Federal Operating Permit
Article 1

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

Permittee/Facility Name:	DuPont – Spruance Plant
Facility Location:	5401 Jefferson Davis Highway Chesterfield County, Virginia
Registration Number:	50397
Permit Number:	PRO50397

This permit includes the following programs:

Federally Enforceable Requirements - Clean Air Act (Pages 16 through 60)

August 15, 2012
Effective Date

August 15, 2017
Expiration Date

Deputy Regional Director

Signature Date

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I. Facility Information

Permittee/Mailing Address
DuPont – Spruance Plant
5401 Jefferson Davis Highway
Richmond, Virginia 23234

Responsible Official
Joseph N. Internicola
Plant Manager

Facility/Location
DuPont – Spruance Plant
5401 Jefferson Davis Highway
Chesterfield County, Virginia 23234

Contact Person
Joe G. Loschiavo
Environmental Associate
804-383-3911

County-Plant Identification Number: 041-0001

Facility Description: NAICS Code 325222 – Noncellulosic Organic Fiber Manufacturing

The facility manufactures synthetic resins, fibers and sheet products, polyamide resins and spunbonded/non-woven fabric through a variety of processes.

II. Emission Units

Equipment to be operated consists of:

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
NOMEX® Process Area							
NOE01	NOS02	Polymerization and Deaeration Process Vessels	39.469 NOMEX® Polymerization Units/hr	DuPont designed solvent recovery system including scrubber, extraction and distillation. This system is in operation over the entire NOMEX® process area. (Solvent Recovery)	NOC01 [a]	VOC/HAP	February 25, 2011
NOE02	NOS01	Dissolver	2200 Batches/yr	Industrial Sheet & Mechanical Inc. high velocity spray scrubber (NOMEX® DMAc Scrubber)	NOC03	VOC	February 25, 2011
NOE3-10	NOS01	Eight (8) Misc. Process Tanks	< 4,217 gal each	N/A	N/A	N/A	February 25, 2011
NOE11	NOS05	RP larger room	N/A	N/A	N/A	N/A	February 25, 2011
NOE12-13	NOS06	Two (2) Basement filter presses	2000 lbs/hr polymer each	N/A	N/A	N/A	February 25, 2011
NOE14	NOS07	Waste Dryer	1250 lbs/hr fiber	N/A	N/A	N/A	February 25, 2011
NOE15-18	NOS01	Four (4) Spinning Machines	2.93 tons/hr fiber	NOMEX® DMAc Scrubber	NOC03	VOC	February 25, 2011
NOE19-23	NOS01	Five (5) Wash/draw Line	1.35 tons/hr fiber each	NOMEX® DMAc Scrubber	NOC03	VOC	February 25, 2011
NOE24	NOS08	Crimpers	6.75 tons/hr fiber	N/A	N/A	N/A	February 25, 2011

NOE25	N/A	Finish Application	6.75 tons/hr fiber	N/A	N/A	N/A	February 25, 2011
NOE26	N/A	Process Tanks	6.75 tons/hr fiber	N/A	N/A	N/A	February 25, 2011
NOE27-34	NOS01	Eight (8) Fibridation Machines	2,350 lbs/hr polymer total	NOMEX® DMAc Scrubber	NOC03	VOC	February 25, 2011
NOE107-108	NOS01	Two (2) Fibridation Machines	294 lbs/hr each	NOMEX® DMAc Scrubber	NOC03	VOC	February 25, 2011
NOE35	NOS01	3DP ("Belt") Press	3,000 lbs/hr polymer total	NOMEX® DMAc Scrubber	NOC03	VOC	February 25, 2011
NOE36-39	NOS01	Four (4) Drum Filters	1.5 tons/hr paper	N/A	N/A	N/A	February 25, 2011
NOE41	NOS11	Paper Machine	1.5 tons/hr paper	N/A	N/A	N/A	February 25, 2011
NOE42-44	N/A	Three (3) Calendering Machines	1.5 tons/hr paper	N/A	N/A	N/A	February 25, 2011
NOE45	NOS01	Slurry process tanks	1.5 tons/hr paper	N/A	N/A	N/A	February 25, 2011
NOE46	NOS08	Fiber Staple Dryer	1.5 tons/hr paper	N/A	N/A	N/A	February 25, 2011
NOE47	NOS09	Fiber Second Floor Room	N/A	N/A	N/A	N/A	February 25, 2011
NOE48	NOS10	Fiber Parts Cleaning Operation	N/A	N/A	N/A	N/A	February 25, 2011
NOE49A	NOS12	Extraction Column	1172.49 DMAc Recovery Units/hr[b]	DuPont Chloroform Constant Level Scrubber/Quench tank (NOMEX® Chloroform Scrubber)	NOC02	VOC/HAP	February 25, 2011
NOE49D	NOS12	Extraction Column	1172.49 DMAc Recovery Units/hr[b]	NOMEX® Chloroform Scrubber	NOC02	VOC/HAP	February 25, 2011
NOE49B	NOS12	Distillation Column	1172.49 DMAc Recovery Units/hr[b]	NOMEX® Chloroform Scrubber	NOC02	VOC/HAP	February 25, 2011
NOE49C	NOS12	Distillation Column	1172.49 DMAc Recovery Units/hr[b]	NOMEX® Chloroform Scrubber	NOC02	VOC/HAP	February 25, 2011
NOE50A	NOS12	Stripper Column	1172.49 DMAc Recovery	NOMEX® Chloroform Scrubber	NOC02	VOC/HAP	February 25, 2011

			Units/hr[b]				
NOE51	NOS12	Quench process tank	1172.49 DMAc Recovery Units/hr[b]	N/A	N/A	N/A	February 25, 2011
NOE52	NOS12	Misc. process vessels	1172.49 DMAc Recovery Units/hr[b]	N/A	N/A	N/A	February 25, 2011
NOE101	NOS01	Spin Position SM5-1	100 lbs/hr virgin polymer	NOMEX® DMAc Scrubber	NOC03	VOC	February 25, 2011
NOE102	NOS01	Spin Position SM5-2	100 lbs/hr virgin polymer	NOMEX® DMAc Scrubber	NOC03	VOC	February 25, 2011
NOE103	NOS01	SM5 Wash/Draw Line	200 lbs/hr virgin polymer	NOMEX® DMAc Scrubber	NOC03	VOC	February 25, 2011
NOE104	NOS02	SM5 Dryer/Crystallizer	200 lbs/hr virgin polymer	N/A	N/A	N/A	February 25, 2011
NOE105	NOS02	Finish Application	275 lbs/hr virgin polymer	N/A	N/A	N/A	February 25, 2011
NOE106	NOS02	SM5 Packaging	200 lbs/hr virgin polymer	N/A	N/A	N/A	February 25, 2011
NOE110	NOS01	SM1 Nitrogen Aspiration System Purge	2.93 tons/hr fiber	NOMEX® DMAc Scrubber	NOC03	VOC	February 25, 2011
NOE111	NOS01	SM2-4 Nitrogen Aspiration System Purge	2.93 tons/hr fiber	NOMEX® DMAc Scrubber	NOC03	VOC	February 25, 2011
NOT01	NOS13	Polymer/solvent OST tank	40,000 gal	N/A	N/A	N/A	February 25, 2011
NOT02	NOS14	Polymer/solvent PMV tank	23,960 gal	N/A	N/A	N/A	February 25, 2011
NOT03-04	NOS03	Two (2) ICL storage tanks	48,000 gal each	N/A	N/A	N/A	February 25, 2011
NOT05-06	NOS04	Two (2) MPD storage tanks	27,100 gal east 18,200 gal west	N/A	N/A	N/A	February 25, 2011
NOT07-08	NOS19 -20	Two (2) DMAc combined feed storage tanks	200,000 gal each	N/A	N/A	N/A	February 25, 2011
NOT09-12	NOS15 -18	Four (4) DMAc storage tanks	3 x 38,000 gal 1 x 68,000 gal	N/A	N/A	N/A	February 25, 2011
NOT13	NOS12	Chloroform storage tank	68,000 gal	NOMEX® Chloroform Scrubber	NOC02	VOC/HAP	February 25, 2011

NOT14	N/A	Spin tank	27,471 gal	N/A	N/A	N/A	February 25, 2011
NOT15	N/A	Deaerator supply tank	12,325 gal	N/A	N/A	N/A	February 25, 2011
NOT16	N/A	Misc. storage tanks	< 10,568 gal each	N/A	N/A	N/A	February 25, 2011
NOT20	NOS12	Recycle tank		NOMEX® Chloroform Scrubber	NOC02	VOC/HAP	February 25, 2011
NOT21	NOS12	Start-up tank		NOMEX® Chloroform Scrubber	NOC02	VOC/HAP	February 25, 2011
NOT22	NOS12	Crud Collection tank		NOMEX® Chloroform Scrubber	NOC02	VOC/HAP	February 25, 2011
NOT23	NOS12	Pollution Abatement tank		NOMEX® Chloroform Scrubber	NOC02	VOC/HAP	February 25, 2011
NOT24	N/A	Recovered Solvent No. 3 Tank	37,800 gallons	N/A	N/A	N/A	February 25, 2011
NOT25	N/A	Spin Supply Tank	19,500 gallons	N/A	N/A	N/A	February 25, 2011
NOT26-27	N/A	DMAc Slurry Tanks	400 gallons each	N/A	N/A	N/A	February 25, 2011
NOT28	NOS12	Chloroform Storage Tank	68,400 gallons	NOMEX® Chloroform Scrubber	NOC02	VOC/HAP	February 25, 2011
NOT29	NOS12	Vaporizer Feed Tank	10,000 gallons	NOMEX® Chloroform Scrubber	NOC02	VOC/HAP	February 25, 2011
NOT30	N/A	Chloroform Crud Tank	500 gallons	N/A	N/A	N/A	February 25, 2011
NOT31	N/A	Automatic Pressure Filter Feed Tank	16,000 gallons	N/A	N/A	N/A	February 25, 2011
NOT32	N/A	Automatic Pressure Filter Accepts Tank	16,000 gallons	N/A	N/A	N/A	February 25, 2011
NOT33	N/A	Secondary Filter Feed Tank	13,300 gallons	N/A	N/A	N/A	February 25, 2011
NOT34	N/A	Filter Aid Feed Tank	1,000 gallons	N/A	N/A	N/A	February 25, 2011
Note a: Not a control device as the solvent recovery is inherent process equipment.							
Note b: This is the capacity of the system. This applies to NOE49A through NOE52.							
Kevlar® Process Area							
SEE01	SES04	Polymerization/Mixer	25.5 Kevlar® Polymerization Units/hr	DuPont designed solvent recovery system including scrubber, extraction and distillation. This system is in operation	SCD06	VOC/HAP	November 19, 2010

				over the entire Kevlar® process area.			
SEE02	SES04	Milling	Same as SEE01	N/A	N/A	N/A	November 19, 2010
SEE03	SES04	Polymer Washing	Same as SEE01	N/A	N/A	N/A	November 19, 2010
SEE04	SES04	Polymer Dryer	Same as SEE01	N/A	N/A	N/A	November 19, 2010
SEE11(A)	SES05, 12, 13, 15, 21-23	Plant 2 Mixers	12.64 Kevlar® Solution Prep Units/hr	N/A	N/A	N/A	November 19, 2010
SEE11(B)	SES05, 12, 13, 15, 21-23	Plant 3 Mixers	Same as SEE11A	N/A	N/A	N/A	November 19, 2010
SEE12(A)	SES05, 12, 13, 15, 21-23	Plant 2 Solution/Blending	Same as SEE11A	N/A	N/A	N/A	November 19, 2010
SEE12(B)	SES05, 12, 13, 15, 21-23	Plant 3 Solution/Blending	Same as SEE11A	N/A	N/A	N/A	November 19, 2010
SEE21	SES08-11, 14, 16-20	Spinning Machine 6	56.23 Kevlar® Spinning Units/hr	N/A	N/A	N/A	November 19, 2010
SEE22	SES08-11, 14, 16-20	Spinning Machine 7	Same as SEE21	N/A	N/A	N/A	November 19, 2010
SEE23	SES08-11, 14, 16-20	Spinning Machine 31	Same as SEE21	N/A	N/A	N/A	November 19, 2010
SEE24	SES08-	Spinning Machine 32	Same as SEE21	N/A	N/A	N/A	November 19,

	11, 14, 16-20						2010
SEE25	SES08-11, 14, 16-20	Spinning Machine RD	Same as SEE21	N/A	N/A	N/A	November 19, 2010
SEE26	SES08-11, 14, 16-20	Spinning Machine LD1	Same as SEE21	N/A	N/A	N/A	November 19, 2010
SEE31	SES01	Extraction Column	270 Kevlar® Solvent Recovery Units/hr	DuPont designed scrubber	SCD01	VOC/HAP	November 19, 2010
SEE32	SES01	Stripper Column	Same as SEE31	DuPont designed scrubber	SCD01	VOC/HAP	November 19, 2010
SEE33	SES01	Distillation Column	Same as SEE31	N/A	N/A	N/A	November 19, 2010
SEE34	SES01	Chloroform Column	Same as SEE31	DuPont designed scrubber	SCD01	VOC/HAP	November 19, 2010
SEE35	SES27	Sulfuric Acid tank	Same as SEE31	N/A	N/A	N/A	November 19, 2010
SET01	SES01	Chloroform storage tank	193,536 Kevlar® Storage Units (KSU)	DuPont designed scrubber or dedicated storage tank scrubber	SCD01 or SCD07	VOC/HAP	November 19, 2010
SET02	SES28	PPD storage tank	72,964 KSU	DuPont designed scrubber	SCD04	VOC/HAP	November 19, 2010
SET03	SES30	TCL – North storage tank	156,620 KSU	DuPont designed scrubber	SCD02	VOC	November 19, 2010
SET04	SES31	TCL – South storage tank	85,950 KSU	DuPont designed scrubber	SCD03	VOC	November 19, 2010
SET05	N/A	NMP storage tank	72,962 KSU	N/A	N/A	N/A	November 19, 2010
SET06	N/A	Premix Feed tank	1031 KSU	N/A	N/A	N/A	November 19, 2010
SET07	N/A	Premix Reclaim tank	17,190 KSU	N/A	N/A	N/A	November 19, 2010
SET08	N/A	Filter Feed tank	10,505 KSU	N/A	N/A	N/A	November 19,

