COMMONWEALTH OF VIRGINIA
Department of Environmental Quality
Valley Regional Office

STATEMENT OF LEGAL AND FACTUAL BASIS

Mohawk Industries, Inc. - Lees Carpets Division
Glasgow, Rockbridge County, Virginia
Permit No. VRO80269

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, Mohawk Industries, Inc. has applied for renewal of its Title V Operating Permit for its commercial carpet manufacturing facility in Glasgow, Virginia. The Department has reviewed the application and has prepared a draft Title V Operating Permit.

Engineer/Permit Contact:_____ Date: *12/18/06*

Air Permit Manager: Date: *12/18/06*

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_____ _____

Deputy Regional Director: Date:

_____ _____

FACILITY INFORMATION

Permittee
Mohawk Industries, Inc.
404 Anderson Street
Glasgow, Virginia 24555-2801

Facility
Lees Carpets Division
404 Anderson Street
Glasgow, Virginia 24555-2801

County - Plant Identification Number: 51-163-0001

SOURCE DESCRIPTION

NAICS 314110 - Carpet and Rug Mills

Mohawk Industries, Inc. - Lees Carpets Division operates a nylon carpet manufacturing facility in Glasgow, Virginia. Activities of the facility to support the carpet manufacturing production process include fuel burning and coal handling, yarn dyeing, yarn processing, carpet backing and ancillary operations such as storage silos.

The facility is currently a Title V major source of PM-10, SO_2, NO_x, CO, VOC, hydrogen chloride, glycol ethers, vinyl acetate and methanol. This source is located in an attainment area for all pollutants and is a PSD major source. The facility was previously permitted under the following issued minor New Source Review (NSR) Permits:

February 13, 1978 (Amended February 16, 1978)
- Permit to install and operate a 155 MMBtu/hr coal-fired boiler

July 10, 1986 (Amended June 29, 2006)
- Permit to construct and operate an Otting sock dye range

December 12, 1990
- Permit to construct and operate the #2 carpet yarn dye line

December 5, 1997
- Permit to construct and operate a replacement storage silo

December 10, 1999 (Amended June 29, 2006)
- Permit to modify and operate the #1 carpet yarn dye line

August 12, 2002 (Amended June 29, 2006)
- Permit to install and operate a hot melt sample line

March 22, 2002 (Amended June 29, 2005 and August 31, 2006)

- Permit to modify and operate a PVC carpet backing line and calcium carbonate storage silo

March 27, 2006

- Permit to construct and operate an extruded coat carpet backing line (EC) for the Hot Melt Line and a research and development sample hot melt extruder (HME-S) and modify and operate the pellet 2 storage silo (pellet 2)

April 28, 2006

- Permit to construct and operate a tile extrusion line (TE1)

CHANGES TO EXISTING TITLE V PERMIT

The following are changes to the existing Title V permit since the issuance of the Title V permit significant modification on October 25, 2005:

- Change the title of the contact person and the name and title of the responsible official (Section I).

- Revise the name for the facility and permittee (Section I).

- Emission units have been updated to reflect the changes in the emission units at the facility (Section II).

- Include the Multicyclone Compliance Assurance Monitoring (CAM) Plan for the Erie City VC boiler (B7) (Section III).

- Removal of Section VI. Process Equipment Requirements – Yarn Processing Line (Heat Setting) (HS1) because this emission unit, the #1 Suessen heat set line (HS1), has been permanently shutdown.

- Removal of Section VII. Process Equipment Requirements – Carpet Dye Lines (CD1, CD3 and CD4) because these emission units, the Kuster Dyeing (CD1), the Atmospheric Beck Dyeing (CD3), and the Piece Dryer (CD4), have been permanently shutdown.

- Removal of the Latex Line (L1) and the PVC foamback line (PVC2) emission units and their associated applicable requirements (Section VIII) because these emission units have been permanently shutdown.

- A tiered periodic monitoring approach for conducting inspections for each #1 Ilma line stack (YD1-1&2 and YD1-3) (Section V), each #2 Ilma line stack (YD2-S2, YD2-D1 and YD2-D2) (Section V), the latex calcium carbonate filler silo stack (LCS) (Section VIII), the hot melt mix tanks filler line cyclone exhaust stack (HMM) (Section VIII), the remote hot melt mix tank filler line cyclone exhaust stack (RHMM) (Section VIII), the VAE latex filler silo stack (VAES) (Section VIII) and

(Section VIII) and the PVC carpet backing line stack (PVC1) (Section VIII) because the facility has stated there have been no reported visible emissions for these stacks since the issuance of the initial Title V permit.

- Incorporate the permit conditions from Mohawk's minor NSR permit dated August 12, 2002, as amended June 29, 2006, to install and operate a hot melt sample line (Section VIII). Details for this change are provided below in the Emission Unit Applicable Requirements section for the Carpet Backing Lines (Section VIII).

- Removal of Condition V.A.15 and Condition V.A.16 because they are no longer applicable requirements since the emission units referenced in the conditions are subject to 40 CFR 63, Subpart OOOO - Printing, Coating, and Dyeing of Fabrics and Other Textiles (Section V).

- Removal of the initial Reference Method 24 or 24A testing requirement for each dye and lubricant within 180 days of the effective date of the permit because this requirement was to determine the VOC content of the facility's dyes and lubricants that were existing prior to the issuance of the initial Title V permit for demonstrating compliance with VOC emission limits. The condition still requires Reference Method 24 or 24A testing for each new dye and lubricant or when the dye or lubricant is modified or substituted (Section V).

- Include the applicable requirements from 40 CFR 63, Subpart OOOO - Printing, Coating, and Dyeing of Fabrics and Other Textiles (Section VIII).

- Limit the facility's potential to emit hazardous air pollutants (HAPs) from all sources to less than 10 tons per year for any individual HAP and 25 tons per year for any combination of HAPs (Section IX).

- Revise the list of insignificant emission units (Section X).

The Title V permit does not include the requirements from the minor NSR permits dated March 27, 2006 and April 28, 2006 because the renewal application was submitted prior to the issuance of these minor NSR permits and the emission units identified in these minor NSR permits have not commenced operation. Per 9 VAC 5-80-80 C.2 of the Commonwealth of Virginia Regulations for the Control and Abatement of Air Pollution, Mohawk is required to submit a complete Title V permit application to obtain the permit revision to include the requirements of these minor NSR permits within 12 months after commencing operation.

COMPLIANCE STATUS

The facility is inspected once every two years. The most recent inspection was conducted on July

July 26, 2005, and the facility was found to be operating in compliance with all applicable requirements.

EMISSION UNIT AND CONTROL DEVICE IDENTIFICATION

The emissions units at this facility consist of the following:

Table I. Significant Emission Units

Emission Ur ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Devi (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
Fuel Burning Equipment							
B5	B5	Babcock and Wilcox Boiler (installed before 1972)	120 MMBtu/hr	-	-	-	-
B6	B6	Babcock and Wilcox Boiler (installed before 1972)	72 MMBtu/hr	-	-	-	-
B7	B7	Erie City VC Boiler (1978)	155 MMBtu/hr	Two (2) Zurn multicyclones	B7	PM/PM-10 ar Lead	2/13/78 Amended 2/16/78
Coal Handling							
CH1	-	Railcar Shaker (1980)	120,000 lbs/hr	-	-	-	-
CH2	-	Coal Bucket Elevator (1980)	120,000 lbs/hr	-	-	-	-
CH3	-	Storage Pile Transfer (1980)	120,000 lbs/hr	-	-	-	-
CH4	-	Coal Storage Pile (1980)	5,000 tons	-	-	-	-
CH5	CH5	Coal Storage Silo (1980)	120,000 lbs/hr (500 tons storag	Wet Suppression	CH5	PM/PM-10	-
Yarn Dye Lines							
YD1	YD1-1& YD1-3	#1 Ilma Line	3,900 lbs yarn/h	-	-	-	12/10/99 Amended 6/29/06

Emission Ur ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Devi (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
YD2	YD2-S2 YD2-D1 YD2-D2	#2 Ilma Line	1.85 tons of dyei solution per 1.5 tons of fabric pe hour	-	-	-	12/12/90
YD3	YD3	Ilma Sample Line (1992)	300 lbs yarn/hr	-	-	-	-
YD4	YD4	Lanly Dryer	600 lbs yarn/hr	-	-	-	7/10/86 Amended 6/29/06
YD5	-	Pack Kettles (Total of 8) (1952		-	-	-	-
Carpet Backing Lines							
LCS	LCS	Latex Calcium Carbonate Fille Silo (constructed before 1972)	60,000 lbs/hr	Fabric Filter	LCS	PM/PM-10	-
SBRM		SBR Latex Mixer (constructed before 1972)	-				
VAES	VAES	VAE Latex Filler Silo	130,000 lbs/hr; 4,420 TPY	Ultra Industries Fabri Filter Model #CBVC 7-36-1	VAES	PM/PM-10	12/5/97
VAEM		VAE Latex Mixer	-				
PVC1	PVC1	PVC Carpet Backing Line	1,800 yd^2/hr	Ceco Twin Pack Fibe Bed (Coalescing Filter	PVC1	PM/PM-10	3/22/02 Amended 6/29/05 a 8/31/06
PVCS	PVCS	Calcium Carbonate Storage Sil	60,000 lbs/hr; 15,000 TPY	Ultra Industries Fabri Filter by IMH	PVCS	PM/PM-10	
HM1	HM1-PC and HM1 MC	Hot Melt Line (1975)	5,600 yd^2/hr	-	-	-	-

Emission Ur ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Devi (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
HMM	HMM	Hot Melt Mix Tanks (2) (1975	68,000 lbs/8 hr total	Fabric Filter	HMM	PM/PM-10	-
	HMM-ve	Hot Melt Mix Tanks - Vents (2 (1975)		-	-	-	-
RHMM	RHMM	Remote Hot Melt Mix Tank (1989)	68,000 lbs/24 hr total	Walton Stout Fabric Filter	RHMM	PM/PM-10	-
	RHMM-vent	Remote Hot Melt Mix Tank - Vent (1989)		-	-	-	-
HMS	HMS	Hot Melt Sample Line	1,333 yd^2/hr	-	-	-	8/12/02 Amended 6/29/06
Miscellaneous							
DINP1 and DINP2	-	Diisononyl phthalate Storage Tanks	10,000 gallons each	-	-	-	-
HS2	-	Superba Heat Set Lines (8)	450 lbs yarn/hr	-	-	-	-
HS3	-	Superba Heat Set Lines with Spectradye (2)	150 lbs yarn/hr	-	-	-	-
WWTP	-	Wastewater Treatment Plant	-	-	-	-	-
-	-	Dye Mixers	-	-	-	-	-
PVC1	-	PVC Oven Gas-Fired Burners (1	364,000 Btu/hr each	-	-	-	-
PVC1	-	PVC Tile Line Singer	700,000 Btu/hr	-	-	-	-
PW	-	Parts Washer	-	-	-	-	-
SLD	-	Self Lock Dryer	1.5 MMBtu/hr	-	-	-	-

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

EMISSIONS INVENTORY

A copy of the 2005 annual emission update is attached as Attachment A. Emissions are summarized in the following tables.

Table II. 2005 Actual Criteria Pollutant Emissions

	Criteria Pollutant Emissions (tons/year)				
Emission Unit	VOC	CO	SO_2	PM-10	NO_x
Carpet Manufacturing Facility	26.15	56.74	300.11	59.69	121.83
Total	26.15	56.74	300.11	59.69	121.83

Table III. 2005 Actual Hazardous Air Pollutant Emissions

Pollutant	Hazardous Air Pollutant Emissions in Tons/Year
Hydrogen Chloride	1.73
Vinyl Acetate*	-
Methanol*	-
Glycol Ethers*	-

*Note: Emission rates for these HAPs are included in the emission rate of the criteria pollutant, VOC (as seen in Table II). Specific emission rates for these HAPs have not been calculated.

EMISSION UNIT APPLICABLE REQUIREMENTS

Fuel Burning Equipment - B5, B6 and B7

Limitations

The following limitations are state BACT requirements from the minor NSR permit dated February 13, 1978, as amended February 16, 1978, hereinafter and in the permit referred as the 2/13/78 permit. Condition numbers refer to those contained in the NSR permit. A copy of the permit is included as Attachment B.

No Condition number: Requires particulate emissions from the Erie City VC boiler (B7) be controlled by two Zurn multicylcones.

Condition 4: Limits particulate emissions from the Erie City VC boiler (B7)

(B7) to 0.28 pounds per million BTU (lbs/MMBtu) heat input.

Condition 5: Limits the ash content and the sulfur content of the coal for the Erie City VC boiler (B7) to 7% and 1%, respectively.

Condition 7: Approved fuel for the Erie City VC boiler (B7) is coal.

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

9 VAC 5-40-900, Existing Source Standard for Particulate Matter (ACQR 1-6)
9 VAC 5-40-910, Existing Source Emission Allocation System
9 VAC 5-40-930, Existing Source Standard for Sulfur Dioxide (ACQR 1-6)
9 VAC 5-40-940, Existing Source Standard for Visible Emissions
9 VAC 5-50-80, New Source Standard for Visible Emissions

The following conditions in the Title V permit were established pursuant to these Codes:

Condition III.A.3: Particulate matter emissions from the operation of the Babcock and Wilcox boiler (B5) shall not exceed 24.8 pounds per hour.

Condition III.A.4: Particulate matter emissions from the operation of the Babcock and Wilcox boiler (B6) shall not exceed 14.8 pounds per hour.

Condition III.A.5: Sulfur dioxide emissions from the operation of the boilers (B5, B6 and B7) combined shall not exceed 916.08 pounds per hour.

Condition III.A.10: Visible emissions from the Erie City VC boiler stack (B7) shall not exceed twenty percent (20%) opacity except during one six-minute period in any one hour in which visible emissions shall not exceed thirty percent (30%) opacity.

Condition III.A.11: Visible emissions from each of the Babock and Wilcox boiler stacks (B5 and B6) shall not exceed twenty percent (20%) opacity except during one six-minute period in any one hour in which visible emissions shall not exceed sixty percent (60%) opacity.

Particulate matter (PM) emission allocation for each of the fuel burning units of the fuel

burning equipment installation was the designation of their portion of the maximum allowable particulate emissions from the fuel burning equipment installation when operating at total capacity. The maximum allowable particulate emissions from the fuel burning equipment installation were the product of the total capacity and the emission ratio determined in accordance with 9 VAC 5-40-900. The allocation of the maximum allowable particulate emissions was determined as follows:

$$E = 1.0906H^{-0.2594}$$

Where:

E = emission limit in lbs/MMBtu
H = the total capacity of the fuel burning equipment installation in MMBtu/hr

Therefore:

Total capacity of boilers (H) = Boiler 5 + Boiler 6 + Boiler 7
= 120 + 72 + 155 MMBtu/hr
= 347 MMBtu/hr

Total allowable emissions for installation (E) = $1.0906H^{-0.2594}$ lbs/MMBtu
= $1.0906((347)^{-0.2594})$ lbs/MMBtu
= 0.23917 lbs/MMBtu

Total allowable particulate emissions: 0.23917 lbs/MMBtu x 347 MMBtu/hr = 83.0 lbs/hr

Allowable particulate emissions for Boiler 7 from 2/13/78 permit:

0.28 lbs/MMBtu x 155 MMBtu/hr = 43.4 lbs/hr

Remaining emissions for Boiler 5 and Boiler 6: 83.0 – 43.4 lbs/hr = 39.6 lbs/hr

Allocation of remaining emissions between Boiler 5 and Boiler 6:

Boiler 5: $39.6 \text{ lbs/hr} \times \frac{120 \text{ MMBtu/hr}}{(120 \text{ MMBtu/hr} + 72 \text{ MMBtu/hr})} = 24.8 \text{ lbs/hr}$

Boiler 6: $39.6 \text{ lbs/hr} \times \frac{72 \text{ MMBtu/hr}}{(120 \text{ MMBtu/hr} + 72 \text{ MMBtu/hr})} = 14.8 \text{ lbs/hr}$

The following conditions were established pursuant to 9 VAC 5-80-110 in order to provide

additional assurance that the aforementioned existing emission standards for these boilers are met:

Condition III.A.7:	The approved fuels for the Babcock and Wilcox boilers (B5 and B6) are natural gas and residual oil. A change in the fuels may require a permit to modify and operate.
Condition III.A.9:	The maximum sulfur content of the residual oil to be burned in the Babcock and Wilcox boilers (B5 and B6) shall not exceed two and a half percent (2.5%) by weight per shipment.
Condition III.A.12:	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. The permittee shall have available good written operating procedures and a maintenance schedule for each boiler.

Periodic Monitoring

Compliance with the visible emission limit for the Erie City VC boiler (B7) will be demonstrated by weekly inspections to be performed on the boiler stack. Each inspection shall include an observation of the presence of visible emissions. If during the inspection visible emissions are observed, a visible emissions evaluation (VEE) shall be conducted in accordance with 40 CFR Part 60, Appendix A, EPA Method 9. The VEE shall be conducted for a minimum of six (6) minutes. If any of the observations exceed twenty percent (20%), the VEE shall be conducted for a total of sixty (60) minutes.

The weekly inspections will satisfy the periodic monitoring requirement for the visible emission limitation for the Erie City VC boiler stack. Frequent checks for visible emissions will limit malfunctions of the control equipment. As long as the control equipment is operating properly, there is little likelihood of violating the visible emission limitation. The control equipment will limit the amount of particulates that are emitted thereby limiting visible emissions.

The PM emission limits for the Babcock and Wilcox boilers (B5 and B6) are 24.8 lbs/hr and 14.8 lbs/hr, respectively. Potential particulate emissions from the operation of each boiler (B5 and B6) using the U.S. Environmental Protection Agency’s AP-42 emission factor are shown in the following table.

Table IV. Babcock and Wilcox Boilers Particulate Emissions

Fuel Type	Capacity of Fuel Burning Equipmen (MMBtu/hr)	Maximum Hourly Throughput (gals/h	AP-42 Emission Factor for PM (lbs/1000 gal)	Maximum Sulfur Conte (S)	Maximum Emissions of PM (lbs/hr)	Calculated PM Emission Standa (lbs/hr)
No. 6 Fuel Oil	120	800	9.19 S + 3.22	2.5	20.96	24.8
No. 6 Fuel Oil	72	480	9.19 S + 3.22	2.5	12.57	14.8

Based on the AP-42 emission factor, the maximum expected particulate emissions from each Babcock and Wilcox boiler (B5 and B6) are less than the allowable limit. Therefore, there is reasonable assurance that the particulate matter emission limits for the Babcock and Wilcox boilers (B5 and B6) will not be violated as long as the sulfur content of the fuel does not exceed 2.5% and the boilers are operating properly. For the residual oil, the permittee is required to obtain a certification from the fuel supplier with each shipment. The certification must include the name of the fuel supplier, the date the residual oil was received, the volume of residual oil delivered in the shipment and the sulfur content (in percent) of the residual oil.

Opacity has been chosen as a surrogate indicator for PM emissions. The permittee will perform weekly inspections on each Babcock and Wilcox boiler stack. If visible emissions are present, Mohawk is required to perform a visible emissions evaluation (VEE). The VEE is to last for a minimum of six minutes. If, however, any readings during the six minutes are greater than the 20% opacity standard, the VEE must be continued for a total of sixty minutes to demonstrate compliance with the opacity standard. If the results of the VEE exceed the opacity standard, the permittee is required to do a particulate matter performance test using EPA Method 5 (40 CFR Part 60, Appendix A) within 90 days of the exceedance of the opacity standard or within one calendar year of the previous stack test of that boiler stack, whichever occurs later. No more than one test per year for each boiler is required as long as the performance test results do not exceed the particulate matter emission limit. The weekly inspections will satisfy the periodic monitoring requirement for the visible emission limitation included in the permit.

The allowable sulfur dioxide emission limit for all three boilers (Babcock and Wilcox boilers (B5 and B6) and Erie City VC boiler (B7)) combined equals 916.08 lbs/hr. The AP-42 emission factor for sulfur dioxide assumes that all of the sulfur is converted to sulfur dioxide. The worst-case sulfur dioxide emissions for the Babcock and Wilcox boilers result from the combustion of No. 6 fuel oil. Therefore, only this fuel type was considered for these boilers to demonstrate compliance. The maximum sulfur dioxide emissions from the boilers are included in the following table.

Table V. Sulfur Dioxide Emissions

Fuel Type	Capacity of Fuel Burning Equipme	Maximum Hour Throughput	AP-42 Emission Fact for Sulfur Dioxide	Maximum Sulfur Content (S	Maximum Emissions of Sulfur Dioxid (lbs/hr)	Sulfur Dioxide Emission Standa (lbs/hr)
Bituminous Coa	155 MMBtu/hr	9.34 tons/hr	38 S lbs/ton	1	354.9	-
No. 6 Fuel Oil	72 MMBtu/hr	480 gals/hr	157 S lbs/1000 gals	2.5	188.4	-
No. 6 Fuel Oil	120 MMBtu/hr	800 gals/hr	157 S lbs/1000 gals	2.5	314.0	-
TOTAL	-	-	-	-	857.3	916.08

The maximum hourly throughput for the coal boiler (B7) was determined using the minimum AP-42 heating value specified for the three types of coal: anthracite, bituminous and subbituminous. The value was 8,300 Btu/lb for subbituminous. This is a conservative assumption because the coal combusted at Mohawk is bituminous and has a higher heating value. As a result, the sulfur dioxide emissions represent a worst-case scenario for the coal boiler.

Since the AP-42 emission factor assumes that all of the sulfur in the fuel is converted to sulfur dioxide, the sulfur dioxide emission limit can not be exceeded as long as the sulfur content of the fuel does not exceed 2.5% for residual oil and 1% for coal and the boilers are operating properly. For residual oil, the permittee is required to obtain a certification from the fuel supplier with each shipment. The certification must include the name of the fuel supplier, the date the residual oil was received, the volume of residual oil delivered in the shipment and the sulfur content (in percent) of the residual oil. For coal, the permittee is required to obtain a certification from the fuel supplier with each shipment. The certification must include the name of the fuel supplier, the date the coal was received, the weight of coal delivered in the shipment, the higher heating value of the coal, the sulfur content (in percent) of the coal and the ash content (in percent) of the coal. Compliance with the sulfur content for residual oil and coal provides reasonable assurance of compliance with the sulfur dioxide emission limit.

Compliance Assurance Monitoring (CAM)

The Babcock and Wilcox boilers (B5 and B6) do not have add-on control equipment and therefore are not subject to 40 CFR Part 64, Compliance Assurance Monitoring (CAM).

The permit requires operation of two (2) Zurn multicyclones for the Erie City VC coal-fired boiler (B7) to control particulate emissions. The coal-fired boiler (B7) is a pollutant specific emissions unit (PSEU) that has the potential to emit more than 100 tons per year of uncontrolled PM emissions. The two Zurn multicyclones are used to reduce PM emissions. Therefore, since the PSEU has uncontrolled emissions greater than or equal to 100 tons per year, is subject to an emission limitation (0.28 lb/MMBtu) and has a control device, the two Zurn multicyclones, to meet that limit, the two multicyclones are subject to CAM. Since the two multicyclones are grouped

grouped together, they were considered as one unit (referred to as the multicyclone unit) for designing the CAM Plan.

The Multicyclone CAM Plan (Attachment C) includes the following requirements:

First, the facility shall perform testing in accordance with EPA Reference Method 5 on the Erie City VC coal-fired boiler (B7) stack to initially verify compliance with the 0.28 lb/MMBtu or 43.4 pounds per hour particulate matter emission limitation in the permit and to determine the optimal pressure drop range for the multicyclone unit . The Reference Method 5 testing shall be completed within 6 months from the issuance of the permit and repeated once every five years thereafter.

