



**COMMONWEALTH of VIRGINIA**  
**DEPARTMENT OF ENVIRONMENTAL QUALITY**  
**PIEDMONT REGIONAL OFFICE**

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**STATEMENT OF LEGAL AND FACTUAL BASIS**

Philip Morris USA Inc. – Manufacturing Center Complex  
3601 Commerce Road, Richmond, Virginia  
Permit No. PRO50076

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, Philip Morris USA Inc. has applied for a renewal of the Title V Operating Permit for its Richmond Manufacturing Center Complex. The Department has reviewed the application and has prepared a final renewal Title V Operating Permit.

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Date: 6/18/14

Air Permit Manager: James E. Kyle, P.E.  
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Date: 6/18/2014

Deputy Regional Director: Kyle Iyar Winter, P.E.  
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Date: 18 JUNE 14

## FACILITY INFORMATION

### Permittee

Philip Morris USA Inc.  
P.O. Box 26603  
Richmond, VA 23261

### Facility

Philip Morris USA Inc. – Manufacturing Center Complex  
3601 Commerce Road  
Richmond Virginia 23234-2201

State-County-Plant ID Number 51-760-0308

**Facility Description** NAICS: 312221 - Tobacco is processed and flavored and cigarettes are manufactured at the Philip Morris USA Incorporated (PMUSA Inc.) Manufacturing Center Complex in Richmond, Virginia under SIC Code 2111. At the Manufacturing Center facility, the Bright, Burley, Oriental and Sheet tobacco are unpacked from containers and conditioned to obtain optimum moisture levels and separate clumps. A portion of the tobacco is diverted and undergoes an expansion treatment. Flavoring is added and the tobacco is cut into strips and dried. The Expanded tobacco and Scrap tobacco is added, flavoring is applied to the final tobacco blend and it is sent to storage. Cigarette filters are made and are sent to the cigarette-making machines. The blended tobacco is sent from storage to the machines. The cigarettes are then made and packaged.

The Semiworks, located just south of Bells Road, adjacent to the Manufacturing Center, is a research and development facility. A portion of the equipment at the Semiworks is utilized for a commercial tobacco process.

## PERMIT STATUS

The complex is a Title V major source of Volatile Organic Compounds (VOC) and Nitrogen Oxides (NO<sub>x</sub>). The source is a major source of HAP and is subject to MACT Subpart DDDDD. This source is located in an attainment area for all pollutants. This is a PSD-sized source but has never triggered PSD permitting. The facility is permitted under four Minor NSR Permits issued on November 25, 1974 (as amended August 29, 2008 and June 14, 2013 and information from the application dated September 24, 1974); January 27, 2011; February 16, 2011; and February 14, 2014. The original Title V permit became effective on January 1, 2005 and was modified in June 2006. It was set to expire on December 31, 2009. The source applied for a Title V renewal permit on June 29, 2009 and thus the application was timely and complete and was eligible for an application shield. The source subsequently submitted revised Title V permit applications in January 2010 and December 2012 and the application was found to be technically complete on December 10, 2012.

## COMPLIANCE STATUS

A full compliance evaluation of this facility, including a site visit, has been conducted. In addition, all reports and other data required by permit conditions or regulations, which are submitted to DEQ, are evaluated for compliance. Based on these compliance evaluations, the facility has not been found to be in violation of any state or federal applicable requirements at this time.

## COMPLIANCE ASSURANCE MONITORING

The fabric filters on VS0101, OC0301, OC0401, PP0101, CN0601, CN0602 and CN0603 are subject to Compliance Assurance Monitoring (CAM) and a CAM plan was submitted for those units.

The boilers (BO0101, BO0201, BO0301) and Expanded Tobacco thermal expansion heaters (FU0301, FU0401) are subject to the Boiler MACT, Subpart DDDDD. Monitoring requirements for the MACT will be sufficient for CAM.

## CHANGES TO THE PERMIT

Since the original issuance of this Federal Operating Permit in January 2005 and a subsequent modification on June 14, 2006, the following changes have taken place to the applicable requirements at this facility:

- 2/15/08, 3/21/08 and 5/27/08 and rescinded 9/24/10 – Direct Material Warehouse project
- 5/7/08, 10/15/09, and 2/16/11 – decrease “facility-wide” PTE for PM, PM<sub>10</sub> and VOC; amend throughput for VS0101, TP3001, and DC1001; add 5 baghouses and increase TP1101 for stem removal; remove TP0101, increase throughput for DC0101; and add an additional baghouse to separating process.
- 8/29/08, 6/14/13 – supersede 11/25/74 permit for BO0301 to limit sulfur and ash in the coal, and reduce the throughput of coal and #2 fuel oil.
- 1/27/11 – allow the utilization of equipment at the Semiworks for the production of a commercial tobacco product.
- 6/14/13, 2/14/14 – add BO0302 and set limits for BO0101 and BO0201, including CO and VOC, and fuel sulfur limits.

Underlined dates indicate the most recent permits to be included in the Title V renewal.

In addition, MACT Subpart DDDDD requirements and CAM requirements were included in the Title V permit.

**EMISSION UNIT AND CONTROL DEVICE IDENTIFICATION**

Equipment to be operated consists of the following:

Emission Unit ID	Stack ID	Emission Unit Description - Manufacturer - Date of Construction	Size / Rated Capacity*	Pollution Control Device Description (PCD)**	PCD ID	Pollutant Controlled	Applicable Permit Date
<b>Fuel Burning Equipment – Site wide support boilers</b>							
BO0101	AE-01B	Central Plant Package Boiler No. 1 (natural gas and #2 fuel oil) - Combustion Engineering - Pre 1974	143.5 mmBtu/hr (MCR***)	Multicyclone (80% efficient)	SD0101	PM	2/14/2014
BO0201	AE-02B	Central Plant Package Boiler No. 2 (natural gas and #2 fuel oil) -Combustion Engineering - Pre 1974	143.5 mmBtu/hr (MCR***)	Multicyclone (80% efficient)	SD0201	PM	2/14/2014
BO0301	AE-06B	VU-40 PC Boiler (pulverized coal and #2 oil)- Combustion Engineering - 1974	172.5 mmBtu/hr (MCR***)	Electrostatic Precipitator (hot side, high voltage, four field) 98% efficient	PE0101	PM	11/25/74 permit & 9/24/1974 application, as amended 8/29/2008 & 6/14/2013
BO0302	AE-B3B	Central Package Boiler No. 3 (natural gas) – 2014	72.3 mmBtu/hr	None	None	None	2/14/2014
*** MCR = Maximum Continuous Rating. This is defined as the maximum long-term steady state firing rate.							
<b>Fuel Burning Equipment Thermal Expansion System Burners</b>							
FU0301	AE-41	Expanded Tobacco Process	Thermal Expansion System – 1996 (natural gas burners replaced in 2008)	6.7 mmBtu/hr	None	None	2/16/2011
FU0401	AE-32		Thermal Expansion System – 1996 (natural gas burners replaced in 2008)	6.7 mmBtu/hr	None	None	2/16/2011
<b>Fuel Burning Equipment - Emergency Generators and Pumps</b>							
PU0101C PU0102C		Diesel Emergency Fire Pumps – 1973	255hp each	None	None	None	None
EG0101		LPG Emergency Generator (DM Warehouse)	60 kW	None	None	None	None
EG0201		LPG Emergency Generator (SB Warehouse)	45 kW	None	None	None	None
EG0301		LPG Emergency Generator (Security Gate K)-2002	15 kW	None	None	None	None
EG0401		LPG Emergency Generator (Security Gates C&D)-2002	30 kW	None	None	None	None
EG0501		LPG Emergency Generator (Security Gate M)-2002	15 kW	None	None	None	None
EG0701		LPG Emergency Generator (ASRS)-2004	45 kW (75 hp)	None	None	None	None
EG0801		LPG Generator - 2006	15 kW	None	None	None	None
EG0901		LPG Emergency Generator - 2007	80 kW	None	None	None	None
EG0102C		Diesel Emergency Generator – 2007	750 kW (1141 hp)	None	None	None	None
EG1001		Diesel Emergency Generator – 2012	750 kW (1141 hp)	None	None	None	None
<b>Ash Handling and Coal Handling</b>							
AH0101	AE-05 AE-07	Ash Handling System (including ash transport system and storage silo) - 1974	1,800 lb/hr ash	Filter bags and baghouse filter (99.0% efficient)	SI:0101 BH0101	PM	None