							2010
SET09	N/A	Mother Liquor Receiver tank	2,674 KSU	N/A	N/A	N/A	November 19, 2010
SET10	N/A	Mother Liquor tank	4,966 KSU	N/A	N/A	N/A	November 19, 2010
SET11	N/A	Wash Receiver No. 1 tank	1,910 KSU	N/A	N/A	N/A	November 19, 2010
SET12	N/A	Weak Feed tank	522,767 KSU	N/A	N/A	N/A	November 19, 2010
SET13	N/A	Intercept tank	7,124 KSU	N/A	N/A	N/A	November 19, 2010
SET14	N/A	Solvent Premix tank	33,014 KSU	N/A	N/A	N/A	November 19, 2010
SET15	N/A	Premix Mix tank	27,888 KSU	N/A	N/A	N/A	November 19, 2010
SET16	N/A	Premix storage tank	245,435 KSU	N/A	N/A	N/A	November 19, 2010
SET17	SES29	PPD storage tank	124,150 KSU	DuPont designed scrubber	SCD05	VOC/HAP	November 19, 2010
SET18	N/A	West Wash Receiver No. 1 Tank	2,894 KSU	N/A	N/A	N/A	November 19, 2010
SET19	N/A	Wet Mother Liquor Receiver Tank	4,259 KSU	N/A	N/A	N/A	November 19, 2010
SET20	N/A	Mother Liquor Neutralization Tank	9,710 KSU	N/A	N/A	N/A	November 19, 2010
SET21	N/A	Dhy Feed Tank (also backup to SET 12)	322,790 KSU	N/A	N/A	N/A	November 19, 2010
SEE36	N/A	Cooling Tower Cell #1	2600 Kevlar® Cooling Units	N/A	N/A	N/A	November 19, 2010
SEE37	N/A	Cooling Tower Cell #2	2600 Kevlar® Cooling Units	N/A	N/A	N/A	November 19, 2010
SEE38	N/A	Cooling Tower Cell #3	2600 Kevlar® Cooling Units	N/A	N/A	N/A	November 19, 2010
SEE39	N/A	PPD Unloading Station #1	180,510 PPD	N/A	N/A	N/A	November 19,

			Loading Units				2010
SEE40	N/A	PPD Unloading Station #2	180,510 PPD Loading Units	N/A	N/A	N/A	November 19, 2010
SEE41	N/A	S.M. Yarn Processor No. 5	3.75 Kevlar® Spinning Units/hr	N/A	N/A	N/A	July 8, 1987
Tyvek® Process Area							
TYE01	TYS04	Line 1 T-10 Coater/Finishing Line	2 tons/hr Tyvek®	N/A	N/A	N/A	N/A
TYE02	TYS04	Line 2 T-10 Coater/Finishing Line	2 tons/hr Tyvek®	N/A	N/A	N/A	N/A
TYE03	TYS04	T-12 Coater/Finishing Line	1.6 tons/hr Tyvek®	N/A	N/A	N/A	N/A
TYE04	TYS03	L1 – Mix tank	2.8 tons/hr Tyvek®	L1-2 Carbon Adsorption System	TYC07	Spin Agent	N/A
TYE05-08	TYS03	L1 – Mixers (4)	2.8 tons/hr Tyvek®	L1-2 Carbon Adsorption System	TYC07	Spin Agent	N/A
TYE09	TYS03	L1 – Spin Cell	2.8 tons/hr Tyvek®	L1-2 Carbon Adsorption System	TYC07	Spin Agent	N/A
TYE10	TYS03	L1 – Blow Down Cell	1 tons/hr Tyvek®	L1-2 Carbon Adsorption System	TYC07	Spin Agent	N/A
TYE11	TYS03	L2 – Mix tank	2.8 tons/hr Tyvek®	L1-2 Carbon Adsorption System	TYC07	Spin Agent	N/A
TYE12-13	TYS03	L2 – Mixers (2)	2.8 tons/hr Tyvek®	L1-2 Carbon Adsorption System	TYC07	Spin Agent	N/A
TYE14	TYS03	L2 – Spin Cell	2.8 tons/hr Tyvek®	L1-2 Carbon Adsorption System	TYC07	Spin Agent	N/A
TYE16	TYS01	L4 – Spin Solution Mixer	3.5 tons/hr Tyvek®	L4 Condenser L4 Absorption Sys. L4 Thermal Oxidizer (controls TYE16-20)	TYC01 TYC02 TYC03	VOC	December 28, 2011
TYE17	TYS01	L4 – Spin Cell	3.5 tons/hr Tyvek®	Same as TYE16	Same as TYE16	VOC	December 28, 2011
TYE18	TYS01	L4 – Nitrogen Stripper Cell	3.5 tons/hr Tyvek®	Same as TYE16	Same as TYE16	VOC	December 28, 2011

TYE19	TYS01	L4 – Absorbant Carry-Over	3.5 tons/hr Tyvek®	Same as TYE16	Same as TYE16	VOC	December 28, 2011
TYE20	TYS01	L4 – Air Stripper Cell	3.5 tons/hr Tyvek®	Same as TYE16	Same as TYE16	VOC	December 28, 2011
TYE21	TYS02	L7 – Spin Solution Mixer	3.5 tons/hr Tyvek®	L7 Condenser L7 Absorption Sys. L7 Thermal Oxidizer (controls TYE21-25)	TYC04 TYC05 TYC06	VOC	December 28, 2011
TYE22	TYS02	L7 – Spin Cell	3.5 tons/hr Tyvek®	Same as TYE21	Same as TYE21	VOC	December 28, 2011
TYE23	TYS02	L7 – Nitrogen Stripper Cell	3.5 tons/hr Tyvek®	Same as TYE21	Same as TYE21	VOC	December 28, 2011
TYE24	TYS02	L7 – Absorbant Carry-Over	3.5 tons/hr Tyvek®	Same as TYE21	Same as TYE21	VOC	December 28, 2011
TYE25	TYS02	L7 – Air Stripper Cell	3.5 tons/hr Tyvek®	Same as TYE21	Same as TYE21	VOC	December 28, 2011
TYT01-02	TYS05	L4 Spin Agent Storage tanks (2)	15,000 gal each	N/A	N/A	N/A	December 28, 2011
TYT03	TYS06	L7 Spin Agent Storage tank	6,250 gal	N/A	N/A	N/A	December 28, 2011
TYT04-08	TYS03	L1-2 Spin Agent Storage tanks (5)	1 – 25,000 gal 4 – 10,800 gal	N/A	N/A	N/A	N/A
TYT09	TYS09	Misc. Storage tanks	<19,815 gal	N/A	N/A	N/A	N/A
Zytel® Process Area							
ZYE01A	ZYS01-A	Commercial Lines 1-2 Salt Preparation including primary reactor and miscellaneous tanks	42.25 Zytel® Polymerization Units/hr	N/A	N/A	N/A	N/A
ZYE01B	ZYS01-B	Commercial Line 3 (HTN®) Salt Preparation including primary reactor, miscellaneous tanks and TA storage silo	20.3 Zytel® Polymerization Units/hr	N/A	N/A	N/A	May 14, 2010
ZYE02	ZYS02-04	Commercial Line 1 including: additive extruder, extruder feed hopper, melt tank,	7.0 Zytel® Polymerization Units/hr	Fabric filter	ZYC01	Particulate	N/A

		separators, dies, cooler/dryer, mixer and distearate dump station					
ZYE03	ZYS05 -06	Commercial Line 2 including: separators, dies and cooler/screener	7.0 Zytel® Polymerization Units/hr	Fabric filter	ZYC01	Particulate	N/A
ZYE04	ZYS08 -09	Commercial Line 3 (HTN®) including: finishers, dies and cooler/screener	1.25 Zytel® Polymerization Units/hr	Fabric filter Cyclone Separator	ZYC01 ZYC02	Particulate Particulate	May 14, 2010
ZYE06	ZYS15 -18	Product Storage Silos (5) with a total of four vents	84.5 Zytel® Product Units	Fabric filter	ZYC01	Particulate	May 14, 2010
ZYE07	ZYS23 -26	Packaging: truck, railcar, sealand container, box and bag loading	84.5 Zytel® Product Units	Fabric filter	ZYC01	Particulate	May 14, 2010
ZYE08-10	ZYS27	Dowtherm® Vaporizers (3)	14.5 MMBtu/hr heat input each	N/A	N/A	N/A	N/A
ZYE11	ZYS27	Dowtherm® Vaporizer VAP-3R	20 MMBtu/hr	N/A	N/A	N/A	N/A
ZYE13	ZYS28	TPA Solids Unloading	25,000 Zytel® TPA Solids Unloading Units	N/A	N/A	N/A	May 14, 2010
ZYE14	ZYS29	Line 3 Reflux Level Pot	625 Zytel® MPMD Storage Units	Zytel® Environmental Abatement Facility (EAF) Scrubber	ZYC03	VOC	May 14, 2010
ZYT01	N/A	Diamine Storage tank	2,500,000 Zytel® Diamine Storage Units	N/A	N/A	N/A	May 14, 2010
ZYT02-07	N/A	Dowtherm Storage tanks (6)	2 – 1,486 gal 2 – 983 gal 1 – 4,000 gal 1 – 3,600 gal	N/A	N/A	N/A	N/A
ZYT08	N/A	MPMD Storage Tank	125,000 Zytel® MPMD Storage Units	N/A	N/A	N/A	May 14, 2010
ZYT09-10	N/A	Salt Make-Up & Storage (2)	2 @ 450,000	N/A	N/A	N/A	May 14, 2010

			Zytel® Salt Make-Up & Storage Units				
ZYT11	N/A	Diamine/MPMD Blend Tank	12,500 Zytel® MPMD Storage Units	N/A	N/A	N/A	N/A
ZYT12	N/A	3-MP Storage Tank	25,000 Zytel® MPMD Storage Units	N/A	N/A	N/A	May 14, 2010
ZYT13	N/A	Amine Storage Tank	21,250 Zytel® MPMD Storage Units	N/A	N/A	N/A	May 14, 2010
Miscellaneous Operations							
MIE01	N/A	Groundwater Remediation System	7,500 gal/hr	N/A	N/A	N/A	N/A
MIE02	N/A	Wastewater Treatment Plant	600,000 gal/hr	N/A	N/A	N/A	N/A
MIE03-04	MIS01-02	Diesel-Fired Emergency Generators (2)	1095 hp each	N/A	N/A	N/A	N/A
MIE05	N/A	Miscellaneous Solvent (VOC based) Metal Cleaning Operations (cold cleaning)	Various	N/A	N/A	N/A	N/A
MIE06-07	MIS03-04	Two Diesel-Fired Fire Pumps (water)	370 hp each	N/A	N/A	N/A	N/A
MIE08	MIS05	One Diesel-Fired Fire Pump (water)	303 hp	N/A	N/A	N/A	N/A
MIE09-10	MIS06-07	Two Diesel-Fired Fire Pumps (foam)	76 hp each	N/A	N/A	N/A	N/A
MIE13	MIS10	Miscellaneous portable temporary rental diesel-fired engines	≤500 hp each	N/A	N/A	N/A	N/A

[*]The Size/Rated capacity is provided for informational purposes only, and is not an applicable requirement.
[*]DMAc = dimethylacetamide.

III. NOMEX® Process Area

A. Limitations

1. Volatile Organic Compound emissions from the following equipment shall be controlled by the NOMEX® DMAc Scrubber (NOC 03):

   SM5 Spinning Line (NOE 101-103)
   3DP ("belt") Press (NOE 35)
   Dissolving tank (NOE 02)
   Spinning machines #1-#4 (NOE 15-18) (1st Floor Exhaust)
   Fibridation units (NOE 027-034)
   Fibridation units (NOE 107-108)
   SM1-4 Nitrogen Aspiration system purge (NOE 110 and 111)
   Wash/Draw Lines #1-5 (NOE 19-23)

   The scrubber shall be operated such that it will maintain a VOC reduction efficiency of at least 50%. The scrubber shall be provided with adequate access for inspection.
   (9 VAC 5-80-110, Condition #E.10 of 5/30/96 RACT Agreement and Conditions #3 and #17 of the 2/25/2011 Permit)

2. VOC emissions from the NOMEX® area shall be controlled by the following work practices:

   a. Operation of spin cells at the minimum pressure necessary to prevent the introduction of oxygen,

   b. Installation of covers on storage tanks and tubs to reduce evaporative losses (spun tub covers are provided when product is stored),

   c. Minimum feasible Wash/Draw bath temperatures, and

   d. Other reasonable measures to reduce controlled and uncontrolled emissions.