The second indicator selected is the continuous pressure drop monitoring which will verify the multicyclone unit is operating within the optimal range as determined during the EPA Reference Method 5 testing. The pressure drop is a good indicator of the inlet velocity and control efficiency is a function of inlet velocity. Changes in the inlet velocity result in changes in the pressure drop across the multicyclone unit. The differential pressure points will be located at the inlet and outlet of the multicyclone unit. When an excursion occurs, corrective action will be initiated beginning with an evaluation of the occurrence to determine the action required to correct the situation. All excursions will be documented and reported.

The third indicator selected is a monthly external inspection of the surfaces and joints of each individual multicyclone and an annual internal inspection of each individual multicyclone. These inspections will alert personnel of early deterioration and leakage and the maintenance requirements necessary to obtain proper control efficiency and to determine the structural integrity of the unit. An excursion triggers an inspection, corrective action and a reporting requirement.

Recordkeeping

The permit includes requirements for maintaining records of all monitoring and testing required by the permit. These records include:

- The monthly and annual throughput of natural gas (in million cubic feet) and residual oil (in 1000 gallons) for the Babcock and Wilcox boilers (B5 and B6). The annual throughput shall be calculated monthly as the sum of each consecutive 12-month period.

- The monthly and annual throughput of coal (in tons) for the Erie City VC boiler (B7). The annual throughput shall be calculated monthly as the sum of each consecutive 12-month period.
- All fuel supplier certifications.

- A log of weekly inspections and the results of all VEEs and performance tests performed

performed on each Babcock and Wilcox boiler stack (B5 and B6) as required in Condition III.B.1.

- The results of all VEEs performed on each Babcock and Wilcox boiler stack (B5 and B6) as required in Condition III.B.2.
- A log of weekly inspections and the results of all VEEs performed on the Erie City VC boiler stack (B7) as required in Condition III.B.3.
- The results of the concurrent VEE performed on the Erie City VC boiler stack (B7) as required in Condition III.E.1.
- The DEQ-approved, pollutant-specific emission factors and the equations used to demonstrate compliance with Conditions III.A.2, III.A.3, III.A.4 and III.A.5.
- Records of the required training for the boiler operators including a statement of time, place and nature of training provided.
- Good written operating procedures based on the manufacturer's recommendations, at minimum, and a maintenance schedule for the boilers.

The permittee is also required to maintain records of all monitoring and testing required by the Mulitcyclone CAM plan. These records include:

- EPA Reference Method 5 stack test results.
- Pressure drop records.
- Monthly and annual inspection logs including date, time, and name of person performing each inspection, results of each inspection, and any maintenance or repairs performed as a result of these inspections.
- Records of all excursions, including date, time and corrective actions taken

Testing

The Multicyclone CAM Plan requires that the permittee conduct a performance test in accordance with EPA Reference Method 5 on the Erie City VC boiler (B7) stack to verify compliance with the particulate matter emission limitation of 0.28 lb/MMBtu. The permit includes the requirement that a VEE is conducted on the Erie City VC boiler stack (B7), in accordance with 40 CFR Part 60, Appendix A, EPA Method 9, concurrently with the performance test.

Additionally, the permit requires stack testing for the Babcock and Wilcox boilers (B5 and B6) for particulate matter if there is a violation of the opacity standard. Also, a table of test methods has been included in the permit if testing, in addition to the monitoring specified in this permit, is performed pursuant to a request from DEQ. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Reporting

The permit requires the permittee to submit a written report containing the following information pertaining to the Multicyclone CAM Plan no later than March 1 and September 1 of each calendar year:

- Summary information on the number, duration, and cause (including unknown cause, if applicable) of excursions and the corrective actions taken; and
- A description of actions taken to implement a QIP during the reporting period as specified in 40 CFR 64.8. Upon completion of a QIP, the permittee shall include in the next summary report documentation that the plan has been completed and reduced the likelihood of similar levels of excursions.

Streamlined Requirements

The following conditions in the February 13, 1978 NSR permit have not been included for the reasons provided:

Condition 2 has not been included. The required final completion report submitted within 10 days after the Erie City VC boiler is put into operation was received from the facility on May 20, 1980.

Condition 3 has not been included. The required performance testing was conducted on August 20, 1980.

Condition 6 has not been included. The required submittal of the performance testing results within 60 days after test completion was received from the facility on September 18, 1980.

Coal Handling - CH1 – CH5

Limitations

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

9 VAC 5-40-260, Existing Source Standard for Particulate Matter (AQCR 1-6)
9 VAC 5-50-80, New Source Standard for Visible Emissions
9 VAC 5-50-90, New Source Standard for Fugitive Dust/Emissions

The following conditions in the Title V permit were established pursuant to these Codes:

Condition IV.A.1:	Particulate matter emissions from the railcar shaker (CH1), coal bucket elevator (CH2), storage pile transfer (CH3) and coal storage silo (CH5) shall not exceed 46.3 pounds per hour each (9 VAC 5-40-260 D). This limit was determined by the

by the equation $E = 55.0P^{0.11}-40$, where E is the emission limit in lbs/hr and P is the process weight rate in tons/hr.

Condition IV.A.3: Requirements for controlling fugitive dust emissions from the railcar shaker (CH1), coal bucket elevator (CH2), storage pile transfer (CH3) and coal storage pile (CH4).

Condition IV.A.4: Visible fugitive emissions from the railcar shaker (CH1), coal bucket elevator (CH2), storage pile transfer (CH3) and coal storage pile (CH4)shall not exceed twenty percent (20%) opacity except during one six-minute period in any one hour in which visible fugitive emissions shall not exceed thirty percent (30%) opacity.

Condition IV.A.5: Visible emissions from the coal storage silo stack (CH5) shall not exceed twenty percent (20%) opacity except during one six-minute period in any one hour in which visible fugitive emissions shall not exceed thirty percent (30%) opacity.

The following condition was established pursuant to 9 VAC 5-80-110 in order to provide assurance that the aforementioned emission standards for the coal handling activities are met. The condition number refers to the one contained in the Title V permit.

Condition IV.A.2: Particulate emissions from the coal storage silo (CH5) shall be controlled by wet suppression. The wet suppression system shall be provided with adequate access for inspection.

Monitoring and Recordkeeping

The coal conveyor feeding the coal storage silo is equipped with a wet suppression system to control particulate emissions. The facility does not operate the wet suppression system on a continuous basis because the facility receives coal that has a low ash content and an adequate moisture content. Based on historical inspection records, visible emissions are negligible from the coal storage silo and conveyor. Therefore, operation of the wet suppression system will only be necessary when visible emissions are present in order to maintain compliance with the visible emission requirement.

Compliance with the process weight rate particulate emissions limit for the coal storage silo can be achieved without operation of the wet suppression system as shown below. Estimated particulate emissions based on the source classification code emission factor for coal transfer for coal cleaning operations are compared to the particulate limit:

Emission Unit	Pollutant	Limitation (lbs/hr)	Maximum Emission Ra

			Rate (lbs/hr)
Coal Storage Silo	PM/PM-10	46.3	12.0

The permit requires the permittee to conduct a weekly inspection of the coal storage silo stack (CH5). The inspection will include a determination of the presence of visible emissions. If visible emissions are found, the permittee can determine either the cause of the visible emissions, take timely corrective action and return the stack to no visible emissions or perform a visible emission evaluation (VEE). The VEE is to last for a minimum of six minutes. If, however, any readings during the six minutes are greater than the 20% opacity standard, the VEE must be continued for a total of sixty minutes to demonstrate compliance with the opacity standard.

The permit contains a requirement for the permittee to perform daily inspection and maintenance activities for the railcar shaker (CH1), coal bucket elevator (CH2), storage pile transfer (CH3) and coal storage pile (CH4). The activities will include inspecting and maintaining the water spray systems or equivalent used to control fugitive emissions from the coal handling activities and a visual survey of the coal handling activities for any sources of excessive fugitive emissions. For the purpose of this survey, excessive emissions are considered to be any visible emissions that leave the plant site boundaries. If sources of excess fugitive emissions are identified during the survey, the permittee shall use water or a suitable chemical treatment to minimize the fugitive emissions. If water is used to control the fugitive dust emissions, the permittee shall take care not to create a water quality problem from surface water run-off.

The permit includes requirements for maintaining records of all monitoring and testing required by the permit. These records include:

- The pollutant-specific emission factors and equations used to demonstrate compliance with Condition IV.A.1; and
- Inspection records as required by Conditions IV.B.1 and IV.B.2.

Compliance Assurance Monitoring (CAM)

CAM does not apply to any of the coal handling emission units because the uncontrolled particulate emissions from each emission unit are less than 100 tons per year.

Testing

The permit does not require source tests. A table of test methods has been included in the permit if testing, in addition to the monitoring specified in this permit, is performed pursuant to a request from DEQ. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Reporting

No specific reporting has been included in the permit for the coal handling operations.

Streamlined Requirements

There are no streamlined requirements for the coal handling operations.

Yarn Dye Lines - YD1 – YD5

Limitations

The following limitations are state BACT requirements from the minor NSR permit dated July 10, 1986, as amended June 29, 2006. Condition numbers refer to those contained in the NSR permit. A copy of the permit is included as Attachment D. Please note the Lanly dryer (YD4) is the only remaining onsite emission unit of the Otting sock dye range permitted at the facility. As a result, all conditions pertaining to the Otting sock dye range have been referenced as the Lanly dryer (YD4).

Part I - Condition 4:	Emissions from the operation of the Lanly dryer (YD4) shall not exceed the limits specified below:				
	Volatile Organic Compounds	3	lbs/	1	tons/

The following limitations are state BACT requirements from the minor NSR permit dated December 12, 1990. Condition numbers refer to those contained in the NSR permit. A copy of the permit is included as Attachment E.

Part I - Condition 4:	VOC emissions from the #2 Ilma line (YD2) shall be controlled by limiting the amount of volatile organic compounds within the dyeing solution to 0.0784 percent by weight. The permittee shall supply samples of the dyeing solution at any time upon request by the Department. The #2 Ilma line (YD2) shall be provided with adequate access for inspection.				
Part I - Condition 5:	The annual consumption of dyeing solution for the #2 Ilma line (YD2) shall not exceed 16,170 tons, calculated monthly as the sum of each consecutive 12-month period.				
Part I - Condition 6:	Emissions from the operation of the #2 Ilma line (YD2) shall not exceed the limits specified below:				
	Volatile Organic	2	lbs/	12	tons/

Compounds

Part I - Condition 7:	Visible emissions from each #2 Ilma line exhaust stack (YD2-S2, YD2-D1, and YD2-D2) shall not exceed five percent (5%) opacity.
Part II - Condition 4:	The permittee shall develop, maintain and have available to all operators good written operating procedures for the operation of the #2 Ilma line (YD2).

The following limitations are state BACT requirements from the minor NSR permit dated December 10, 1999, as amended June 29, 2006. Condition numbers refer to those contained in the NSR permit. A copy of the permit is included as Attachment F.

Condition 3:	Volatile organic compound emissions (VOC) from the #1 Ilma line (YD1) are limited to 0.0005 pounds VOC per pound of yarn dye as applied, calculated as a monthly weighted average.
Condition 4:	VOC emissions from the #1 Ilma line (YD1) lubricant are limited to 0.003 pounds VOC per pound of yarn lubricant as applied, calculated as a monthly weighted average.
Condition 6:	The #1 Ilma line (YD1) shall not operate more than 7500 hours per year, calculated monthly as the sum of each consecutive 12-month period.
Condition 7:	The throughput of carpet yarn dye for the #1 Ilma line (YD1) shall not exceed 3,416,400 pounds per month.
Condition 8:	The throughput of carpet yarn dye for the #1 Ilma line (YD1) shall not exceed 35,100,000 pounds per year, calculated monthly as the sum of each consecutive 12-month period.
Condition 9:	The throughput of carpet yarn lubricant for the #1 Ilma line (YD1) shall not exceed 284,700 pounds per month.
Condition 10:	The throughput of carpet yarn lubricant for the #1 Ilma line (YD1) shall not exceed 2,925,000 pounds per year, calculated monthly as the sum of each consecutive 12-month period.
Condition 11:	The average throughput of steam to the #1 Ilma line (YD1)

shall not exceed 10,968 pounds per hour, calculated on a weekly basis.

Condition 12: Emissions from the operation of the #1 Ilma line (YD1) shall not exceed the limits specified below:

Volatile Organic Compounds	3	lbs/	13	tons/

Condition 13: Visible emissions from each #1 Ilma line exhaust stack (YD1-1&2, and YD1-3) shall not exceed five percent (5%) opacity as determined by EPA Method 9 (reference 40 CFR Part 60, Appendix A).

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

9 VAC 5-40-80, Existing Source Standard for Visible Emissions
9 VAC 5-50-80, New Source Standard for Visible Emissions

The following conditions in the Title V permit were established pursuant to these Codes:

Condition V.A.13: Visible emissions from the Ilma sample line exhaust stack (YD3) and the Lanly dryer exhaust stack (YD4) shall not exceed twenty percent (20%) opacity except during one six-minute period in any one hour in which visible emissions shall not exceed thirty percent (30%) opacity.

Condition V.A.14: Visible fugitive emissions from the pack kettles (YD5) shall not exceed twenty percent (20%) opacity except during one six-minute period in any one hour in which visible emissions shall not exceed sixty percent (60%) opacity.

Monitoring

The permit requires that VOC emissions from the #1 Ilma line (YD1) are limited to 0.0005 pounds of VOC per pound of yarn dye as applied and 0.003 pounds of VOC per pound of yarn lubricant as applied, calculated as a monthly weighted average. Periodic monitoring necessary to reasonably assure compliance with these requirements is accomplished by the following monitoring approach:

- The VOC content of each dye or lubricant as supplied shall be determined by the permittee or

or the supplier initially or when the dye or lubricant is modified or substituted using Reference Method 24 or 24A (40 CFR Part 60, Appendix A). Such content shall be used for purposes of calculating emissions, the monthly weighted average mass of VOC per mass of yarn dye as applied and the monthly weighted average mass of VOC per mass of yarn lubricant as applied.

- Each dye and lubricant as supplied whose MSDS indicates a VOC content of 100% by weight may be assumed to be 100% VOC for the purpose of calculating emissions, the monthly weighted average mass of VOC per mass of yarn dye as applied and the monthly weighted average mass of VOC per mass of yarn lubricant as applied in lieu of Reference Method 24 or 24A (40 CFR Part 60, Appendix A) testing.

- Each new dye and lubricant as supplied received after the effective date of the permit or when the dye or lubricant is modified or substituted shall be tested by the permittee or supplier within 90 days of the receipt of shipment, modification or substitution. Each dye and lubricant as supplied shipment received shall be clearly identified by a product formulation number that may be correlated to Method 24 or 24A test results.

- Until such time as testing is conducted for the purpose of calculating the monthly weighted average mass of VOC per mass of yarn dye or lubricant as applied in the #1 Ilma line (YD1), the VOC content of each dye or lubricant as supplied shall be based on formulation data as shown on the Material Safety Data Sheet (MSDS) or other vendor information. If the VOC content is given as a range, the maximum value shall be used.

These conditions provide reasonable assurance that the VOC pound per pound of yarn dye as applied limit, the VOC pound per pound of yarn lubricant as applied limit and the emission limitation will be met.

Additionally, the monthly weighted average mass of VOC per mass of yarn dye or lubricant as applied in the #1 Ilma line (YD1) will be determined using the following equation:

$$VOC = \frac{\sum_{i=1}^{n} W_i M_i}{\sum_{i=1}^{n} M_i}$$

Where:

VOC = the weighted average mass, in pounds, of VOC per mass, in pounds, of yarn dye or lubricant applied each calendar month

W_i = the weight fraction of VOC of each yarn dye or lubricant (i) applied during the calendar month

M_i = the total mass, in pounds, of each yarn dye or lubricant (i) applied during the calendar month

The permit requires that VOC emissions from the #2 Ilma line (YD2) are controlled by limiting the amount of VOC within the dyeing solution to 0.0784 percent by weight. Periodic monitoring necessary to reasonably assure compliance with this requirement is accomplished by the following monitoring approach:

- The VOC content of each dye as supplied shall be determined by the permittee or the supplier initially or when the dye is modified or substituted using Reference Method 24 or 24A (40 CFR Part 60, Appendix A). Such content shall be used for purposes of calculating emissions and the monthly VOC percent by weight within the dyeing solution applied.

- Each dye as supplied whose MSDS indicates a VOC content of 100% by weight may be assumed to be 100% VOC for the purpose of calculating emissions and the monthly VOC percent by weight within the dyeing solution applied in lieu of Reference Method 24 or 24A (40 CFR Part 60, Appendix A) testing.

- Each new dye as supplied received after the effective date of this permit or when the dye is modified or substituted shall be tested by the permittee or the supplier within 90 days of the receipt of shipment, modification or substitution. Each dye as supplied shipment received shall be clearly identified by a product formulation number that may be correlated to Method 24 or 24A test results.

- Until such time as testing is conducted for the purpose of calculating the VOC percent by weight within the dyeing solution applied in the #2 Ilma line (YD2), the VOC content of each dye as supplied shall be based on formulation data as shown on the Material Safety Data Sheet (MSDS) or other vendor information. If the VOC content is given as a range, the maximum value shall be used.

These conditions provide reasonable assurance that the emission limitation will be met. Specifically, annual testing of each dye within the dyeing solution provides reasonable assurance in meeting the VOC percent by weight limit.

Additionally, the monthly VOC percent by weight within the dyeing solution will be determined using the following equation:

$$VOC_{wt} = \frac{\sum_{i=1}^{n} W_i M_i}{\sum_{i=1}^{n} M_i} \times 100\%$$

Where:

VOC_{wt}	=	the VOC percent by weight within the dyeing solution applied each calendar month
W_i	=	the weight fraction of VOC of each dyeing solution (i) applied during the calendar month
M_i	=	the total mass, in pounds, of each dyeing solution (i) applied during the calendar month

The monitoring requirements in Condition 5 of the NSR permit dated December 10, 1999, as amended June 29, 2006, have been modified to meet Part 70 requirements.

The permit requires each process steam line for the #1 Ilma line (YD1) to be equipped with a steam flow meter and a 7-day circular chart recorder. The steam flow meter and the 7-day circular chart recorder measure and record, respectively, the steam throughput in pounds per hour. Each monitoring device shall be installed, maintained, calibrated and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations. Each monitoring device shall be provided with adequate access for inspection and shall be in operation when the #1 Ilma line (YD1) is operating.

The permittee shall determine compliance with the steam throughput limit by calculating weekly the average hourly steam throughput using the following equation:

$$STM_{avg} = \frac{\sum_{i=1}^{7} M_i}{\sum_{i=1}^{7} H_i}$$

Where:

STM_{avg}	=	the average hourly steam throughput in pounds per hour
M_i	=	the total mass, in pounds, of steam throughput during a 7-day period
H_i	=	the total number of hours of operation during the corresponding 7-day period

The permit contains a requirement for the permittee to perform a tiered periodic monitoring approach for conducting inspections of each #1 Ilma line exhaust stack (YD1-1&2, and YD1-3) and #2 Ilma line exhaust stack (YD2-S2, YD2-D1, and YD2-D2) to determine the presence of visible emissions. If during the inspection visible emissions are observed, a visible emissions evaluation

evaluation (VEE) shall be conducted in accordance with 40 CFR Part 60, Appendix A, EPA Method 9. The VEE shall be conducted for a minimum of six (6) minutes. If any of the observations exceed five percent (5%), the VEE shall be conducted for a total of sixty (60) minutes. If the 60-minute VEE indicates a violation of the standard, corrective action shall be taken. If 12 consecutive weekly inspections are performed on any given stack and no visible emissions are present, then the visible inspections may be performed monthly. However, as soon as visible emissions are noted during a monthly inspection, or when requested by the DEQ, the inspections must then be performed weekly for that stack.

The permit also contains a requirement for the permittee to perform a tiered periodic monitoring approach for conducting inspections of the Ilma sample line exhaust stack (YD3) and the Lanly dryer exhaust stack (YD4). If during the inspection visible emissions are observed, a visible emissions evaluation (VEE) shall be conducted in accordance with 40 CFR Part 60, Appendix A, EPA Method 9. The VEE shall be conducted for a minimum of six (6) minutes. If any of the observations exceed twenty percent (20%), the VEE shall be conducted for a total of sixty (60) minutes. If the 60-minute VEE indicates a violation of the standard, corrective action shall be taken. If 12 consecutive weekly inspections are performed on any given stack and no visible emissions are present, then the visible inspections may be performed monthly. However, as soon as visible emissions are noted during a monthly inspection, or when requested by the DEQ, the inspections must then be performed weekly for that stack.

The permittee shall determine compliance with the hourly VOC emission limit for the #1 Ilma line (YD1) by calculating the average hourly emissions using the following equation:

$$E_{voc} = \frac{\left(\sum_{i=1}^{n} W_{dye,i} M_{dye,i} + \sum_{i=1}^{n} W_{lub,i} M_{lub,i} \right)}{H}$$

Where:

E_{voc} = the average hourly VOC emissions in pounds per hour

$W_{dye,i}$ = the weight fraction of VOC of each yarn dye (i) applied during the calendar month

$M_{dye,i}$ = the total mass, in pounds, of each yarn dye (i) applied during the calendar month

$W_{lub,i}$ = the weight fraction of VOC of each yarn lubricant (i) applied during the calendar month

$M_{lub,i}$ = the total mass, in pounds, of each yarn lubricant (i) applied during the calendar month

H = the total number of hours of operation during the calendar month

The permittee shall determine compliance with the annual VOC emission limit for the #1 Ilma line (YD1) by calculating the monthly emissions using the following equation:

$$E_{voc} = \frac{\left(\sum_{i=1}^{n} W_{dye,i} M_{dye,i} + \sum_{i=1}^{n} W_{lub,i} M_{lub,i} \right)}{2000}$$

Where:

E_{voc} = the total monthly VOC emissions in tons

$W_{dye,i}$ = the weight fraction of VOC of each yarn dye (i) applied during the calendar month

$M_{dye,i}$ = the total mass, in pounds, of each yarn dye (i) applied during the calendar month

$W_{lub,i}$ = the weight fraction of VOC of each yarn lubricant (i) applied during the calendar month

$M_{lub,i}$ = the total mass, in pounds, of each yarn lubricant (i) applied during the calendar month

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

The permittee shall determine compliance with the hourly VOC emission limit for the #2 Ilma line (YD2) by calculating the average hourly emissions using the following equation:

$$E_{voc} = \frac{\sum_{i=1}^{n} W_i M_i}{H}$$

Where:

E_{voc} = the average hourly VOC emissions in pounds per hour

W_i = the weight fraction of VOC of each dyeing solution (i) applied during the calendar month

M_i = the total mass, in pounds, of each dyeing solution (i) applied during the calendar month

H = the total number of hours of operation during the calendar month

The permittee shall determine compliance with the annual VOC emission limit for the #2 Ilma line (YD2) by calculating the monthly emissions using the following equation:

$$E_{voc} = \frac{\sum_{i=1}^{n} W_i M_i}{2000}$$

Where:

E_{voc} = the total monthly VOC emissions in tons

W_i = the weight fraction of VOC of each dyeing solution (i) applied during the calendar month

M_i = the total mass, in pounds, of each dyeing solution (i) applied during the calendar month

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

The permittee shall determine compliance with the hourly VOC emission limit for the Lanly dryer (YD4) by calculating the average hourly emissions using the following equation:

$$E_{voc} = \frac{\sum_{i=1}^{n} W_i M_i}{H}$$

Where:

E_{voc} = the average hourly VOC emissions in pounds per hour

W_i = the weight fraction of VOC of each dye (i) applied to the yarn sock dried in the Lanly dryer during the calendar month

M_i = the total mass, in pounds, of each dye (i) applied to the yarn sock dried in the Lanly dryer during the calendar month

H = the total number of hours of operation during the calendar month

The permittee shall determine compliance with the annual VOC emission limit for the Lanly dryer (YD4) by calculating the monthly emissions using the following equation:

$$E_{voc} = \frac{\sum_{i=1}^{n} W_i M_i}{2000}$$

Where:

E_{voc} = the total monthly VOC emissions in tons

W_i = the weight fraction of VOC of each dye (i) applied to the yarn sock dried in the Lanly dryer during the calendar month

M_i = the total mass, in pounds, of each dye (i) applied to the yarn sock dried in the Lanly dryer during the calendar month

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

Compliance Assurance Monitoring (CAM)

CAM does not apply to any of the yarn dye lines because none of the yarn dye lines have an add-on control device.