Emission Unit ID	Stack ID	Emission Unit Description - Manufacturer - Date of Construction	Size / Rated Capacity*	Pollution Control Device Description (PCD)**	PCD ID	Pollutant Controlled	Applicable Permit Date
<b>Tobacco Processing</b>							
CS0101	AE-45	Conditioning Process - Leaf and Sheet (conditioning cylinders) - 1995, 2008	50,000 lb/hr Leaf 41,000 lb/hr Sheet	Four rotoclone scrubbers (90.0% efficient)	SR0101	PM	2/16/2011
CS0201	AE-46				SR0201		
CS0301	AE-47				SR0301		
CS1001	AE-R1	Separating Process - Leaf and Sheet (pneumatic separators) - 2008	50,000 lb/hr Leaf 41,000 lb/hr Sheet	Three Baghouse filters (99.5% efficient)	BH4101	PM	2/16/2011
SP1401, SP1501, SP1601	AE-E7a AE-E8a AE-E9a				BH4102 BH4103		
CS0901	AE-H8				SR2601		
CO0101	AE-34	Expanded Tobacco Process	20,000 lbs/hr	Rotoclone scrubber (90.0% efficient)	SR2601	PM	2/16/2011
CO0601	AE-35				SR2601		
CO0301	AE-34				SR2601		
CO0301	AE-35	Conveyor - 2009	7,000 lbs/hr	Wet scrubber (90.0% efficient for particulate; 40.0% efficient for VOC)	SC0101	PM VOC	2/16/2011
CO0301	AE-35				SC0101		
CO0401	AE-E4				SC0201		
OC0401	AE-E4	Conveyor - 1983	7,000 lbs/hr	Wet scrubber (90.0% efficient for particulate; 40.0% efficient for VOC)	SC0201	PM VOC	2/16/2011
PP0101 (OC0301, OC0401)	AE-G8				SC0301		
SM0402	AE-H5				SC0301		
SM0502	AE-H6	Mechanical separator - 1996	7,000 lbs/hr	Wet scrubber (90.0% efficient for particulate; 40.0% efficient for VOC)	BH5701	PM	2/16/2011
FU0301 EX0101	AE-41				BH5801		
FU0401 EX0201	AF-32				BH5801		
TP9301	AE-R2 AE-R3	Scrap Tobacco Process	7,000 lbs/hr	None	None	None	2/16/2011
CS0601 CS0701	AF-70				None		
DR0601 DR0701 DR0801 DR0901	AE-Q1				None		
		Cutting and Drying Process	68,000 lbs/hr	Four rotoclone scrubbers (90.0% efficient) followed by a thermal oxidizer (95.0% efficient for VOC)	SR2901	PM	2/16/2011
					SR3001		
					SR3201		
		Steam dryers - 2008	68,000 lbs/hr	None	IN0401	VOC	2/16/2011
					None		
					None		

Emission Unit ID	Stack ID	Emission Unit Description - Manufacturer - Date of Construction		Size / Rated Capacity*	Pollution Control Device Description (PCD)**	PCD ID	Pollutant Controlled	Applicable Permit Date
TR0101								
TR0102	AE-42							
TR0103	AE-30	Dry Flavor Preparation Process	Flavor Tanks	2,508 gal/hr	None	None	None	2/16/2011
MT0101								
MT0102								
DC0101	AE-89		Mechanical transport system (Flavor components)- 1995	6,000 lb/hr	Baghouse filter (99.0% efficient)	BH3101	PM	2/16/2011
FC0101	AE-16							
FC0201	AE-17							
FC0301	AE-26		Liquid application cylinders - 1992	60,000 lbs/hr	Four rotoclone scrubbers (90.0% efficient)	SR0801 SR0701 SR0601	PM	2/16/2011
FC0401	AE-18							
DA0101	AE-25							
DA0201	AE-22							
DA0301	AE-19		Stream dryers - 1992	60,000 lbs/hr	None	None	None	2/16/2011
DA0401	AE-15							
CC0101	AE-42		Liquid application cylinders - 1974	30,000 lbs/hr	Two rotoclone scrubbers (90.0% efficient)	SR1001 SR1201	PM	2/16/2011
CC0301								
CC0201								
CC0401	AE-42		Liquid application cylinders - 1974	30,800 lbs/hr	Two rotoclone scrubbers (90.0% efficient)	SR1101 SR1301	PM	2/16/2011
FC0501								
FC0502								
FC0601								
FC0602								
FC0701	AE-Q1		Liquid application cylinders - 1993, 1995	100,000 lbs/hr and 175 tpy ethanol	Four rotoclone scrubbers (90.0% efficient for particulate) followed by a thermal oxidizer (95.0% efficient for VOC)	SR1901 SR2001 SR2101 SR2201 IN0401	PM VOC	10/14/97 RACT & 2/16/2011
FC0702								
FC0801								
FC0802								
-	Fugitive		Application of Ethanol based flavors	175 tons/yr ethanol	None	None	None	None
TP0201	AE-L1 AE-L2 AE-L3 AE-L4 AE-L5 AE-L6 AE-L7 AE-L8 AE-L9 AE-M1 AE-M2 AE-M3 AE-M4 AE-J6 AE-J7		Pneumatic transport system - 1974, 1997	72,000 lbs/hr	Sixteen baghouse filters (99.5% efficient)	BH2001 BH2002 BH2003 BH2101 BH2102 BH2103 BH2201 BH2202 BH2301 BH2302 BH2602 BH2603 BH2604 BH6101 BH6701 BH6801	PM	2/16/2011

Emission Unit ID	Stack ID	Emission Unit Description - Manufacturer - Date of Construction	Size / Rated Capacity*	Pollution Control Device Description (PCD)**	PCD ID	Pollutant Controlled	Applicable Permit Date
TP1101	AE-57	Dust and stem removal system- 1974, 1997	2,160 lb/hr	Eighteen baghouse filters (99.5% efficient)	BH0801	PM	2/16/2011
	AE-59				BH0802		
	AE-63				BH0803		
	AE-J3				BH0901		
TP1401 TP0801 TP1501	AE-91 AE-92 AE-J1	Pneumatic Transport System (filters) - 1996	4,160 lb/hr	One four-segment baghouse filter (99.0% efficient) and two baghouse filters (99.0% efficient)	BH3401	PM	2/16/2011
					BH3402		
VS0101	Plenum AE-63	Mechanical separating system - 1990	10,000 lb/hr	Baghouse filter (99.5% efficient)	BH0701	PM	2/16/2011
TP3001	AE-P6	Pneumatic Transport System - 2004	31.4 TPA units/hr	Baghouse filter (99.5% efficient)	BH6901	PM	2/16/2011
DC1001	AE-P7	Mechanical Transport System -2005	188.4 TPA units/hr	Baghouse filter (99.5% efficient)	BH8001	PM	2/16/2011
CN0601	AE-H7	Housekeeping vacuum system 1996	720 lbs/hr	Three baghouse filters (99.0% efficient)	BH5901	PM	2/16/2011
CN0602	AE-E3				BH3801		
CN0603	AE-E3				BH3802		
CN0701	AE-F4	Housekeeping vacuum system - 1999	200 lbs/hr	Baghouse filter (99.0% efficient)	BH4201	PM	2/16/2011
MAHVSU	AE-P1	Housekeeping vacuum system – 1997, 2003	32,000 lbs/hr	Seven baghouse filters (99.0% efficient)	BH8101	PM	2/16/2011
	AE-P2				BH8201		
	AE-P3				BH8301		
	AE-P4				BH8401		
	AE-P5				BH8501		
AE-P8	BH6501						
AE-P9	BH6601						
CN1001	AE-J8	Housekeeping vacuum system - 2003	100 lbs/hr	Baghouse filter (99.0% efficient)	BH7301	PM	2/16/2011

