable to a major source prior to the expiration date established under 9 VAC 5-80-110 D.

(9 VAC 5-80-110 L)

U. Permit Availability

Within five days after receipt of the issued permit, the permittee shall maintain the permit on the premises for which the permit has been issued and shall make the permit immediately available to DEQ upon request.

(9 VAC 5-80-150 E)

V. Transfer of Permits

1. No person shall transfer a permit from one location to another, unless authorized under 9 VAC 5-80-130, or from one piece of equipment to another.
(9 VAC 5-80-160)
2. In the case of a transfer of ownership of a stationary source, the new owner shall comply with any current permit issued to the previous owner. The new owner shall notify the Board of the change in ownership within 30 days of the transfer and shall comply with the requirements of 9 VAC 5-80-200.
(9 VAC 5-80-160)
3. In the case of a name change of a stationary source, the owner shall comply with any current permit issued under the previous source name. The owner shall notify the Board of the change in source name within 30 days of the name change and shall comply with the requirements of 9 VAC 5-80-200.
(9 VAC 5-80-160)

W. Malfunction as an Affirmative Defense

1. A malfunction constitutes an affirmative defense to an action brought for noncompliance with technology-based emission limitations if the requirements of paragraph 2 of this condition are met.
2. The affirmative defense of malfunction shall be demonstrated by the permittee through properly signed, contemporaneous operating logs, or other relevant evidence that show the following:
 - a. A malfunction occurred and the permittee can identify the cause or causes of the malfunction.
 - b. The permitted facility was at the time being properly operated.
 - c. During the period of the malfunction the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit.

- d. The permittee notified the board of the malfunction within two working days following the time when the emission limitations were exceeded due to the malfunction. This notification shall include a description of the malfunction, any steps taken to mitigate emissions, and corrective actions taken. The notification may be delivered either orally or in writing. The notification may be delivered by electronic mail, facsimile transmission, telephone, or any other method that allows the permittee to comply with the deadline. This notification fulfills the requirements of 9 VAC 5-80-110 F 2 b to report promptly deviations from permit requirements. This notification does not release the permittee from the malfunction reporting requirement under 9 VAC 5-20-180 C.
3. In any enforcement proceeding, the permittee seeking to establish the occurrence of a malfunction shall have the burden of proof.
4. The provisions of this section are in addition to any malfunction, emergency or upset provision contained in any applicable requirement.
(9 VAC 5-80-250)

X. Permit Revocation or Termination for Cause

A permit may be revoked or terminated prior to its expiration date if the owner knowingly makes material misstatements in the permit application or any amendments thereto or if the permittee violates, fails, neglects or refuses to comply with the terms or conditions of the permit, any applicable requirements, or the applicable provisions of 9 VAC 5 Chapter 80 Article 1. The Board may suspend, under such conditions and for such period of time as the Board may prescribe any permit for any of the grounds for revocation or termination or for any other violations of these regulations.
(9 VAC 5-80-190 C and 9 VAC 5-80-260)

Y. Duty to Supplement or Correct Application

Any applicant who fails to submit any relevant facts or who has submitted incorrect information in a permit application shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrections. An applicant shall also provide additional information as necessary to address any requirements that become applicable to the source after the date a complete application was filed but prior to release of a draft permit.
(9 VAC 5-80-80 E)

Z. Stratospheric Ozone Protection

If the permittee handles or emits one or more Class I or II substances subject to a standard promulgated under or established by Title VI (Stratospheric Ozone Protection) of the federal Clean Air Act, the permittee shall comply with all applicable sections of 40 CFR Part 82, Subparts A to F.
(40 CFR Part 82, Subparts A-F)

AA. Asbestos Requirements

The permittee shall comply with the requirements of National Emissions Standards for Hazardous Air Pollutants (40 CFR 61) Subpart M, National Emission Standards for Asbestos as it applies to the following: Standards for Demolition and Renovation (40 CFR 61.145), Standards for Insulating Materials (40 CFR 61.148), and Standards for Waste Disposal (40 CFR 61.150).
(9 VAC 5-60-70 and 9 VAC 5-80-110 A.1)

BB. Accidental Release Prevention

If the permittee has more, or will have more than a threshold quantity of a regulated substance in a process, as determined by 40 CFR 68.115, the permittee shall comply with the requirements of 40 CFR Part 68.
(40 CFR Part 68)

CC. Changes to Permits for Emissions Trading

No permit revision shall be required under any federally approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in this permit.
(9 VAC 5-80-110 I)

DD. Emissions Trading

Where the trading of emissions increases and decreases within the permitted facility is to occur within the context of this permit and to the extent that the regulations provide for trading such increases and decreases without a case-by-case approval of each emissions trade:

1. All terms and conditions required under 9 VAC 5-80-110, except subsection N, shall be included to determine compliance.
2. The permit shield described in 9 VAC 5-80-140 shall extend to all terms and conditions that allow such increases and decreases in emissions.
3. The owner shall meet all applicable requirements including the requirements of 9 VAC 5-80-50 through 9 VAC 5-80-300.
(9 VAC 5-80-110 I)