   Compliance with #2.a. shall be determined as stated in Condition #15.
   (9 VAC 5-80-110 and Condition #4 of the 2/25/2011 Permit)

3. Volatile Organic Compound emissions from the following equipment shall be controlled by the NOMEX® Chloroform Scrubber (NOC 02):

   Extraction Column (NOE 49A)
   Extraction column (NOE 49D)
   Two Distillation Columns (NOE 49B and 49C)
   Stripper Column (NOE 50A)
   Chloroform storage tank (NOT 13)
   Recycle Tank (NOT 20)
   Start-up Tank (NOT 21)
   Crud Collection Tank (NOT 22)
   Pollution Abatement Tank (NOT 23)
   Chloroform storage tank (NOT 28)

Vaporizer feed tank (NOT 29)
Chloroform crud tank (NOT 30)

The scrubber shall be operated such that it will maintain a VOC reduction efficiency of at least 95%. The scrubber shall be provided with adequate access for inspection.
(9 VAC 5-80-110, 9 VAC 5-40-3430 B, 9 VAC 5-40-3440 B and Conditions #5 and #18 of the 2/25/2011 Permit)

4. Fugitive VOC emissions from the solvent recovery area equipment in chloroform service shall be controlled by a leak detection and repair (LDAR) program in accordance with 40 CFR 60 Subpart VV, with the exception of the reporting requirements of 60.487. The covered equipment shall include all chloroform-containing vessels, equipment and lines that would be regulated by 40 CFR 60 Subpart VV if the facility were subject to Subpart VV. Equipment shall be considered to be leaking when a reading above 500 ppm of VOC is obtained using an approved measurement technique. Note: The facility is not actually subject to 40 CFR 60 Subpart VV.

   (9 VAC 5-80-110, Condition #E.8 of 1996 RACT Agreement and Condition #6 of the 2/25/2011 Permit)

5. Volatile Organic Compound (VOC) emissions from NOMEX® spinning and solvent recovery operations shall not exceed 9.65 pounds of VOC emissions per thousand pounds of solvent feed, calculated in accordance with the equations in 40 CFR 60 Subpart HHH (although the facility is not actually subject to 40 CFR 60 Subpart HHH) and calculated monthly on a six month rolling average basis.

   (9 VAC 5-80-110, Condition #E.11 of 1996 RACT Agreement and Condition #20 of the 2/25/2011 Permit)

6. Volatile Organic Compound emissions from the operation of the following equipment, prior to the NOMEX® DMAc scrubber (NOC 03), shall not exceed the limitations specified below:

	lbs/hr	tons/yr
Combined Spinning Machines #1-4 (NOE 15-18) (as captured by the 1st floor spinning exhaust system)	34.1	124.4
SM1 Nitrogen Aspiration System Purge (NOE 110) (calculated monthly as the sum of each consecutive 12 month period)	N/A	3.9
SM2-SM4 Nitrogen Aspiration System Purge (NOE 111) (calculated monthly as the sum of each consecutive 12 month period)	N/A	7.5

   Compliance with the spinning machine (NOE 15-18) emission limits shall be determined in accordance with Conditions #2.a, #15 and #16.g. Compliance with the nitrogen aspiration system purge (NOE 110 and 111) emission limits shall be determined in accordance with Condition #13.
   (9 VAC 5-80-110 and Condition #8 of the 2/25/2011 Permit)

7. Emissions from the operation of the chloroform extraction system shall not exceed the limitations specified below:

   a. 3.5 lbs VOC (chloroform)/hr (average hourly emissions calculated monthly on a 12 month rolling average basis); and

   b. 15 tons VOC (chloroform)/yr (calculated monthly as the sum of each consecutive 12 month period).

   (9 VAC 5-80-110 and Condition #9 of the 2/25/2011 Permit)

8. Emissions from the operation of the NOMEX® plant processes (excluding finish on yarn as applied, polymer ingredients and the chloroform extraction system) shall not exceed the limitations specified below:

   a. 127.2 lbs VOC (dimethylacetamide)/hr (average hourly emissions calculated monthly on a 12 month rolling average basis); and

   b. 557.3 tons VOC (dimethylacetamide)/yr (calculated monthly as the sum of each consecutive 12 month period).

   (9 VAC 5-80-110 and Condition #10 of the 2/25/2011 Permit)

9. Emissions from the operation of the NOMEX® plant processes (dimethylacetamide, chloroform, finish on yarn as applied, and polymer ingredients) shall not exceed the limitations specified below:

   573.3 tons VOC/yr (calculated monthly as the sum of each consecutive 12 month period).
   (9 VAC 5-80-110 and Condition #11 of the 2/25/2011 Permit)

10. The chloroform storage tank (NOT 28) and the vaporizer feed tank (NOT 29) shall be constructed and operated in compliance with all applicable requirements of 40 CFR 63 Subpart FFFF. For the chloroform storage tank (NOT 28), compliance with 40 CFR 63 Subpart FFFF shall also constitute compliance with 40 CFR 60 Subpart Kb.
    (9 VAC 5-80-110, 40 CFR 63.2535(c), 40 CFR 63 Subpart FFFF, 40 CFR 60 Subpart Kb and Condition #19 of the 2/25/2011 Permit)

B. Monitoring

11. The NOMEX® DMAc Scrubber (NOC 03) shall be equipped with an exhaust gas flow meter, a scrubber liquid flow meter, a scrubber liquid DMAc concentration monitor and a device to continuously measure the differential pressure across the scrubber. The monitor, device and meters shall be installed in accessible locations and shall be maintained by the permittee such that they are in proper working order at all times (except for periods of required maintenance and calibration).
    (9 VAC 5-80-110 and Condition #3 of the 2/25/2011 Permit)

12. The NOMEX® Chloroform Scrubber (NOC 02) shall be equipped with a scrubber liquid temperature gauge and a scrubber spray flow meter. The gauge and flow meter shall be installed in accessible locations and shall be maintained by the permittee such that they are in proper working order at all times (except for periods of required maintenance and calibration). In addition, the scrubber spray liquid shall be sampled daily. These samples

shall be analyzed daily for chloroform concentration except for instances of laboratory analysis unavailability. Samples obtained during instances of laboratory analysis unavailability shall be analyzed for chloroform concentration on the first date when laboratory analysis becomes available.
(9 VAC 5-80-110 and Condition #5 of the 2/25/2011 Permit)

13. Each nitrogen aspiration system purge (NOE 110 and 111) shall be equipped with a temperature gauge and a gas flow meter. The temperature gauges and flow meters shall be installed in accessible locations and shall be maintained by the permittee such that they are in proper working order at all times. The permittee shall monitor and record the data provided by the monitoring devices at least once per shift. This data shall be used to determine compliance with the nitrogen aspiration system purge (NOE 110 and NOE 111) emission limits specified in Condition #6, calculated monthly as the sum of each consecutive 12 month period. Unless otherwise approved by the Director, Piedmont Regional Office, the DMAc concentration data used to determine compliance in accordance with this condition shall be calculated from the monitored temperature data, at least once per shift, as specified in the June 26, 2001 application amendment.
(9 VAC 5-80-110 and Conditions #7 and #13 of the 2/25/2011 Permit)

14. Each monitoring device required by Conditions #11 (scrubber liquid flow meter, scrubber liquid DMAc concentration monitor and a device to continuously measure differential pressure drop across the scrubber) and #12 (scrubber spray liquid flow meter, scrubber liquid temperature gauge and scrubber spray liquid sample for chloroform concentration analysis) shall be observed by the permittee with a frequency of not less than once per shift, except for the once per day NOC 02 chloroform concentration analysis. The permittee shall keep a log of the observations. For NOC 02, for any such observation that reveals a scrubber spray flow less than 5 gpm, a scrubber spray chloroform concentration of greater than 10% or a spray temperature higher than 35 degrees Celsius, the permittee shall take corrective action to return NOC 02 to normal operation within one hour for the applicable monitored parameter (i.e. the applicable monitored parameter has returned to its normal range within one hour of discovery), follow the applicable malfunction provisions of 9 VAC 5-20-180 or provide performance testing data certifying that the operation of the control device at the out-of-range level is consistent with the control efficiency required by Condition #3. For NOC 03, for any such observation that reveals a scrubber liquid flow less than 1,100 gpm, or a scrubber liquid DMAc concentration greater than 11,500 ppm, the permittee shall take corrective action to return NOC 03 to normal operation within one hour for the applicable monitored parameter (i.e. the applicable monitored parameter has returned to its normal range within one hour of discovery), follow the applicable malfunction provisions of 9 VAC 5-20-180 or provide performance testing data certifying that the operation of the control device at the out-of-range level is consistent with the control efficiency required by Condition #1.
(9 VAC 5-80-110 and Condition #12 of the 2/25/2011 Permit)

15. The facility shall examine on a once-per-shift basis the pressure balance condition of each operating spin cell. If necessary, the pressure balance of each operating cell shall be adjusted to a level consistent with Condition #2.a. The facility shall maintain a log documenting that the required examinations have been conducted for each shift. The requirements of this condition and Condition #2 shall be incorporated into the written operating procedures and operator training required by Condition #86.

    (9 VAC 5-80-110 and Condition #14 of the 2/25/2011 Permit)

C. Recordkeeping

16. 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, Piedmont Regional Office. These records shall include, but are not limited to:

    a. Records supporting all calculations required by 40 CFR 60 Subpart HHH as applied to the NOMEX® process area. Monthly calculations shall be performed using the procedures specified in 40 CFR 60 Subpart HHH (although the facility is not actually subject to 40 CFR 60 Subpart HHH) in calculating solvent feed, emissions and efficiencies.

    b. Monthly calculations of average hourly and annual VOC emissions as required by Conditions #7, #8 and #9 (annual only), including all documentation necessary to support these calculations.

    c. Records (log) of the control device monitoring device observations required by Condition #14, as well as any corrective actions taken as a result of these observations.

    d. Records of the data and calculations demonstrating compliance with the nitrogen aspiration system purge emission limits of Condition #6.

    e. Records (log) of the once/shift spin cell pressure balance examinations required by Condition #15.

    f. Records demonstrating compliance with the LDAR program specified in Condition #4.

    g. Records of the initial performance test for NOC 03 and the 1st floor exhaust from spinning machines #1-#4 (NOE 15-18) required by Condition #14 of the 12/5/2008 permit and records of the NOC 03 operating parameters during the performance test.

    These records shall be available for inspection by the DEQ and shall be current for the most recent five years.
    (9 VAC 5-80-110, 40 CFR 63 Subparts A and FFFF, and Conditions #16, #21 and #25 of the 2/25/2011 Permit)

D. Reporting

17. The permittee shall submit quarterly project reports (associated with the July 14, 2008 permit application) to the Piedmont Regional Office within 30 days after the end of each calendar quarter. Each quarterly report shall contain the information specified in subsections a-g of this condition. The final quarterly report (the report submitted within 30 days after the end of the calendar quarter in which the all projects are completed) shall contain the information specified in subsections a-h of this condition.

    a. A list of each project identified by the permittee at the time of the report which is planned in order to reach the production capacities stated in the permit application, as amended.

    b. For each listed project, the general NOMEX® process area (spinning, etc.) affected, and

the specific equipment involved.

c. For each listed project, a brief description of how each project will contribute to its respective general process area (spinning, etc.) achieving the stated operational capacity for that area.

d. The current status of the project: Not begun, Under Construction or Completed.

e. For projects which have not begun construction/implementation, the estimated start date.

f. For projects which are being implemented/constructed as of the date of the report, the estimated project completion date.

g. For projects which have already been implemented/completed, the actual implementation/completion date.

h. An estimate of the final capacity of each modified NOMEX® process area (spinning, etc.) taking into account all completed projects.

(9 VAC 5-80-110 and Condition #24 of the 2/25/2011 Permit)

E. National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing (MON MACT – 40 CFR 63 Subpart FFFF)

18. As of the date of this permit, the NOMEX® solvent recovery operation is considered a miscellaneous organic chemical manufacturing process unit for the purposes of 40 CFR 63 Subpart FFFF. See Section IX of this permit for the MON MACT requirements for the NOMEX® process area.
(9 VAC 5-80-110 and 40 CFR 63 Subparts A and FFFF)

IV. Kevlar® Process Area

A. Limitations

19. Volatile Organic Compound (VOC) emissions from the following equipment shall be controlled by the Kevlar® Chloroform Scrubber (SCD 01):

    SEE 31 - Extraction Column
    SEE 32 - Stripper Column
    SEE 34 – Chloroform Column
    SET 01 – Chloroform Storage Tank

    The scrubber shall be provided with adequate access for inspection and shall be in operation when any of the equipment specified in this condition is operating. If allowed by a revision to the 11/19/2010 Permit, the chloroform storage tank (SET 01) may alternatively be controlled by the dedicated storage tank scrubber (SCD 07).
    (9 VAC 5-80-110, 9 VAC 5-40-3430 B, 9 VAC 5-40-3440 B and Condition #3 of the 11/19/2010 Permit)

20. VOC emissions from each PPD storage tank (SET 02 and 17) shall be controlled by a water-based scrubber (SCD 04 and SCD 05). The scrubbers shall be provided with adequate access for inspection and shall be in operation when the PPD storage tanks are in use.
    (9 VAC 5-80-110 and Condition #4 of the 11/19/2010 Permit)

21 VOC emissions from each TCL storage tank (SET 03 and 04) shall be controlled by an oil-based scrubber (SCD 02 and SCD 03). The scrubbers shall be provided with adequate access for inspection and shall be in operation when the TCL storage tanks are in use.
    (9 VAC 5-80-110 and Condition #5 of the 11/19/2010 Permit)