Recordkeeping

The recordkeeping requirements in Part II - Condition 3 of the NSR permit dated December 12, 1990 and Condition 15 of the NSR permit dated December 10, 1999, as amended June 29, 2006, have been modified to meet Part 70 requirements.

The permit includes requirements for maintaining records of all monitoring and testing required by the permit. These records include:

- Weekly and monthly hours of operation of the #1 Ilma line (YD1).
- Monthly hours of operation of the #2 Ilma line (YD2) and the Lanly dryer (YD4).
- Annual hours of operation of the #1 Ilma line (YD1), calculated monthly as the sum of each consecutive 12-month period.
- Monthly and annual throughput of carpet yarn dye (in pounds) used in the #1 Ilma line (YD1). Annual throughput shall be calculated monthly as the sum of each consecutive 12-month period.
- Monthly and annual throughput of carpet yarn lubricant (in pounds) used in the #1 Ilma line (YD1). Annual throughput shall be calculated monthly as the sum of each consecutive 12-month period.
- The daily, weekly and monthly throughput of dyeing solution used in the #2 Ilma line

(YD2).

- The daily, weekly and monthly throughput of material dyed in the #2 Ilma line (YD2).
- Monthly and annual throughput of dye (in pounds) for the Lanly dryer (YD4). Annual throughput shall be calculated monthly as the sum of each consecutive 12-month period.
- Hourly throughput of process steam (in pounds) used by the #1 Ilma line (YD1), calculated as a weekly average.
- Hourly and annual VOC emissions (in pounds and tons, respectively) from the #1 Ilma line (YD1). Hourly emissions shall be calculated as a monthly average. Annual emissions shall be calculated monthly as the sum of each consecutive 12-month period.
- Hourly and annual VOC emissions (in pounds and tons, respectively) from the #2 Ilma line (YD2). Hourly emissions shall be calculated as a monthly average. Annual emissions shall be calculated monthly as the sum of each consecutive 12-month period.
- Hourly and annual VOC emissions (in pounds and tons, respectively) from the Lanly dryer (YD4). Hourly emissions shall be calculated as a monthly average. Annual emissions shall be calculated monthly as the sum of each consecutive 12-month period.
- VOC content of each carpet yarn dye and lubricant (in pounds per pound of yarn dye or lubricant) used in the #1 Ilma line (YD1), calculated as a monthly weighted average.
- An analysis of the dyeing solution having the highest concentration of volatile organic compounds by weight to be used in the #2 Ilma line (YD2) for each month. This analysis shall include the concentration by weight of each VOC within the dyeing solution.
- Material Safety Data Sheets (MSDS) and product formulation data including total and individual mass VOC content, in %, as applicable, for each dyeing solution used in the #2 Ilma line (YD2).
- MSDS or other vendor information showing VOC content, HAP content, water content and solids content for each carpet yarn dye component and carpet yarn lubricant component used in the #1 Ilma line (YD1).
- MSDS or other vendor information showing VOC content, HAP content, water content and solids content for each dye component used in the Ilma sample line (YD3) and pack kettles (YD5).
- Operation and control device monitoring records for the #1 Ilma line (YD1) process steam flow meter(s) and 7-day circular chart recorder(s).
- Results of all stack tests, visible emissions evaluations and performance evaluations for the #1 Ilma line (YD1).
- Service and maintenance records for the #2 Ilma line (YD2).
- Records of any reference method testing that is performed under Conditions V.B.2 and V.B.4.

- Inspection records as required by Conditions V.B.7 and V.B.8.

Testing

The #1 Ilma line (YD1), #2 Ilma line (YD2) and the Lanly dryer (YD4) are required by regulation to allow for emissions testing upon reasonable notice using appropriate methods and that test ports are to be provided at the appropriate locations. Part II – Condition 3 of the NSR permit dated July 10, 1986, as amended June 29, 2006, Part II – Condition 2 of the NSR permit dated December 12, 1990 and Condition 16 of the NSR permit dated December 10, 1999, as amended June 29, 2006, outline this requirement.

The permit does not require source tests. A table of test methods has been included in the permit if testing, in addition to the monitoring specified in this permit, is performed pursuant to a request from DEQ. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Reporting

The reporting requirement in Part I - Condition 9 of the NSR permit dated December 12, 1990, has been incorporated into the permit.

The permit includes the following reporting requirement:

- The permittee shall notify the Director, Valley Region, prior to changing the dye formulation which may increase or change the VOC content of the dye used in the #2 Ilma line (YD2).

Streamlined Requirements

The visible emission limitation in 9 VAC 5-50-80 (New Source Standard for Visible Emissions) has not been included for the #1 and #2 Ilma lines (YD1 and YD2) because the permit limit of five percent (5%) opacity is more stringent than the regulatory limit of twenty percent (20%) opacity, including one six-minute period in any one hour not to exceed thirty percent (30%) opacity.

The following conditions in the NSR permit dated July 10, 1986, as amended June 29, 2006, have not been included for the reasons provided:

Part I - Condition 5 has not been included. The required visible emissions evaluation was conducted on September 9, 1998.

Part II - Condition 2 has not been included. The required written notifications of the actual date construction commenced within 30 days after such date and the actual startup date within 15 days after such date of the Lanly dryer (YD4) were received from the facility on August 6, 1986 and May 18, 1987, respectively.

Part II - Condition 8 has not been included. The facility has been constructed

The following conditions in the December 12, 1990 NSR permit have not been included for the reasons provided:

Part I - Condition 8 has not been included. The required visible emissions evaluation was conducted on September 9, 1998.

Part II - Condition 1 has not been included. The required written notifications of the actual date construction commenced within thirty (30) days after such date and the actual startup date of the #2 Ilma line (YD2) were received from the facility on January 23, 1991 and July 18, 1991, respectively.

Part II - Condition 7 has not been included. The facility has been constructed.

The following conditions in the NSR permit dated December 10, 1999, as amended June 29, 2006, have not been included for the reasons provided:

Condition 14 has not been included. The required visible emissions evaluation (VEE) on each #1 Ilma line exhaust stack (YD1-1&2, and YD1-3) was conducted on April 18, 2000.

Condition 17a has not been included. The required written notification of the actual date on which modification of the #1 Ilma line (YD1) commenced within 30 days after such date was received from the facility on December 23, 1999.

Condition 17b has not been included. The required written notification of the actual startup date of the #1 Ilma line (YD1) within 15 days after such date was received from the facility on February 14, 2000.

Condition 17c has not been included. The required written notification of the anticipated date of the VEE on each exhaust stack (YD1-1&2, and YD1-3) of the #1 Ilma line postmarked at least 30 days prior to such date is no longer applicable because the VEE has been conducted and a copy of the test results has been received.
Condition 18 has not been included. The modification of the #1 Ilma line (YD1) has been completed.

Carpet Backing Lines - LCS, VAES, PVC1, PVC2, PVCS, HM1, HMM and RHMM

Limitations

The following limitations are state BACT requirements from the minor NSR permit dated December 5, 1997. Condition numbers refer to those contained in the NSR permit. A copy of the permit is included as Attachment G.

Condition 3:	Particulate emissions from the filling of the VAE latex filler silo (VAES) and return air from the transfer of filler from the VAE latex filler silo to the VAE latex mixer shall be controlled by a fabric filter. The fabric filter shall be provided with adequate access for inspection.
Condition 5:	The VAE latex filler silo (VAES) operation shall process no more than 130,000 pounds per day, calculated as the sum of each consecutive 24-hour period.
Condition 6:	The annual throughput of calcium carbonate for the VAE latex filler silo (VAES) shall not exceed 4,420 tons, calculated monthly as the sum of each consecutive 12-month period.
Condition 7:	Visible emissions from the VAE latex filler silo fabric filter (VAES) exhaust shall not exceed five percent (5%) opacity as determined by EPA Method 9 (reference 40 CFR Part 60, Appendix A). This condition applies at all times except during startup, shutdown and malfunction.
Condition 13:	Requirements necessary to minimize the duration and frequency of excess emissions, with respect to air pollution control equipment and process equipment which affect such emissions.
Condition 14:	The permittee shall and have available to all operators good written operating procedures for the operation of the air pollution control equipment, train operators in proper operations and maintain training records.

The following limitations are state BACT requirements from the minor NSR permit dated March 22, 2002, as amended June 29, 2005 and August 31, 2006. Condition numbers refer to those contained in the NSR permit. A copy of the permit is included as Attachment H.

Condition 3:	Particulate matter emissions from the PVC carpet backing line (PVC1) shall be controlled by a coalescing filter. The coalescing filter shall be provided with adequate access for inspection and shall be in operation when the PVC carpet backing line (PVC1) is operating.

Condition 4: Particulate matter emissions from the calcium carbonate storage silo (PVCS) shall be controlled by a fabric filter. The fabric filter shall be provided with adequate access for inspection and shall be in operation when the calcium carbonate storage silo (PVCS) is operating.

Condition 7: The calcium carbonate storage silo (PVCS) shall process no more than 120 tons per day, calculated daily.

Condition 8: The calcium carbonate storage silo (PVCS) shall process no more than 15,500 tons per year, calculated monthly as the sum of each consecutive 12-month period.

Condition 9: The throughput of plastisol formula to the PVC carpet backing line (PVC1) shall not exceed 283.5 tons per day, calculated daily.

Condition 10: The throughput of plastisol formula to the PVC carpet backing line (PVC1) shall not exceed 51,328 tons per year, calculated monthly as the sum of each consecutive 12-month period.

Condition 11: Emissions from the operation of the PVC carpet backing line (PVC1) shall not exceed the limits specified below:

Particulate Matter	0.(	lbs/	1.!	tons/
PM-10	0.(	lbs/	1.!	tons/
Volatile Organic Compounds			5.8	tons/

Condition 12: Visible emissions from the PVC carpet backing line (PVC1) shall not exceed five percent (5%) opacity as determined by EPA Method 9 (reference 40 CFR Part 60, Appendix A). This condition applies at all times except during startup, shutdown and malfunction.

Condition 13: Visible emissions from the calcium carbonate storage silo (PVCS) shall not exceed five percent (5%) opacity as determined by EPA Method 9 (reference 40 CFR Part 60, Appendix A). This condition applies at all times except during

during startup, shutdown and malfunction.

Condition 20: Requirements necessary 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.

The following limitations are state BACT requirements from the minor NSR permit dated August 12, 2002, as amended June 29, 2006. Condition numbers refer to those contained in the NSR permit. A copy of the permit is included as Attachment I.

Condition 3: The throughput of volatile organic compounds (VOC) in the materials used in the hot melt sample line (HMS) shall not exceed 8.6 tons per year, calculated monthly as the sum of each consecutive 12-month period.

Condition 4: Emissions from the operation of the hot melt sample line (HMS) shall not exceed the limit specified below:

Volatile Organic Compounds	8	tons/

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

9 VAC 5-40-80, Existing Source Standard for Visible Emissions
9 VAC 5-40-260, Existing Source Standard for Particulate Matter (AQCR 1-6)
9 VAC 5-50-80, New Source Standard for Visible Emissions

The following conditions in the Title V permit were established pursuant to these Codes:

Condition VI.A.1: Particulate emissions from the latex calcium carbonate filler silo (LCS), calcium carbonate storage silo (PVCS), hot melt mix tanks (HMM) and remote hot melt mix tank (RHMM) shall not exceed the process weight limit as determined by the equation $E = 4.10P^{0.67}$, where E is the emission limit in lbs/hr and P is the process weight rate in tons/hr.

Condition VI.A.2: Particulate emissions from the VAE latex filler silo (VAES) shall not exceed the process weight limit as determined by the equation $E = 55.0P^{0.11}-40$, where E is the emission limit in lbs/hr and P is the process weight rate in tons/hr.

Condition VI.A.15: Visible emissions from the latex calcium carbonate filler silo stack (LCS) shall not exceed twenty percent (20%) opacity except during one six-minute period in any one hour in which visible emissions shall not exceed sixty percent (60%) opacity.

Condition VI.A.16: Visible emissions from the hot melt line stacks (HM1-PC and HM1-MC), hot melt sample line stack (HMS), hot melt mix tanks vent (HMM-vent), remote hot melt mix tank vent (RHMM-vent), hot melt mix tanks filler line cyclone exhaust stack (HMM) and remote hot melt mix tank filler line cyclone exhaust stack (RHMM) shall not exceed twenty percent (20%) opacity except during one six-minute period in any one hour in which visible emissions shall not exceed thirty percent (30%) opacity.

The following conditions were established pursuant to 9 VAC 5-80-110 in order to provide assurance that the aforementioned emission standards for the latex calcium carbonate filler silo (LCS), hot melt mix tanks (HMM) and remote hot melt mix tank (RHMM) are met. Condition numbers refer to those contained in the Title V permit.

Condition VI.A.3: Particulate emissions from the latex calcium carbonate filler silo (LCS) and return air from the transfer of filler from the latex calcium carbonate filler silo to the SBR latex mixer shall be controlled by a fabric filter. The fabric filter shall be provided with adequate access for inspection.

Condition VI.A.4: Particulate emissions from the hot melt mix tanks filler line cyclone exhaust (HMM) and remote hot melt mix tank filler line cyclone exhaust (RHMM) shall be controlled by a fabric filter. The fabric filter shall be provided with adequate access for inspection.

Compliance Assurance Monitoring (CAM)

Even though the latex calcium carbonate filler silo (LCS), VAE latex filler silo (VAES), PVC carpet backing line (PVC1), calcium carbonate storage silo (PVCS), hot melt mix tanks (HMM) and remote hot melt mix tank (RHMM) have a control device to control particulate emissions, CAM does not apply to these emission units because the uncontrolled particulate emissions from each emission unit are less than 100 tons per year.

Monitoring

The monitoring requirements in Condition 3 of the NSR permit dated December 5, 1997 and Conditions 5 and 6 of the NSR permit dated March 22, 2002, as amended June 29, 2005 and August 31, 2006, have been modified to meet Part 70 requirements.

The permit requires the latex calcium carbonate filler silo fabric filter (LCS), hot melt mix tanks filler line cyclone exhaust fabric filter (HMM), remote hot melt mix tank filler line cyclone exhaust fabric filter (RHMM) and VAE latex filler silo fabric filter (VAES) to be equipped with a device to continuously measure the differential pressure drop across the fabric filter. 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.

The permit requires the coalescing filter (PVC1) to be equipped with a device to continuously measure the differential pressure drop across the coalescing filter. 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 when the coalescing filter is operating.

The permit requires the calcium carbonate storage silo fabric filter (PVCS) to be equipped with a device to continuously measure the differential pressure drop across the fabric filter. 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 when the fabric filter is operating.

The stacks for the hot melt mix tanks (HMM) and the remote hot melt mix tank (RHMM) are uncontrolled vents (HMM-vent and RHMM-vent, respectively) used for air displacement during material feeding of the tanks. The material is fed to these tanks via filler lines by cyclone separators whose exhaust is controlled by fabric filters. A control device is not required for the tank vents because compliance with the process weight rate particulate emissions limit and visible emission requirement can be achieved without a control device. A visible emission evaluation conducted during the feeding of the tanks on November 5, 2001 for these vents demonstrated compliance with the 20% opacity limit. Estimated particulate emissions based on the AP-42 emission factor for pneumatic cement unloading to an elevated storage silo are compared to the particulate limit:

Emission Unit	Pollutant	General Process	Maximum Emission Ra

		Limitation (lbs/hr)	Rate (lbs/hr) (Based on AP-42)
Hot melt mix tanks (2) (HMM-vent)	PM/PM-10	6.8 (each)	0.6 (each)
Remote hot melt mix tank (RHMM-vent)	PM/PM-10	5.2	0.4

The permit requires operation of a fabric filter for the VAE latex filler silo (VAES), latex calcium carbonate filler silo (LCS), calcium carbonate storage silo (PVCS), hot melt mix tanks filler line cyclone exhaust (HMM) and remote hot melt mix tank filler line cyclone exhaust (RHMM) to demonstrate compliance with the particulate matter and visible emission requirements. Therefore, a properly operating fabric filter can achieve compliance with the process weight rate particulate emissions limit. Estimated particulate emissions based on the AP-42 emission factor for pneumatic cement unloading to elevated storage silo are compared to the particulate limit:

Emission Unit	Pollutant	General Process Limitation (lbs/hr)	Maximum Controlled Emission Rate (lbs/hr) (Based on AP-42)
VAE latex filler silo (VAES)	PM/PM-10	40.6	0.09
Latex calcium carbonat filler silo (LCS)	PM/PM-10	40.0	0.08
Calcium carbonate storage silo (PVCS)	PM/PM-10	40.0	0.08
Hot melt mix tanks (2) (HMM)	PM/PM-10	6.8 (each)	0.006 (each)
Remote hot melt mix tank (RHMM)	PM/PM-10	5.2	0.004

If the fabric filters are operating properly, compliance with the 20% opacity limit for the latex calcium carbonate filler silo stack (LCS), hot melt mix tanks filler line cyclone exhaust stack (HMM) and remote hot melt mix tank filler line cyclone exhaust stack (RHMM) can be achieved since there should be no visible emissions from these units. This is the case because the fabric filters eliminate the particulates which are the source of the visible emissions. Therefore, if visible emissions are seen from the fabric filter stack it can be reasonably assumed that there is a problem with the fabric filter. The permit contains a requirement for the permittee to perform a tiered periodic monitoring approach for conducting inspections of the latex calcium carbonate filler silo stack (LCS), hot melt mix tanks filler line cyclone exhaust stack (HMM) and remote hot melt mix tank filler line cyclone exhaust stack (RHMM) as follows:

- The permittee will be required to initially conduct a weekly inspection of the latex

calcium carbonate filler silo stack (LCS), hot melt mix tanks filler line cyclone exhaust stack (HMM) and remote hot melt mix tank filler line cyclone exhaust stack (RHMM). Each inspection shall include an observation of the presence of visible emissions and the pressure drop across each fabric filter. If during the inspection visible emissions are observed, a visible emission evaluation (VEE) shall be conducted in accordance with 40 CFR Part 60, Appendix A, EPA Method 9, unless corrective action is taken such that the stack resumes operation with no visible emissions. The VEE shall be conducted for a minimum of six minutes. If any of the observations exceed the applicable opacity limit, the VEE shall be conducted for a total of 60 minutes. If 12 consecutive weekly inspections are performed on any given stack and no visible emissions are present, then the inspections for that stack may be reduced to once per week. However, as soon as visible emissions are noted during a weekly inspection, or when requested by DEQ, the inspections must then be performed weekly for that stack.

If the fabric filter is operating properly, compliance with the 5% opacity limit for the VAES latex filler silo (VAES) and the calcium carbonate storage silo (PVCS) can be achieved since there should be no visible emissions from these units. This is the case because the fabric filters eliminate the particulates which are the source of the visible emissions. Therefore, if visible emissions are seen from the fabric filter stack it can be reasonably assumed that there is a problem with the fabric filter. The permit contains a requirement for the permittee to perform a tiered periodic monitoring approach for conducting inspections of the VAES latex filler silo (VAES) and the calcium carbonate storage silo (PVCS) as follows:

- The permittee will be required to initially conduct a weekly inspection of the VAES latex filler silo (VAES) and the calcium carbonate storage silo (PVCS). Each inspection shall include an observation of the presence of visible emissions and the pressure drop across each fabric filter. If during the inspection visible emissions are observed, a visible emission evaluation (VEE) shall be conducted in accordance with 40 CFR Part 60, Appendix A, EPA Method 9, unless corrective action is taken such that the stack resumes operation with no visible emissions. The VEE shall be conducted for a minimum of six minutes. If any of the observations exceed the applicable opacity limit, the VEE shall be conducted for a total of 60 minutes. If 12 consecutive weekly inspections are performed on any given stack and no visible emissions are present, then the inspections for that stack may be reduced to once per month. However, as soon as visible emissions are noted during a monthly inspection, or when requested by DEQ, the inspections must then be performed weekly for that stack.

If the coalescing filter is operating properly, compliance with the 5% opacity limit for the PVC carpet backing line (PVC1) can be achieved since there should be no visible emissions from these units. This is the case because the coalescing filter eliminates the particulates which are the source of the visible emissions. Therefore, if visible emissions are seen from the PVC carpet backing line stack (PVC1) it can be reasonably assumed that there is a problem with the coalescing filter. The permit contains a requirement for the permittee to perform a tiered periodic monitoring approach for

periodic monitoring approach for conducting inspections of the PVC carpet backing line stack (PVC1) as follows:

- The permittee will be required to initially conduct a weekly inspection of the PVC carpet backing line stack (PVC1). Each inspection shall include an observation of the presence of visible emissions and the pressure drop across each fabric filter. If during the inspection visible emissions are observed, a visible emission evaluation (VEE) shall be conducted in accordance with 40 CFR Part 60, Appendix A, EPA Method 9, unless corrective action is taken such that the stack resumes operation with no visible emissions. The VEE shall be conducted for a minimum of six minutes. If any of the observations exceed the applicable opacity limit, the VEE shall be conducted for a total of 60 minutes. If 12 consecutive weekly inspections are performed on any given stack and no visible emissions are present, then the inspections for that stack may be reduced to once per month. However, as soon as visible emissions are noted during a monthly inspection, or when requested by DEQ, the inspections must then be performed weekly for that stack.

Visible emissions have been selected as the indicator because they are indicative of good operation and maintenance of a fabric filter and coalescing filter. If the fabric filter or coalescing filter is not functioning properly, visible emissions will be present and there is a chance that the permittee is in danger of not meeting the process weight rate particulate emissions limit. Therefore, visible emissions are an acceptable performance indicator.

The tiered approach for inspections will satisfy the periodic monitoring requirement for the visible emission limitations. The required frequency of checks for visible emissions will limit malfunctions of the control equipment. As long as the control equipment is operating properly, there is little likelihood of violating the visible emission limitation. The control equipment will limit the amount of particulates that are emitted thereby limiting visible emissions.

The hot melt line (HM1) and hot melt sample line (HMS) involve the application of a hot melt pre-coat and main coat directly to the back of the carpet. Only VOC are emitted during this process. Due to the fact that no particulate emissions are expected, no visible emissions are expected. Therefore, there is little likelihood that the visible emission standard will ever be violated. As a result, no periodic monitoring is required for visible emissions from the hot melt line (HM1) and hot melt sample line (HMS) as only VOC will be emitted.