Emission Unit ID	Stack ID	Emission Unit Description - Manufacturer - Date of Construction	Size / Rated Capacity*	Pollution Control Device Description (PCD)**	PCD ID	Pollutant Controlled	Applicable Permit Date		
<b>Commercial Production at Semiworks</b>									
SP0101SW	AE-02SW	Commercial Production at Semiworks (2011)	281.25 SW units/hr	Baghouse filter (99.0% efficient)	BH0101SW	PM/PM <sub>10</sub>	1/27/2011		
OD0101SW				Scrubber (95.0% efficient)	SC0101SW	PM/PM <sub>10</sub>	1/27/2011		
PC0101SW				Total Tobacco Throughput	79.65 SWC units/hr	Baghouse filter (99.0% efficient)	BH0301SW	PM/PM <sub>10</sub>	1/27/2011
CS0201SW									
FC0101SW				Burley Processing Equipment	79.65 SWC units/hr	Portable Dust filters (99.0% efficient)	BH0401SW	PM/PM <sub>10</sub>	1/27/2011
FC0201SW									
DR0101SW				Ethanol Application	10.38 lb/hr	None	None	None	1/27/2011
FC0202SW									
TP1010SW	AS-05SW (indoors)								
TP0201SW	AS-02SW (indoors)								

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

## EMISSIONS INVENTORY

A copy of the 2013 annual emission update is available from DEQ. Emissions are summarized in the following tables.

### 2013 Actual Emissions

Facility-Wide Criteria Pollutant Emissions in Tons/Year							
VOC	CO	SO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	NO <sub>x</sub>	Lead	NH <sub>3</sub> *
151.3	12.6	320.7	15.6	12.2	314.3	0.037	9.5

\* Ammonia is not a criteria pollutant but rather a precursor and emission data is collected by EPA

### 2013 Facility Hazardous Air Pollutant Emissions

Pollutant	Emissions in Tons/Yr
Acetaldehyde	0.008
Acrolein	0.004
Arsenic compounds	0.006
Bromoform	0.001
Benzene	0.018
Benzyl chloride	0.010
Cadmium Compounds	0.001
Carbon disulfide	0.002
Chloroform	0.001
Chromium compounds	0.004
Cobalt compounds	0.001
Cyanide compounds	0.035
Bis(2-ethylhexyl)phthalate	0.001
Dimethyl sulfate	0.001
Ethyl benzene	0.001
Ethyl chloride	0.001
Ethylene dichloride	0.001
Formaldehyde	0.005
Hydrogen chloride	16.876
Hydrogen fluoride	3.234
Isophorone	0.008
Manganese compounds	0.007
Mercury compounds	0.001

Pollutant	Emissions in Tons/Yr
Methyl bromide	0.002
Methyl chloride	0.007
Methyl ethyl ketone	0.005
Methylene chloride	0.004
Methylhydrazine	0.002
n-Hexane	0.004
Nickel	0.004
Perchloroethylene	0.001
Polycyclic Organic Matter	0.046
Propionaldehyde	0.005
Selenium Compounds	0.018
Toluene	0.003
Xylene	0.001

## **EMISSION UNIT APPLICABLE REQUIREMENTS – Fuel Burning Equipment – Site wide support boilers**

*PC boiler BO0301 was constructed prior to June 19, 1984 and has not been modified so NSPS Db is not applicable. It operates according to a permit issued November 25, 1974 (as amended August 29, 2008 and June 14, 2013 and from the application dated September 24, 1974). That permit contains applicable requirements for BO0301 only and provides an enforceable limit for PSD avoidance.*

*A new package boiler (BO0302) was permitted on June 14, 2013 and is subject to NSPS Dc. Existing package boilers (BO0101 & BO0201) were unpermitted, existing units prior to the June 14, 2013 permit which put operational limits on the units after heat exchangers were added. This did not trigger a modification for these older units so NSPS Db is not applicable. The June 14, 2013 permit was amended on February 14, 2014 to allow for the existing fuel oil in the tanks that supply BO0101 and BO0201 to contain a slightly higher sulfur content based on the current fuel in the tank. That permit contains applicable requirements for BO0101, BO0201 and BO0302. Following are applicable requirements from the Virginia State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution:*

- Introduction of the 11/25/1974 permit as amended 8/29/2008 and 6/14/2013 (Condition 1 of the Title V permit) requires the PC boiler to be constructed as proposed in the 1974 application and supplemental letter.
- Condition 2 of the 11/25/1974 permit as amended 8/29/2008 and 6/14/2013 (Condition 2 of the Title V permit) requires the control technology for particulate matter to be an electrostatic precipitator. *This is a BACT requirement.*
- Condition 2 of the 2/14/2014 NSR permit (Condition 3 of the Title V permit) requires the three package boilers (BO0101, BO0201, BO0302) to control NOx emissions through proper operation and maintenance of the unit. *This is a BACT requirement.*
- Condition 3 of the 2/14/2014 NSR permit (Condition 4 of the Title V permit) allows the dual fuel package boilers (BO0101, BO0201) to use natural gas and #2 fuel oil. *Although not designated as BACT in the underlying permit, this condition sets the basis for the BACT emission limit determinations for each fuel.*
- Condition 4 of the 2/14/2014 NSR permit (Condition 5 of the Title V permit) allows BO0302 to use natural gas as a fuel. *Although not designated as BACT in the underlying permit, this condition sets the basis for the BACT emission limit determinations for each fuel.*
- Condition 3 of the 11/25/1974 permit as amended 8/29/2008 and 6/14/2013 (Condition 6 of the Title V permit) allows pulverized coal and distillate oil (startup) as fuels for the PC boiler (BO0301). *Although not designated as BACT in the underlying permit, this condition sets the basis for the emission limit determinations for each fuel.*
- Condition 5 of the 11/25/1974 permit as amended 8/29/2008 and 6/14/2013 (Condition 7 of the Title V permit) describes coal and low sulfur distillate oil specifications for the PC boiler (BO0301), including a sulfur content of 1.2% for coal and 0.05% for #2 fuel oil. *Although not designated as BACT in the underlying permit, this condition sets the basis for emission limit determinations based on fuel sulfur content.*
- Condition 6 of the 11/25/1974 permit as amended 8/29/2008 and 6/14/2013 (Condition 8 of the Title V permit) requires fuel certification for every shipment of coal and distillate oil for BO0301. *Although not designated as BACT in the underlying permit, this condition provides an enforceable means to monitor the sulfur and ash content of each fuel.*
- Condition 4 of the 11/25/1974 permit as amended 8/29/2008 and 6/14/2013 (Condition 9 of the Title V permit) limits the throughput of coal and oil to the PC Boiler (BO0301). *This condition provides an enforceable means to control emissions by fuel throughput limits. These fuel throughput limits were taken on the existing PC boiler in order to net out of PSD permitting.*
- Condition 5 of the 2/14/2014 NSR permit (Condition 10 of the Title V permit) limits the fuel throughput of natural gas and distillate oil through the Package Boilers (BO0101, BO0201, BO0302). *This is a BACT requirement.*
- Condition 6 of the 2/14/2014 NSR permit (Condition 11 of the Title V permit) limits the sulfur content of the existing fuel oil in the fuel tank for the Package Boilers to no more than 0.25 percent (BO0101, BO0201). *This is a BACT requirement.*