22. Fugitive VOC emissions from the Kevlar® solvent recovery area equipment shall be controlled by a leak detection and repair (LDAR) program in accordance with 40 CFR 60 Subpart VV, with the exception of the reporting requirements of 60.487. The covered equipment shall include all n-methylpyrrolidone and chloroform-containing vessels, equipment and lines that would be regulated by 40 CFR 60 Subpart VV if the facility were subject to Subpart VV. Equipment shall be considered to be leaking when a reading above 500 ppm of VOC is obtained using an approved measurement technique. Note: The facility is not actually subject to 40 CFR 60 Subpart VV.
    (9 VAC 5-80-110, Condition #E.5 of the of 1996 RACT Agreement and Condition #6 of the 11/19/2010 Permit)

23. The amount of Volatile Organic Compounds introduced as make-up additives into Kevlar® Cooling Tower Cells (SEE 36-38) in the water treatment chemicals shall not exceed 4.6 tons per year as a combined total, calculated monthly as the sum of each consecutive 12 month period.
    (9 VAC 5-80-110 and Condition #7 of the 11/19/2010 Permit)

24. The Kevlar® spinning operations (SEE 21-26) shall process no more than 449,800 Kevlar® Spinning Units per year, calculated monthly as the sum of each consecutive 12 month period. (9 VAC 5-80-110 and Condition #8 of the 11/19/2010 Permit)

25. The Kevlar® Polymerization Dryer (SEE 04) shall process no more than 204,000 Kevlar® Polymerization Units per year, calculated monthly as the sum of each consecutive 12 month period.
(9 VAC 5-80-110 and Condition #9 of the 11/19/2010 Permit)

26. The S.M. Yarn Processor No. 5 (SEE 41) shall process no more than 21,539 Kevlar® Spinning Units per year, calculated monthly as the sum of each consecutive 12 month period. (9 VAC 5-80-110 and Condition #4 of 7/8/1987 Permit)

27. Volatile Organic Compound (n-methylpyrrolidone) emissions from Kevlar® polymerization and solvent recovery operations shall not exceed 17 pounds of VOC emissions per thousand pounds of solvent feed, calculated in accordance with the equations in 40 CFR 60 Subpart HHH (although the facility is not actually subject to 40 CFR 60 Subpart HHH) and calculated monthly on a six month rolling average basis. The monthly calculations required by this condition shall be performed using the procedures specified in 40 CFR 60 Subpart HHH (although the facility is not actually subject to 40 CFR 60 Subpart HHH) in calculating solvent feed, emissions and efficiencies
(9 VAC 5-80-110, Condition #E.7 of 1996 RACT Agreement and Conditions #10 and #11 of the 11/19/2010 Permit)

28. Emissions from the operation of the Kevlar® solvent recovery chloroform extraction system (SET 01, SEE 31-34) shall not exceed the limitations specified below:

    a. 3.8 lbs VOC per hour (average hourly emissions, as determined by a monthly chloroform material balance, calculated monthly on a 12 month rolling average basis); and

    b. 15 tons VOC per year (as determined by a monthly chloroform material balance, calculated monthly on a 12 month rolling average basis).

    (9 VAC 5-80-110 and Condition #12 of the 11/19/2010 Permit)

29. Emissions from the operation of the Kevlar® plant processes (excluding finishing oils, polymer ingredients and the chloroform extraction system) shall not exceed the limitations specified below:

    a. 8.8 lbs VOC per hour (average hourly emissions as n-methylpyrrolidone, calculated monthly on a 12 month rolling average basis); and

    b. 35.3 tons VOC per year (as n-methylpyrrolidone).

    Compliance with these emission limits shall be determined as stated in Conditions #25, #42.d and #44.
    (9 VAC 5-80-110 and Condition #13 of the 11/19/2010 Permit)

30. Emissions from the application finishing oils in the Kevlar® spinning operations (SEE 21-26) shall not exceed the limitations specified below:

VOC	0.1 lbs/hr	0.5 tons/yr

Compliance with these emission limits shall be determined as stated in Condition #24.
(9 VAC 5-80-110 and Condition #14 of the 11/19/2010 Permit)

31. Emissions from the operation of the Kevlar® polymer dryer (SEE 04) shall not exceed the limits specified below:

Particulate Matter	0.5 lbs/hr	2.0 tons/yr
PM10	0.2 lbs/hr	0.6 tons/yr

Compliance with these emission limits shall be determined as stated in Condition #25.
(9 VAC 5-80-110 and Condition #15 of the 11/19/2010 Permit)

32. Emissions from the operation of the interlace and winder equipment of the Kevlar® spinning operation (SEE 21-26) shall not exceed the limits specified below:

Particulate Matter	0.8 lbs/hr	3.0 tons/yr
PM10	0.1 lbs/hr	0.4 tons/yr

Compliance with these emission limits shall be determined as stated in Condition #24.
(9 VAC 5-80-110 and Condition #16 of the 11/19/2010 Permit)

33. Emissions from the operation of the Kevlar® Cooling Tower Cells (SEE 36-38) shall not exceed the limits specified below:

Particulate Matter	3.3 lbs/hr	14.5 tons/yr
PM10	3.3 lbs/hr	14.5 tons/yr
VOC	1.1 lbs/hr	4.6 tons/yr

Compliance with these emission limits shall be determined as stated in Condition #23.
(9 VAC 5-80-110 and Condition #17 of the 11/19/2010 Permit)

34. Emissions from the operation of the Kevlar® spinning operation (SEE 21-26) shall not exceed the limits specified below:

Sulfuric Acid Mist	3.3 tons/yr

Compliance with these emission limits shall be determined as stated in Condition #24.
(9 VAC 5-80-110 and Condition #18 of the 11/19/2010 Permit)

35. Emissions from the application of S.M. Yarn Processor No. 5 (SEE 41) shall not exceed the limitations specified below:

Particulate Matter	1.31 lbs/hr	1.85 tons/yr

Compliance with these emissions limits shall be determined by compliance with Condition #26.
(9 VAC 5-80-110 and Condition #5 of 7/8/1987 Permit)

36. Visible emissions from SEE04, SEE21-26 and SEE41 shall not exceed 20 percent opacity, except for one six-minute period in any one hour of not more than 30% opacity. Failure to meet the requirements of this condition because of the presence of water vapor shall not be a violation of this section.
(9 VAC 5-80-110 and 9 VAC 5-50-80)

B. Monitoring

37. The Kevlar® Chloroform Scrubber (SCD 01) shall be equipped with a scrubber spray flow meter. The flow meter 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 (except for periods of required maintenance and calibration).
(9 VAC 5-80-110 and Condition #3 of the 11/19/2010 Permit)

38. Each emission unit subject to Condition #36 shall be observed visually at least once each operating month for at least a brief time period to determine which emissions units have normal visible emissions (does not include condensed water vapor/steam), unless a 40 CFR 60 Appendix A Method 9 visible emissions evaluation is performed on the emissions unit. Each emissions unit observed having above-normal visible emissions shall be followed up with a 40 CFR 60 Appendix A Method 9 visible emissions evaluation unless the visible emission condition is corrected as expeditiously as possible and recorded, and the cause and corrective measures taken are recorded.
(9 VAC 5-80-110)

39. The permittee shall conduct an annual integrity inspection on each control device required by Conditions #20-21. The permittee shall make any necessary repairs to the control devices as expeditiously as possible.
(9 VAC 5-80-110)

40. Reserved: Initial performance test completed

41. Biennially, the permittee shall conduct additional performance tests for VOC (as n-methylpyrrolidone) from the Kevlar® polymerization area process vents to verify the accuracy of the compliance mechanisms specified in Condition #42.d. The details of the tests shall be arranged with the Director, Piedmont Regional Office. Unless otherwise specified by the Director, Piedmont Regional Office, the permittee shall submit a test protocol to the Director, Piedmont Regional Office for review and approval at least 60 days prior to each performance test. After the completion of three performance tests required by this condition, the permittee may petition the Director, Piedmont Regional Office to reduce the frequency of the performance tests.
(9 VAC 5-80-110 and Condition #22 of the 11/19/2010 Permit)

C. Recordkeeping

42. 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, Piedmont Regional Office. These records shall include, but are not limited to:

    a. Records of all calculations required by Condition #27.

    b. Monthly calculations of average hourly and annual VOC emissions as required by Condition #28, as determined by a material balance of chloroform, including all documentation necessary to support these calculations.

    c. Monthly and annual throughputs of the materials/units listed in Conditions #23-26; annual throughputs shall be calculated monthly as the sum of each consecutive 12 month period.

    d. The cumulative n-methylpyrrolidone emission factor (determined as the cumulative emissions since January 2007 divided by cumulative polymer production since January 2007), calculated monthly by material balance. The material balance shall be calculated consistent with the procedures specified in Condition #27 and include all necessary supporting documentation. These emission calculation records, in conjunction with the production records required by Condition #42.c, shall be used to determine compliance with the emission limits of Condition #29.

        i. Compliance with the annual emission limit of Condition #29 shall be determined monthly using the Condition #42.c production data for the most recent 12-month period and the greater of 0.346 lbs VOC/Kevlar® Polymerization Unit **or** the cumulative emission factor calculated for the most recent month.

        ii. Compliance with the hourly emission limit of Condition #29 shall be determined monthly using the Condition #42.c production data for the most recent 12-month period (consecutive 12-month polymer production divided by consecutive 12-month operating hours) and the greater of 0.346 lbs VOC/Kevlar® Polymerization Unit **or** the cumulative emission factor calculated for the most recent month. Consecutive 12- month operating hours shall include all hours where n-methylpyrrolidone is present in the equipment listed in the Kevlar® Process Area portion of the Section II Emission Unit Table.

    e. Records demonstrating compliance with the LDAR program specified in Condition #22.

    f. Monthly and annual calculations of sulfuric acid mist and finishing oil VOC emissions from the Kevlar Spinning operations (SEE 21-26), including all documentation necessary to support these calculations. Annual emissions shall be calculated monthly as the sum of each consecutive 12 month period.

    g. The results of the monthly visible emission surveys required by Condition #38 and details of any corrective action taken as a result of these inspections.

    h. The results of the annual integrity inspections required by Condition #39 and details of any corrective action taken as a result of these inspections.

i. The results of the performance tests required by Condition #41.

These records shall be available for inspection by the DEQ and shall be current for the most recent five years.
(9 VAC 5-80-110 and Condition #23 of the 11/19/2010 Permit)

D. Reporting

43. The permittee shall report the results of any 40 CFR Part 60 Method 9 opacity test performed as a result of Condition #38. If the test indicates the facility is out of compliance with the standard contained in Condition #36, the source shall also report the length of time associated with any exceedance of the standard and the corrective actions taken to correct the exceedance. This report shall be sent to the Director, Piedmont Regional Office within seven days of the applicable test unless otherwise noted in Section XIV, Condition #E.
(9 VAC 5-80-110)

44. In the event that the compliance demonstration method of Condition #42.d indicates a potential violation of an emission limit of Condition #29, the permittee may elect to conduct a performance test consistent with the procedures of Condition #21 of the 11/19/2010 Permit, except that the timeframes specified in Condition #21 of the 11/19/2010 Permit shall be shortened from 60 days to 30 days. Unless otherwise specified by the Director, Piedmont Regional Office, any such test shall be performed within 45 days of the conclusion of the 12-month period resulting in the potential violation. Pending the results of any such test and any other relevant information, the Director, Piedmont Regional Office may determine whether the potential violation constitutes an actual violation of Condition #29.
(9 VAC 5-80-110 and Condition #24 of the 11/19/2010 Permit)

E. National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing (MON MACT – 40 CFR 63 Subpart FFFF)

45. As of the date of this permit, the Kevlar® polymer production and solvent recovery operations are considered miscellaneous organic chemical manufacturing process units for the purposes of 40 CFR 63 Subpart FFFF. See Section IX of this permit for the MON MACT requirements for the Kevlar® process area.
(9 VAC 5-80-110 and 40 CFR 63 Subparts A and FFFF)

V. Tyvek® Process Area (Lines 4 and 7)

A. Limitations

46. Volatile Organic Compound (VOC) emissions from each Tyvek® line (except for the air stripper and nitrogen stripper) shall be controlled primarily by condenser(s). The condenser(s) shall be provided with adequate access for inspection and shall be in operation when the Tyvek® lines are operating.
(9 VAC 5-80-110 and Condition #2 of the 12/28/2011 Permit)

47. VOC emissions from non-condensable gases from the Tyvek® line condensers and, at a minimum, from the Tyvek® spin cell nitrogen stripper chambers shall be controlled by a VOC absorption system. The VOC absorption system shall be provided with adequate access for inspection.
(9 VAC 5-80-110 and Condition #3 of the 12/28/2011 Permit)

48. VOC emissions from the Tyvek® line air strippers and the VOC absorption system exhaust shall be controlled by a heat regenerative incinerator. Supplemental fuel shall be combusted as necessary to maintain the required incinerator temperature as determined during performance testing. The heat regenerative incinerator shall be provided with adequate access for inspection.
(9 VAC 5-80-110 and Condition #4 of the 12/28/2011 Permit)

49. VOC emissions from the Tyvek® Line 4 and 7 spin agent storage tanks (TYT 01-03) shall be controlled by a vapor return line to supply trucks for filling losses. The tanks shall have normally closed vent valves to prevent breathing losses, in accordance with the National Fire Prevention Association (NFPA) Section 30.
(9 VAC 5-80-110, 9 VAC 5-40-3430 B, 9 VAC 5-40-3440 B and Condition #7 of the 12/28/2011 Permit)