The permittee shall determine compliance with the hourly particulate matter emission limit for the PVC carpet backing line (PVC1) by calculating daily the average hourly emissions using the following equation:

$$E_{PM} = \left(\frac{M \times EF_{plast}}{H}\right)\left(\frac{100 - CE_{cf}}{100}\right)$$

Where:

E_{PM} = the daily average hourly particulate matter emissions in pounds per hour

M = the total throughput of plastisol formula, in pounds, used in the PVC carpet backing line during the calendar day

H = the total number of hours of operation for the PVC carpet backing line during the calendar day

EF_{plast} = the DEQ-approved emission factor in pounds of particulate per pound of plastisol

CE_{cf} = control efficiency of the coalescing filter

The permittee shall determine compliance with the annual particulate matter emission limit for the PVC carpet backing line (PVC1) by calculating the monthly emissions using the following equation:

$$E_{PM} = \left(\frac{M \times EF_{plast}}{2000}\right)\left(\frac{100 - CE_{cf}}{100}\right)$$

Where:

E_{PM} = the monthly particulate matter emissions in tons

M = the total throughput of plastisol formula, in pounds, used in the PVC carpet backing line during the calendar month

EF_{plast} = the DEQ-approved emission factor in pounds of particulate per pound of plastisol

CE_{cf} = control efficiency of the coalescing filter

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

The permittee shall determine compliance with the annual VOC emission limit for the hot melt sample line (HMS) by calculating the monthly emissions using the following equation:

$$E_{voc} = \frac{\sum_{i=1}^{n} W_i M_i}{2000}$$

Where:

E_{voc} = the total monthly VOC emissions in tons

W_i = the weight fraction of VOC of each material (i) applied during the calendar month

M_i = the total mass, in pounds, of each material (i) applied during the calendar month

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

Recordkeeping

The recordkeeping requirements in Condition 9 of the NSR permit dated December 5, 1997 and Condition 14 of the NSR permit dated March 22, 2002, as amended June 29, 2005 and August 31, 2006, and Condition 5 of the NSR permit dated August 12, 2002 Permit, as amended June 29, 2006, have been modified to meet Part 70 requirements.

The permit includes requirements for maintaining records of all monitoring and testing required by the permit. These records include:

- Daily and annual throughput of calcium carbonate for the VAE latex filler silo (VAES). Daily throughput shall be calculated daily as the sum of each consecutive 24-hour period. Annual throughput shall be calculated monthly as the sum of each consecutive 12-month period.
- Air pollution control equipment training provided and all scheduled and non-scheduled maintenance as required by Condition VI.A.22.
- Daily hours of operation of the PVC carpet backing line (PVC1).
- Daily and annual throughput of plastisol formula (in tons) used in the PVC carpet backing line (PVC1). Annual throughput shall be calculated monthly as the sum of each consecutive 12-month period.
- Daily and annual throughput of latex (in tons) used in the PVC carpet backing line (PVC1). Annual throughput shall be calculated monthly as the sum of each consecutive 12-month period.
- Hourly particulate matter and PM-10 emissions (in pounds) from the PVC carpet backing line (PVC1), calculated as a daily average.
- Annual particulate matter, PM-10, volatile organic compound emissions (in tons) from the PVC carpet backing line (PVC1). Annual emissions shall be calculated monthly as the sum of each consecutive 12-month period.
- Material Safety Data Sheets (MSDS) or other vendor information showing VOC content, HAP content, water content and solids content for each component of the plastisol formula.

- Material Safety Data Sheets (MSDS) or other vendor information showing VOC content, HAP content, water content and solids content for each component of the latex.

latex.

- Daily and annual throughput of calcium carbonate (in tons) used in the calcium carbonate storage silo (PVCS). Annual throughput shall be calculated monthly as the sum of each consecutive 12-month period.
- Annual throughput of VOC (in tons) in the materials used in the hot melt sample line (HMS), calculated monthly as the sum of each consecutive 12-month period.
- Annual VOC emissions (in tons) from the hot melt sample line (HMS), calculated monthly as the sum of each consecutive 12-month period.
- Material Safety Data Sheets (MSDS) or other vendor information showing VOC content, HAP content, water content, and solids content for each material used in the hot melt sample line.
- Inspection records as required by Conditions VI.B.5, VI.B.6 and VI.B.7.
- The DEQ-approved, pollutant-specific emission factors and the equations used to demonstrate compliance with Conditions VI.A.20 and VI.A.21.

Testing

The permit includes the requirement in Condition 4 of the NSR permit dated December 5, 1997 and Condition 15 of the NSR permit dated March 22, 2002, as amended June 29, 2005 and August 31, 2006, that the permitted facility be constructed so as to allow for emissions testing upon reasonable notice at any time using appropriate methods. Test ports shall be provided at the appropriate locations when requested.

The permit does not require source tests. A table of test methods has been included in the permit if testing, in addition to the testing and monitoring specified in this permit, is performed pursuant to a request from DEQ. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Reporting

The reporting requirement in Condition 16 of the NSR permit dated March 22, 2002, as amended June 29, 2005 and August 31, 2006, has been incorporated into the permit.

The permit includes the following reporting requirement:

- Notification of the intention to shutdown or bypass, or both, air pollution control equipment for necessary scheduled maintenance, which results in excess emissions for more than one hour, at least 24 hours prior to the shutdown.

Streamlined Requirements

The visible emission limitation in 9 VAC 5-50-80 (New Source Standard for Visible Emissions) has

has not been included for the VAE latex filler silo (VAES), calcium carbonate storage silo (PVCS) and the PVC carpet backing line (PVC1) because the permit limit of five percent (5%) opacity is more stringent than the regulatory limit of twenty percent (20%) opacity, including one six-minute period in any one hour not to exceed thirty (30%) opacity.

The following conditions in the December 5, 1997 NSR permit have not been included for the reasons provided:

Condition 7 (visible emissions evaluation) has not been included. The condition requires that visible emissions shall not exceed a 5% opacity standard and a visible emissions evaluation (VEE) be conducted on the VAE latex filler silo fabric filter exhaust. The VEE was conducted on December 7, 1999.

Condition 8 has not been included. The required written notification for the anticipated date on which the VEE will be performed postmarked at least thirty (30) days prior to such date was received from the facility on October 29, 1999.

Conditions 15 and 16 have not been included. The modification of the facility and the reconstruction of the VAE latex filler silo (VAES) have been completed.

The following conditions in the NSR permit dated August 12, 2002, as amended June 29, 2006, have not been included for the reasons provided:

Condition 6a has not been included. The required written notification of the actual date on which installation of the hot melt sample line (HMS) commenced within 30 days after such date was received from the facility on August 29, 2002.

Condition 6b has not been included. The required written notification of the actual startup date of the hot melt sample line (HMS) within 15 days after such date was received from the facility on November 18, 2003.

Hazardous Air Pollutant Conditions – Printing, Coating, and Dyeing of Fabrics and Other Textiles

The compliance date for 40 CFR Part 63, Subpart OOOO - National Emission Standards for Hazardous Air Pollutants: Printing, Coating, and Dyeing of Fabrics and Other Textiles (Textile MACT), was May 29, 2006. Since the facility did not obtain federally enforceable limits on its facility-wide emissions of hazardous air pollutants (HAPs) to below major-source thresholds prior to this date, it is subject to the Textile MACT.

Limitations

The following conditions are the applicable Textile MACT limitations for the facility's operations: organic HAP emission limitations for the facility's operations:

Condition VII.A.1: Organic hazardous air pollutant (HAP) emissions from the facility shall not exceed the following limits:

- For web coating and printing operations, organic HAP emissions to the atmosphere are limited to 0.12 kilogram (kg) of organic HAP per kg of solids applied.
- For dyeing and finishing operations, organic HAP emissions to the atmosphere are limited to 0.016 kilogram (kg) of organic HAP per kg of dyeing and finishing materials applied.

Condition VII.A.2: The permittee shall meet the following operation and maintenance requirements:

- At all times, including periods of startup, shutdown, and malfunction, the permittee shall operate and maintain the facility, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions at least to the levels required by all relevant standards.
- Malfunctions shall be corrected as soon as practicable after their occurrence.
- Operation and maintenance requirements established pursuant to section 112 of the Clean Air Act are enforceable independent of emissions limitations or other requirements in relevant standards.
- Determination of whether operation and maintenance procedures are being used will be based on information available to the DEQ which may include, but is not limited to, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

Monitoring

To demonstrate initial and continuous compliance with the applicable organic HAP emission limitations, Mohawk indicated in their application that the "compliant material option" and the "emission rate without add-on controls option" specified in the Textile MACT will be used.

Therefore, all applicable monitoring requirements from the Textile MACT for these two compliance options have been included in the Title V permit. These requirements provide adequate monitoring to meet periodic monitoring requirements. As a result, no additional monitoring has been included in the Title V permit.

Recordkeeping

The permit contains all applicable recordkeeping requirements from the Textile MACT for the "compliant material option" and the "emission rate without add-on controls option", such as manufacturer's formulation data or test data for each material used and calculations, to demonstrate compliance with the applicable organic HAP emission limitations. No additional recordkeeping has been included in the Title V permit.

Reporting

The Textile MACT requires the facility to submit a Notification of Compliance Status for the initial compliance period that applies to each affected source. Additionally, the Textile MACT requires the submittal of semiannual compliance reports for each affected source. These reporting requirements have been included in the Title V permit. The semiannual compliance reports will be submitted concurrently with the reporting requirements contained in General Condition XI.C.3 of the Title V permit.

Streamlined Requirements

The initial notification requirement associated with the Textile MACT has not been included in the permit because the source has already completed the requirement.

Facility Wide Conditions - Hazardous Air Pollutants

As of September 1, 2007, the following limitations, monitoring, recordkeeping and reporting requirements will apply to the facility:

Limitations

The facility is currently considered a major source because it has the potential to emit, in the aggregate, 10 tons per year or more of any HAP or 25 tons per year or more of any combination of HAPs. Additionally, on an individual emission unit basis, the Erie City VC boiler (B7) has the potential to emit more than 10 tons per year of hydrogen chloride (HCl). As a result, the facility has voluntarily requested federally enforceable limits on its facility-wide emissions of HAPs to below major-source thresholds in order to be classified as a minor source of HAPs and avoid being subject to 40 CFR 63, Subpart DDDDD - National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters (Boiler MACT) which has a compliance date of September 13, 2007. This will also require federally enforceable limits on the Erie City VC boiler (B7). The following conditions were established pursuant to 9 VAC 5-80-110

were established pursuant to 9 VAC 5-80-110 in order to limit the facility-wide HAP emissions to below major-source thresholds (i.e., synthetic minor HAP limits). The condition numbers refer to the draft Title V permit.

Condition VIII.A.1: The Erie City VC boiler (B7) shall consume no more than 31,508 tons of coal per year, calculated monthly as the sum of each consecutive 12-month period.

Condition VIII.A.2: The maximum chlorine content of the coal to be burned in the Erie City VC boiler (B7) shall not exceed 0.030% by weight per shipment as determined by ASTM Method D-2361.

Condition VIII.A.3: Hazardous air pollutant (HAP) emissions, as defined by §112(b) of the Clean Air Act, from the facility shall not exceed 9.9 tons per year of any individual HAP or 24.9 tons per year of any combination, calculated monthly as the sum of each consecutive 12-month period. HAPs which are not accompanied by a specific CAS number shall be calculated as the sum of all compounds containing the named chemical when determining compliance with the individual HAP emissions limitation of 9.9 tons per year.

Monitoring and Recordkeeping

The HCl emission limit for the facility will be 9.9 tons per year. Based on the annual coal throughput limit, assuming all of the chlorine in the coal is emitted as HCl and using the molar weight ratio for hydrogen chloride to chlorine, potential HCl emissions from the Erie City VC boiler (B7) are shown in the following table:

Table VI. Erie City VC Boiler HCl Emissions

Fuel Type	Maximum Annual Throughput (tons/yr)	Maximum Chlorine Content (% wt)	Molar Weig Ratio (HCl/Cl)	Calculated Emissions o HCl (tons/yr	Maximum Emissions o HCl (tons/yr
Coal	31,508	0.030	1.028	9.72	9.9

As shown in the table above, the maximum expected HCl emissions are less than the allowable limit. Therefore, there is reasonable assurance that the HCl emission limit of 9.9 tons per year will not be violated as long as the coal throughput limit and chlorine content limit for the coal are not exceeded and the boiler is operating properly. For the coal, the permittee is required to obtain a certification from the fuel supplier with each shipment. In addition to the information currently required for each fuel supplier certification (name of the fuel supplier, the date the coal was

was received, the weight of coal delivered in the shipment, the higher heating value of the coal, the sulfur content (in percent) of the coal and the ash content (in percent) of the coal), the certification must include the chlorine content (in percent) of the coal and the method used to determine the chlorine content of the coal.

The permit includes requirements for maintaining records of all monitoring required by the permit to determine compliance with the individual and total HAP emission limits. These records include:

- The monthly and annual throughput of coal (in tons) for the Erie City VC boiler (B7). The annual throughput shall be calculated monthly as the sum of each consecutive 12-month period.
- Monthly and annual throughput of each HAP-containing material used at the facility. This includes, but is not limited to, materials used in all manufacturing processes, fuel burning equipment and miscellaneous sources such as insignificant emission units and maintenance, repair, and construction activities (coatings, adhesives, lubricants, etc.). Annual throughput shall be calculated monthly as the sum of each consecutive 12-month period.
- Monthly and annual individual and total HAP emissions from the facility. This includes, but is not limited to, materials used in all manufacturing processes, fuel burning equipment and miscellaneous sources such as insignificant emission units and maintenance, repair, and construction activities (coatings, adhesives, lubricants, etc.).from all manufacturing processes, including fuel burning equipment. Annual emissions shall be calculated monthly as the sum of each consecutive 12-month period.

- Material Safety Data Sheets (MSDS) or other vendor information showing HAP content for each material used at the facility.
- All coal fuel supplier certifications.

These records, in conjunction with the recordkeeping requirements from the Textile MACT, provide reasonable assurance of compliance with the emission limits of 9.9 tons per year of any individual HAP and 24.9 tons per year of any combination.

GENERAL CONDITIONS

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

STATE ONLY APPLICABLE REQUIREMENTS

The permittee did not identify any state-only applicable requirements in their application. Therefore, no state-only applicable requirements have been included in the permit.

FUTURE APPLICABLE REQUIREMENTS

The facility has voluntarily requested federally enforceable limits on its facility-wide emissions of HAPs to below major-source thresholds in order to be classified as a minor source of HAPs and avoid being subject to the Boiler MACT and future MACT requirements. Therefore, no future applicable requirements have been identified by the permittee and the staff are unaware of any requirements that the facility could become subject to during the life of the Title V permit. Therefore, no future applicable requirements have been included in the permit.

INAPPLICABLE REQUIREMENTS

The facility did not identify any inapplicable requirements in their application. Therefore, no inapplicable requirements are included in the permit. DEQ reviewed the applicability of 40 CFR Part 63, Subpart Q - National Emission Standards for Hazardous Air Pollutants of Industrial Process Cooling Towers as the regulation pertains to Mohawk's three industrial cooling towers. Mohawk does not use chromium-based water treatment chemicals. Therefore, 40 CFR Part 63, Subpart Q is not applicable to the facility.

DEQ reviewed the applicability of 40 CFR Part 60, Subpart Y - Standards of Performance for Coal Preparation Plants as the regulation pertains to the facility's coal handling operations. The regulation defines a coal preparation plant as "any facility (excluding underground mining operations) which prepares coal by one or more of the following processes: breaking, crushing, screening, wet or dry cleaning and thermal drying." The facility does not break, crush, screen, wet or dry clean, or thermal dry the coal received. Therefore, 40 CFR Part 60, Subpart Y is not applicable to the facility.

COMPLIANCE PLAN

Mohawk is currently in compliance with all applicable requirements. No compliance plan was included in the application or in the permit.

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 Un No.	Emission Unit Description	Citation	Pollutant(s) Emitted (VAC 5-80-720 B)	Rated Capacity (9 VAC 5-80-720 C
CS	Carpet Shearing (2)	9 VAC 5-80-720 B	PM-10	
-	Fork Trucks	9 VAC 5-80-720 B	VOC, PM-10	
Pellet	Pellet Silos	9 VAC 5-80-720 B	PM-10	
YP	Yarn Twisting, Conin Knitting, etc.	9 VAC 5-80-720 B	VOC, PM-10	
-	Maintenance Tools (drills, etc.)	9 VAC 5-80-720 B	PM-10	
FP	Diesel Fire Pump	9 VAC 5-80-720 B	VOC, PM-10, NO_x, SO_2, CO	
AshS	Ash Silo	9 VAC 5-80-720 B	PM-10	
CT	Cooling Towers (3)	9 VAC 5-80-720 A	VOC, PM-10	

[1]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 did not submit a request for confidentiality. Therefore, all portions of the Title V renewal application are suitable for public review.

PUBLIC PARTICIPATION

A public notice regarding the draft permit was placed in The Rockbridge Weekly, Lexington, Virginia, on November 1, 2006. EPA was sent a copy of the draft permit and notified of the public notice on October 31, 2006 and concurrently reviewed the draft permit as a proposed permit. West Virginia is the only affected state and was sent a copy of the public notice in a letter dated November 1, 2006. All persons on the Title V mailing list were also sent a copy of the public notice in letters dated November 1, 2006.

Public comments were accepted from November 2, 2006 to December 1, 2006. No comments were received from the public or the affected state regarding the draft permit. EPA's comment period ended on December 16, 2006. No comments were received from EPA.

ATTACHMENTS

Attachment A - 2005 Annual Emissions Update
Attachment B - February 13, 1978 Minor NSR Permit and February 16, 1978 Amendment
Attachment C - Multicyclone Compliance Assurance Monitoring (CAM) Plan

Attachment D - July 10, 1986 Minor NSR Permit (Amended June 29, 2006)
Attachment E - December 12, 1990 Minor NSR Permit
Attachment F - December 10, 1999 Minor NSR Permit (Amended June 29, 2006)
Attachment G - December 5, 1997 Minor NSR Permit
Attachment H - March 22, 2002 Minor NSR Permit (Amended June 29, 2005 and August 31, 2006)

Attachment I - August 12, 2002 Minor NSR Permit (Amended June 29, 2006)

Attachment A

2005 Annual Emissions Update

Commonwealth of Virginia
Department of Environmental Quality

Annual Update for Calendar Year: 2005

Registration#: 80269
Plant Name: Mohawk Industries Inc - Lees Carpets Division
Physical Location: 404 Anderson St
Mailing Address: 404 Anderson Street
Glasgow, VA 24555 2801

Region: VRO
County: 163 Rockbridge County
Plant ID: 00001
Contact Person: Dickison, Dennis
Telephone: (540)258-2811
Employees: 1222
Principal Product: carpet & yarn
SIC: 2273 NAICS: 314110
Inspector: Hensley, Karen
Classification Major/Potential Major

Summary Data for Calendar Year: 2005

Stk	Pt	Seg	Segment Description	SCC	Annual Thruput	Units	% Sulfur	% Ash	Heat Content (mmbtu/ SCC unit)	Primary Control Equip	Secondary Control Equip	% Overall Effic	% Annual Thruput Dec Feb	Mar May	Jun Aug	Sep Nov	Operating Schedule Hr Dy	Dy Wk	Hr Yr	% Space Heat	Stack Parameters Ht (ft)	Dia (ft)	Exit Temp (f)	Exit Flow Rate (ACFM)	Plume Ht (ft)	Elevation (ft)
1	1	1	5 BAB&WILC-FM2370/NG&#6OL	10200401	~~445.6~~ 166.3	1000 Gallons Burned	2.4	0	152				~~12~~ 16	~~28~~ 50	~~25~~ 34	~~30~~ 0	~~12~~ ~~2.2~~ 3.0	5	~~3045~~ 576	16	80	4	550	28902		734
1	1	2	5 BAB&WILC-FM2370/NG&#6OL	10200601	~~.65~~ 15.2	Million Cubic Feet Burned	0	0	1030				~~12~~ 7	~~28~~ 49	~~23~~ 23	~~30~~ 21	~~12~~ 1.9	5	~~3045~~ 486	16	80	4	550	28902		734
2	2	1	6 BAB&WILC-FM1543/NG&#6OL	10200401	~~08.03~~ 263.2	1000 Gallons Burned	2.4	0	152				~~47~~ 4	~~18~~ 26	~~19~~ 48	~~16~~ 22	~~5~~ 6.5	~~2~~ 3	~~755~~ 1016	16	75	4	550	27151		734
2	2	2	6 BAB&WILC-FM1543/NG&#6OL	10200602	~~3.25~~ 4.43	Million Cubic Feet Burned	0	0	1030				~~47~~ 20	~~18~~ 80	~~18~~ 0	~~16~~ 0	~~5~~ 2.3	3	~~755~~ 181	16	75	4	550	27151		734
3	4	1	CARPT DYE/DRY VOC EMITTED	33000399	~~2.96~~ 4.57	Tons Processed	0	0	0				~~25~~ 27	~~20~~ 28	~~26~~ 23	~~28~~ 22	~~14~~ 7.9	5	~~3450~~ 1969	0	25	3	200	5000		734
3	4	2	CRPT DYE/DRY PM10 EMITTED	33000399	~~.82~~ 1.21	Tons Processed	0	0	0				~~25~~ 27	~~20~~ 28	~~26~~ 23	~~28~~ 22	~~14~~ 7.9	5	~~3450~~ 1969	0	25	3	200	5000		734
3	6	1	HOT MELT/LATEX VOC EMTTD	33000399	~~23.26~~ 8.02	Tons Processed	0	0	0				~~24~~ 26	~~38~~ 32	~~27~~ 22	~~18~~ 20	~~21~~ 12	5	~~5250~~ 3624	0	25	3	200	5000		734
4	5	1	YARN DYE/DRY VOC EMITTED	33000399	~~5.32~~ ~~[illegible]~~ 5.85	Tons Processed	0	0	0				~~24~~ 27	~~21~~ 26	~~26~~ 24	~~18~~ 23	21	5	~~5250~~ 5290	0	22	1.1	120	1710		734

Ceb 4/17/06

Commonwealth of Virginia
Department of Environmental Quality

Annual Update for Calendar Year: 2005

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Plant Name: Mohawk Industries Inc - Lees Carpets Division
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Principal Product: carpet & yarn
SIC: 2273 NAICS: 314110
Inspector: Hensley, Karen
Classification Major/Potential Major

Summary Data for Calendar Year: 2005

Stk	Pt	Seg	Segment Description	SCC	Annual Thruput	Units	% Sulfur	% Ash	Heat Content (mmbtu/ SCC unit)	Primary Control Equip	Secondary Control Equip	% Overall Effic	% Annual Thruput Dec Feb	Mar May	Jun Aug	Sep Nov	Operating Schedule Hr Dy	Dy Wk	Hr Yr	% Space Heat	Stack Parameters Ht (ft)	Dia (ft)	Exit Temp (f)	Exit Flow Rate (ACFM)	Plume Ht (ft)	Elevation (ft)
4	5	2	YARN DYE/DRY PM10 EMITTED	33000399	~~6.94~~ 7.25	Tons Processed	0	0	0				~~24~~ 27	~~31~~ 26	~~26~~ 24	~~18~~ 23	21	5.6	~~3250~~ 5270 7014	0	22	1.1	120	1710		734
6	7	1	7 ERIE CITY 'VC' COAL BLR	10200204	~~18667~~ 17,317	Tons Burned	.84	6.2	27	007		90.9	~~24~~ 27	~~28~~ 23	~~17~~ 21	~~24~~ 27	24	5.6	~~5727~~ 7011	16	60	5	400	58479		734
										007 = Centrifugal Collector - High Efficiency																
6	7	2	COAL HANDLING	30501008	~~18667~~ 17,317	TONS COAL SHIPPED	0	0	0				~~24~~ 27	~~25~~ 28	~~17~~ 21	~~24~~ 27	24	8	~~5727~~	16	60	5	400	58479		734
9	26	1	PVC BACKING LINE	33000199	~~27414.8~~ 37,785.3	Tons Processed	0	0	0	018		98	~~29~~ 25	~~26~~ 25	~~25~~ 25	~~20~~ 25	~~16~~ 20.5	~~5~~ 6	~~4500~~ 6152	0	57	1.5	222	11000		734
										018 = Fabric Filter - Low Temperature i.e. T<180F																
9	26	2	PVC FILLER SILO (CACO)	33000399	~~8042~~ 12,358	Tons Processed	0	0	0	018		99	~~28~~ 25	~~26~~ 25	~~25~~ 28	~~20~~ 23	~~16~~ 20.5	~~8~~ 6	~~4500~~ 6152	0	57	1.5	222	11000		734
										018 = Fabric Filter - Low Temperature i.e. T<180F																
10	27	1	20 SUESSEN HEAT SET MACH	33000199	~~83.0~~ 2.02	Tons Processed	0	0	0				~~25~~ 0	27 53	~~20~~ 47	~~16~~ 0	~~16~~ 0.3	5	~~3975~~ 35	0	41	1.41	120	2885		734
11	30	1	FILLER SILO_(ATH/CACO)	33000399	~~6271~~ 5831	Tons Processed	0	0	0	018		99	~~24~~ 24	~~24~~ 32	~~22~~ 21	~~28~~ 25	~~4~~ 9.6	~~3~~ 6	~~88~~ 2902	0	65	.25	70	500		734
										018 = Fabric Filter - Low Temperature i.e. T<180F																
12	28	1	29 VAE LATEX MIXER	30500618	~~2486~~ 2838	Tons Cement Produced	0	0	0	018		99	~~21~~ 25	~~24~~ 20	~~24~~ 27	28	4	5	1000	0	65	.25	68	200		734
										018 = Fabric Filter - Low Temperature i.e. T<180F																