- Condition 7 of the 2/14/2014 NSR permit (Condition 12 of the Title V permit) limits the sulfur content of the fuel oil delivered to the fuel tank of the Package Boilers (BO0101, BO0201) after 2/14/2014 to 0.05 percent. *This is a BACT requirement.*
- Condition 10 of the 2/14/2014 NSR permit (Condition 13 of the Title V permit) limits hourly criteria pollutant emissions from the Package Boilers (BO0101, BO0201, BO0302). *This is a BACT requirement.*
- Condition 11 of the 2/14/2014 NSR permit (Condition 14 of the Title V permit) limits annual criteria pollutant emissions from the Package Boilers (BO0101, BO0201, BO0302). *This is a BACT requirement.*
- Condition 7 of the 11/25/1974 permit as amended 8/29/2008 and 6/14/2013 (Condition 15 of the Title V permit) limits emissions of PM, SO<sub>2</sub>, and NO<sub>x</sub> from the PC Boiler (BO0301). *The NO<sub>x</sub> limit for BO0301 was taken to net out of PSD in 9 VAC 5-80-1605. PM and SO<sub>2</sub> were previously permitted but, due to the new fuel limit taken to avoid PSD permitting for this project, the limits came down. In addition, the source requested that the Greenhouse Gas (GHG) (as CO<sub>2</sub>-e) emissions be quantified to make their PSD avoidance netting exercise enforceable.*
- Condition 8 of the 11/25/1974 permit as amended 8/29/2008 and 6/14/2013 (Condition 16 of the Title V permit) limits visible emissions from the PC Boiler (BO0301). *9 VAC 5-50-80 – Visible Emission Standard for Stationary Sources*
- Condition 13 of the 2/14/2014 NSR permit (Condition 17 of the Title V permit) limits visible emissions from the existing Package Boilers (BO0101, BO0201). *9 VAC 5-40-940 – Visible Emission Standard for Existing Fuel Burning Sources.*
- Condition 12 of the 2/14/2014 NSR permit (Condition 18 of the Title V permit) limits visible emissions from the new Package Boiler (BO0302). *BACT applies to this source and the limit reflects a BACT determination. The NSR permit mistakenly used 9 VAC 5-40-80 for the citation, however.*
- Condition 19 of the Title V permit requires the source to monitor the operation and maintenance procedures for the PC and Package Boilers (BO0101, BO0201, BO0301, BO0302) in order to show compliance with PM emission limits. *This condition fulfills the monitoring requirement of Part 70.*
- Condition 20 of the Title V permit requires the source to monitor the fuel sulfur content of the oil combusted in BO0101 and BO0201. *This condition fulfills the monitoring requirement of Part 70.*
- Condition 21 of the Title V permit requires the source to burn only natural gas in the BO0302 boiler to comply with the hourly SO<sub>2</sub> limit. *This condition fulfills the monitoring requirement of Part 70.*
- Condition 22 of the Title V permit requires the source to monitor the operation and maintenance procedures for the PC Boiler (BO0301) in order to show compliance with the hourly SO<sub>2</sub> emission limits. *This condition fulfills the monitoring requirement of Part 70.*
- Condition 23 of the Title V permit requires the permittee to perform monthly visible emission checks to show compliance with opacity limits for the PC and Package boilers (BO0101, BO0201, BO0301). "Normal" visible emissions shall be those which are observed on a frequent basis. A Method 9 VEE will be required if visible emissions appear to be above normal. *This condition fulfills the monitoring requirement of Part 70.*
- Condition 9 of the 11/25/1974 permit as amended 8/29/2008 and 6/14/2013 and Condition 15 of the 2/14/2014 NSR permit (Condition 24 of the Title V permit) lists the recordkeeping requirements necessary to show compliance with those permits for the PC Boiler and Package Boilers (BO0101, BO0201, BO0301, BO0302). *The recorded parameters will be inspected for compliance with the conditions of the NSR permit.*
- Condition 25 of the Title V permit requires that a NO<sub>x</sub> stack test (Method 7) be conducted on the boilers (BO0101, BO0201, BO0301) every five years, while burning the worst case fuel. *This condition fulfills the monitoring requirement of Part 70.*
- Condition 26 of the Title V permit requires the permittee to use appropriate testing methods if testing is being conducted. *9 VAC 5-50-30 Special Provisions for New and Modified Stationary Sources – Performance Testing.*
- Condition 9 of the 2/14/2014 NSR permit (Condition 27 of the Title V permit) requires the Package Boiler No. 3 (BO0302) to be operated in compliance with NSPS Subpart Dc unless the permit is more restrictive. The only

requirement in NSPS Dc is to record monthly natural gas usage. 9 VAC 5-50-400 EPA Standards of Performance for New and Modified Stationary Sources.

#### **Streamlined Requirements**

There are no streamlined conditions for these units.

**The following Virginia Administrative Codes that have specific emission requirements have been determined to be applicable:**

- 9 VAC 5-40-900: Emission Standards for Fuel Burning Equipment- Standard for Particulate Matter
- 9 VAC 5-40-930: Emission Standards for Fuel Burning Equipment- Standard for Sulfur Dioxide
- 9 VAC 5-50-80: Standards of Performance for Visible Emissions and Fugitive Dust/Emissions- Standard for Visible Emissions
- 9 VAC 5-50-260: Standards of Performance for Stationary Sources-Standard for Stationary Sources

#### **EMISSION UNIT APPLICABLE REQUIREMENTS – Fuel Burning Equipment – Expanded Tobacco Process – Thermal Expansion Furnaces (FU0301, FU0401)**

*The Thermal Expansion process utilizes the heat from two natural gas furnaces. These furnaces were permitted in the 2/16/2011 permit along with non fuel burning equipment (see Section for Tobacco Processing). Emission limits for these furnaces are combined with the other emissions for the Tobacco Processing (see Section for Tobacco Processing for emission limits). Following are applicable requirements from the Virginia State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution:*

- Condition 28 of the Title V permit states the allowable fuel for the furnaces (FU0301, FU0401) to be natural gas. *This condition contributes to making the BACT emission limits for these units enforceable.*
- Condition 7 of the 2/16/2011 NSR permit (Condition 29 of the Title V permit) limits the throughput of natural gas to the two furnaces at the Expanded Tobacco Process. *This condition contributes to making the BACT emission limits for these units enforceable.*
- Condition 30 of the Title V permit limits the opacity from the two furnaces at the Expanded Tobacco Process (FU0301, FU0401). *This requirement is from Standards of Performance for Visible Emissions from New and Modified Sources*
- Condition 31 of the Title V permit requires the permittee to perform semi-annual visible emission checks to show compliance with opacity limits for the two furnaces at the Expanded Tobacco Process (FU0301, FU0401). "Normal" visible emissions shall be those which are observed on a frequent basis. A Method 9 VEE will be required if visible emissions appear to be above normal. *This condition fulfills the monitoring requirement of Part 70.*
- Condition 37 of the 2/16/2011 NSR permit (Condition 32 of the Title V permit) requires the permittee to keep records of the monthly throughput of natural gas to the furnaces (FU0301, FU0401). *This condition contributes to making the BACT emission limits for these units enforceable.*

#### **Streamlined Requirements**

There are no streamlined conditions for these units.