50. At all times the disposal of volatile organic compounds shall be accomplished by taking measures, to the extent practicable, consistent with air pollution control practices for minimizing emissions. Volatile organic compounds shall not be intentionally spilled, discarded in sewers which are not connected to a treatment plant, or stored in open containers, or handled in any other manner that would result in evaporation beyond that consistent with air pollution practices for minimizing emissions.
(9 VAC 5-80-110 and Condition #9 of the 12/28/2011 Permit)

51. The approved fuel for the heat regenerative incinerator is natural gas. A change in the fuel may require a permit to modify and operate.
(9 VAC 5-80-110 and Condition #6 of the 12/28/2011 Permit)

52. The production of Tyvek® from Lines 4 and 7 shall not exceed 55,000 tons per year, calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.
(9 VAC 5-80-110 and Condition #12 of the 12/28/2011 Permit)

53. Although it is not directly applicable, the Tyvek® facility shall institute fugitive leak detection and repair procedures to correspond with the standards of 40 CFR 60 Subpart VV or equivalent with two exceptions; the facility shall not be subject to the reporting requirements in 60.487 **and** equipment shall be considered to be leaking when a reading above 500 ppm of VOC is obtained using an approved measurement technique. Records shall be maintained at the facility in accordance with 60.486 and shall be submitted to the Director, Piedmont Regional Office on request.
(9 VAC 5-80-110, Condition #E.16 of the of 1996 RACT Agreement and Condition #14 of the 12/28/2011 Permit)

54. Except where this permit is more restrictive than the applicable requirement, Tyvek® Lines 4 and 7 shall be operated in compliance with the requirements of 40 CFR 60, Subpart HHH.
(9 VAC 5-80-110, 40 CFR 60, Subpart HHH and Condition #13 of the 12/28/2011 Permit)

55. Emissions from the operation of Tyvek® Line 4 and Tyvek® Line 7 shall each not exceed the limits specified below:

Volatile Organic Compounds	13.8 lbs/hr	55.0 tons/yr
Hydrogen Fluoride	2.3 lbs/hr	N/A

Compliance with hourly and annual limits shall be demonstrated by calculating annual emissions on a 12-month rolling average basis. Hourly emissions shall be calculated by dividing annual emissions by 8,760 hours/yr.

These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits may be considered credible evidence of the exceedance of emission limits. Compliance with these emission limits may be determined as stated in Condition #63.
(9 VAC 5-80-110 and Condition #15 of the 12/28/2011 Permit)

56. As of the date of this permit, the permittee is limited to use of the following toxic compounds or hazardous air pollutants (HAPs) in the spiking agents for Tyvek® Lines 4 and 7:

Toxic Compounds or HAPs	CAS Number
Fluorinated compounds	N/A

The permittee may use additional toxic compounds or HAPs (listed in Attachment A of the 12/28/2011 permit) in Tyvek® Lines 4 and 7 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, Piedmont Regional Office. Such notification shall be made within fifteen (15) days after the use of additional toxic compounds or HAPs and shall include identification of the toxic compound or HAPs, the date the toxic compound or 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, Piedmont Regional Office.

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

c. The permittee shall not use any toxic compound or 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 toxic compound or HAP may result in enforcement action.

(9 VAC 5-80-110 and Condition #16 of the 12/28/2011 Permit)

57. Visible emissions from the Tyvek® Lines 4 and 7 and heat regenerative incinerator shall not exceed five percent opacity as determined by the EPA Method 9 (reference 40 CFR 60, Appendix A).
(9 VAC 5-80-110 and Condition #17 of the 12/28/2011 Permit)

B. Monitoring

58. Each emission unit subject to Condition #57 shall be observed visually at least once each operating month for at least a brief time period to determine which emissions units have any visible emissions (does not include condensed water vapor/steam), unless a 40 CFR 60 Appendix A Method 9 visible emissions evaluation is performed on the emissions unit. Each emissions unit observed having any visible emissions shall be followed up with a 40 CFR 60 Appendix A Method 9 visible emissions evaluation unless the visible emission condition is corrected as expeditiously as possible and recorded, and the cause and corrective measures taken are recorded.
(9 VAC 5-80-110)

59. The control devices required by Conditions #46-48 shall be operated within the parameters ranges established during stack testing (e.g., heat regenerative incinerator inlet/outlet temperatures and gas flow rate). These control parameters shall remain consistent unless prior notification of a change is made to the Director, Piedmont Regional Office.
(9 VAC 5-80-110 and Condition #8 of the 12/28/2011 Permit)

60. The heat regenerative incinerator shall be equipped with a device to measure the incinerator chamber temperature. Each monitoring device shall be installed, maintained, calibrated and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations. Each monitoring device shall be provided with adequate access for inspection and shall be in operation when the heat regenerative incinerator is operating.
(9 VAC 5-80-110 and Condition #10 of the 12/28/2011 Permit)

61. The heat regenerative ceramic shall be inspected and replaced as recommended by the manufacturer in order to insure its effectiveness. These recommendations shall be readily accessible or posted conspicuously.
(9 VAC 5-80-110 and Condition #5 of the 12/28/2011 Permit)

62. The permittee shall conduct an annual integrity inspection on the storage tank vapor return lines required by Condition #49. The permittee shall make any necessary repairs to the vapor return lines as expeditiously as possible.
(9 VAC 5-80-110)

C. Recordkeeping

63. 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, Piedmont Regional Office. These records shall include, but are not limited to:

a. Annual production of Tyvek® Lines 4 and 7, calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.

b. Material Safety Data Sheets (MSDS), Certified Product Data Sheets (CPDS), **or** other vendor information as approved by DEQ showing VOC content, fluorinated compound content, and HAP content for each spiking agent, spin agent, polymer, **or** other agent used in the Tyvek® manufacturing process.

c. Monthly and annual throughput in gallons **or** pounds of each spiking agent, spin agent, polymer, **or** other agent used in the Tyvek® manufacturing process. Annual throughputs shall be calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.

d. Twelve-month rolling average emissions calculations for VOC and HAPs from the Tyvek® lines using calculation methods approved by the Piedmont Regional Office to verify compliance with the lb/hr and ton/yr emissions limitations in Condition #55.

e. Recordkeeping as required by 40 CFR 60 Subpart HHH (including amounts of solvent, make-up solvent, polymer usage, and solvent-to-polymer ratio in the spinning solution); calculation of monthly VOC emissions for each line; and total VOC emissions for the last twelve month period for each line.

f. Recordkeeping in accordance with 40 CFR 60 Subpart VV (40 CFR 60.486)

g. The results of the monthly visible emission surveys required by Condition #58 and details of any corrective action taken as a result of these inspections.

h. Operation and control device monitoring records for the heat regenerative incinerator as required in Condition #59.

i. The results of the annual integrity inspections required by Condition #62 and details of any corrective action taken as a result of these inspections.

These records shall be available for inspection by the DEQ and shall be current for the most recent five years.
(9 VAC 5-80-110 and Conditions #13, #14, and #18 of the 12/28/2011 Permit)

D. Reporting

64. The permittee shall report the results of any 40 CFR Part 60 Method 9 opacity test performed as a result of Condition #58. If the test indicates the facility is out of compliance with the standard contained in Condition #57, the source shall also report the length of time associated with any exceedance of the standard and the corrective actions taken to correct the

exceedance. This report shall be sent to the Director, Piedmont Regional Office within seven days of the applicable test unless otherwise noted in Section XIV, Condition #E.
(9 VAC 5-80-110)

65. To demonstrate compliance with the requirement of Condition #54, the permittee shall submit a semi-annual report of the previous 6-month rolling average solvent emissions. In addition, an annual report demonstrating annual compliance shall be compiled. The semi-annual and annual reports shall be sent to the Director, Piedmont Regional Office.
(9 VAC 5-80-110 and Condition #13 of the 12/28/2011 Permit)

VI. Zytel® Process Area

A. Limitations

66. Volatile Organic Compound emissions from the following equipment shall be controlled by the Zytel® Environmental Abatement Facility (EAF) Scrubber (ZYC 03):

    ZYE 14 – Line 3 Reflux Level Pot

    The scrubber shall be operated such that it will maintain a VOC reduction efficiency of at least 95%. The scrubber shall be provided with adequate access for inspection and shall be in operation, except for periods of scheduled maintenance as allowed by any applicable RCRA regulation up to a maximum of 240 hours per year, when any of the equipment specified in this condition is operating.
    (9 VAC 5-80-110 and Condition #3 of 5/14/2010 Permit)

67. The Zytel® EAF Scrubber (ZYC 03) shall be operated such that at all times of required operation, the scrubber liquid (water) flow rate is equal to or greater than 1.0 gallons per minute and the scrubber outlet gas temperature is equal to or less than 62 °C.
    (9 VAC 5-80-110 and Condition #4 of 5/14/2010 Permit)

68. Zytel® Continuous Polymerization Line 3 shall produce no more than 12,045 Zytel® Polymerization Units per year, calculated monthly as the sum of each consecutive 12 month period.
    (9 VAC 5-80-110 and Condition #7 of 5/14/2010 Permit)

69. Zytel® Continuous Polymerization Line 3 shall be operated such that the temperature at the Line 3 Reflux Level Pot (ZYE 14) does not exceed 80 °C as a three hour average.
    (9 VAC 5-80-110 and Condition #8 of 5/14/2010 Permit)

70. Emissions from the operation of Line 3 Reflux Level Pot (ZYE 14), as exhausted from the Zytel® EAF Scrubber (ZYC 03), shall not exceed the limitations specified below:

VOC	0.8 lbs/hr	3.6 tons/yr

    Compliance with these emission limits shall be determined as stated in Conditions #66-69, #74-76 and #80.
    (9 VAC 5-80-110 and Condition #9 of 5/14/2010 Permit)

71. The Dowtherm® operations in the Zytel® process area shall institute fugitive leak detection and repair (LDAR) procedures to correspond with the standards of 40 CFR 60 Subpart VV with two exceptions; the facility shall not be subject to the reporting requirements in 60.487 and equipment shall be considered to be leaking when a reading above 500 ppm of VOC is obtained using an approved measurement technique. Records shall be maintained at the facility in accordance with 60.486 and shall be submitted to the Director, Piedmont Regional Office on request.
    (9 VAC 5-80-110 and Condition #E.12 of 5/30/1996 RACT Agreement)

72. Emissions from the operation of Dowtherm® vaporizers ZYE 08-11 shall not exceed the limits specified below:

Particulate Matter	0.372 lbs/MMBtu
Sulfur Dioxide	2.64 lbs/MMBtu

(9 VAC 5-80-110, 9 VAC 5-50-10 D, 9 VAC 5-40-900 and 9 VAC 5-40-930)

73. Visible emissions from the Dowtherm® vaporizers ZYE 08-11 shall not exceed 20 percent opacity, except for one six-minute period in any one hour of not more than 30% opacity. Failure to meet the requirements of this condition because of the presence of water vapor shall not be a violation of this section.
(9 VAC 5-80-110 and 9 VAC 5-50-80)

B. Monitoring

74. The Zytel® EAF Scrubber (ZYC 03) shall be equipped with a scrubber liquid (water) flow meter and a scrubber outlet gas temperature monitor. The flow meter and temperature monitor shall be installed in accessible locations and shall be maintained by the permittee such that they are in proper working order at all times (except for periods of required maintenance and calibration).
(9 VAC 5-80-110 and Condition #5 of 5/14/2010 Permit)

75. To ensure good performance, the Zytel® EAF Scrubber (ZYC 03) liquid flow meter and outlet gas temperature monitor shall be observed by the permittee with a frequency of not less than once per shift. The permittee shall keep a log of the observations required by this condition and any related corrective actions.
(9 VAC 5-80-110 and Condition #6 of 5/14/2010 Permit)

76. The Line 3 Reflux Level Pot (ZYE 14) shall be equipped with a temperature monitor. The temperature monitor 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 (except for periods of required maintenance and calibration) the process is in operation.
(9 VAC 5-80-110 and Condition #8 of 5/14/2010 Permit)

77. Each emission unit subject to Condition #73 shall be observed visually at least once each operating month for at least a brief time period to determine which emissions units have normal visible emissions (does not include condensed water vapor/steam), unless a 40 CFR 60 Appendix A Method 9 visible emissions evaluation is performed on the emissions unit. Each emissions unit observed having above-normal visible emissions shall be followed up with a 40 CFR 60 Appendix A Method 9 visible emissions evaluation unless the visible emission condition is corrected as expeditiously as possible and recorded, and the cause and corrective measures taken are recorded.
(9 VAC 5-80-110)

C. Recordkeeping

78. 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, Piedmont Regional Office. These records shall include, but

are not limited to:

a. Monthly and annual production of Zytel® from Zytel® Continuous Polymerization Line 3, annual throughputs shall be calculated monthly as the sum of each consecutive 12 month period.

b. Records of each occasion the 3-hour average temperature at the inlet to Line 3 Reflux Level Pot (ZYE 14) exceeded the requirement of Condition #69.

c. Logs of the scrubber operating parameters observations as required by Condition #75.

d. Leak detection in repair records in accordance with 40 CFR 60 Subpart VV (40 CFR 60.486).

e. The emission factors used to calculate the emissions of each pollutant with an emission limitation in Condition #72.

f. The results of the monthly visible emission surveys required by Condition #77 and details of any corrective action taken as a result of these inspections.