Commonwealth of Virginia
Department of Environmental Quality

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Summary Data for Calendar Year: 2005

												% Annual Thruput				Operating Schedule				Stack Parameters					
Stk	Pt	Seg	Segment Description	SCC	Annual Thruput	Units	% Sulfur	% Ash	Heat Content (mmbtu/ SCC unit)	Primary Control Equip	Secondary Control Equip	% Overall Effic	Dec Feb	Mar May	Jun Aug	Sep Nov	Hr Dy	Dy Wk	Hr Yr	% Space Heat	Ht (ft)	Dia (ft)	Exit Temp (f)	Exit Flow Rate (ACFM)	Plume Ht (ft)	Elevation (ft)
15	32	1	PVC2 Foamback Line - CO	49099999	~~.09~~ 1.46	Tons Solvent Consumed							25	~~28~~ 29	~~25~~ 29	~~28~~ 17	~~8~~ 1.4	5	~~2000~~ 340		34	2	170	20000		734
15	32	2	PVC2 Foamback Line - VOC	49099999	0	Tons Solvent Consumed							25	~~25~~ 29	~~25~~ 29	~~25~~ 17	~~8~~ 1.4	5	~~2000~~ 340		34	2	170	20000		734

Commonwealth of Virginia
Department of Environmental Quality

Annual Update for Calendar Year: 2005

Registration#: 80269
Plant Name: Mohawk Industries Inc - Lees Carpets Division
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											% Annual Thruput				Operating Schedule				Stack Parameters					
Stk	Pt	Seg	Segment Description	SCC	Annual Thruput	Units	% Sulfur	% Ash	Heat Content (mmbtu/ SCC unit)	Primary Control Equip	Secondary Control Equip	% Overall Effic	Dec Feb	Mar May	Jun Aug	Sep Nov	Hr Dy	Dy Wk	Hr Yr	% Space Heat	Ht (ft)	Dia (ft)	Exit Temp (f)	Exit Flow Rate (ACFM)	Plume Ht (ft)	Elevation (ft)

Document Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering and evaluating the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name of Responsible Official (Print) Lane Leonard

Title Sr Director of Division Manufacturing

Signature [signature] **Date** 4-12-06

Commonwealth of Virginia
Department of Environmental Quality

Registration Number: 80269

County - Plant ID: 163-00001

Plant Name: Mohawk Industries Inc - Lees Carpets Division

POLLUTANT EMISSIONS REPORT (PLANT) (Tons/Year)

Parameter List

Pollutant Type: All Pollutants

Years: 2005-2005

	CO	HCL	NH3	NO2	PB	PM	PM 10	PM 2.5
2005	56.74	1.73	0.61	121.83	0.00	83.29	59.69	31.82

Registration Number: 80269

County - Plant ID: 163-00001

Plant Name: Mohawk Industries Inc - Lees Carpets Division

POLLUTANT EMISSIONS REPORT (PLANT) (Tons/Year)

Parameter List

Pollutant Type: All Pollutants

Years: 2005-2005

	SO2	VOC
2005	300.11	26.15

Attachment B

February 13, 1978 Minor NSR Permit
And February 16, 1978 Amendment

COPY TO

Richmond ____ Plecker ____

Barnard ____ Miller ____

Weigand 2/15 Hartley ____

R-II

Coal boiler

RECEIVED

FEB 15 1978

February 13, 1978

Mr. A. C. Lohr
Corporate Engineering
Burlington Industries, Inc.
Executive Offices
P. O. Box 21207
Greensboro, North Carolina 27420

Location: Glasgow, Virginia
Registration Number: 20269

Dear Mr. Lohr:

The Staff of the State Air Pollution Control Board has analyzed your permit request to install and operate a new coal fired boiler at the above identified location. The permit request was deemed a complete application December 31, 1978, after receipt of submittal dated December 2, 1978. & 1-31-78

12-2-77

The particulate emissions from the new Erie City "VC" boiler will be controlled by two Zurn multicyclones with shave off.

ZURN INSTALLED - R.G. 7-1[illegible] 120,000 LB/HR C[illegible] 125,000?

IN SERIES R.G. 7/13/82

NEVER INSTALLED - R.G. 7-13-82

The permit is approved under the authorities delegated to the Executive Director by the Board, subject to the following condition(s):

#1 re written 2-16-78 changing date to 12-2-77 & 1-31-78 submittals. R.G. 7-13-[illegible]

1. Installation and operation to be conducted as proposed in the December 14 and 20, 1977, submittals.

ONLY 12-2-77 SHOULD BE "WITH ATTACHMENTS" — R.G. 2-15-78

2. A final completion report be submitted to the Board (Attention: Director, Division of Compliance) and Region II Director, address below, within 10 days after the boiler is put into operation.

3. Compliance with Part V - Section 5.03 - Performance Testing - of the Regulations for the Control and Abatement of Air Pollution will require a particulate emission test of the coal boiler stacks. The coal boiler must be operating at design conditions during the testing. The test must be performed within 60 days after achieving maximum rate but not later than 180 days after date of initial operation. The details of the emission testing are to be arranged with the Region II Director.

4. Particulate emissions from the coal boiler shall be limited to 0.28 lb/10^6 BTU heat input.

5. The average yearly ash content shall be limited to 7% and the sulfur content in the coal shall not exceed 1%.

6. The Board (Attention: Director, Division of Compliance) and Region II Director each must be furnished, within 60 days, a copy of the results of the emission test required in condition 3 above.

7. The approved fuel for this unit is coal. Any changes from this type of fuel requires a permit to modify and operate under Section 2.33 of the Regulations for the Control and Abatement of Air Pollution.

Part II, Section 2.11, "Conditions on Approvals," effective August 9, 1975, provides for the automatic revocation of this permit if the owner or other person fails to adhere to these conditions.

If actual construction of this source is not started prior to December 1, 1978, the status of the permit must be reviewed to determine if the Prevention of Significant Deterioration requirements of the Clean Air Act are being met.

Part II - Section 2.33(h) - Permits - Stationary Sources and Indirect Sources - Revocation of Permits - of the Regulations for the Control and Abatement of Air Pollution states:

> "A permit granted pursuant to this section shall become invalid if a program of continuous construction or modification is not commenced within 24 months from the date the permit is granted or if a program of construction or modification is discontinued for a period of 12 months or more. The Board may extend such time period upon a satisfactory showing that an extension is justified."

You are cautioned that approval of this permit should not be construed to mean your operation is automatically in compliance with all aspects of the Regulations for the Control and Abatement of Air Pollution. Regional personnel will be constantly evaluating all sources for compliance with Part V, Section 5.12 - Emission Standards for Visible Emissions and Section 5.13 - Fugitive Dust.

In addition, yearly updating of emissions from sources will require visits from staff personnel. Compliance with all air pollution regulations must be a continuing full time effort.

This permit approval is only applicable to the Air Pollution Control Board Permit Requirements and does not alter permit requirements by any other governmental agency.

Sincerely,

W. R. Meyer
Executive Director

WRM/MLM/bh

cc: Assistant Executive Director, Enforcement
Director, Division of Engineering

Mr. M. S. Williams
Region II Director
State Air Pollution Control Board
1126 Norwood Street
Radford, Virginia 24141

COPY TO

Richmond ____ Plecker ____

Barnard ____ Keller ____

Weigand 2/17 Bradley ____

Coal Boiler

February 16, 1978

RECEIVED

FEB 17 1978

Mr. A. C. Lohr
Corporate Engineering
Burlington Industries, Inc.
Executive Offices
P.O. Box 21207
Greensboro, North Carolina 27420

Location: Glasgow, Va.
Registration No.: 20269

Dear Mr. Lohr:

Please refer to our letter of February 13, 1978. Inadvertently the receipt of submittal dated January 31, 1978 was not listed in the permit letter dated February 13, 1978.

Therefore, condition 1 is changed to read:

1. Installation and operation to be conducted as proposed in the December 2, 1977 and January 31, 1978 submittals.
CORRECT THIS TIME—RG

Other than this the terms of the permit letter remain the same.

Sincerely,

J. R. Belcher
Director, Division of Compliance

JRB/rw
cc: Assistant Executive Director, Enforcement
Director, Division of Engineering
Mr. M. S. Williams, Region II Director

Attachment C

Multicyclone Compliance Assurance Monitoring (CAM) Plan

Multicyclone Compliance Assurance Monitoring (CAM) Plan
(Unit: B7)

Indicator	Indicator 1	Indicator 2	Indicator 3
	Performance Testing	Pressure Drop	Periodic Structural Inspections
Measurement approach	Once every five years, testing on the Erie City VC boiler stack according to EPA Method 5 (40 CFR 60, Appendix A) shall be conducted to verify the particulate emissions rate for the Erie City VC boiler and determine normal operating conditions for the entire multicyclone unit that consists of two multicyclones.	Continuous monitoring of the pressure drop to determine if the inlet velocity for the entire multicyclone unit is operating within normal operating conditions determined during the testing conducted in accordance with EPA Method 5.	Monthly external inspection of surfaces and joints of each multicyclone by a qualified employee to determine the presence of any leaks or deterioration. Annual internal inspection of each multicyclone by a qualified employee to determine structural integrity of the unit and to ensure no excessive build-up or channeling is present.
Indicator range	Maximum 0.28 pounds particulate matter per million Btu heat input or 43.4 pounds particulate mater per hour	An excursion is defined as a 20-minute continuous pressure drop of 15% or greater above or below the normal pressure drop determined during the testing conducted in accordance with EPA Method 5. Excursions trigger an inspection, corrective action and a reporting requirement.	An excursion is defined as failure to perform the monthly or annual inspection of the multicyclone. Excursions trigger an inspection, corrective action and a reporting requirement.
Quality Improvement Plan (QIP) Threshold	NA	Upon completion of the initial testing conducted in accordance with EPA Method 5, no more than 6 excursions from the indicator range in a 6-month reporting period that corresponds with the Title V semi-annual reporting period.	NA
Performance criteria: **Data Representativeness**	Testing shall be conducted at three boiler firing rates. One of the firing rates shall be at the maximum expected operating firing rate of the boiler and the remaining two firing rates shall be based on normal expected operating firing rates.	Control efficiency is a function of inlet velocity and changes in velocity result in changes in pressure drop across the entire multicyclone unit. The differential pressure points are located at the inlet and outlet of the entire multicyclone unit and the gauges have an accuracy of +/- 5%	Each mulitcyclone shall be inspected visually for early detection of structure deterioration and required maintenance.
Verification of operational status	NA	NA	NA

Indicator	Indicator 1	Indicator 2	Indicator 3
	Performance Testing	Pressure Drop	Periodic Structural Inspections
QA/QC practices and criteria	Trained personnel to perform test. Test procedures shall be as required by EPA Method 5 (40 CFR 60, Appendix A). A test protocol shall be submitted to and approved by the Director, Valley Region, prior to testing. One copy of the test results shall be submitted to the Director, Valley Region, within 60 days after test completion.	Calibrate, maintain and operate the instrumentation in accordance with the manufacturer's specifications.	Trained personnel perform the inspection and maintenance.
Monitoring frequency and data collection procedure	The test shall be performed within 6 months of the issuance of the permit and once every five years thereafter.	Measured and recorded continuously.	Record results of monthly and annual inspections of each multicyclone.

Attachment D

July 10, 1986 Minor NSR Permit
(Amended June 29, 2006)

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

VALLEY REGIONAL OFFICE
4411 Early Road, P.O. Box 3000, Harrisonburg, Virginia 22801
(540) 574-7800 Fax (540) 574-7878
www.deq.virginia.gov

Preston Bryant
Secretary of Natural Resources

David K. Paylor
Director

R. Bradley Chewning, P.E.
Regional Director

June 29, 2006

Mr. Lane Leonard
Vice President of Manufacturing
Mohawk Industries, Inc. - Lees Carpets Division
404 Anderson Street
Glasgow, Virginia 24555

Location: Rockbridge County
Registration No.: 80269
Plant ID No.: 51-163-0001

Dear Mr. Leonard:

Attached is a minor permit amendment to your new source review permit dated July 10, 1986 to construct and operate the Otting sock dye range in accordance with the provisions of the Virginia Regulations for the Control and Abatement of Air Pollution. Please note that Part II, Condition 8 of the permit dated July 10, 1986 has been removed because it is no longer applicable since the Otting sock dye range is subject to 40 CFR 63, Subpart OOOO. In addition, please note that the regulatory citations have been updated with this permit amendment. This permit replaces your permit dated July 10, 1986.

This permit contains legally enforceable conditions. Failure to comply may result in a Notice of Violation and civil penalty. Please read all permit conditions carefully.

In the course of evaluating the application and arriving at a final decision to approve the project, the Department of Environmental Quality (DEQ) deemed the application complete on June 2, 2006.

This permit approval to construct and operate shall not relieve Mohawk Industries, Inc. – Lees Carpets Division of the responsibility to comply with all other local, state, and federal permit regulations.

The Board's Regulations as contained in Title 9 of the Virginia Administrative Code 5-170-200 provide that you may request a formal hearing from this case decision by filing a petition with the Board within 30 days after this case decision notice was mailed or delivered to you. 9 VAC 5-170-180 provides that you may request direct consideration of the decision by the Board if the Director of the DEQ made the decision. Please consult the relevant regulations for additional requirements for such requests.

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

David K. Paylor, Director
Department of Environmental Quality
P. O. Box 10009
Richmond, VA 23240-0009

If this permit was delivered to you by mail, three days are added to the thirty-day period in which to file an appeal. Please refer to Part Two A of the Rules of the Supreme Court of Virginia for information on the required content of the Notice of Appeal and for additional requirements governing appeals from decision of administrative agencies.

If you have any questions concerning this permit, please call Bobby Lute at (540) 574-7820.

Sincerely,

Larry M. Simmons, P.E.
Deputy Regional Director

Attachment: Permit

cc. Director, OAPP (electronic file submission)
Manager, Data Analysis (electronic file submission)

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

PERMIT TO CONSTRUCT AND OPERATE

This permit replaces your permit dated July 10, 1986.

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

Mohawk Industries, Inc. - Lees Carpets Division
404 Anderson Street
Glasgow, Virginia 24555
Registration No.: 80269
Plant ID No.: 51-163-0001

is authorized to construct and operate

an Otting sock dye range
(reference L) instead of the old
Ilma sock dye range (reference B)

located at

404 Anderson Street
Glasgow, Rockbridge County, Virginia

in accordance with the Specific Conditions (emission limitation, monitoring, and testing requirements) and the General Conditions set forth in Parts I and II herein.

Approved on July 10, 1986

Amended on June 29, 2006

Deputy Regional Director, Valley Region

Permit consists of 4 pages.
Part I - Specific Conditions 1 to 5.
Part II - General Conditions 1 to 11.
Part III - Document List, 3 items

PART I - SPECIFIC CONDITIONS - the regulatory reference and authority for each condition is listed in parentheses ( ) after each condition.

1. The Otting sock dye range is located at the Glasgow carpet plant.

2. Construction and operation shall be conducted as proposed in the permit applications dated June 5, 1986 and May 30, 2006. The permit applications and supporting documents (see Document List) are a part of this permit.
(9 VAC 5-80-1180)

3. The equipment to be installed consists of:

   An Otting sock dye range (reference L)
   which replaces the Ilma sock dye range (reference B)

4. Emissions from the operation of the Otting sock dye range shall not exceed the limitations specified below:

Volatile Organic Compounds	3.2 lbs/hr	1.8 tons/yr

   (9 VAC 5-80-1180)

5. An opacity test shall be conduced on the Otting sock dye range. The details of the test shall be arranged with the Director, Valley Region.
(9 VAC 5-50-30 and 9 VAC 5-80-1200)

PART II - GENERAL CONDITIONS

1. Within 10 days after receiving this permit the permittee shall notify the Board (Director, Valley Region) in writing of the estimated start-up date of the permitted facility. This notification is for administrative purposes only and need not be a firm date.
(9 VAC 5-80-1180)

2. The permittee shall furnish written notification to the Board (Director, Valley Region) of:

   a. The actual date on which construction commenced within 30 days after such date.

   b. The actual start-up date within 15 days after such date.

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

3. The permitted facility shall be designed and constructed so as to allow emissions testing using the methods prescribed upon reasonable notice at any time.
(9 VAC 5-50-30 F, 9 VAC 5-60-30 and 9 VAC 5-80-1180)

4. The Board reserves the right to modify and, if appropriate, to reissue or to rescind this permit if prior to operation there is a substantive change in any of the data upon which the decision to approve this permit was based.
(9 VAC 5-80-1180)

5. All local zoning and building requirements must be met before commencing construction.
(9 VAC 5-80-1180)

6. If, for any reason, the permittee does not comply or will not be able to comply with the emission limitations or other conditions specified in this permit, the permittee shall provide in writing to the Board (Director, Valley Region) the following information as soon as possible but no later than five (5) days after such conditions become known to the permittee:

   a. description of noncompliance;

   b. cause of noncompliance;

   c. anticipated time the noncompliance is expected to continue or, if corrected, the actual duration of noncompliance;

   d. steps taken by the permittee to minimize or eliminate the noncompliance; and

   e. steps taken by the permittee to prevent recurrence of the noncompliance.

   Submittal of this report does not constitute a waiver of the emission limitations or other conditions of this permit nor does it in any way restrict the DEQ's authority to enforce the permit conditions pursuant to Section 113 of the Clean Air Act.
   (9 VAC 5-80-1180)

7. The permitted facility is to be constructed and operated as represented in the permit application referenced in Condition 2 of Part I. No changes in the permit application specifications or any existing facilities shall be made with alter the emissions into the ambient air or alter the impact of the facility on air quality without the prior written approval of the Board.
(9 VAC 5-80-1180)

8. This approval shall become invalid if construction of the proposed plant is not commenced by January 15, 1988 or if it is discontinued for a period of 18 months.
(9 VAC 5-80-1210)

9. In the event of any change in control of ownership of the permitted source, the permittee shall notify the succeeding owner of the existence of this permit by letter and send a copy of that letter to Director, Valley Region.
(9 VAC 5-80-1180)

10. The conditions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of that provision to other circumstances, and the remainder of this permit, shall not be affected thereby.
(9 VAC 5-80-1180)

11. This permit approval is only applicable to the permit requirements of the State Air Pollution Control Board and does not alter permit requirements by any other local, state, or federal government agency. Mohawk Industries, Inc. - Lees Carpet Division is cautioned that approval of this permit shall not be construed to mean its operation is automatically in compliance with all aspects of the Regulations for the Control and Abatement of Air Pollution. DEQ personnel will be constantly evaluating all sources for compliance with 9 VAC 5-50-80 - Standard for Visible Emissions, 9 VAC 5-50-90 - Standard for Fugitive Dust/Emissions, and 9 VAC 5-50-140 - Standard for Odorous Emissions. Compliance with all air pollution regulations must be a continuing, full time effort.
(9 VAC 5-80-1180)

Annual requirements to fulfill legal obligations to maintain current stationary source emissions data will necessitate your response to requests for information to include, as appropriate: fuel consumption by type, heat value, sulfur and ash contest; process and production data; refuse disposal by incineration including auxiliary fuels burned; storage, handling and use of liquid organic compounds; and, changes in stack data, control equipment, and operating schedules. Such requests for information from the Regional Office will either be in writing or by personal contact of field enforcement personnel. Emission data provided to the Board by a source must be made available to the public upon request; process data for individual facilities and plants will be made available to the public upon request unless the source claims, in writing, the information is proprietary and that it should be held as confidential.
(9 VAC 5-20-160 and 9 VAC 5-170-60)

PART III - DOCUMENT LIST

1. Burlington Industries, Incorporated permit application, dated June 5, 1986, and signed by Philip H. Klein.

2. State Air Pollution Control Board, Region II engineering analysis, dated June 25, 1986.

3. Mohawk Industries, Inc. - Lees Carpets Division letter dated May 30, 2006 and signed by Lane Leonard.

Attachment E

December 12, 1990 Minor NSR Permit

copy to Def. Nat'l Fac

DTE-724-90

WALLACE E. REED, CHAIRMAN
CHARLOTTESVILLE

TIMOTHY E. BARROW,
VICE CHAIRMAN
VIRGINIA BEACH

SAM C. BROWN, JR.
VIRGINIA BEACH

RICHARD L. COOK
RICHMOND

MANUEL DEESE
RICHMOND

COMMONWEALTH of VIRGINIA

Department of Air Pollution Control
ROOM 801, NINTH STREET OFFICE BUILDING
POST OFFICE BOX 10089
RICHMOND, VIRGINIA 23240
(804) 786-2378
FAX # (804) 225-3933
TDD # (804) 371-8471

WALLACE N. DAVIS
EXECUTIVE DIRECTOR

December 12, 1990

Mr. P. H. Klein
Director of Corporate Engineering
Burlington Industries, Inc.
Lees Commercial Carpet Division
404 Anderson Street
Glasgow, VA 24555

Location: Glasgow
Registration No: 20269
County-Plant No: 2740-0001

Dear Mr. Klein:

Attached is a permit to construct and operate a second Ilma dye line at your Glasgow facility in accordance with the provisions of the Commonwealth of Virginia Regulations for the Control and Abatement of Air Pollution.

In the course of evaluating the application and arriving at a final decision to approve the project, the Virginia Department of Air Pollution Control (VDAPC) deemed the application complete on October 22, 1990.

This approval to construct and operate shall not relieve Burlington Industries, Inc. of the responsibility to comply with all other local, State and Federal permit requirements.

If you have any questions concerning this permit, please contact the Director, Region II, at (703) 857-7328.

Sincerely,

Wallace N. Davis

Wallace N. Davis
Executive Director

WND/AOE/AAH/edb

cc: Director, Division of Technical Evaluation
Director, Division of Computer Services
Director, Region II
Suite A, 5338 Peters Creek Road
Roanoke, VA 24019

An Equal Opportunity Employer

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CHARLOTTESVILLE

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VICE CHAIRMAN
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RICHMOND

COMMONWEALTH of VIRGINIA

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RICHMOND, VIRGINIA 23240
(804) 786-2378
FAX # (804) 225-3933
TDD # (804) 371-8471

WALLACE N. DAVIS
EXECUTIVE DIRECTOR

STATIONARY SOURCE PERMIT TO CONSTRUCT AND OPERATE

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

Burlington Industries, Inc.
404 Anderson Street
Glasgow, Virginia 24555
Registration No: 20269
County-Plant No: 2740-0001

is authorized to construct and operate

a second Ilma dye line (#2 Ilma Dye Line)

located at

404 Anderson Street, 1/2 mile northwest of the junction of Routes 501 and 130 in Glasgow, Virginia

in accordance with the Conditions of this permit.