**The following Virginia Administrative Codes that have specific emission requirements have been determined to be applicable:**

- 9 VAC 5-50-260 9 VAC 5-50-260: Emission Standards of Performance for Stationary Sources – Standard for stationary sources.
- 9 VAC 5-50-290: Standards of Performance for Stationary Sources- Standard for Visible Emissions

**EMISSION UNIT APPLICABLE REQUIREMENTS - Emergency Generators and Diesel Fire Pumps (EG0102C, EG0801, EG0901, PU0101C, PU0102C, EG0201, EG0301, EG0401, EG0501, EG0701)**

*These emergency units are not subject to minor NSR permitting so there are no underlying permit conditions. Unit EG0102C is subject to 40 CFR Part 60 subpart IIII. Units EG0102C, EG0801 and EG0901 are subject to 40 CFR Part 63 subpart ZZZZ. Following are applicable requirements from the Virginia State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution:*

- Condition 33 of the Title V permit requires that emissions from the generators and fire pumps shall be controlled by good operation and maintenance of the units. *This condition ensures that the units are well-maintained and are able to meet visible emission standards.*
- Conditions 34 through 35 of the Title V permit allows the use of #2 fuel oil as fuel in EG0102C, EG1001, PU0101C and PU0102C. EG0201, EG0301, EG0401, EG0501, EG0701, EG0801 and EG0901 are allowed to use propane as fuel. *These requirements will define the fuel type of the units for MACT and/or NSPS applicability.*
- Condition 36 of the Title V permit limits the emergency generators to no more than 500 hrs of operation/yr. *This limit is based on the EPA (John Seitz) memo from September 6, 1995 regarding the PTE for emergency generators.*
- Conditions 37 and 38 of the Title V permit limit the emergency generators to requirements by reference for federal regulations as follows: EG0102C, EG0101, EG0201, EG0301, EG0401, EG0501, EG0701, EG0801, EG0901, EG1001, PU0101C, and PU0102C are subject to MACT ZZZZ requirements. EG0102C and EG1001 are also subject to NSPS subpart IIII (40 CFR 60.4200 and 40 CFR 63.6585). These units are also subject to the General Requirements in Parts 60.1 through 19 and 63.1 through 16 (Subpart A of the MACT and NSPS regulations). *The source is aware of all specific applicable requirements of NSPS Subpart IIII and MACT Subpart ZZZZ and will submit documentation accordingly to show compliance. Copies of the regulations will be attached to the Title V permit.*
- Condition 39 of the Title V permit limits visible emissions from the generators (EG0102C, EG1001) to no more than 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 5-50-80 Standard for Visible Emissions for New and Modified Stationary Sources.*
- Condition 40 of the Title V permit limits visible emissions from the fire pumps (PU0101C, PU0102C) to no more than 30 percent opacity except during one six minute-period in any one hour in which visible emissions shall not exceed 60 percent opacity. *9 VAC 5-40-80 Standard for Visible Emissions for Existing Stationary Sources.*
- Condition 41 of the Title V permit requires the permittee to perform monthly visible emission checks to show compliance with opacity limits for the diesel generators (EG0102C, EG1001) and fire pumps (PU0101C, PU0102C). "Normal" visible emissions shall be those which are observed on a frequent basis. A Method 9 VEE will be required if visible emissions appear to be above normal. *This condition fulfills the monitoring requirement of Part 70.*
- Condition 42 of the Title V permit limits visible emissions from the LPG emergency generators (EG0101, EG0201, EG0301, EG0401, EG0501, EG0701, EG0801, EG0901) to no more than 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 5-50-80 Standard for Visible Emissions for New and Modified Stationary Sources.*
- Condition 43 of the Title V permit requires the permittee to perform semi-annual visible emission checks to show compliance with opacity limits for the LPG emergency generators (EG0101, EG0201, EG0301, EG0401, EG0501, EG0701, EG0801, EG0901). "Normal" visible emissions shall be those which are observed on a frequent basis. A Method 9 VEE will be required if visible emissions appear to be above normal. *This condition fulfills the monitoring requirement of Part 70.*
- Condition 44 of the Title V permit requires the permittee to keep a log of the hours of operation of each generator on a monthly basis. *This requirement provides for monitoring to show compliance with Condition 36.*

- Condition 45 of the Title V permit requires the permittee to maintain records necessary to demonstrate compliance with the requirements of the emergency generators and fire pumps (EG0102C, EG0101, EG0201, EG0301, EG0401, EG0501, EG0701, EG0801, EG0901, EG1001, PU0101C, PU0102C). *9 VAC 5-50-50 Standards of Performance for Stationary Sources – Notification, records and reporting.*
- Condition 46 of the Title V permit requires the permittee to use appropriate testing methods if testing is being conducted on the generators. *9 VAC 5-50-30 Special Provisions for New and Modified Stationary Sources – Performance Testing.*

#### **Streamlined Requirements**

There are no streamlined conditions for these units

**The following Virginia Administrative Codes that have specific emission requirements have been determined to be applicable:**

- 9 VAC 5-50-290: Standards of Performance for Stationary Sources- Standard for Visible Emissions
- 9 VAC 5-50-400 EPA Standards of Performance for New Stationary Sources
- 9 VAC 5-60-100 EPA Standards for Hazardous Air Pollutants for Source Categories

#### **EMISSION UNIT APPLICABLE REQUIREMENTS - Ash Handling (AH0101) and Coal Handling Operations (CH0101)**

*Requirements for these units are not contained in a NSR permit although they are considered a new source as per 9 VAC 5-50-250. The coal handling operations (CH0101) are subject to NSPS Subpart Y. Following are standards from the Virginia State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution:*

#### **Limitations**

- Condition 47 of the Title V permit requires particulate matter emissions from ash handling shall not exceed 3.8 lbs/hr and particulate matter emissions from coal handling shall not exceed 51.3 lbs/hr. *9 VAC 5-40-260: These limits come from Rule 4-4, General Process Operations, where the particulate standard for existing or unpermitted sources is based on the process weight rate.*
- Condition 48 of the Title V permit limits visible emissions from the ash handling to no more than 20% opacity except during one six-minute period in any one hour in which visible emissions shall not exceed 30% opacity. Visible emissions from the coal handling operations are limited to no more than 20% opacity (NSPS Subpart Y). *9 VAC 5-50-80 Standards of Performance for Visible Emissions and Fugitive Dust/Emissions and 40 CFR 60.425.*
- Condition 49 of the Title V permit describes fugitive dust control. *9 VAC 5-50-90 Standards of Performance for Visible Emissions and Fugitive Dust/Emissions.*
- Condition 50 of the Title V permit requires monitoring of the visible emissions from the ash and coal handling equipment (AH0101, CH0101) on a monthly basis. *This monitoring fulfills the requirements of Part 70 monitoring.*
- Condition 51 of the Title V permit requires proper recordkeeping to show compliance with Conditions 43 through 46. *9 VAC 5-50-50 Standards of Performance for Stationary Sources – Notification, records and reporting.*
- Condition 52 of the Title V permit requires the permittee to use appropriate testing methods if testing is being conducted on the ash handling and coal handling equipment. *9 VAC 5-50-30 Special Provisions for New and Modified Stationary Sources – Performance Testing.*

#### **Streamlined Requirements**

There are no streamlined conditions for these units.