These records shall be available for inspection by the DEQ and shall be current for the most recent five years.
(9 VAC 5-80-110, Condition #E.12 of 5/30/1996 RACT Agreement and Condition #12 of the 5/14/2010 Permit)

D. Reporting

79. The permittee shall report the results of any 40 CFR Part 60 Method 9 opacity test performed as a result of Condition #77. If the test indicates the facility is out of compliance with the standard contained in Condition #73, the source shall also report the length of time associated with any exceedance of the standard and the corrective actions taken to correct the exceedance. This report shall be sent to the Director, Piedmont Regional Office within seven days of the applicable test unless otherwise noted in Section XIV, Condition #E.
(9 VAC 5-80-110)

80. The permittee shall report, within 4 business hours, any occasion where the 3-hour average temperature at the Line 3 Reflux Level Pot (ZYE 14) exceeds 80 °C. The report shall include the duration of the excursion and any corrective action taken.
(9 VAC 5-80-110 and Condition #8 of 5/14/2010 Permit)

VII. Emergency Generators/Engines (MIE 03-04, MIE 06-10, MIE 13)

A. Limitations

81. Visible emissions from MIE 03-04, MIE 06-10 and MIE 13 shall not exceed 20 percent opacity, except for one six-minute period in any one hour of not more than 30% opacity. Failure to meet the requirements of this condition because of the presence of water vapor shall not be a violation of this section.
(9 VAC 5-80-110 and 9 VAC 5-50-80)

B. Monitoring

82. Each emission unit subject to Condition #81 shall be observed visually at least once each operating month for at least a brief time period to determine which emissions units have normal visible emissions (does not include condensed water vapor/steam), unless a 40 CFR 60 Appendix A Method 9 visible emissions evaluation is performed on the emissions unit. Each emissions unit observed having above-normal visible emissions shall be followed up with a 40 CFR 60 Appendix A Method 9 visible emissions evaluation unless the visible emission condition is corrected as expeditiously as possible and recorded, and the cause and corrective measures taken are recorded.
(9 VAC 5-80-110)

C. Recordkeeping

83. 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, Piedmont Regional Office. These records shall include, but are not limited to:

    a. The results of the monthly visible emission surveys required by Condition #82 and details of any corrective action taken as a result of these inspections.

    These records shall be available for inspection by the DEQ and shall be current for the most recent five years.
    (9 VAC 5-80-110)

D. Reporting

84. The permittee shall report the results of any 40 CFR Part 60 Method 9 opacity test performed as a result of Condition #82. If the test indicates the facility is out of compliance with the standard contained in Condition #81, the source shall also report the length of time associated with any exceedance of the standard and the corrective actions taken to correct the exceedance. This report shall be sent to the Director, Piedmont Regional Office within seven days of the applicable test unless otherwise noted in Section XIV, Condition #E.
(9 VAC 5-80-110)

E. National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE MACT – 40 CFR 63 Subpart ZZZZ)

85. As of the date of this permit, the emergency engines (MIE 06-10, MIE 13) are considered affected sources for the purposes of 40 CFR 63 Subpart ZZZZ. See Section X of this permit for the RICE MACT requirements for the emergency engines.
(9 VAC 5-80-110 and 40 CFR 63 Subparts A and ZZZZ)

VIII. Facility Wide Conditions

A. Work Practice, Recordkeeping and Reporting

Note: Conditions #86-88 apply to the NOMEX®, Kevlar®, Tyvek® and Zytel® process areas; Condition #89 applies only to the NOMEX® and Kevlar® process areas

86. 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 5-80-110, Condition #30 of the 2/25/2011 Permit, Condition #29 of the 11/19/2010 Permit, Condition #22 of the 12/28/2011 Permit and Condition #17 of the 5/14/2010 Permit)

87. In order to minimize the duration and frequency of excess emissions, including visible 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 5-80-110, Condition #29 of the 2/25/2011 Permit, Condition #29 of the 11/19/2010 Permit, Condition #22 of the 12/28/2011 Permit and Condition #17 of the 5/14/2010 Permit)

88. 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, Piedmont Regional Office. These records shall include, but are not limited to:

    a. Operator training records required by Condition #86.

    b. Written operating procedures for all process equipment and air pollution control equipment as required by Condition #86.

    c. A maintenance schedule for all process equipment and air pollution control equipment as required by Condition #87.

    d. Scheduled and unscheduled maintenance records for all process equipment and air pollution control equipment, including catalyst bed replacements as required by Condition #87.

    These records shall be available on site for inspection by the DEQ and shall be current for the most recent five years.
    (9 VAC 5-80-110 E, Conditions #16 and #29-30 of the 2/25/2011 Permit, Conditions #23 and #29 of the 11/19/2010 Permit, Conditions #18 and #22 of the 12/28/2011 Permit and

Conditions #12 and #17 of the 5/14/2010 Permit)

89. The permittee shall submit the results of demonstrations in which the 6-month average VOC control efficiency in any plant as specified in the 5/30/1996 RACT Agreement is not demonstrated. These reports shall be submitted at the end of each calendar quarter. However, if the permittee is successful in demonstrating compliance with the VOC control efficiency in each plant during a particular quarter, a report stating this shall be submitted to the Director, Piedmont Regional Office semiannually. Any such semiannual reports may be included in the reports required by Section XIV, Condition #C.3
(9 VAC 5-80-110 and Condition #E.4 of 5/30/1996 RACT Agreement)

B. Solvent Metal Cleaning Operations (Cold Cleaning)

Note: The requirements of Conditions #90-94 are not applicable to aqueous-based solutions.

90. No owner or other person shall use or permit the use of any cold cleaner unless such cleaner is equipped with a control method that will remove, destroy or prevent the discharge into the atmosphere of at least 85% by weight of volatile organic compound emissions. Achievement of this emission standard by use of the methods in Conditions #91-93 will be acceptable to the board.
(9 VAC 5-80-110 and 9 VAC 5-40-3280 C)

91. Emissions from each solvent metal cleaning operation (cold cleaning) shall be controlled as follows:

    a. Covers or enclosed remote reservoirs shall be provided. Covers shall be designed so that they can be easily operated with one hand. (Covers for larger degreasers may require mechanical assistance, by spring loading, counterweighting or powered systems). Enclosed remote reservoirs shall be designed such that they provide reduction effectiveness equivalent to that of a cover.

    b. External or internal drainage facilities shall be provided to collect and return the solvent to a closed container or a solvent cleaning machine. The drainage facilities may be external for applications where an internal type cannot fit into the cleaning system.

    c. A permanent label summarizing the operating procedures in Condition #92 shall be placed in a conspicuous location on or near the degreaser.

    (9 VAC 5-80-110 and 9 VAC 5-40-3290 C1)

92. The permittee shall operate each solvent metal cleaning operation (cold cleaning) consistent with good operating practices including the following:

    a. Waste solvent shall not be disposed of or transferred to another party, such that greater than 20% of the waste (by weight) can evaporate into the atmosphere. Waste solvent shall only be stored in closed containers.

    b. The degreaser cover shall be closed whenever not handling parts in the cleaner.

    c. Cleaned parts shall be drained for at least 15 seconds or until dripping ceases.

    (9 VAC 5-80-110 and 9 VAC 5-40-3290 C2)

93. The permittee shall dispose of waste solvent from each solvent metal cleaning operation (cold cleaning) by one of the following methods:

    a. Reclamation (either by outside services or in-house).

    b. Incineration.

    (9 VAC 5-80-110 and 9 VAC 5-40-3290 D)

94. 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, Piedmont Regional Office. These records shall include, but are not limited to:

    a. Records documenting that each solvent metal cleaning operation (cold cleaning) at the facility is in compliance with the requirements of Conditions #90-93.

    These records shall be available on site for inspection by the DEQ and shall be current for the most recent five years.
    (9 VAC 5-80-110)

C. Testing

95. The permitted facility shall be constructed so as to allow for emissions testing at any time using appropriate methods. Upon request from the Department, test ports shall be provided at the appropriate locations.
    (9 VAC 5-80-110 and 9 VAC 5-50-30)

96. If compliance testing is conducted in addition to the monitoring specified in this permit, the permittee shall use the following test methods in accordance with procedures approved by the DEQ as follows:
    (9 VAC 5-80-110)

IX. National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing (NOMEX® and Kevlar® Process Areas)

A. General

97. The permittee shall be in compliance with the applicable emission limits and work practice standards in Tables 1 through 7 to 40 CFR 63 Subpart FFFF at all times, except during periods of startup, shutdown, and malfunction (SSM), and the permittee shall meet the requirements specified in §§63.2455 through 63.2490 (or the alternative means of compliance in §63.2495, §63.2500, or §63.2505), except as specified in paragraphs (b) through (s) of 40 CFR 63.2450. The permittee shall meet the notification, reporting, and recordkeeping requirements specified in §§63.2515, 63.2520, and 63.2525. As of the date of this permit, Tables 1, 4, 6 and 7 are applicable to the permittee.
(9 VAC 5-80-110 and 40 CFR 63.2450(a))

98. The permittee shall determine if an emission stream is a halogenated vent stream, as defined in §63.2550, by calculating the mass emission rate of halogen atoms in accordance with §63.115(d)(2)(v). Alternatively, the permittee may elect to designate the emission stream as halogenated.
(9 VAC 5-80-110 and 40 CFR 63.2450(b))

99. Except where this permit is more restrictive than the applicable requirement, the permittee shall operate in compliance with all applicable requirements of 40 CFR 63 Subparts A and FFFF. Table 12 of 40 CFR 63 Subpart FFFF shows which parts of the General Provisions in 40 CFR 63.1 through 63.13 apply to the permittee.
(9 VAC 5-80-110 and 40 CFR 63 Subparts A and FFFF)

B. Closed-Vent System Requirements

100. Except when complying with §63.2485, if the permittee reduces organic HAP emissions by venting emissions through a closed-vent system to any combination of control devices (except a flare) or recovery devices, the permittee shall meet the requirements of §63.982(c) and the requirements referenced therein.

    a. The permittee shall submit with the Notification of Compliance Status, a monitoring plan containing the information specified in 40 CFR 63.999(b)(2)(i) and (ii) to identify the parameters that will be monitored to assure proper operation of each control device.

    b. The permittee shall monitor the parameters specified in the Notification of Compliance Status or in the operating permit application or amendment. Records shall be generated as specified in 40 CFR 63.998(d)(2)(i).

    c. The permittee shall operate and maintain each nonflare control device so that the monitored parameters defined as required in paragraph (a) of this condition remain within the ranges specified in the Notification of Compliance Status whenever emissions of regulated material are routed to the control device except during periods of start-up,

shutdown, and malfunction as specified in 40 CFR 63 Subpart FFFF.

d. The permittee shall prepare and submit with the Notification of Compliance Status, as specified in 40 CFR 63.999(b)(2), either a design evaluation that includes the information specified in paragraph (e) of this condition or the results of the performance test as described in paragraph (b)(1)(ii) of 40 CFR 63.985.

e. The design evaluation shall include documentation demonstrating that the control device being used achieves the required control efficiency during the reasonably expected maximum storage vessel filling or transfer loading rate. This documentation is to include a description of the gas stream that enters the control device, including flow and regulated material content, and the information specified in paragraphs (b)(1)(i)(A) through (E) of 40 CFR 63.985, as applicable. For storage vessels, the description of the gas stream that enters the control device shall be provided for varying liquid level conditions. This documentation shall be submitted with the Notification of Compliance Status as specified in 40 CFR 63.999(b)(2).

f. Except as allowed by Condition #102.a, each closed vent system shall be designed and operated to collect the regulated material vapors from the emission point, and to route the collected vapors to a control device.

g. Except as allowed by Condition #102.a , closed vent systems used to comply with the provisions of 40 CFR 63 Subpart FFFF shall be operated at all times when emissions are vented to, or collected by, them.

Closed-Vent LDAR Requirements

h. Except for any closed vent systems that are designated as unsafe or difficult to inspect as provided in paragraphs (b)(2) and (3) of 40 CFR 63.983, each closed vent system shall be inspected as specified in paragraph (i) of this condition.

i. If the closed vent system is constructed of hard-piping, the permittee shall conduct an initial inspection according to the procedures in paragraph (c) of 40 CFR 63.983 and conduct annual inspections for visible, audible, or olfactory indications of leaks.

j. If there are visible, audible, or olfactory indications of leaks at the time of the annual visual inspections required by paragraph (i) of this condition, the permittee shall follow the procedure specified in either paragraph (k) or (l) of this condition.

k. The permittee shall eliminate the leak.

l. The permittee shall monitor the equipment according to the procedures in paragraph (c) of 40 CFR 63.983.

m. Leaks, as indicated by 40 CFR 63.983(d)(2), shall be repaired as required by 40 CFR 63.983(d)(2-3).

(9 VAC 5-80-110, 40 CFR 63.2450(e)(1), 40 CFR 63.982(c), 40 CFR 63.983 and 40 CFR 63.985)

C. Limitations

101. The permittee shall meet each emission limit in Table 1 to 40 CFR 63 Subpart FFFF that applies to its continuous process vents, and the permittee shall meet each applicable requirement specified in paragraphs (b) through (c) of 40 CFR 63.2455.

    a. For each continuous process vent, the permittee shall either designate the vent as a Group 1 continuous process vent or determine the total resource effectiveness (TRE) index value as specified in §63.115(d), except as specified in paragraphs (b)(1) through (3) of 40 CFR 63.2455.

    b. If the permittee uses a recovery device to maintain the TRE above a specified threshold, the permittee shall meet the requirements of §63.982(e) and the requirements referenced therein, except as specified in §63.2450 and paragraph (c)(1) of 40 CFR 63.2455.

    c. For each Group 2 continuous process vent using a recovery device to maintain the TRE greater than 1.9 but less than 5.0, the permittee shall comply with the requirements in §63.993 and the requirements referenced therein.

    d. Except as allowed by Condition #97, each recovery device used to comply with the provisions of 40 CFR 63 Subpart FFFF shall be operated at all times when emissions are vented to them.