Approved on December 12, 1990.

Wallace N. Davis

Wallace N. Davis
Executive Director

Permit consists of 6 pages.
Part I - Specific Conditions 1 to 9.
Part II - General Conditions 1 to 13.
Part III - Document List, 9 items.

PART I - SPECIFIC CONDITIONS - the regulatory reference and authority for each condition is listed in parenthesis ( ) after each condition.

1. Burlington Industries' Glasgow facility is located at 404 Anderson Street, 1/2 mile northwest of the junction of Routes 501 and 130 in Glasgow, Virginia.

2. The permitted facility is to be constructed and operated as represented in the permit application dated April 23, 1990. No changes in the permit application specifications or the permitted facility shall be made which increase the emissions into ambient air or increase the impact of the facility on air quality without the prior written approval of the Department.
(Sections 120-02-11 and 120-08-01 C.3 of State Regulations)

3. Equipment to be constructed and operated consists of:

   - a second Ilma dye line (#2 Ilma Dye Line) having a nominal maximum operating throughput of 1.85 tons of dyeing solution per 1.54 tons of fabric per hour.

4. Volatile organic compound emissions from the #2 Ilma Dye Line shall be controlled by limiting the amount of volatile organic compounds within the dyeing solution to 0.0784 percent by weight. The permittee shall supply samples of the dyeing solution at any time upon request by the Department. The dye line shall be provided with adequate access for inspection.
(Section 120-08-01 F of State Regulations)

5. The annual consumption of dyeing solution shall not exceed 16,170 tons.
(Section 120-02-11 of State Regulations)

6. Emissions from the operation of the #2 Ilma Dye Line shall not exceed the limitations specified below:

Volatile Organic Compounds	2.9 lbs/hr	12.7 tons/yr

(Sections 120-05-0403 and 120-05-0303 of State Regulations)

7. Visible emissions from the #2 Ilma Dye Line exhaust stacks shall not exceed 5 percent opacity.
(Section 120-02-11 of State Regulations)

8. An opacity test shall be conducted on the dye line. The details of the test shall be arranged with the Director, Region II.
(Sections 120-02-11 and 120-05-02 of State Regulations)

9. Emissions of ethanol and 2-ethyl hexanol from the #2 Ilma Dye Line are presently exempt from regulation because the uncontrolled emission rates are less than the emission rates specified in Table 5-3 of the regulations. Burlington Industries shall notify the Director, Region II prior to changing the dye formulation which may increase or change the VOC content of the dye used in this line.
(Section 120-02-11 of State Regulations)

PART II - GENERAL CONDITIONS

1. The permittee shall furnish written notification to the Board, (Director, Region II) of:

   a. the actual date on which construction of the dye line commenced within 30 days after such date, and

   b. the actual start-up date of the dye line within 15 days after such date.

   (Section 120-05-05 of State Regulations)

2. The permitted facility shall be constructed so as to allow for emissions testing using appropriate methods upon reasonable notice at any time.
(Section 120-05-03 F of State Regulations)

3. The permittee shall retain records of all emission data and operating parameters required by the terms of this permit. Such records shall be current for the most recent three years and shall include, but are not limited to:

   a. the daily, weekly and monthly throughput of dyeing solution used in the #2 Ilma Dye Line,

   b. the daily, weekly and monthly throughput of material dyed in the #2 Ilma Dye Line, and

   c. an analysis of the dyeing solution having the highest concentration of volatile organic compounds by weight to be used in the #2 Ilma Dye Line for each month. This analysis shall include the concentration by weight of each volatile organic compound within the dyeing solution.

   (Section 120-05-05 of State Regulations)

4. The permittee shall develop, maintain, and have available to all operators good written procedures for operation of the dye line. Records of service and maintenance shall be maintained on file by the source for the most current three-year period.
(Section 120-01-11 of State Regulations)

5. If, for any reason, the permitted facility or related air pollution control equipment fails or malfunctions and may cause excess emissions for more than one hour, the owner shall notify the Department (Director, Region II) by telephone or telegraph within 4 daytime business hours. In addition, the owner shall provide a written statement explaining the problem and the estimated duration of the breakdown.
(Section 120-02-34 of State Regulations)

6. This permit may be modified or revoked in whole or in part for cause, including, but not limited to, the following:

   a. Violation of any terms or conditions of this permit;

   b. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts;

   c. A change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge; or

   d. Information that the permitted discharge of any pollutant poses a threat to human health, welfare, or the environment.

   (Sections 120-02-11 and 120-08-01 of State Regulations)

7. This approval shall become invalid if construction is not commenced within eighteen months of the date of this permit or if it is discontinued for a period of 18 months.
(Section 120-08-01 I of State Regulations)

8. In the event of any change in control of ownership of the permitted source, the permittee shall notify the succeeding owner of the existence of this permit by letter and send a copy of that letter to the Director, Region II.
(Section 120-02-11 of State Regulations)

9. The conditions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of that provision to other circumstances, and the remainder of this permit, shall not be affected thereby.
(Section 120-02-11 of State Regulations)

10. This permit approval is only applicable to the permit requirements of the State Air Pollution Control Board and does not alter permit requirements by any other local, state, or federal government agency. The permittee is cautioned that approval of this permit should not be construed to mean its operation is automatically in compliance with all aspects of the Regulations for the Control and Abatement of Air Pollution. Initial compliance shall be verified by stack test, visual emissions evaluation, and by other means (process rate, operating practice, etc.). Continuing compliance shall be verified by Department personnel by constant surveillance in accordance with the State Air Pollution Control Board Regulations. Compliance with all air pollution regulations must be a continuing, full time effort.
(Section 120-02-11 of State Regulations)

11. Annual requirements to fulfill legal obligations to maintain current stationary source emissions data will necessitate your prompt response to requests for information to include, as appropriate: fuel consumption by type, heat value, sulfur and ash content; process and production data; refuse disposal by incineration including auxiliary fuels burned; storage, handling and use of liquid organic compounds; and, changes in stack data, control equipment, and operating schedules. Such requests for information from the Department will either be in writing or by personal contact. The availability of information submitted to the Department or the Board will be governed by applicable provisions of the Freedom of Information Act, §§ 2.1-340 through 2.1-348 of the Code of Virginia, § 10.1-1314 (addressing information provided to the Board), and § 120-02-30 of the State Air Pollution Control Board Regulations. Information provided to federal officials is subject to appropriate federal law and regulations governing confidentiality of such information.
(Section 120-02-31 of State Regulations)

12. A copy of this permit shall be maintained on the premises of the facility to which it applies.
(Section 120-02-11 of State Regulations)

13. The permittee shall allow authorized state and federal representatives, upon the presentation of credentials:

    a. to enter the permittee's premises on which the facility is located or in which any records are required to be kept under the terms and conditions of this permit;

    b. to have access to and copy at reasonable times any records required to be kept under the terms and conditions of this permit or the State Air Pollution Control Board Regulations;

c. to inspect at reasonable times any facility, equipment, or process subject to the terms and conditions of this permit or the State Air Pollution Control Board Regulations; and

d. to sample or test at reasonable times. For the purposes of this section, the time for inspection shall be deemed reasonable during regular business hours or whenever the facility is in operation. Nothing contained herein shall make an inspection time unreasonable during an emergency.

(Section 120-02-11 of State Regulations)

PART III - DOCUMENT LIST

1. Burlington Industries permit application dated April 23, 1990 signed by Mr. P. H. Klein, Director of Corporate Engineering.

2. Burlington Industries submittal of MSD sheets for wetting agent used in Ilma Dye Line dated May 21, 1990 signed by Don A. Brown, Environmental Engineer.

3. Burlington Industries submittal of toxicological data concerning 2-ethyl hexanol dated July 10, 1990 signed by Don A. Brown.

4. Department of Air Pollution Control notification of receipt of permit application to the U. S. Forest Service, Jefferson National Forest dated September 21, 1990 signed by Andrew A. Hetz, Air Pollution Control Engineer.

5. Handwritten calculation of fuel cost for thermal incineration of #2 Ilma Dye Line VOC emissions given to the Department during an October 4, 1990 inspection by Don A. Brown.

6. Burlington Industries submittal of maximum ethanol and 2-ethyl hexanol emissions from the Kuster Dye Line dated October 18, 1990 signed by Don A. Brown.

7. Department of Air Pollution Control notification letter to the County Administrator of Rockbridge County, dated October 29, 1990.

8. Department of Air Pollution Control engineering analysis, dated November 7, 1990.

9. Department of Air Pollution Control submittal of permit engineering analysis and draft permit to U. S. Forest Service, Jefferson National Forest dated November 9, 1990 signed by Andrew A. Hetz.

Attachment F

December 10, 1999 Minor NSR Permit
(Amended June 29, 2006)

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

VALLEY REGIONAL OFFICE
4411 Early Road, P.O. Box 3000, Harrisonburg, Virginia 22801
(540) 574-7800 Fax (540) 574-7878
www.deq.virginia.gov

Preston Bryant
Secretary of Natural Resources

David K. Paylor
Director

R. Bradley Chewning, P.E.
Regional Director

June 29, 2006

Mr. Lane Leonard
Vice President of Manufacturing
Mohawk Industries, Inc. - Lees Carpets Division
404 Anderson Street
Glasgow, Virginia 24555

Location: Rockbridge County
Registration No.: 80269
Plant ID No.: 51-163-0001

Dear Mr. Leonard:

Attached is a minor amendment to your new source review permit dated December 10, 1999 to modify and operate the #1 carpet yarn dye line (Ref. YD1) in accordance with the provisions of the Virginia Regulations for the Control and Abatement of Air Pollution. Please note that Condition 13 of the permit dated December 10, 1999 has been removed because it is no longer applicable since the #1 carpet yarn dye line is subject to 40 CFR 63, Subpart OOOO. In addition, please note that the regulatory citations have been updated with this permit amendment. This permit replaces your permit dated December 10, 1999.

This permit contains legally enforceable conditions. Failure to comply may result in a Notice of Violation and civil penalty Please read all permit conditions carefully.

In the course of evaluating the application and arriving at a final decision to approve the project, the Department of Environmental Quality (DEQ) deemed the application complete on June 2, 2006.

This permit approval to modify and operate shall not relieve Mohawk Industries, Inc. – Lees Carpets Division of the responsibility to comply with all other local, state, and federal permit regulations.

The Board's Regulations as contained in Title 9 of the Virginia Administrative Code 5-170-200 provide that you may request a formal hearing from this case decision by filing a petition with the Board within 30 days after this case decision notice was mailed or delivered to you. 9 VAC 5-170-180 provides that you may request direct consideration of the decision by the Board if the Director of the DEQ made the decision. Please consult the relevant regulations for additional requirements for such requests.

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

David K. Paylor, Director
Department of Environmental Quality
P. O. Box 10009
Richmond, VA 23240-0009

If this permit was delivered to you by mail, three days are added to the thirty-day period in which to file an appeal. Please refer to Part Two A of the Rules of the Supreme Court of Virginia for information on the required content of the Notice of Appeal and for additional requirements governing appeals from decisions of administrative agencies.

If you have any questions concerning this permit, please call Bobby Lute at (540) 574-7820.

Sincerely,

Larry M. Simmons, P.E.
Deputy Regional Director

Attachment: Permit

cc. Director, OAPP (electronic file submission)
Manager, Data Analysis (electronic file submission)

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

STATIONARY SOURCE PERMIT TO MODIFY AND OPERATE

This permit replaces your permit dated December 10, 1999.

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

Mohawk Industries, Inc. - Lees Carpets Division
404 Anderson Street
Glasgow, Virginia 24555
Registration No.: 80269
Plant ID No.: 51-163-0001

is authorized to modify and operate

the #1 carpet yarn dye line (Ref. YD1)

located at

404 Anderson Street
Glasgow, Rockbridge County, Virginia

in accordance with the Conditions of this permit.

Approved on December 10, 1999

Amended on June 27, 2006

Deputy Regional Director, Valley Region

Permit consists of 7 pages.
Permit Conditions 1 to 25.
Source Testing Report Format.

PERMIT CONDITIONS - the regulatory reference or authority for each condition is listed in parentheses ( ) after each condition.

APPLICATION

1. Except as specified in this permit, the permitted facility is to be modified and operated as represented in the permit applications dated November 13, 1999 and May 30, 2006, including amendment information dated November 23, 1999, and December 1, 3 and 6, 1999. Any changes in the permit application specifications or any existing facilities which alter the impact of the facility on air quality may require a permit. Failure to obtain such a permit prior to construction may result in enforcement action.
   (9 VAC 5-50-390 and 9 VAC 5-80-1210 D)

PROCESS REQUIREMENTS

2. **Equipment List** - Equipment to be modified at this facility consists of:

   - #1 carpet yarn dye line with a rated capacity of 3,900 lbs yarn/hr (Ref. YD1)

   (9 VAC 5-80-1100)

3. **Emission Controls** - Volatile organic compound emissions from the carpet yarn dye are limited to 0.0005 pounds VOC per pound of yarn dye as applied, calculated as a monthly weighted average.
   (9 VAC 5-50-260)

4. **Emission Controls** - Volatile organic compound emissions from the carpet yarn lubricant are limited to 0.003 pounds VOC per pound of yarn lubricant as applied, calculated as a monthly weighted average.
   (9 VAC 5-50-260)

5. **Monitoring Devices** - Each process steam line for the #1 carpet yarn dye line (Ref. YD1) shall be equipped with a steam flow meter and a 7-day circular chart recorder. Each monitoring device shall be installed, maintained, calibrated and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations. Each monitoring device shall be provided with adequate access for inspection and shall be in operation when the #1 carpet yarn dye line (Ref. YD1) is operating.
   (9 VAC 5-80-1180, 9 VAC 5-50-20 C and 9 VAC 5-50-260)

OPERATING/EMISSION LIMITATIONS

6. **Operating Hours** - The #1 carpet yarn dye line shall not operate more than 7,500 hours per year, calculated monthly as the sum of each consecutive 12-month period.
   (9 VAC 5-80-1180)

7. **Throughput** - The throughput of carpet yarn dye shall not exceed 3,416,400 pounds per month.
(9 VAC 5-80-1180)

8. **Throughput** - The throughput of carpet yarn dye shall not exceed 35,100,000 pounds per year, calculated monthly as the sum of each consecutive 12-month period.
(9 VAC 5-80-1180)

9. **Throughput** - The throughput of carpet yarn lubricant shall not exceed 284,700 pounds per month.
(9 VAC 5-80-1180)

10. **Throughput** - The throughput of carpet yarn lubricant shall not exceed 2,925,000 pounds per year, calculated monthly as the sum of each consecutive 12-month period.
(9 VAC 5-80-1180)

11. **Throughput** - The average throughput of steam to the #1 carpet yarn dye line (Ref. YD1) shall not exceed 10,968 pounds per hour, calculated on a weekly basis.
(9 VAC 5-80-1180)

12. **Emission Limits** - Emissions from the operation of the #1 carpet yarn dye line (Ref. YD1) shall not exceed the limits specified below:

Volatile Organic Compounds	3.5 lbs/hr	13.2 tons/yr

(9 VAC 5-50-260)

13. **Visible Emission Limit** - Visible emissions from each exhaust stack (YD1-1, YD1-2, YD1-3) of the #1 carpet yarn dye line (Ref. YD1) shall not exceed 5 percent opacity as determined by the EPA Method 9 (reference 40 CFR 60, Appendix A).
(9 VAC 5-50-80 and 9 VAC 5-50-260)

INITIAL COMPLIANCE DETERMINATION

14. **Visible Emissions Evaluation** – A Visible Emission Evaluations (VEE) in accordance with 40 CFR Part 60, Appendix A, Method 9, shall be conducted by the permittee on each exhaust stack (YD1-1, YD1-2, YD1-3) of the #1 carpet yarn dye line (Ref. YD1). Each test shall consist of ten sets of 24 consecutive observations (at 15 second intervals) to yield a six-minute average. The details of the tests are to be arranged with the Director, Valley Regional Office. The evaluation shall be performed, and demonstrate compliance within 60 days after achieving the maximum production rate at which the facility will be operated but in no event later than 180 days after start-up of the permitted facility. One copy of the test result shall be submitted to the Director, Valley Regional Office, within 60 days after test completion and shall conform to the test report format enclosed with this permit.
(9 VAC 5-50-30 and 9 VAC 5-80-1200)

RECORDS

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

    a. Weekly hours of operation of the #1 carpet yarn dye line (Ref. YD1)

    b. Monthly hours of operation of the #1 carpet yarn dye line (Ref. YD1).

    c. Annual hours of operation of the #1 carpet yarn dye line (Ref. YD1), calculated monthly as the sum of each consecutive 12-month period.

    d. Monthly throughput of carpet yarn dye (in pounds) used in the #1 carpet yarn dye line (Ref. YD1).

    e. Annual throughput of carpet yarn dye (in pounds) used in the #1 carpet yarn dye line (Ref. YD1), calculated monthly as the sum of each consecutive 12-month period.

    f. Monthly throughput of carpet yarn lubricant (in pounds) used in the #1 carpet yarn dye line (Ref. YD1).

    g. Annual throughput of carpet yarn lubricant (in pounds) used in the #1 carpet yarn dye line (Ref. YD1), calculated monthly as the sum of each consecutive 12-month period.

    h. Hourly throughput of process steam (in pounds) used by the #1 carpet yarn dye line (Ref. YD1), calculated as a weekly average.

    i. Hourly VOC emissions (in pounds) from the #1 carpet yarn dye line (Ref. YD1), calculated as a monthly average.

    j. Annual VOC emissions (in tons) from the #1 carpet yarn dye line (Ref. YD1), calculated as the sum of each consecutive 12-month period.

    k. VOC content of carpet yarn dyes (in pounds per pound of yarn dye), calculated as a monthly weighted average.

    l. VOC content of carpet yarn lubricants (in pounds per pound of yarn lubricant), calculated as a monthly weighted average.

    m. Material Safety Data Sheets (MSDS) or other vendor information showing VOC content, HAP content, water content, and solids content for each carpet yarn dye component and carpet yarn lubricant component.

n. Operation and control device monitoring records for the #1 carpet yarn dye line (Ref. YD1) process steam flow meter(s) and 7-day circular chart recorder(s).

o. Results of all stack tests, visible emission evaluations and performance evaluations.

These records shall be available for inspection by the DEQ and shall be current for the most recent five years.
(9 VAC 5-50-50)

16. **Testing/Monitoring Ports** - The permitted facility shall be constructed so as to allow for emissions testing upon reasonable notice at any time, using appropriate methods. Test ports shall be provided when requested at the appropriate locations.
(9 VAC 5-50-30 F)

NOTIFICATIONS

17. **Initial Notifications** - The permittee shall furnish written notification to the Director, Valley Regional Office:

a. The actual date on which modification of the #1 carpet yarn dye line (Ref. YD1) commenced within 30 days after such date.

b. The actual start-up date of the #1 carpet yarn dye line (Ref. YD1) within 15 days after such date.

c. The anticipated date of the Visible Emissions Evaluation (VEE) of each exhaust stack (YD1-1, YD1-2, YD1-3) of the #1 carpet yarn dye line (Ref. YD1) postmarked at least 30 days prior to such date.

(9 VAC 5-50-50)

GENERAL CONDITIONS

18. **Permit Invalidation** - This permit to modify the #1 carpet yarn dye line (Ref. YD1) shall become invalid, unless an extension is granted by the DEQ, if:

a. A program of continuous modification is not commenced before the latest of the following:

i. 18 months from the date of this permit;

ii. Nine months from the date that the last permit or other authorization was issued from any other governmental agency;

iii. Nine months from the date of the last resolution of any litigation concerning any such permits or authorization; or

b. A program of modification is discontinued for a period of 18 months or more, or is not completed within a reasonable time, except for a DEQ approved period between phases of a phased construction project.

(9 VAC 5-80-1210)

19. **Right of Entry** - The permittee shall allow authorized local, state, and federal representatives, upon the presentation of credentials:

a. To enter upon the permittee's premises on which the facility is located or in which any records are required to be kept under the terms and conditions of this permit;

b. To have access to and copy at reasonable times any records required to be kept under the terms and conditions of this permit or the State Air Pollution Control Board Regulations;

c. To inspect at reasonable times any facility, equipment, or process subject to the terms and conditions of this permit or the State Air Pollution Control Board Regulations; and

d. To sample or test at reasonable times.

For purposes of this condition, the time for inspection shall be deemed reasonable during regular business hours or whenever the facility is in operation. Nothing contained herein shall make an inspection time unreasonable during an emergency.
(9 VAC 5-170-130)

20. **Notification for Facility or Control Equipment Malfunction** - The permittee shall furnish notification to the Director, Valley Regional Office, of malfunctions of the affected facility or related air pollution control equipment that may cause excess emissions for more than one hour, by facsimile transmission, telephone or telegraph. Such notification shall be made as soon as practicable but not later than four daytime business hours of the malfunction. The permittee shall provide a written statement giving all pertinent facts, including the estimated duration of the breakdown, within 14 days of the occurrence. When the condition causing the failure or malfunction has been corrected and the equipment is again in operation, the permittee shall notify Director, Valley Regional Office, in writing.
(9 VAC 5-20-180 C)

21. **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)

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

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

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

    c. Fails to comply with any emission standards applicable to the equipment listed in Condition 2;

    d. Causes emissions from this facility which result in violations of, or interferes with the attainment and maintenance of, any ambient air quality standard;

    e. Fails to operate this facility in conformance with any applicable control strategy, including any emission standards or emission limitations, in the State Implementation Plan in effect on the date that the application for this permit is submitted;

    f. Fails to modify or operate this facility in accordance with the application for this permit or any amendments to it; or

    g. Allows the permit to become invalid.

    (9 VAC 5-80-1200)

23. **Change of Ownership** - In the case of a transfer of ownership of a stationary source, the new owner shall abide by any current permit issued to the previous owner. The new owner shall notify the Director, Valley Regional Office, of the change of ownership within 30 days of the transfer.
    (9 VAC 5-80-1240)

24. **Registration/Update** - Annual requirements to fulfill legal obligations to maintain current stationary source emissions data will necessitate a prompt response by the permittee to requests by the DEQ or the Board for information to include, as appropriate: process and production data; changes in control equipment; and operating schedules. Such requests for information from the DEQ will either be in writing or by personal contact. The availability of information submitted to the DEQ or the Board will be governed by applicable provisions of the Freedom of Information Act, §§ 2.2-3700 through 2.2-3714 of the Code of Virginia, § 10.1-1314 (addressing information provided to the Board) of the Code of Virginia, and 9 VAC 5-170-60 of the State Air Pollution Control Board Regulations. Information provided to federal officials is subject to appropriate federal law and regulations governing confidentiality of such information.
    (9 VAC 5-170-60 and 9 VAC 5-20-160)

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

SOURCE TESTING REPORT FORMAT

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

Certification
1. Signed by team leader / certified observer (include certification date)
*2. Signed by reviewer

Introduction
1. Test purpose
2. Test location, type of process
3. Test dates
*4. Pollutants tested
5. Test methods used
6. Observers' names (industry and agency)
7. Any other important background information

Summary of Results
1. Pollutant emission results / visible emissions summary
2. Input during test vs. rated capacity
3. Allowable emissions
*4. Description of collected samples, to include audits when applicable
5. Discussion of errors, both real and apparent

Source Operation
1. Description of process and control devices
2. Process and control equipment flow diagram
3. Process and control equipment data

* Sampling and Analysis Procedures
1. Sampling port location and dimensioned cross section
2. Sampling point description
3. Sampling train description
4. Brief description of sampling procedures with discussion of deviations from standard methods
5. Brief description of analytical procedures with discussion of deviation from standard methods

Appendix
*1. Process data and emission results example calculations
2. Raw field data
*3. Laboratory reports
4. Raw production data
*5. Calibration procedures and results
6. Project participants and titles
7. Related correspondence
8. Standard procedures

* Not applicable to visible emission evaluations.