**The following Virginia Administrative Codes that have specific emission requirements have been determined to be applicable:**

- 9 VAC 5-40-260: Emission Standards for General Process Operations - Standard for particulate matter
- 9 VAC 5-50-50: Standards of Performance for Stationary Sources – Notification, records and reporting.
- 9 VAC 5-50-80: Standard for Visible Emissions and Fugitive Dust/Emissions – standard for fugitive dust/emissions

#### **EMISSION UNIT APPLICABLE REQUIREMENTS - Tobacco Processing**

(CS0101, CS0201, CS0301, CS1001, SP1301, SP1401, SP1501, SP1601, CS0901, CO0101, CO0601, CO0301, OC0301, CO0401, OC0401, PP0101, SM0402, SM0502, FU0301/EX0101, FU0401/EX0201, TP3301, CS0601, CS0701, DR0601, DR0701, DR0801, DR0901, FC0101, FC0201, FC0301, FC0401, DA0101, DA0201, DA0301, DA0401, CC0101, CC0301, CC0201, CC0401, TR0101, TR0102, TR0103, DC0101, FC0501, FC0502, FC0601, FC0602, FC0701, FC0702, FC0801, FC0802, TP0201, TP1101, TP1401, TP0801, TP1501, TP2801, AF0101, FA0101, VS0101, TP3001, DC1001, CN0601, CN0602, CN0603, CN0701, MAHVSU, CN0901, CN1001)

*Following are limitations from the NSR permit issued February 16, 2011 which primarily covers the tobacco processing at the facility:*

- Condition 2 of the 2/16/2011 NSR permit (Condition 53 of the Title V permit) requires rotoclone scrubbers for particulate matter control for the conditioning cylinders, liquid application cylinders, steam dryers and mechanical treatment system. *This is a BACT requirement.*
- Condition 3 of the 2/16/2011 NSR permit (Condition 54 of the Title V permit) requires fabric filters for control of particulate matter from the separators, mechanical and pneumatic transport systems, and the housekeeping vacuum systems. *This is a BACT requirement.*
- Condition 4 of the 2/16/2011 NSR permit (Conditions 55 of the Title V permit) requires scrubbers for control of VOC and PM-10 from the conditioning chambers and conveyors. *This is a BACT requirement.*
- Condition 5 of the 2/16/2011 NSR permit (Condition 56 of the Title V permit) requires a thermal oxidizer to control VOC from the steam dryers and liquid application cylinders. *This is a VOC RACT requirement.*
- Condition 6 of the 2/16/2011 NSR permit (Condition 57 of the Title V permit) describes the control strategy for VOC from the units not listed in the previous condition. *This is a VOC RACT requirement.*
- Conditions 8 through 15, and 17 through 25, and 27 through 29 of the 2/16/2011 NSR permit (Conditions 58 through 76 of the Title V permit) establish throughput limits for the tobacco processing equipment. *Although not designated as BACT in the underlying permit, these conditions provide an enforceable means to limit emissions based on BACT.*
- Conditions 30 through 33 and 35 of the 2/16/2011 NSR permit (Conditions 77 through 81 of the Title V permit) limit criteria pollutant emissions and limit visible emissions to 5 percent for the tobacco processing equipment. *These are BACT requirements. Condition 33 of the 2/16/2011 permit (Condition 82 of the Title V permit) was at one time a facility-wide limit on the PTE of the source. In December 18, 1992 the source requested the limits on TSP, PM<sub>10</sub>, ammonia, ethanol, and VOC from the tobacco processing and fuel burning. On May 8, 2008 Philip Morris received a permit to lower those limits to reflect more current operations. Only emissions from tobacco processing and ethanol application were included in the new limit. Emissions from fuel burning equipment were not included in this new cap so the cap was no longer "facility-wide" but rather only based on the throughput of blended tobacco and ethanol [Conditions 14 and 15 of the 2/16/11 NSR permit (Conditions 66 and 67 of the Title V permit)].*
- Conditions 2 and 4 of the 2/16/2011 NSR permit (Conditions 82 and 83 of the Title V permit) requires a water flow meter on the rotoclone scrubbers and a water flow meter and differential pressure gauge on the other scrubbers. *This requirement provides for monitoring to show compliance with Conditions 30 and 31 of the NSR permit (Conditions 77 and 78 of the Title V permit).*
- Condition 3 of the 2/16/2011 NSR permit (Condition 84 of the Title V permit) requires a differential pressure gauge on the fabric filters. *This requirement provides for monitoring to show compliance with Conditions 30 and 31 of the NSR permit.*

- Condition 85 of the Title V permit requires monthly visible emissions checks on the scrubbers, fabric filters, and thermal oxidizer. *This monitoring fulfills the requirements of Part 70 monitoring.*
- Condition 5 of the 2/16/2011 NSR permit (Condition 86 of the Title V permit and the 10/14/1997 RACT) requires continuous monitoring of the chamber temperatures and damper positions for the thermal oxidizer. *This is a VOC RACT requirement.*
- Conditions 87 through 94 of the Title V permit require CAM for the fabric filters for OC0301, OC0401, PP0101, VS0101, CN0601, CN0602 and CN0603. *Continuous monitoring of the differential pressure drop across the fabric filter (baghouse) is selected as the primary indicator in the monitoring approach for the fabric filters. Maintaining the pressure drop within a recommended operating range will provide an indication of proper baghouse performance. A decrease in pressure drop is indicative of bag failure (possible holes or tears in the fabric). Increases in pressure drop can be indicative of fabric blinding or decreased permeability caused by inadequate cleaning. A monthly visible emissions observation is selected as the secondary indicator for baghouse performance monitoring. Visible emissions monitoring has been selected as the secondary performance indicator since it is indicative of proper operation and maintenance of baghouses. A properly operating baghouse (as applied to the affected emission units at the MC Complex) will exhibit no visible emissions in its exhaust. An increase in visible emissions indicates reduced performance and efficiency of the baghouse. The indicator range of no visible emissions was selected for two primary reasons. First, an increase in visible emissions is indicative of an increase in particulate matter emissions and second; a monitoring approach that does not rely on facility personnel to maintain Method 9 certification is desired. Although Method 22 directly applies to fugitive emission sources, the visible emissions observation approach specified by Method 22 is appropriate for application to stack emissions and does not require the observer to be Method 9 certified.*
- Condition 37 of the 2/16/2011 NSR permit (Conditions 95 and 96 of the Title V permit) requires the tracking of material throughput, a monthly log of visible emissions observations, monitoring records for the thermal oxidizer, and the operating schedule for the steam dryers and liquid application cylinders. Records shall be kept on site for the most recent five-year period. *9 VAC 5-50-50 Standards of Performance for Stationary Sources – Notification, records and reporting.*
- Condition 97 of the Title V permit requires the permittee to use appropriate testing methods if testing is being conducted in addition to monitoring. *9 VAC 5-50-30 Special Provisions for New and Modified Stationary Sources – Performance Testing.*

#### **Streamlined Requirements**

There are no streamlined conditions for these units.

**The following Virginia Administrative Codes that have specific emission requirements have been determined to be applicable:**

- 9 VAC 5-50-30: Special Provisions for New and Modified Stationary Sources – Performance Testing
- 9 VAC 5-50-50: Standards of Performance for Stationary Sources – Notification, records and reporting.
- 9 VAC 5-50-260: Emission Standards of Performance for Stationary Sources – Standard for stationary sources.

#### **EMISSION UNIT APPLICABLE REQUIREMENTS – Commercial Process at the Semiworks (R&D) Facility**

(PC0101SW, CS0201SW, SP0101SW, OD0101SW, FC0101SW, DA0101SW, CC0101SW, CC0201SW, CS0301SW, DR0101SW, FC0201SW, FC0202SW, TP0101SW, TP0201SW)

*Following are limitations from the NSR permit issued January 27, 2011:*

- Condition 2 of the 1/27/2011 NSR permit (Condition 98 of the Title V permit) requires baghouses for particulate matter control from SP0101SW, OD0101SW, and TP0101SW. *This is a BACT requirement.*
- Condition 3 of the 1/27/2011 NSR permit (Condition 99 of the Title V permit) requires portable dust filters for particulate matter control from TP0201SW. *This is a BACT requirement.*