    (9 VAC 5-80-110, 40 CFR 63.993 and 40 CFR 63.2455)

102. The permittee shall meet each emission limit in Table 4 to 40 CFR 63 Subpart FFFF that applies to its storage tanks, and the permittee shall meet each applicable requirement specified in paragraphs (b) through (e) of 40 CFR 63.2470.

    a. The emission limits in this condition for control devices used to control emissions from storage tanks shall not apply during periods of planned routine maintenance. Periods of planned routine maintenance of each control device, during which the control device does not meet the emission limit specified in condition, shall not exceed 360 hours per year (hr/yr). Note: the 40 CFR 63.2470(d) increase from 240 hrs/yr to 360 hrs/yr was granted in approval determinations dated March 23, 2009 and July 15, 2011.

    b. For each Group 1 storage tank, the permittee shall reduce total HAP emissions by 95 percent by weight or to 20 ppmv of TOC or organic HAP by venting emissions through a closed vent system to any combination of control devices (excluding a flare).

    (9 VAC 5-80-110 and 40 CFR 63.2470)

103. The permittee shall meet each requirement in Table 7 to 40 CFR 63 Subpart FFFF that applies to its wastewater streams and liquid streams in open systems within a miscellaneous organic chemical manufacturing process unit (MCPU), except as specified in paragraphs (b) through (o) of 40 CFR 63.2485.

    a. For each process wastewater stream, the permittee shall comply with the requirements in §§63.132 through 63.148 and the requirements referenced therein, except as specified in §63.2485.

(9 VAC 5-80-110 and 40 CFR 63.2485)

D. Leak Detection and Repair (LDAR) Requirements

104. The permittee shall meet each requirement in Table 6 to 40 CFR 63 Subpart FFFF that applies to its equipment leaks, except as specified in paragraphs (b) through (d) of 40 CFR 63.2470.

    a. For all equipment that is in organic HAP service, the permittee shall comply with the requirements of Subpart UU of this Part 63 and the requirements referenced therein, except as specified in §63.2480(b) and (d).

    (9 VAC 5-80-110 and 40 CFR 63.2480)

E. Heat Exchange System Requirements

105. The permittee shall meet each requirement in Table 10 to 40 CFR 63 Subpart FFFF that applies to its heat exchange systems, except as specified in paragraphs (b) and (c) of 40 CFR 63.2490.

    a. For each heat exchange system, as defined in §63.101, the permittee shall comply with the requirements of §63.104 and the requirements referenced therein, except as specified in §63.2490.

    (9 VAC 5-80-110 and 40 CFR 63.2490)

F. Monitoring Requirements

106. Except as specified in a alternative monitoring request approved by the Administrator, United States EPA (Administrator), the permittee shall meet each of the applicable monitoring requirements specified in 40 CFR 63.993 and 40 CFR 63.996. Prior to submittal of a revised Notification of Compliance Status, the permittee shall comply with the alternative monitoring requirements approved by the Administrator on August 19, 2009 (Kevlar® and NOMEX®). Upon submittal of a revised Notification of Compliance Status incorporating its requirements, the permittee shall comply with the alternative monitoring requirements approved by the Administrator on May 7, 2012 (Kevlar®). If the Administrator approves new or amended alternative monitoring requirements during the term of this permit, the permittee shall comply with the new/amended requirements in lieu of the requirements approved on August 19, 2009 or May 7, 2012 (Kevlar® or NOMEX®).

    a. All monitoring equipment shall be installed, calibrated, maintained, and operated according to manufacturer's specifications or other written procedures that provide adequate assurance that the equipment would reasonably be expected to monitor accurately.

    b. The permittee shall maintain and operate each continuous parameter monitoring systems (CPMS) as specified in this section, or in a relevant subpart, and in a manner consistent with good air pollution control practices.

    c. All CPMS's shall be installed and operational, and the data verified as specified in this 40

CFR 63 Subpart FFFF either prior to or in conjunction with conducting performance tests. Verification of operational status shall, at a minimum, include completion of the manufacturer's written specifications or recommendations for installation, operation, and calibration of the system or other written procedures that provide adequate assurance that the equipment would reasonably be expected to monitor accurately.

d. All CPMS's shall be installed such that representative measurements of parameters from the regulated source are obtained.

e. In accordance with 40 CFR 63 Subpart FFFF, except for system breakdowns, repairs, maintenance periods, instrument adjustments, or checks to maintain precision and accuracy, calibration checks, and zero and span adjustments, all continuous parameter monitoring systems shall be in continuous operation when emissions are being routed to the monitored device.

(9 VAC 5-80-110, 40 CFR 63.993 and 40 CFR 63.996)

G. Notification and Reporting Requirements

107. The permittee shall submit all of the notifications in 40 CFR 63.8(e), 63.8(f)(4) and (6), and 63.9(b) and (h) that apply by the dates specified.
(9 VAC 5-80-110 and 40 CFR 63.2515)

108. The permittee shall submit the following reports to demonstrate compliance with this permit. The content of and format of such reports shall be arranged with the Director, Piedmont Regional Office. These reports shall include, but are not limited to:

a. Compliance Report – submitted semi-annually in accordance with 40 CFR 63.2520(b) and including the information specified in 40 CFR 63.2520(e) and 40 CFR 63.999(c).

(9 VAC 5-80-110 and 40 CFR 63.2520)

H. Recordkeeping Requirements

109. 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, Piedmont Regional Office. These records shall include, but are not limited to:

a. The results of each calibration check and all maintenance performed on each Continuous Parameter Monitoring System (CPMS) as specified in §63.998(c)(1)(ii)(A).

b. Records of the halogen concentration in each 40 CFR 63 Subpart FFFF vent stream determined according to the procedures specified in Condition #98.

c. Monitoring records as required by the most recent alternative monitoring plan approved by the Administrator, United States EPA.

d. For a CPMS used to comply with 40 CFR 63 Subpart FFFF, a record of the procedure used for calibrating the CPMS.

e. For a CPMS used to comply with 40 CFR 63 Subpart FFFF, records of the information specified in paragraphs (c)(ii)(A) through (H) of 40 CFR 63.998.

f. Records of periods of operation during which the parameter boundaries are exceeded. The parameter boundaries are established pursuant to the EPA Approved alternative monitoring plan.

g. For all Group 2 wastewater streams, the permittee shall keep in a readily accessible location records of the process unit identification and description of the process unit, the stream identification code, the concentration of Table 8 and 9 compound(s) (from 40 CFR 63 Subpart FFFF) in parts per million, by weight (include documentation of the methodology used to determine concentration) and the flow rate in liters per minute.

h. Each applicable record required by subpart A of 40 CFR 63 and in referenced subparts F, G, SS and UU of 40 CFR 63 and in referenced subpart F of 40 CFR 65.

i. Records of each operating scenario as specified in 40 CFR 63.2525(b)(1-8).

j. A record of each time a safety device is opened to avoid unsafe conditions in accordance with 40 CFR 63.2450(p).

k. The closed vent system records required by 40 CFR 63.998(d)(1).

l. A record of the planned routine maintenance performed on any control system during which the control system does not meet the applicable specifications of 40 CFR 63.983(a), 63.985(a), or 63.987(a), as applicable, due to the planned routine maintenance. Such a record shall include the information specified in 40 CFR 63.998(d)(2)(ii)(A-C). This information shall be submitted in the Periodic Reports as specified in 40 CFR 63.999(c)(4).

m. Regulated source and control equipment start-up, shutdown and malfunction records as required by 40 CFR 63.998(d)(3).

n. Closed vent system equipment leak records as required by 40 CFR 63.998(d)(4).

o. The permittee shall record the occurrences and the cause of periods when the monitored parameters are outside of the parameter ranges documented in the Notification of Compliance Status report. This information shall also be reported in the Periodic Report.

p. Records of any applications for and approvals of extensions for planned routine maintenance in accordance with 40 CFR 63.2470(d).

q. Records of any applicability determinations for heat exchanger systems potentially subject to Condition #105.

These records shall be available for inspection by the DEQ and shall be current for the most recent five years.
(9 VAC 5-80-110, 40 CFR 63.2450(k)(1), 40 CFR 63.147(b)(8), 40 CFR 63.2525, 40 CFR 63 Subparts A and FFFF)

X. National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

A. Work Practice Requirements

110. As stated in 40 CFR 63.6602 and 63.6640, and as excepted in Table 2C of 40 CFR 63 Subpart ZZZZ, the permittee shall comply with the following requirements for emergency engines MIE 06-10 and MIE 13.

    a. Change oil and filter every 500 hours of operation or annually, whichever comes first.

    b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first.

    c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

    (9 VAC 5-80-110, 40 CFR 63.6602 and Table 2C of 40 CFR 63 Subpart ZZZZ)

111. The permittee shall operate and maintain each emergency engine (MIE 06-10, MIE 13) and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop a site-specific maintenance plan which shall provide to the extent practicable for the maintenance and operation of the each emergency engine (MIE 06-10, MIE 13) in a manner consistent with good air pollution control practice for minimizing emissions..
    (9 VAC 5-80-110 and 40 CFR 63.6625(e))

112. For emergency engines MIE 06-10 and MIE 13, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as permitted in this condition, shall be prohibited:

    a. There shall be no time limit on the use of emergency engines MIE 06-10 and MIE 13 in emergency situations.

    b. The permittee may operate emergency engines MIE 06-10 and MIE 13 for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, or the insurance company associated with the unit. Maintenance checks and readiness testing of such units shall be limited to 100 hours per year. The permittee may petition the Director, Piedmont Regional Office for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency engines MIE 06-10 and MIE 13 beyond 100 hours per year.

    c. The permittee may operate each emergency engine (MIE 06-10, MIE 13) up to 50 hours per year in non-emergency situations, but those 50 hours shall be counted towards the 100 hours per year provided for maintenance and testing. The 50 hours per year for non-emergency situations shall not be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a

financial arrangement with another entity; except that the permittee may operate each emergency engine (MIE 06-10, MIE 13) for a maximum of 15 hours per year as part of a demand response program if the regional transmission organization or equivalent balancing authority and transmission operator has determined there are emergency conditions that could lead to a potential electrical blackout, such as unusually low frequency, equipment overload, capacity or energy deficiency, or unacceptable voltage level. Each emergency engine (MIE 06-10, MIE 13) shall not be operated for more than 30 minutes prior to the time when the emergency condition is expected to occur, and each emergency engine's (MIE 06-10, MIE 13) operation shall be terminated immediately after the permittee is notified that the emergency condition is no longer imminent. The 15 hours per year of demand response operation shall be counted as part of the 50 hours of operation per year provided for non-emergency situations. The supply of emergency power to another entity or entities pursuant to financial arrangement is not limited by this condition, as long as the power provided by the financial arrangement is limited to emergency power.

(9 VAC 5-80-110 and 40 CFR 63.6640(f))

B. Monitoring Requirements

113. The permittee shall install a non-resettable hour meter on each emergency engine (MIE 06-10, MIE 13) if one is not already installed.
(9 VAC 5-80-110 and 40 CFR 63.6625(f))

C. Reporting Requirements

114. The permittee shall submit a semi-annual compliance report as specified in Table 7 of 40 CFR 63 Subpart ZZZZ. The permittee shall submit each report by the date specified in 40 CFR 63.6650(b). Each compliance report shall contain the information specified by 40 CFR 63.6650 and the information specified below.

    a. If there are no deviations from any emission limitations or operating limitations that apply to you, a statement that there were no deviations from the emission limitations or operating limitations during the reporting period.

    b. If there are one or more deviations from any emission limitation or operating limitation during the reporting period, the information in 40 CFR 63.6650(d).

    c. If there are one or more malfunctions during the reporting period, the information in 40 CFR 63.6650(c)(4).

    (9 VAC 5-80-110 and 40 CFR 63.6650)

D. Recordkeeping Requirements

115. As specified in 40 CFR 63.10(b)(1), the permittee shall keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The permittee shall keep records on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record according to 40 CFR 63.10(b)(1). The permittee can keep the records offsite for the remaining 3 years. The

permittee's records shall be in a form suitable and readily available for expeditious review as specified in 40 CFR 63.10(b)(1). These records shall include, but are not limited to:

a. Records of the maintenance conducted on each emergency engine (MIE 06-10, MIE 13) in order to demonstrate that the permittee operated and maintained the units and after-treatment control devices (if any) according to the maintenance plan required by Condition #111.

b. Records of the hours of operation of each emergency engine (MIE 06-10, MIE 13) that is recorded through the non-resettable hour meter. The permittee shall document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the emergency engines (MIE 06-10, MIE 13) are used for demand response operation, the permittee shall keep records of the notification of the emergency situation, and the time each emergency engine (MIE 06-10, MIE 13) was operated as part of demand response.