Attachment G

December 5, 1997 Minor NSR Permit

file

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

George Allen
Governor

Becky Norton Dunlop
Secretary of Natural Resources

Valley Regional Office

Street address: 4411 Early Road, Harrisonburg, Virginia 22801
Mailing address: P.O. Box 1129, Harrisonburg, Virginia 22801-1129
Telephone (540) 574-7800 Fax (540) 574-7878
http://www.deq.state.va.us

Thomas L. Hopkins
Director

R. Bradley Chewning, P.E.
Valley Regional Director

December 5, 1997

Mr. Terry L. Fripp
Director Corporate Engineering
Burlington Industries - Lees Carpets Division
404 Anderson Street
Glasgow, VA 24555

Location: Rockbridge County
Registration No: 20269
County-Plant No: 163-0001

Dear Mr. Fripp:

Attached is an amendment to the permit dated April 7, 1994 to reconstruct and operate a replacement storage silo in accordance with the provisions of the Commonwealth of Virginia State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution. Permit changes are reflected in Conditions 3, 5 and 6. These changes include allowing transfer emissions from the silo to the mixer to be vented through the silo fabric filter and increasing the daily and annual throughput of calcium carbonate. Additionally, the permit has been amended to reflect the substitution of calcium carbonate for aluminum trihydrate, in accordance with your letter dated October 26, 1995. This permit supersedes your permit dated April 7, 1994.

The permit contains legally enforceable conditions. Failure to comply may result in a Notice of Violation and civil penalty. Please read all permit conditions carefully.

In the course of evaluating the application and arriving at a final decision to approve the project, the Department of Environmental Quality (DEQ) deemed the application complete on November 14, 1997.

This approval to modify and operate shall not relieve Burlington Industries - Lees Carpets Division of the responsibility to comply with all other local, state and federal permit regulations.

9 VAC 5-20-90 (formerly Section 120-02-09) of the Board's Regulations provides that you may request a formal hearing from this case decision by filing a petition with the Board within 30 days after this case decision notice was mailed to you. Please consult the relevant regulations for additional requirements for such requests.

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

Thomas L. Hopkins, Director
Department of Environmental Quality
P.O. Box 10009
Richmond, Virginia 23240-0009

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

If you have any questions concerning this permit, please call Patty Buonviri of the Valley Regional Office at (540)574-7823.

Sincerely

Larry M. Simmons, P.E.
Regional Permit Manager

Enclosure: Permit

cc: Director, OPATS (electronic file submission)
Manager, Data Analysis (electronic file submission)
Manager, Enforcement and Compliance (electronic file submission)

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

STATIONARY SOURCE PERMIT TO RECONSTRUCT AND OPERATE

This permit supersedes your permit dated April 7, 1994.

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

Burlington Industries
Lees Carpets Division
404 Anderson Street
Glasgow, VA 24555
Registration No. 20269
County-Plant No. 163-0001

is authorized to reconstruct and operate

a replacement storage silo

located at

404 Anderson Street
Glasgow, Virginia

in accordance with the Conditions of this permit.

Approved on December 5, 1997.

Harry M. Seemann
for Director, Department of Environmental Quality

Permit consists of 6 pages.
Permit Conditions 1 to 19.

PERMIT CONDITIONS - the regulatory reference and authority for each condition is listed in parentheses ( ) after each condition.

1. Except as specified in this permit, the permitted facility is to be reconstructed and operated as represented in the permit applications dated March 2, 1994 and October 28, 1997, including amendment sheets dated April 5, 1994 and November 10, 1997. Any changes in the permit application specifications or any existing facilities which alter the impact of the facility on air quality may require a permit. Failure to obtain such a permit prior to construction may result in enforcement action.
(9 VAC 5-20-110 (formerly Section 120-02-11) of State Regulations)

2. Equipment to be reconstructed consists of:

   - one (1) VAE Latex Filler Silo with a storage capacity of 5493 cubic feet (Ref. 30)

3. Particulate emissions from the filling of the VAE latex filler silo and the return air from the transfer of filler from the VAE latex filler silo to the VAE latex mixer shall be controlled by a fabric filter. The fabric filter shall be provided with adequate access for inspection. The fabric filter shall be equipped with a device to continuously measure the differential pressure drop across the fabric filter. 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 5-80-10 H and 9 VAC 5-50-260 (formerly Sections 120-08-01 H and 120-05-0403) of State Regulations)

4. The permitted facility shall be constructed so as to allow for emissions testing upon reasonable notice at any time, using appropriate methods. Test ports shall be provided at the appropriate locations.
(9 VAC 5-50-30 F (formerly Section 120-05-03 F) of State Regulations)

5. The VAE latex filler silo operation shall process no more than 130,000 pounds per day, calculated as the sum of each consecutive 24 hour period.
(9 VAC 5-20-110 (formerly Section 120-02-11) of State Regulations)

6. The annual throughput of calcium carbonate shall not exceed 4420 tons, calculated monthly as the sum of each consecutive 12 month period.
(9 VAC 5-20-110 (formerly Section 120-02-11) of State Regulations)

7. Visible emissions from the VAE latex filler silo fabric filter exhaust shall not exceed 5 percent opacity as determined by EPA Method 9 (reference 40 CFR 60, Appendix A). This condition applies at all times except during start-up, shutdown and malfunction. A visible emissions evaluation (VEE) shall be conducted on the VAE latex filler silo fabric filter exhaust. The details of the test shall be arranged with the Director, Valley Regional Office.
(9 VAC 5-20-110 and 9 VAC 5-50-20 (formerly Sections 120-02-11 and 120-05-02) of State Regulations)

8. The permittee shall furnish written notification to the Director, Valley Regional Office, of the anticipated date of the VEE postmarked at least thirty (30) days prior to such date.
(9 VAC 5-20-110 (formerly Section 120-02-11) of State Regulations)

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

   a. The yearly throughput of calcium carbonate, calculated monthly as the sum of each consecutive 12 month period.

   b. The amount of calcium carbonate received, calculated daily as the sum of each consecutive 24 hour period.

   These records shall be available for inspection by the DEQ and shall be current for the most recent five (5) years.
   (9 VAC 5-50-50 (formerly Section 120-05-05) of State Regulations)

10. This permit may be modified or revoked in whole or in part for cause, including, but not limited to, the following:

    a. Violation of any terms or conditions of this permit;

    b. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts;

    c. A change in any condition that requires either a temporary or permanent reduction or elimination of a permitted discharge; or

d. Information that the permitted discharge of any pollutant poses a threat to human health, welfare, or the environment.

(9 VAC 5-20-110 and 9 VAC 5-80-10 (formerly Sections 120-02-11 and 120-08-01) of State Regulations)

11. The permittee shall allow authorized local, state and federal representatives, upon the presentation of credentials:

a. To enter upon the permittee's premises on which the facility is located or in which any records are required to be kept under the terms and conditions of this permit;

b. To have access to and copy at reasonable times any records required to be kept under the terms and conditions of this permit or the State Air Pollution Control Board Regulations;

c. To inspect at reasonable times any facility, equipment, or process subject to the terms and conditions of this permit or the State Air Pollution Control Board Regulations; and

d. To sample or test at reasonable times.

For purposes of this condition, the time for inspection shall be deemed reasonable during regular business hours or whenever the facility is in operation. Nothing contained herein shall make an inspection time unreasonable during an emergency.
(9 VAC 5-20-110 (formerly Section 120-02-11) of State Regulations)

12. If, for any reason, the permitted facility or related air pollution control equipment fails or malfunctions and may cause excess emissions for more than one hour, the owner shall notify the Director, Valley Regional Office, within four (4) business hours of the occurrence. In addition, the owner shall provide a written statement, within 14 days, explaining the problem, corrective action taken, and the estimated duration of the breakdown/shutdown.
(9 VAC 5-20-180 (formerly Section 120-02-34) of State Regulations)

13. In order to minimize the duration and frequency of excess emissions due to malfunctions of process equipment or air pollution control equipment, the permittee shall:

    a. Develop a maintenance schedule and maintain records of all scheduled and non-scheduled maintenance. These records shall be maintained on site for a period of five (5) years and shall be made available to DEQ personnel upon request.

    b. Maintain an inventory of spare parts that are needed to minimize durations of air pollution control equipment breakdowns.

    (9 VAC 5-20-110 (formerly Section 120-02-11) of State Regulations)

14. The permittee shall have available written operating procedures for the related air pollution control equipment. Operators shall be trained in the proper operation of all such equipment and shall be familiar with the written operating procedures. These procedures shall be based on the manufacturer's recommendations, at minimum. The permittee shall maintain records of training provided including names of trainees, date of training and nature of training.
    (9 VAC 5-20-110 (formerly Section 120-02-11) of State Regulations)

15. This permit shall become invalid if modification of the proposed carpet manufacturing facility is not commenced within eighteen (18) months of the date of this permit or if it is discontinued for a period of eighteen (18) months.
    (9 VAC 5-80-10 K (formerly Section 120-08-01 K) of State Regulations)

16. This permit shall become invalid if reconstruction of the proposed storage silo is not commenced within eighteen (18) months of the date of this permit or if it is discontinued for a period of eighteen (18) months.
    (9 VAC 5-80-10 K (formerly Section 120-08-01 K) of State Regulations)

17. In the event of any change in control of ownership of the permitted source, the permittee shall notify the succeeding owner of the existence of this permit by letter and send a copy of that letter to the Director, Valley Regional Office.
    (9 VAC 5-20-110 (formerly Section 120-02-11) of State Regulations)

18. Annual requirements to fulfill legal obligations to maintain current stationary source emissions data will necessitate your prompt response to requests for information to include, as appropriate: process and production data, changes in control equipment, and operating schedules. Such requests for information from the DEQ will either be in writing or by personal contact. The availability of information submitted to the DEQ or the Board will be governed by applicable provisions of the Freedom of Information Act, §§ 2.1-340 through 2.1-348 of the Code of Virginia, § 10.1-1314 (addressing information provided to the Board), and 9 VAC 5-20-150 (formerly § 120-02-30) of the State Air Pollution Control Board Regulations. Information provided to federal officials is subject to appropriate federal law and regulations governing confidentiality of such information.
(9 VAC 5-20-160 (formerly Section 120-02-31) of State Regulations)

19. A copy of this permit shall be maintained on the premises of the facility to which it applies.
(9 VAC 5-20-110 (formerly Section 120-02-11) of State Regulations)

Attachment H

March 22, 2002 Minor NSR Permit
(Amended June 29, 2005 and August 31, 2006)

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

VALLEY REGIONAL OFFICE
4411 Early Road, P.O. Box 3000, Harrisonburg, Virginia 22801
(540) 574-7800 Fax (540) 574-7878
www.deq.virginia.gov

Preston Bryant
Secretary of Natural Resources

David K. Paylor
Director

R. Bradley Chewning, P.E.
Regional Director

September 1, 2006

Mr. Lane Leonard
Vice President of Manufacturing
Mohawk Industries, Inc. - Lees Carpets Division
404 Anderson Street
Glasgow, Virginia 24555

Location: Rockbridge County
Registration No.: 80269
Plant ID No.: 51-163-0001

Dear Mr. Leonard:

Attached is a minor amendment to your new source review permit dated March 22, 2002, as amended June 29, 2005, to modify and operate a PVC carpet backing line (PVC1) and a calcium carbonate storage silo (PVCS-C1) in accordance with the provisions of the Virginia State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution. Please note all references to and applicable requirements for the PVC foamback line equipped with a 1.5 MMBtu/hr curing oven (PVC2) have been removed. This permit replaces your permit dated March 22, 2002, as amended June 29, 2005.

This permit contains legally enforceable conditions. Failure to comply may result in a Notice of Violation and civil penalty. Please read all permit conditions carefully.

In the course of evaluating the application and arriving at a final decision to approve the project, the Department of Environmental Quality (DEQ) deemed the application complete on August 15, 2006.

This permit approval to modify and operate shall not relieve Mohawk Industries, Inc. - Lees Carpets Division of the responsibility to comply with all other local, state, and federal permit regulations.

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

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

David K. Paylor, Director
Department of Environmental Quality
P. O. Box 10009
Richmond, VA 23240-0009

If this permit was delivered to you by mail, three days are added to the thirty-day period in which to file an appeal. Please refer to Part Two A of the Rules of the Supreme Court of Virginia for information on the required content of the Notice of Appeal and for additional requirements governing appeals from decisions of administrative agencies.

If you have any questions concerning this permit, please call Bobby Lute at (540) 574-7820.

Sincerely,

for Larry M. Simmons, P.E.
Deputy Regional Director

Attachment: Permit

cc: Director, OAPP (electronic file submission)
Manager, Data Analysis (electronic file submission)

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

STATIONARY SOURCE PERMIT TO MODIFY AND OPERATE

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

Mohawk Industries, Inc. - Lees Carpets Division
404 Anderson Street
Glasgow, Virginia 24555
Registration No.: 80269
Plant ID No.: 51-163-0001

is authorized to modify and operate

a PVC carpet backing line (PVC1) and a calcium carbonate storage silo (PVCS-C1)

located at

404 Anderson Street
Glasgow, Rockbridge County, Virginia

in accordance with the Conditions of this permit.

Approved on March 22, 2002

Amended on June 29, 2005

Amended on August 31, 2006

L. Bradley Chewning
Regional Director, Valley Region

Permit consists of 8 pages.
Permit Conditions 1 to 24.

PERMIT CONDITIONS - the regulatory reference or authority for each condition is listed in parentheses ( ) after each condition.

APPLICATION

1. Except as specified in this permit, the permitted facility is to be modified and operated as represented in the permit applications dated February 10, 2000, December 5, 2001, December 21, 2004, February 14, 2005 and August 15, 2006, including amendment information dated February 11 and 24, 2000, March 2 and 20, 2000 and May 18, 2005, supplemental information dated January 2 and 4, 2002, February 1 and 7, 2002, March 31, 2005 and April 21, 2005 and supplemental information received May 3, 2005. Any changes in the permit application specifications or any existing facilities which alter the impact of the facility on air quality may require a permit. Failure to obtain such a permit prior to construction may result in enforcement action.
(9 VAC 5-50-390 and 9 VAC 5-80-1210 D)

PROCESS REQUIREMENTS

2. **Equipment List** - Previously permitted equipment at this facility prior to the date of this permit consists of:

   - PVC carpet backing line rated at 1,800 square yards of fabric per hour (PVC1)

   - Calcium carbonate storage silo rated at 30 tons per hour (PVCS-C1)

   (9 VAC 5-80-1100)

3. **Emission Controls** - Particulate matter emissions from the PVC carpet backing line (PVC1) shall be controlled by a coalescing filter. The coalescing filter shall be provided with adequate access for inspection and shall be in operation when the PVC carpet backing line (PVC1) is operating.
(9 VAC 5-50-260)

4. **Emission Controls** - Particulate matter emissions from the calcium carbonate storage silo (PVCS-C1) shall be controlled by a fabric filter. The fabric filter shall be provided with adequate access for inspection and shall be in operation when the calcium carbonate storage silo (PVCS-C1) is operating.
(9 VAC 5-50-260)

5. **Monitoring Devices** - The coalescing filter shall be equipped with a device to continuously measure the differential pressure drop across the coalescing filter. 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 when the coalescing filter is operating.
(9 VAC 5-80-1180, 9 VAC 5-50-20 C and 9 VAC 5-50-260)

6. **Monitoring Devices** - The fabric filter shall be equipped with a device to continuously measure the differential pressure drop across the fabric filter. 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 when the fabric filter is operating.
(9 VAC 5-80-1180, 9 VAC 5-50-20 C and 9 VAC 5-50-260)

OPERATING/EMISSION LIMITATIONS

7. **Processing (P2)** - The calcium carbonate storage silo (PVCS-C1) shall process no more than 120.0 tons/day, calculated daily.
(9 VAC 5-80-1180)

8. **Processing (P2)** - The calcium carbonate storage silo (PVCS-C1) shall process no more than 15,500.0 tons/yr, calculated monthly as the sum of each consecutive 12-month period.
(9 VAC 5-80-1180)

9. **Throughput (P2)** - The throughput of plastisol formula to the PVC carpet backing line (PVC1) shall not exceed 283.5 tons/day, calculated daily.
(9 VAC 5-80-1180)

10. **Throughput (P2)** - The throughput of plastisol formula to the PVC carpet backing line (PVC1) shall not exceed 51,328.0 tons/yr, calculated monthly as the sum of each consecutive 12-month period.
(9 VAC 5-80-1180)

11. **Emission Limits (P2)** - Emissions from the operation of the PVC carpet backing line (PVC1) shall not exceed the limits specified below:

Particulate Matter	0.65	lbs/hr	1.50	tons/yr
PM-10	0.65	lbs/hr	1.50	tons/yr
Volatile Organic Compounds			5.81	tons/yr

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

12. **Visible Emission Limit** - Visible emissions from the PVC carpet backing line (PVC1) shall not exceed 5% opacity as determined by EPA Method 9 (reference 40 CFR Part 60, Appendix A). This condition applies at all times except during startup, shutdown, and malfunction.
(9 VAC 5-50-80 and 9 VAC 5-50-260)

13. **Visible Emission Limit** - Visible emissions from the calcium carbonate storage silo (PVCS-C1) shall not exceed 5% opacity as determined by EPA Method 9 (reference 40 CFR Part 60, Appendix A). This condition applies at all times except during startup, shutdown, and malfunction.
(9 VAC 5-50-80 and 9 VAC 5-50-260)

RECORDS

14. **On Site Records** - The permittee shall maintain records of emission data and operating parameters as necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Director, Valley Region. These records shall include, but are not limited to:

    a. Daily hours of operation of the PVC carpet backing line (PVC1).

    b. Daily throughput of plastisol formula (in tons) used in the PVC carpet backing line (PVC1).

    c. Daily throughput of latex (in tons) used in the PVC carpet backing line (PVC1).

    d. Annual throughput of plastisol formula (in tons) used in the PVC carpet backing line (PVC1), calculated monthly as the sum of each consecutive 12-month period.

    e. Annual throughput of latex (in tons) used in the PVC carpet backing line (PVC1), calculated monthly as the sum of each consecutive 12-month period.

    f. Hourly particulate matter and PM-10 emissions (in pounds) from the PVC carpet backing line (PVC1), calculated as a daily average.

    g. Annual particulate matter, PM-10 and VOC emissions (in tons) from the PVC carpet backing line (PVC1), calculated as the sum of each consecutive 12-month period.

    h. Material Safety Data Sheets (MSDS) or other vendor information showing VOC content, HAP content, water content, and solids content for each component of the plastisol formula.

    i. Material Safety Data Sheets (MSDS) or other vendor information showing VOC content, HAP content, water content, and solids content for each component of the latex.

    j. Daily throughput of calcium carbonate (in tons) used in the calcium carbonate storage silo (PVCS-C1).

k. Annual throughput of calcium carbonate (in tons) used in the calcium carbonate storage silo (PVCS-C1), calculated monthly as the sum of each consecutive 12-month period.

These records shall be available for inspection by the DEQ and shall be current for the most recent five years.
(9 VAC 5-50-50)

15. **Testing/Monitoring Ports** - The permitted facility shall be constructed so as to allow for emissions testing and monitoring upon reasonable notice at any time, using appropriate methods. Test ports shall be provided when requested.
(9 VAC 5-50-30 F)

NOTIFICATIONS

16. **Notification for Control Equipment Maintenance** - The permittee shall furnish notification to the Director, Valley Region, of the intention to shut down or bypass, or both, air pollution control equipment for necessary scheduled maintenance, which results in excess emissions for more than one hour, at least 24 hours prior to the shutdown. The notification shall include, but is not limited to, the following information:

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

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

    c. The nature and quantity of emissions of air pollutants likely to occur during the shutdown period;

    d. Measures that will be taken to minimize the length of the shutdown or to negate the effect of the outage.

    (9 VAC 5-20-180 B)

17. **Notification for Facility or Control Equipment Malfunction** - The permittee shall furnish notification to the Director, Valley Region, of malfunctions of the affected facility or related air pollution control equipment that may cause excess emissions for more than one hour, by facsimile transmission, telephone or telegraph. Such notification shall be made as soon as practicable but not later than four daytime business hours after the malfunction is discovered. The permittee shall provide a written statement giving all pertinent facts, including the estimated duration of the breakdown, within 14 days of discovery of the malfunction. When the condition causing the failure or malfunction has been corrected and the equipment is again in operation, the permittee shall notify the Director, Valley Region, in writing.
(9 VAC 5-20-180 C and 9 VAC 5-80-1180)

GENERAL CONDITIONS

18. **Right of Entry** - The permittee shall allow authorized local, state and federal representatives, upon the presentation of credentials:

    a. To enter upon the permittee's premises on which the facility is located or in which any records are required to be kept under the terms and conditions of this permit;

    b. To have access to and copy at reasonable times any records required to be kept under the terms and conditions of this permit or the State Air Pollution Control Board Regulations;

    c. To inspect at reasonable times any facility, equipment, or process subject to the terms and conditions of this permit or the State Air Pollution Control Board Regulations; and

    d. To sample or test at reasonable times.

    For purposes of this condition, the time for inspection shall be deemed reasonable during regular business hours or whenever the facility is in operation. Nothing contained herein shall make an inspection time unreasonable during an emergency.
    (9 VAC 5-170-130 and 9 VAC 5-80-1180)

19. **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 9 VAC 5-80-1180)

20. **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:

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

    b. Maintain an inventory of spare parts.

    c. Have available written operating procedures for equipment. These procedures shall be based on the manufacturer's recommendations, at a minimum.

    d. Train operators in the proper operation of all such equipment and familiarize the operators with the written operating procedures. 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 and 9 VAC 5-80-1180 D)

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

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

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

    c. Fails to comply with any emission standards applicable to the equipment listed in Condition 2;

    d. Causes emissions from this facility which result in violations of, or interferes with the attainment and maintenance of, any ambient air quality standard;

    e. Fails to operate this facility in conformance with any applicable control strategy, including any emission standards or emission limitations, in the State Implementation Plan in effect on the date that the application for this permit is submitted;

    f. Fails to modify or operate this facility in accordance with the application for this permit or any amendments to it; or

    g. Allows the permit to become invalid.

    (9 VAC 5-80-1210 F)

22. **Change of Ownership** - In the case of a transfer of ownership of a stationary source, the new owner shall abide by any current permit issued to the previous owner. The new owner shall notify the Director, Valley Region, of the change in ownership within 30 days of the transfer.
(9 VAC 5-80-1240)

23. **Registration/Update** - Annual requirements to fulfill legal obligations to maintain current stationary source emissions data will necessitate a prompt response by the permittee to requests by the DEQ or the Board for information to include, as appropriate: process and production data; changes in control equipment; and operating schedules. Such requests for information from the DEQ will either be in writing or by personal contact. The availability of information submitted to the DEQ or the Board will be governed by applicable provisions of the Freedom of Information Act, §§ 2.2-3700 through 2.2-3714 of the Code of Virginia, § 10.1-1314 (addressing information provided to the Board) of the Code of Virginia, and 9 VAC 5-170-60 of the State Air Pollution Control Board Regulations. Information provided to federal officials is subject to appropriate federal law and regulations governing confidentiality of such information.
(9 VAC 5-20-160 and 9 VAC 5-170-60)

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

Attachment I

August 12, 2002 Minor NSR Permit
(Amended June 29, 2006)

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

VALLEY REGIONAL OFFICE
4411 Early Road, P.O. Box 3000, Harrisonburg, Virginia 22801
(540) 574-7800 Fax (540) 574-7878
www.deq.virginia.gov

Preston Bryant
Secretary of Natural Resources

David K. Paylor
Director

R. Bradley Chewning, P.E.
Regional Director

June 29, 2006

Mr. Lane Leonard
Vice President of Manufacturing
Mohawk Industries, Inc. - Lees Carpets Division
404 Anderson Street
Glasgow, Virginia 24555

Location: Rockbridge County
Registration No.: 80269
Plant ID No.: 51-163-0001

Dear Mr. Leonard:

Attached is a minor amendment to your new source review permit dated August 12, 2002 to install and operate a hot melt sample line in accordance with the provisions of the Virginia Regulations for the Control and Abatement of Air Pollution. Please note that Condition 5 of the permit dated August 12, 2002 has been designated as state-only enforceable and is now Condition 16. In addition, please note the regulatory citations have been updated with this permit amendment. This permit replaces your permit dated August 12, 2002.