- Condition 4 of the 1/27/2011 NSR permit (Condition 100 of the Title V permit) requires the baghouses to be equipped with a device that measures the differential pressure drop across the filters. These devices shall be maintained. *This is a BACT requirement.*
- Condition 5 of the 1/27/2011 NSR permit (Condition 101 of the Title V permit) requires the differential pressure device on the baghouses to be observed weekly and a log kept of the observations. *Standards and conditions for granting permits – ensuring practical enforceability.*
- Condition 6 of the 1/27/2011 NSR permit (Condition 102 of the Title V permit) requires a particulate matter scrubber for CS0201SW, FC0101SW, DA0101SW, CC0101SW, CC0201SW, CS0301SW, DR0101SW, FC0201SW and FC0202SW. *This is a BACT requirement and Standards and conditions for granting permits is in effect – ensuring practical enforceability.*
- Condition 7 of the 1/27/2011 NSR permit (Condition 103 of the Title V permit) requires the particulate matter scrubber be equipped with a water flow rate and differential pressure monitors. *This is a BACT requirement and Standards and conditions for granting permits is in effect – ensuring practical enforceability.*
- Condition 8 of the 1/27/2011 NSR permit (Condition 104 of the Title V permit) requires the water flow rate and scrubber differential pressure monitors to be observed weekly and a log kept of the observations. *Standards and conditions for granting permits – ensuring practical enforceability.*
- Condition 9 of the 1/27/2011 NSR permit (Condition 105 of the Title V permit) requires VOC workpractice standards to be in place. *Special provisions to minimize fugitive VOC emissions.*
- Condition 10 of the 1/27/2011 NSR permit (Condition 106 of the Title V permit) limits the throughput of tobacco processed by the Semiworks equipment for commercial production. *This condition contributes to making the BACT emission limits for these units enforceable.*
- Condition 11 of the 1/27/2011 NSR permit (Condition 107 of the Title V permit) limits the throughput of ethanol flavoring to the tobacco equipment at the Semiworks for commercial production. *This condition contributes to making the BACT emission limits for these units enforceable.*
- Condition 12 of the 1/27/2011 NSR permit (Condition 108 of the Title V permit) limits hourly and annual emissions from the Semiworks equipment used for commercial production. *This is a BACT requirement.*
- Condition 13 of the 1/27/2011 NSR permit (Condition 109 of the Title V permit) limits the visible emissions from the baghouses, dust filters and scrubber stacks at the Semiworks used for commercial production. *This is a BACT requirement.*
- Condition 110 of the Title V permit requires quarterly monitoring of visible emissions from the scrubber, dustfilters, and baghouses at the Semiworks. *This ensures compliance with the opacity limits for those units.*
- Condition 14 of the 1/27/2011 NSR permit (Condition 111 of the Title V permit) requires recordkeeping of emission data and operating parameters to demonstrate compliance with the permit. *Special Provisions for notification, recordkeeping and reporting*
- Condition 15 of the 1/27/2011 NSR permit (Condition 112 of the Title V permit) requires baghouses for particulate matter control. *This is a BACT requirement.*

#### **Streamlined Requirements**

There are no streamlined conditions for these units.

**The following Virginia Administrative Codes that have specific emission requirements have been determined to be applicable:**

- 9 VAC 5-50-80: Standard for Visible Emissions and Fugitive Dust/Emissions – standard for fugitive dust/emissions
- 9 VAC 5-50-260: Emission Standards of Performance for Stationary Sources – Standard for stationary sources.

**FACILITY-WIDE APPLICABLE REQUIREMENTS – Fuel Burning Equipment - MACT Subpart DDDDD (BO0101, BO0201, BO0301, BO0302, FU0301, FU0401)**

*The requirements of 40 CFR Part 63, Subpart DDDDD are currently effective due to the January 9, 2012 decision by the United States District Court for the District of Columbia to vacate the administrative stay that U.S. EPA put in place during the reconsideration of the March, 2011 final rules. On February 7, 2012, U.S. EPA issued a "No Action Assurance" letter to facilities and indicated that U.S. EPA will exercise its enforcement discretion to not pursue enforcement action of violations of the Initial Notification deadlines established in the rule. This letter further notes that U.S. EPA has proposed revisions to the compliance dates for all units (the date by which a unit must be in compliance with the substantive requirements in the Boiler MACT rule) and to the subcategories for some units.*

- Conditions 113, 114 and 115 of the Title V permit refers to applicable requirements from 40 CFR Part 63, Subpart DDDDD for Industrial, Commercial, and Institutional Boilers and Process Heaters and the General Provisions of Subpart A. These include emission limits, control measures, operating restrictions, monitoring, recordkeeping, reporting, testing, and other requirements. *These requirements are taken from the Boiler MACT and General Provisions. Although DEQ has not elected to take compliance delegation for this regulation from EPA, the facility is subject to these applicable requirements and so they must be included in the Title V permit.*

**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.

**Comments on General Conditions**

**119. Permit Expiration**

This condition refers to the Board taking action on a permit application. The Board is the State Air Pollution Control Board. The authority to take action on permit applications has been delegated to the Regions as allowed by §§2.1-20.01:2 and §10.1-1185 of the *Code of Virginia*, and the "Department of Environmental Quality Agency Policy Statement NO. 3-2001."

This general condition cites the entire Article that follows:

Article 1 (9 VAC 5-80-50 et seq.), Part II of 9 VAC 5 Chapter 80. Federal Permits for Stationary Sources

This general condition cites the sections that follow:

- 9 VAC 5-80-80. Application
- 9 VAC 5-80-140. Permit Shield
- 9 VAC 5-80-150. Action on Permit Applications

**125. Failure/Malfunction Reporting**

Section 9 VAC 5-20-180 requires malfunction and excesses emissions reporting within four hours of discovery. Section 9 VAC 5-80-250 also requires malfunction reporting; however, reporting is required within two days. Section 9 VAC 5-20-180 is from the general regulations. All affected facilities are subject to this section including Title V facilities. Section 9 VAC 5-80-250 is from the Title V regulations. Title V facilities are subject to both sections. A facility may make a single report that meets the requirements of 9 VAC 5-20-180 and 9 VAC 5-80-250. The report must be made within four daytime business hours of the malfunction.

In order for emission units to be relieved from the requirement to make a written report in 14 days the emission units must have continuous monitors and the continuous monitors must meet the requirements of 9 VAC 5-50-410 or 9 VAC 5-40-41.

This general condition cites the sections that follow:

- 9 VAC 5-40-41. Emissions Monitoring Procedures for Existing Sources
- 9 VAC 5-40-50. Notification, Records and Reporting
- 9 VAC 5-50-50. Notification, Records and Reporting

**129. Permit Modification**

This general condition cites the sections that follow:

- 9 VAC 5-80-50. Applicability, Federal Operating Permit For Stationary Sources
- 9.VAC 5-80-190. Changes to Permits
- 9 VAC 5-80-260. Enforcement
- 9 VAC 5-80-1100. Applicability, Permits for New and Modified Stationary Sources
- 9 VAC-5-80-1790. Applicability, Permits for Major Stationary Sources and Modifications Located in Prevention of Significant Deterioration Areas

**141. Malfunction as an Affirmative Defense**

The regulations contain two reporting requirements for malfunctions that coincide. The reporting requirements are listed in section 9 VAC 5-80-250 and 9 VAC 5-20-180. The malfunction requirements are listed in General Condition 141 and General Condition 125. For further explanation see the comments on general condition 125.

This general condition cites the sections that follow:

- 9 VAC 5-20-180. Facility and Control Equipment Maintenance or Malfunction
- 9 VAC 5-80-110. Permit Content

**STATE ONLY APPLICABLE REQUIREMENTS**

The following Virginia Administrative Codes have specific requirements only enforceable by the State and have not been included in the Federal Operating Permit:

- 9 VAC 5-40-20.A.3 Compliance (with opacity standards except during startup, shutdown, and malfunction);
- 9 VAC 5-50-310, Odorous Emissions
- 9 VAC 5-60-320, Toxic Pollutants

**FUTURE APPLICABLE REQUIREMENTS**

None.