(9 VAC 5-80-110 and 40 CFR 63.6655(e-f))

E. General Compliance Requirement

116. The permittee shall operate in compliance with all applicable requirements of 40 CFR 63 Subparts A and ZZZZ. Table 8 of 40 CFR 63 Subpart ZZZZ shows which parts of the General Provisions in 40 CFR 63.1 through 63.13 apply to the permittee.
(9 VAC 5-80-110 and 40 CFR 63, Subparts A and ZZZZ)

XI. National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial and Institutional Boilers and Process Heaters

A. General Compliance Requirement

117. The permittee shall operate in compliance with all applicable requirements of 40 CFR 63 Subparts A and DDDDD.
(9 VAC 5-80-110 and 40 CFR 63, Subparts A and DDDDD)

XII. Insignificant Emission Units

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

Emission Unit No.	Emission Unit Description	Citation	Pollutant(s) Emitted (9 VAC 5-80-720 B)	Rated Capacity (9 VAC 5-80-720 C)
MIT01-02	Two Gasoline/Diesel Storage Tanks	9 VAC 5-80-720 B	VOC	N/A
MIT03-04	Two No. 2 Fuel Oil Storage Tanks	9 VAC 5-80-720 B	VOC	N/A
ZYE15	Adipic Acid Unloading System	9 VAC 5-80-720 B	PM/PM10	N/A
MIE15	Aqueous Based Metal Cleaning Units	9 VAC 5-80-720 A	N/A	N/A
SEE42	One Caustic Railcar Unloading Station	9 VAC 5-80-720 B	None	N/A
TYE25-32	Polyethylene Pellet Storage Silos (8)	9 VAC 5-80-720 B	PM/PM10	N/A
ZYTAA	Zytel Acetic Acid Tank	9 VAC 5-80-720 B	VOC	N/A
MIE11-12	Two 1.9 MMBtu/hr diesel-fired space heaters	9 VAC 5-80-720 A	N/A	N/A

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

XIII. Permit Shield & Inapplicable Requirements

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

Citation	Title of Citation	Description of Applicability
None Identified		

Nothing in this permit shield shall alter the provisions of §303 of the federal Clean Air Act, including the authority of the administrator under that section, the liability of the owner for any violation of applicable requirements prior to or at the time of permit issuance, or the ability to obtain information by the administrator pursuant to §114 of the federal Clean Air Act, (ii) the Board pursuant to §10.1-1314 or §10.1-1315 of the Virginia Air Pollution Control Law or (iii) the Department pursuant to §10.1-1307.3 of the Virginia Air Pollution Control Law.
(9 VAC 5-80-140)

XIV. General Conditions

A. Federal Enforceability

All terms and conditions in this permit are enforceable by the administrator and citizens under the federal Clean Air Act, except those that have been designated as only state-enforceable. (9 VAC 5-80-110 N)

B. Permit Expiration

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

1. The owner shall submit an application for renewal at least six months but no earlier than eighteen months prior to the date of permit expiration. The owner may submit a letter with appropriate updated application pages in place of the full application form stating what permit changes are requested. The owner shall submit additional information or a full application form if deemed necessary by the Department of Environmental Quality.

2. If an applicant submits a timely and complete application for an initial permit or renewal under this section, the failure of the source to have a permit or the operation of the source without a permit shall not be a violation of Article 1, Part II of 9 VAC 5 Chapter 80, until the Board takes final action on the application under 9 VAC 5-80-150.

3. No source shall operate after the time that it is required to submit a timely and complete application under subsections C and D of 9 VAC 5-80-80 for a renewal permit, except in compliance with a permit issued under Article 1, Part II of 9 VAC 5 Chapter 80.

4. If an applicant submits a timely and complete application under section 9 VAC 5-80-80 for a permit renewal but the Board fails to issue or deny the renewal permit before the end of the term of the previous permit, (i) the previous permit shall not expire until the renewal permit has been issued or denied and (ii) all the terms and conditions of the previous permit, including any permit shield granted pursuant to 9 VAC 5-80-140, shall remain in effect from the date the application is determined to be complete until the renewal permit is issued or denied.

5. The protection under subsections F 1 and F 5 (ii) of section 9 VAC 5-80-80 F shall cease to apply if, subsequent to the completeness determination made pursuant section 9 VAC 5-80-80 D, the applicant fails to submit by the deadline specified in writing by the Board any additional information identified as being needed to process the application.

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

C. Recordkeeping and Reporting

1. All records of monitoring information maintained to demonstrate compliance with the terms and conditions of this permit shall contain, where applicable, the following:

   a. The date, place as defined in the permit, and time of sampling or measurements.

   b. The date(s) analyses were performed.

   c. The company or entity that performed the analyses.

   d. The analytical techniques or methods used.

   e. The results of such analyses.

   f. The operating conditions existing at the time of sampling or measurement.

   (9 VAC 5-80-110 F)

2. Records of all monitoring data and support information shall be retained for at least five years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.
   (9 VAC 5-80-110 F)

3. The permittee shall submit the results of monitoring contained in any applicable requirement to DEQ no later than **March 1** and **September 1** of each calendar year. This report must be signed by a responsible official, consistent with 9 VAC 5-80-80 G, and shall include:

   a. The time period included in the report. The time periods to be addressed are January 1 to June 30 and July 1 to December 31.

   b. All deviations from permit requirements. For purposes of this permit, deviations include, but are not limited to:

      (1) Exceedance of emissions limitations or operational restrictions;

      (2) Excursions from control device operating parameter requirements, as documented by continuous emission monitoring, periodic monitoring, or compliance assurance monitoring which indicates an exceedance of emission limitations or operational restrictions; or,

      (3) Failure to meet monitoring, recordkeeping, or reporting requirements contained in this permit.

   c. If there were no deviations from permit conditions during the time period, the permittee shall include a statement in the report that “no deviations from permit requirements

occurred during this semi-annual reporting period."

(9 VAC 5-80-110 F)

D. Annual Compliance Certification

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

1. The time period included in the certification. The time period to be addressed is January 1 to December 31.

2. The identification of each term or condition of the permit that is the basis of the certification.

3. The compliance status.

4. Whether compliance was continuous or intermittent, and if not continuous, documentation of each incident of non-compliance.

5. Consistent with subsection 9 VAC 5-80-110 E, the method or methods used for determining the compliance status of the source at the time of certification and over the reporting period.

6. Such other facts as the permit may require to determine the compliance status of the source.

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

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

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

E. Permit Deviation Reporting

The permittee shall notify the Director, Piedmont Regional Office within four daytime business hours after discovery of any deviations from permit requirements which may cause excess emissions for more than one hour, including those attributable to upset conditions as may be defined in this permit. In addition, within 14 days of the discovery, the permittee shall provide a written statement explaining the problem, any corrective actions or preventative measures taken, and the estimated duration of the permit deviation. The occurrence should also be reported in the next semi-annual compliance monitoring report pursuant to Section XI, Condition #C.3 of this permit.
(9 VAC 5-80-110 F.2 and 9 VAC 5-80-250)

F. Failure/Malfunction Reporting

In the event that any affected facility or related air pollution control equipment fails or malfunctions in such a manner that may cause excess emissions for more than one hour, the owner shall, as soon as practicable but no later than four daytime business hours after the malfunction is discovered, notify the Director, Piedmont Regional Office by facsimile transmission, telephone or telegraph of such failure or malfunction and shall within 14 days of discovery provide a written statement giving all pertinent facts, including the estimated duration of the breakdown. Owners subject to the requirements of 9 VAC 5-40-50 C and 9 VAC 5-50-50 C are not required to provide the written statement prescribed in this paragraph for facilities subject to the monitoring requirements of 9 VAC 5-40-40 and 9 VAC 5-50-40. When the condition causing the failure or malfunction has been corrected and the equipment is again in operation, the owner shall notify the Director, Piedmont Regional Office.
(9 VAC 5-20-180 C)

G. Severability

The terms of this permit are severable. If any condition, requirement or portion of the permit is held invalid or inapplicable under any circumstance, such invalidity or inapplicability shall not affect or impair the remaining conditions, requirements, or portions of the permit.
(9 VAC 5-80-110 G.1)

H. Duty to Comply

The permittee shall comply with all terms and conditions of this permit. Any permit noncompliance constitutes a violation of the federal Clean Air Act or the Virginia Air Pollution Control Law or both and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or, for denial of a permit renewal application.
(9 VAC 5-80-110 G.2)

I. Need to Halt or Reduce Activity not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
(9 VAC 5-80-110 G.3)

J. Permit Modification

A physical change in, or change in the method of operation of, this stationary source may be subject to permitting under State Regulations 9 VAC 5-80-50, 9 VAC 5-80-1100, 9 VAC 5-80-1790, or 9 VAC 5-80-2000 and may require a permit modification and/or revisions except as may be authorized in any approved alternative operating scenarios.
(9 VAC 5-80-190 and 9 VAC 5-80-260)

K. Property Rights

The permit does not convey any property rights of any sort, or any exclusive privilege.
(9 VAC 5-80-110 G.5)

L. Duty to Submit Information

1. The permittee shall furnish to the Board, within a reasonable time, any information that the Board may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon

request, the permittee shall also furnish to the Board copies of records required to be kept by the permit and, for information claimed to be confidential, the permittee shall furnish such records to the Board along with a claim of confidentiality.
(9 VAC 5-80-110 G.6)

2. Any document (including reports) required in a permit condition to be submitted to the Board shall contain a certification by a responsible official that meets the requirements of 9 VAC 5-80-80 G.
(9 VAC 5-80-110 K.1)

M. Duty to Pay Permit Fees

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

N. Fugitive Dust Emission Standards

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

1. Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads, or the clearing of land;

2. Application of asphalt, water, or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which may create airborne dust; the paving of roadways and the maintaining of them in a clean condition;

3. Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty material. Adequate containment methods shall be employed during sandblasting or other similar operations;

4. Open equipment for conveying or transporting material likely to create objectionable air pollution when airborne shall be covered or treated in an equally effective manner at all times when in motion; and,

5. The prompt removal of spilled or tracked dirt or other materials from paved streets and of dried sediments resulting from soil erosion.

(9 VAC 5-40-90 and 9 VAC 5-50-90)

O. Startup, Shutdown, and Malfunction

At all times, including periods of startup, shutdown, soot blowing, and malfunction, owners shall, to the extent practicable, maintain and operate any affected facility including associated air

pollution control equipment in a manner consistent with air pollution control practices for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Board, which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.
(9 VAC 5-50-20 E and 9 VAC 5-40-20 E)

P. Alternative Operating Scenarios

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

Q. Inspection and Entry Requirements

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

1. Enter upon the premises where the source is located or emissions-related activity is conducted, or where records must be kept under the terms and conditions of the permit.

2. Have access to and copy, at reasonable times, any records that must be kept under the terms and conditions of the permit.

3. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit.

4. Sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit or applicable requirements.

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

R. Reopening For Cause

The permit shall be reopened by the Board if additional federal requirements become applicable to a major source with a remaining permit term of three years or more. Such reopening shall be completed no later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to 9 VAC 5-80-80 F.

1. The permit shall be reopened if the Board or the administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.

2. The permit shall be reopened if the administrator or the Board determines that the permit must be revised or revoked to assure compliance with the applicable requirements.

3. The permit shall not be reopened by the Board if additional applicable state requirements

become applicable to a major source prior to the expiration date established under 9 VAC 5-80-110 D.

(9 VAC 5-80-110 L)

S. Permit Availability

Within five days after receipt of the issued permit, the permittee shall maintain the permit on the premises for which the permit has been issued and shall make the permit immediately available to DEQ upon request.
(9 VAC 5-80-150 E)

T. Transfer of Permits

1. No person shall transfer a permit from one location to another, unless authorized under 9 VAC 5-80-130, or from one piece of equipment to another.
(9 VAC 5-80-160).

2. In the case of a transfer of ownership of a stationary source, the new owner shall comply with any current permit issued to the previous owner. The new owner shall notify the Board of the change in ownership within 30 days of the transfer and shall comply with the requirements of 9 VAC 5-80-200.
(9 VAC 5-80-160).

3. In the case of a name change of a stationary source, the owner shall comply with any current permit issued under the previous source name. The owner shall notify the Board of the change in source name within 30 days of the name change and shall comply with the requirements of 9 VAC 5-80-200.
(9 VAC 5-80-160)

U. Malfunction as an Affirmative Defense

1. A malfunction constitutes an affirmative defense to an action brought for noncompliance with technology-based emission limitations if the requirements of paragraph 2 of this condition are met.

2. The affirmative defense of malfunction shall be demonstrated by the permittee through properly signed, contemporaneous operating logs, or other relevant evidence that show the following:

   a. A malfunction occurred and the permittee can identify the cause or causes of the malfunction.

   b. The permitted facility was at the time being properly operated.

   c. During the period of the malfunction the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit.

   d. The permittee notified the board of the malfunction within two working days following

the time when the emission limitations were exceeded due to the malfunction. This notification shall include a description of the malfunction, any steps taken to mitigate emissions, and corrective actions taken. The notification may be delivered either orally or in writing. The notification may be delivered by electronic mail, facsimile transmission, telephone, or any other method that allows the permittee to comply with the deadline. This notification fulfills the requirements of 9 VAC 5-80-110 F 2 b to report promptly deviations from permit requirements. This notification does not release the permittee from the malfunction reporting requirement under 9 VAC 5-20-180 C.

3. In any enforcement proceeding, the permittee seeking to establish the occurrence of a malfunction shall have the burden of proof.

4. The provisions of this section are in addition to any malfunction, emergency or upset provision contained in any applicable requirement.

(9 VAC 5-80-250)

V. Permit Revocation or Termination for Cause

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

W. Duty to Supplement or Correct Application

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

X. Stratospheric Ozone Protection

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

Y. Asbestos Requirements

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

Z. Accidental Release Prevention

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

AA. Changes to Permits for Emissions Trading

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

BB. Emissions Trading

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

1. All terms and conditions required under 9 VAC 5-80-110, except subsection N, shall be included to determine compliance.

2. The permit shield described in 9 VAC 5-80-140 shall extend to all terms and conditions that allow such increases and decreases in emissions.

3. The owner shall meet all applicable requirements including the requirements of 9 VAC 5-80-50 through 9 VAC 5-80-300.

(9 VAC 5-80-110 I)