This permit contains legally enforceable conditions. Failure to comply may result in a Notice of Violation and civil penalty. Please read all permit conditions carefully.

In the course of evaluating the application and arriving at a final decision to approve the project, the Department of Environmental Quality (DEQ) deemed the application complete on June 2, 2006.

This permit approval to install and operate shall not relieve Mohawk Industries, Inc. - Lees Carpets Division of the responsibility to comply with all other local, state, and federal permit regulations.

The Board's Regulations as contained in Title 9 of the Virginia Administrative Code 5-170-200 provide that you may request a formal hearing from this case decision by filing a petition with the Board within 30 days after this case decision notice was mailed or delivered to you.

9 VAC 5-170-180 provides that you may request direct consideration of the decision by the Board if the Director of the DEQ made the decision. Please consult the relevant regulations for additional requirements for such requests.

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

David K. Paylor, Director
Department of Environmental Quality
P.O. Box 10009
Richmond, Virginia 23240-0009

If this permit was delivered to you by mail, three days are added to the thirty-day period in which to file an appeal. Please refer to Part Two A of the Rules of the Supreme Court of Virginia for information on the required content of the Notice of Appeal and for additional requirements governing appeals from decisions of administrative agencies.

If you have any questions concerning this permit, please call Bobby Lute at (540) 574-7820.

Sincerely,

Larry M. Simmons

Larry M.Simmons, P.E.
Deputy Regional Director

Attachment: Permit

cc: Director, OAPP (electronic file submission)
Manager, Data Analysis (electronic file submission)

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

STATIONARY SOURCE PERMIT TO INSTALL AND OPERATE

This permit replaces your permit dated August 12, 2002.

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

Mohawk Industries, Inc. - Lees Carpets Division
404 Anderson Street
Glasgow, Virginia 24555
Registration No.: 80269
Plant ID No.: 51-163-0001

is authorized to install and operate

a hot melt sample line

located at

404 Anderson Street
Glasgow, Rockbridge County, Virginia

in accordance with the Conditions of this permit.

Approved on August 12, 2002

Amended on June 29, 2006

Deputy Regional Director, Valley Region

Permit consists of 7 pages.
Permit Conditions 1 to 17.
Attachment A.

PERMIT CONDITIONS - the regulatory reference or authority for each condition is listed in parentheses ( ) after each condition.

APPLICATION

1. Except as specified in this permit, the permitted facility is to be installed and operated as represented in the permit applications dated April 24, 2002, and May 30, 2006, including supplemental information dated May 30, 2002 and amendment information dated July 15, 2002. Any changes in the permit application specifications or any existing facilities which alter the impact of the facility on air quality may require a permit. Failure to obtain such a permit prior to construction may result in enforcement action.
(9 VAC 5-50-390 and 9 VAC 5-80-1210 D)

PROCESS REQUIREMENTS

2. **Equipment List** - Equipment to be installed at this facility consists of:

   - a hot melt sample line rated at 1,333 square yards of fabric per hour

   (9 VAC 5-80-1100)

OPERATING/EMISSION LIMITATIONS

3. **Throughput (P2)** - The throughput of volatile organic compounds (VOC) in the materials used in the hot melt sample line shall not exceed 8.6 tons per year, calculated monthly as the sum of each consecutive 12-month period.
(9 VAC 5-80-1180)

4. **Emission Limits (P2)** - Emissions from the operation of the hot melt sample line shall not exceed the limits specified below:

Volatile Organic Compounds	8.6 tons/yr

   (9 VAC 5-50-260)

RECORDS

5. **On Site Records** - The permittee shall maintain records of emission data and operating parameters as necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Director, Valley Region. These records shall include, but are not limited to:

   a. Annual throughput of VOC (in tons) in the materials used in the hot melt sample line, calculated monthly as the sum of each consecutive 12-month period.

b. Annual VOC emissions (in tons) from the hot melt sample line, calculated monthly as the sum of each consecutive 12-month period.

c. Material Safety Data Sheets (MSDS) or other vendor information showing VOC content, water content, and solids content for each material used in the hot melt sample line.

These records shall be available for inspection by the DEQ and shall be current for the most recent five years.
(9 VAC 5-50-50)

NOTIFICATIONS

6. **Initial Notifications** - The permittee shall furnish written notification to the Director, Valley Region, of:

   a. The actual date on which installation of the hot melt sample line commenced within 30 days after such date.

   b. The actual startup date of the hot melt sample line within 15 days after such date.

   (9 VAC 5-50-50)

7. **Notification for Facility or Control Equipment Malfunction** - The permittee shall furnish notification to the Director, Valley Region, of malfunctions of the affected facility or related air pollution control equipment that may cause excess emissions for more than one hour, by facsimile transmission, telephone or telegraph. Such notification shall be made as soon as practicable but not later than four daytime business hours after the malfunction is discovered. The permittee shall provide a written statement giving all pertinent facts, including the estimated duration of the breakdown, within 14 days of the occurrence. When the condition causing the failure or malfunction has been corrected and the equipment is again in operation, the permittee shall notify the Director, Valley Region, in writing.
(9 VAC 5-50-180 C)

GENERAL CONDITIONS

8. **Permit Invalidation** - This permit to install the hot melt sample line shall become invalid, unless an extension is granted by the DEQ, if:

   a. A program of continuous installation is not commenced before the lastest of the following:

      i. 18 months from the date of this permit;

      ii. Nine months from the date that the last permit or other authorization was issued from any other governmental agency;

iii. Nine months from the date of the last resolution of any litigation concerning any such permits or authorization; or

b. A program of continuous installation is discontinued for a period of 18 months or more, or is not completed within a reasonable time, except for a DEQ approved period between phases of a phased construction project.

(9 VAC 5-80-1210)

9. **Right of Entry** - The permittee shall allow authorized local, state and federal representatives, upon the presentation of credentials:

a. To enter upon the permittee's premises on which the facility is located or in which any records are required to be kept under the terms and conditions of this permit;

b. To have access to and copy at reasonable times any records required to be kept under the terms and conditions of this permit or the State Air Pollution Control Board Regulations;

c. To inspect at reasonable times any facility, equipment, or process subject to the terms and conditions of this permit or the State Air Pollution Control Board Regulations; and

d. To sample or test at reasonable times.

For purposes of this condition, the time for inspection shall be deemed reasonable during regular business hours or whenever the facility is in operation. Nothing contained herein shall make an inspection time unreasonable during an emergency.
(9 VAC 5-170-130)

10. **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)

11. **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:

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

b. Maintain an inventory of spare parts.

c. Have available written operating procedures for equipment. These procedures shall be based on the manufacturer's recommendations, at a minimum.

d. Train operators in the proper operation of all such equipment and familiarize the operators with the written operating procedures. 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)

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

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

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

c. Fails to comply with any emission standards applicable to the equipment listed in Condition 2;

d. Causes emissions from this facility which result in violations of, or interferes with the attainment and maintenance of, any ambient air quality standard;

e. Fails to operate this facility in conformance with any applicable control strategy, including any emission standards or emission limitations, in the State Implementation Plan in effect on the date that the application for this permit is submitted;

f. Fails to install or operate this facility in accordance with the application for this permit or any amendments to it; or

g. Allows the permit to become invalid.

(9 VAC 5-80-1210)

13. **Change of Ownership** - In the case of a transfer of ownership of a stationary source, the new owner shall abide by any current permit issued to the previous owner. The new owner shall notify the Director, Valley Region, of the change in ownership within 30 days of the transfer.
(9 VAC 5-80-1240)

14. **Registration/Update** - Annual requirements to fulfill legal obligations to maintain current stationary source emissions data will necessitate a prompt response by the permittee to requests by the DEQ or the Board for information to include, as appropriate: process and production data; changes in control equipment; and operating schedules. Such requests for information from the DEQ will either be in writing or by personal contact. The availability of information submitted to the DEQ or the Board will be governed by applicable provisions of the Freedom of Information Act, §§ 2.2-3700 through 2.2-3714 of the Code of Virginia, § 10.1-1314 (addressing information provided to the Board) of the Code of

Virginia, and 9 VAC 5-170-60 of the State Air Pollution Control Board Regulations. Information provided to federal officials is subject to appropriate federal law and regulations governing confidentiality of such information.
(9 VAC 5-20-160 and 9 VAC 5-170-60)

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

STATE-ONLY ENFORCEABLE REQUIREMENTS

This section is included pursuant to 9 VAC 5-80-1120 F, and is not required under the federal Clean Air Act or under any of its applicable federal requirements. This section is only enforceable by the Commonwealth of Virginia State Air Pollution Control Board and its designees.

16. **Hazardous Air Pollutants (P2)** - As of the date of this permit, the permittee is limited to use of the following volatile hazardous air pollutants (HAPs) in the materials for the hot melt sample line:

Volatile HAPs	CAS Number
Vinyl Acetate	108-05-4

The permittee may use additional HAPs (listed in Attachment A) in the hot melt sample line under 9 VAC 5-60-300 C without obtaining a new permit provided the following conditions are met:

a. Notification shall be given to the Director, Valley Region. Such notification shall be made within fifteen (15) days after the use of additional HAPs and shall include identification of the HAPs, the date the HAP was first used, and the anticipated maximum throughput of that compound in lbs/hr and tons/yr. Additional details of the notification should be arranged with the Director, Valley Region.

b. The permittee shall operate this facility in compliance with 9 VAC 5 Chapter 60, Article 5, for all HAPs.

c. The permittee shall not use any HAP which would make the facility subject to federal emission standards in 40 CFR 61 or 40 CFR 63.

d. If a permit is required, failure to obtain the permit prior to the change in process formulation or the use of any additional HAP may result in enforcement action.

(9 VAC 5-170-160, 9 VAC 5-60-320 and 9 VAC 5-60-340)

17. **On Site Records** - The permittee shall maintain records of emission data and operating parameters as necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Director, Valley Region. These records shall include, but are not limited to, Material Safety Data Sheets (MSDS) or other vendor information showing HAP content for each material used in the hot melt sample line. These records shall be available for inspection by the DEQ and shall be current for the most recent five years.
(9 VAC 5-50-50)

ATTACHMENT A – HAZARDOUS AIR POLLUTANT LIST

Note 1: Emissions for pollutant listings which do not have a specific CAS number must be totaled when determining major source applicability under Title V and for HAP regulations (i.e. 112(g) & (d)).

CAS#	NAME
see Note 1	ANTIMONY COMPOUNDS [1]
see Note 1	ARSENIC COMPOUNDS
see Note 1	BERYLLIUM COMPOUNDS
see Note 1	CADMIUM COMPOUNDS
see Note 1	CHROMIUM COMPOUNDS
see Note 1	COBALT COMPOUNDS
see Note 1	COKE OVEN EMISSIONS
see Note 1	CYANIDE COMPOUNDS [2]
see Note 1	GLYCOL ETHERS [3]
see Note 1	LEAD COMPOUNDS
see Note 1	MANGANESE COMPOUNDS
see Note 1	MERCURY COMPOUNDS
see Note 1	NICKEL COMPOUNDS
see Note 1	POLYCYCLIC ORGANIC MATTER/POM [4]
see Note 1	SELENIUM COMPOUNDS

CAS#			NAME
50	00	0	FORMALDEHYDE
51	28	5	2,4-DINITROPHENOL
51	79	6	ETHYL CARBAMATE/URETHANE
53	96	3	2-ACETYLAMINOFLUORENE
56	23	5	CARBON TETRACHLORIDE
56	38	2	PARATHION
57	14	7	1,1-DIMETHYLHYDRAZINE
57	57	8	BETA-PROPIOLACTONE
57	74	9	CHLORDANE
58	89	9	LINDANE (AND ALL OTHER STEREOISOMERS OF 1,2,3,4,5,6- HEXACHLOROCYCLOHEXANE)
59	89	2	N-NITROSOMORPHOLINE/NMOR
60	11	7	DIMETHYL AMINOAZOBENZENE/ 4-DIMETHYLAMINOAZOBENZENE
60	34	4	METHYL HYDRAZINE
60	35	5	ACETAMIDE
62	53	3	ANILINE & HOMOLOGUES
62	73	7	DICHLORVOS
62	75	9	N-NITROSODIMETHYLAMINE/NDMA
63	25	2	CARBARYL
64	67	5	DIETHYL SULFATE

67	56	1	METHANOL
67	66	3	CHLOROFORM
67	72	1	HEXACHLOROETHANE
68	12	2	DIMETHYLFORMAMIDE/ N,N-DIMETHYLFORMAMIDE
71	43	2	BENZENE (INCLUDING BENZENE FROM GASOLINE)
71	55	6	METHYL CHLOROFORM/1,1,1-TRICHLOROETHANE
72	43	5	METHOXYCHLOR
72	55	9	2,2-BIS(P-CHLORPHENYL)-1,1- DICHLOROETHYLENE/DDE
74	83	9	METHYL BROMIDE/BROMOMETHANE
74	87	3	METHYL CHLORIDE/CHLOROMETHANE
74	88	4	METHYL IODIDE/IODOMETHANE
75	00	3	ETHYL CHLORIDE/CHLOROETHANE
75	01	4	VINYL CHLORIDE/CHLOROETHYLENE
75	05	8	ACETONITRILE
75	07	0	ACETALDEHYDE
75	09	2	METHYLENE CHLORIDE/DICHLOROMETHANE
75	15	0	CARBON DISULFIDE
75	21	8	ETHYLENE OXIDE
75	25	2	BROMOFORM
75	34	3	1,1-DICHLOROETHANE/ETHYLIDENE DICHLORIDE
75	35	4	VINYLIDENE CHLORIDE/1,1-DICHLOROETHYLENE
75	44	5	PHOSGENE/CARBONYLCHLORIDE
75	55	8	1,2-PROPYLENE IMINE
75	56	9	PROPYLENE OXIDE/1,2-EPOXYPROPANE
76	44	8	HEPTACHLOR
77	47	4	HEXACHLOROCYCLOPENTADIENE
77	78	1	DIMETHYL SULFATE
78	59	1	ISOPHORONE
78	87	5	PROPYLENE DICHLORIDE/1,2-DICHLOROPROPANE
78	93	3	METHYL ETHYL KETONE/MEK/2-BUTANONE
79	00	5	1,1,2-TRICHLOROETHANE
79	01	6	TRICHLOROETHYLENE
79	06	1	ACRYLAMIDE
79	10	7	ACRYLIC ACID
79	11	8	CHLORACETIC ACID
79	34	5	1,1,2,2-TETRACHLOROETHANE
79	44	7	DIMETHYL CARBAMOYL CHLORIDE
79	46	9	2-NITROPROPANE
80	62	6	METHYL METHACRYLATE
82	68	8	PENTACHLORONITROBENZENE/QUINTOBENZENE
84	74	2	DIBUTYL PHTHLATE
85	44	9	PHTHALIC ANHYDRIDE
87	68	3	HEXACHLOROBUTADIENE

87	86	5	PENTACHLOROPHENOL
88	06	2	2,4,6-TRICHLOROPHENYL
90	04	0	O-ANISIDINE
91	20	3	NAPHTHALENE
91	22	5	QUINOLINE
91	94	1	3,3'-DICHLOROBENZIDENE
92	52	4	BIPHENYL
92	67	1	4-AMINODIPHENYL
92	87	5	BENZIDINE
92	93	3	4-NITRODIPHENYL
94	75	7	2,4-D, (DICHLOROPHENOXY/ACETIC ACID) (INCLUDING SALTS AND ESTERS)
95	95	4	2,4,5-TRICHLOROPHENOL
95	47	6	O-XYLENE
95	48	7	O-CRESOL
95	53	4	O-TOLUIDINE
95	80	7	2,4-TOLUENE DIAMINE/TOLUENE-2,4-DIAMINE
96	09	3	STYRENE OXIDE
96	12	8	1,2-DIBROMO-3-CHLOROPROPANE
96	45	7	ETHYLENE THIOUREA/ETU
98	07	7	BENZOTRICHLORIDE
98	82	8	CUMENE
98	86	2	ACETOPHENONE
98	95	3	NITROBENZENE
100	02	7	4-NITROPHENOL
100	41	4	ETHYL BENZENE
100	42	5	STYRENE, MONOMER/VINYL BENZENE
100	44	7	BENZYL CHLORIDE
101	14	4	4,4-METHYLENE BIS(2-CHLOROANILINE)
101	68	8	4,4'-METHYLENEDIPHENYL DIISOCYANATE/MDI
101	77	9	4,4-METHYLENE DIANILINE
106	42	3	P-XYLENE
106	44	5	P-CRESOL
106	46	7	1,4-DICHLOROBENZENE
106	50	3	P-PHENYLENEDIAMINE
106	51	4	QUINONE
106	88	7	1,2-EPOXYBUTANE
106	89	8	EPICHLOROHYDRIN
106	93	4	ETHYLENE DIBROMIDE/EDB/1,2-DIBROMOETHANE
106	99	0	1,3-BUTADIENE
107	02	8	ACROLEIN
107	05	1	ALLYL CHLORIDE
107	06	2	1,2-DICHLOROETHANE/ETHYLENE DICHLORIDE
107	13	1	ACRYLONITRILE
107	21	1	ETHYLENE GLYCOL
107	30	2	CHLOROMETHYL METHYL ETHER/CMME

108	90	7	CHLOROBENZENE
108	05	4	VINYL ACETATE
108	10	1	METHYL ISOBUTYL KETONE/HEXONE
108	31	6	MALEIC ANHYDRIDE
108	38	3	M-XYLENE
108	39	4	M-CRESOL
108	88	3	TOLUENE
108	95	2	PHENOL
109	59	1	ISOPROPOXYETHANOL [3]
109	86	4	2-METHOXYETHANOL [3]
110	54	3	HEXANE
110	80	5	2-ETHOXYETHANOL [3]
111	42	2	DIETHANOLAMINE
111	44	4	DICHLOROETHYL ETHER/ BIS(2-CHLOROETHYL)ETHER
111	76	2	2-BUTOXYETHANOL [3]
114	26	1	PROPOXUR/BAYGON
117	81	7	DI-SEC-OCTYL PHTHLATE/ BIS(2-ETHYLHEXYL)PHTHALATE
118	74	1	HEXACHLOROBENZENE
119	90	4	3,3-DIMETHOXYBENZIDINE
119	93	7	3,3-DIMETHYLBENZIDINE
120	80	9	CATECHOL
120	82	1	1,2,4-TRICHLOROBENZENE
121	14	2	2,4-DINITROTOLUENE
121	44	8	TRIETHYLAMINE
121	69	7	DIMETHYLANILINE
122	66	7	1,2-DIPHENYLHYDRAZINE
123	31	9	HYDROQUINONE/DIHYDROXYBENZENE
123	38	6	PROPIONALDEHYDE
123	91	1	1,4-DIOXANE/1,4-DIETHYLENEOXIDE
126	99	8	2-CHLORO-1,3-BUTADIENE/BETA-CHLOROPRENE
127	18	4	TETRACHLOROETHYLENE/PERCHLOROETHYLENE
131	11	3	DIMETHYL PHTHALATE
132	64	9	DIBENZOFURANS
133	06	2	CAPTAN
133	90	4	CHLORAMBEN
140	88	5	ETHYL ACRYLATE
151	56	4	ETHYLENIMINE
156	62	7	CALCIUM CYANAMIDE
302	01	2	HYDRAZINE
334	88	3	DIAZOMETHANE
463	58	1	CARBONYL SULFIDE
510	15	6	CHLOROBENZILATE
532	27	4	2-CHLOROACETOPHENONE
534	52	1	4,6-DINITRO-O-CRESOL (INCLUDING SALTS)

540	84	1	2,2,4-TRIMETHYLPENTANE
542	07	6	1,3-DICHLOROPROPENE
542	88	1	BIS-(CHLOROMETHYL) ETHER
584	84	9	TOLUENE-2,4-DIISOCYANATE/TDI
593	60	2	VINYL BROMIDE
624	83	9	METHYL ISOCYANATE
680	31	9	HEXAMETHYL PHOSPHORAMIDE/HMPA
684	93	5	N-NITROSO-N-METHYLUREA/NMU
822	06	0	HEXAMETHYLENE DIISOCYANATE
1120	71	4	1,3-PROPANE SULTONE
1319	77	3	CRESOLS/CRESYLIC ACID
1330	20	7	XYLENE ISOMERS AND MIXTURES
1336	36	3	POLYCHLORINATED BIPHENYLS/AROCHLORS
1582	09	8	TRIFLURALIN
1634	04	4	METHYL TERT BUTYL ETHER
1746	01	6	2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN
7550	45	0	TITANIUM TETRACHLORIDE
7647	01	0	HYDROGEN CHLORIDE/HYDROCHLORIC ACID (GAS ONLY)
7664	39	3	HYDROGEN FLUORIDE/HYDROFLUORIC ACID
7723	14	0	PHOSPHOROUS
7782	50	5	CHLORINE
7803	51	2	PHOSPHINE
8001	35	2	TOXAPHENE/CHLORINATED CAMPHENE

The following pollutants and pollutant source categories are listed as HAPs under section 112(b) but are excluded from the definitions of toxics in the Virginia Regulations:

A. Asbestos NESHAP, 40 CFR 61 Subpart M (for asbestos removal, demolition and installation contact Virginia Department of Labor - 804/786-8009).
B. Fine Mineral Fibers.
C. Radionuclides (including radon).

[1] For all listings above which contain the word "compounds" and for the glycol ethers, the following applies: Unless otherwise specified, these listings are defined as including any unique chemical substance that contains the named chemical (i.e., antimony, arsenic, etc.) as part of that chemical's infrastructure.

[2] X'CN where X = H' or any other group where formal dissociation may occur. For example, KCN or $Ca(CN)_2$.

3 Glycol ethers include mono- and di-ethers of ethylene glycol, diethylene glycol, and triethylene glycol R-(OCH2CH2)n-OR'
where:

n = 1, 2, or 3
R = alkyl C7 or less, or phenyl or alkyl substituted phenyl
R' = H, or alkyl C7 or less, or carboxylic acid ester, sulfate, phosphate, nitrate, or sulfonate

2-Butoxyethanol, 2-Ethoxyethanol, Isopropoxyethanol, and 2-Methoxyethanol meet this definition, but are considered as only one HAP (glycol ethers) for Title V and CAAA §112 purposes. They are also listed individually in this table as a reminder that because they have TLVs, they must be considered separately under Virginia's Toxic Pollutant regulations (9 VAC 5 Chapter 60, Articles 4 and 5).

4 Includes substituted and/or unsubstituted polycyclic aromatic hydrocarbons and aromatic heterocycle compounds, with two or more fused rings, at least one of which is benzenoid in structure. Polycyclic Organic Matter is a mixture of organic compounds containing one or more of these polycyclic aromatic chemicals which include dioxins and furans. Polycyclic Organic Matter is generally formed or emitted during thermal processes including (1) incomplete combustion, (2) pyrolysis, (3) the volatilization, distillation or processing of fossil fuels or bitumens, or (4) the distillation or thermal processing of non-fossil fuels.