**INAPPLICABLE REQUIREMENTS (Condition 117 of the Title V permit)**

PU0101C	Diesel Emergency Fire Pump -1971	255 hp
PU0102C	Diesel Emergency Fire Pump -1971	255 hp
EG0102C	Diesel Emergency Generator - 2007	750 kW (1141 hp)
EG01001	Diesel Emergency Generator - 2012	750 kW (1141 hp)
EG0101	Propane Emergency Generator - <2008	60 kW
EG0201	Propane Emergency Generator - <2008	45kW
EG0301	Propane Emergency Generator - 2002	15kW
EG0401	Propane Emergency Generator - 2002	30kW
EG0501	Propane Emergency Generator - 2002	15kW
EG0701	Propane Emergency Generator - 2004	45 kW (75 hp)
EG0801	Propane Emergency Generator - 2006	15 kW
EG0901	Propane Emergency Generator - 2007	80 kW

New Source Performance Standards for Stationary Spark Ignition Internal Combustion Engines (NSPS JJJJ) is not applicable to the propane generators at this facility because they were manufactured before January 1, 2008. The diesel engines are not subject to this subpart because they are not spark ignition engines.

New Source Performance Standards for Stationary Compression Ignition Internal Combustion Engines (NSPS III) is not applicable to EG0101, EG0201, EG0301, EG0401, EG0501, EG0701, EG0801 and EG0901 because those generators are not compression ignition (diesel) engines. The fire pumps (PU0101C, PU0102C) are not subject to this subpart because they were constructed prior to July 11, 2005.

The startup, shut down, and malfunction opacity exclusion listed in 9 VAC 5-40-20 A 3 cannot be included in any Title V permit. This portion of the regulation is not part of the federally approved state implementation plan. The opacity standard applies to existing sources at all times including startup, shutdown, and malfunction. Opacity exceedances during malfunction can be affirmatively defended provided all requirements of the affirmative defense section of this permit are met. Opacity exceedances during startup and shut down will be reviewed with enforcement discretion using the requirements of 9 VAC 5-40-20 E, which state that "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."

CO<sub>2</sub>-e emissions are below permitting levels for the Greenhouse Gas Tailoring Rule under PSD regulations.

The following NSR permit conditions were not included in the Title V permit as they are considered inapplicable or obsolete for the following reasons:

Condition #6 of the 2/14/2014 permit had a requirement to sample the existing oil tanks associated with BO0101 and BO0201 to determine the sulfur content of the fuel. This has been fulfilled.

Conditions #2, #3, #6, #16, #26, #29, #31, and #37 of the 2/16/2011 permit were omitted or edited to remove reference to TP2801, AF0101, FA0101, CN0901, and LP0101 which have been removed from the facility.

Condition #34 of the 2/16/2011 permit allows equipment to be relocated within the plant so long as the system air movement capacity and maximum control efficiency of the control system is not decreased. This condition was placed in the permit for the tobacco processing equipment in 2001 to allow the movement of equipment associated with the housekeeping vacuum system. This language was based on an exemption citation for woodworking equipment. There is no regulatory basis for this condition. There is no baseline airflow or monitoring associated with this condition to show compliance with. It is not enforceable and so it was not included in the Title V permit.

Condition #16 of the 1/27/2011 permit had a requirement to notify DEQ of the actual startup date of the equipment used for commercial production at the Semiworks. This has been fulfilled.

**COMPLIANCE PLAN**

There is no compliance plan for this facility.

**INSIGNIFICANT EMISSION UNITS**

The insignificant emission units are presumed to be in compliance with all requirements of the 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.

Insignificant emission units include the following:

Emission Unit No.	Emission Unit Description	Citation	Pollutant Emitted	Rated Capacity
CF0401 to CF0404	Mechanical Separators	9 VAC 5-80-720 B	VOC, PM, PM <sub>10</sub>	
VC0101, VC0102		9 VAC 5-80-720 B	PM <sub>10</sub>	
CF0101 to CF0105, CF0201 to CF0205, CF0301 to CF0303	Cutters	9 VAC 5-80-720 B	PM, PM <sub>10</sub>	

Emission Unit No.	Emission Unit Description	Citation	Pollutant Emitted	Rated Capacity
CO0501	Conveyors	9 VAC 5-80-720 B	VOC, PM, PM <sub>10</sub>	
EH0201	Paint Spray Booth	9 VAC 5-80-720 B	VOC, PM, PM <sub>10</sub>	
EV0101	Electric (Parts Rinse Water) Concentrator	9 VAC 5-80-720 B	VOC	
HX1001	Electric (Parts Glue Removal) Dryer	9 VAC 5-80-720 B	PM, PM <sub>10</sub>	
IM0101, IM0102, IM0103, IM0104	Treatment Chambers	9 VAC 5-80-720 B	VOC, PM, PM <sub>10</sub>	
IM0201, IM0202 IM0301, IM0303		9 VAC 5-80-720 B	VOC, PM, PM <sub>10</sub>	
MT0101S, MT0102S	Spray Flavor Blend Tank	9 VAC 5-80-720 B	VOC	
SI0101, SI0102, SI0201, SI0202	Total Blend Silos	9 VAC 5-80-720 B	PM, PM <sub>10</sub>	
SI0401, SI0501, SI0601	Tobacco Silos	9 VAC 5-80-720 B	PM, PM <sub>10</sub>	
TK0101	Underground Alcohol Storage Tank	9 VAC 5-80-720 B	VOC	20,000 gal.
TK0102	Underground Alcohol Storage Tank	9 VAC 5-80-720 B	VOC	20,000 gal.
TK0301C	No.2 Fuel Oil Storage Tank (Central Plant)	9 VAC 5-80-720 B	VOC	148,000 gal.
TK0302C	No.2 Fuel Oil Storage Tank (Central Plant)	9 VAC 5-80-720 B	VOC	148,000 gal.
TK0303S, TK0312S, TK0313S, TK0314S, TK0315S, TK0316S	Spray Flavor Application Tanks	9 VAC 5-80-720 B	VOC	
TK0601C	Underground Diesel Storage Tank (Central Plant)	9 VAC 5-80-720 B	VOC	15,000 gal.
TK1601C	Burley Casing Blend Tank	9 VAC 5-80-720 B	VOC	
TK1701C, TK1702C, TK1703C	Burley Casing Application Tanks	9 VAC 5-80-720 B	VOC	
TK2501B	No.2 Fuel Oil Storage Tank (PC Boiler Plant)	9 VAC 5-80-720 B	VOC	15,000 gal.
TP3101	Pneumatic Transport System	9 VAC 5-80-720 B	PM, PM <sub>10</sub>	
TP3201	Pneumatic Transport System	9 VAC 5-80-720 B	PM, PM <sub>10</sub>	
Various	Shop Parts Washers	9 VAC 5-80-720 B	VOC	
Various	Parts Sandblasters	9 VAC 5-80-720 B	PM, PM <sub>10</sub>	
Various	Flavor Tanks	9 VAC 5-80-720 B	VOC	
Various	Glue (Adhesive), and Plasticizer Tanks	9 VAC 5-80-720 B	VOC	
Various	Hydraulic Oil Tanks	9 VAC 5-80-720 B	VOC	
Various	Diesel Day Tanks	9 VAC 5-80-720 B	VOC	
Various	Various Foil Packaging	9 VAC 5-80-720 B	VOC	
SM0601	Mechanical Separating System	9 VAC 5-80-720 B	PM, PM <sub>10</sub>	

The citation criteria for insignificant activities are as follows:

- 9 VAC 5-80-720 A - Listed Insignificant Activity, Not Included in Permit Application
- 9 VAC 5-80-720 B - Insignificant due to emission levels
- 9 VAC 5-80-720 C - Insignificant due to size or production rate

### **CONFIDENTIAL INFORMATION**

The permittee submitted a showing for confidentiality but the underlying NSR permits do not contain confidential information. A non-confidential permit application was submitted and all portions of the Title V application are suitable for public review.

### **PUBLIC PARTICIPATION**

The public notice for the proposed permit renewal was placed in the Richmond Style Weekly on April 30, 2014 and stayed in Public Notice for 30 days. EPA had an additional 15 days to review the proposed permit. No comments were received.