

Federal Operating Permit Article 1

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

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

Permittee Name: MeadWestvaco Virginia Corporation – Specialty Chemicals Division
Facility Name: MeadWestvaco Virginia Corporation – Carbon Plant
Facility Location: off Maryland Street plant boundary, Covington, Virginia
Registration Number: 20329
AFS ID Number: 51-580-0011
Permit Number: VA-20329

July 1, 2005

Effective Date

February 5, 2009

Minor Modification Date

June 30, 2010

Expiration Date

Steven A. Dietrich, P.E.
Regional Director

Signature Date

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I. Facility Information

Permittee

MeadWestvaco Virginia Corporation – Specialty Chemicals Division
P. O. Box 140
Covington, VA 24426

Responsible Official

R. K. Beckler
Vice President Operations Group, Specialty Chemicals Division

Facility

MeadWestvaco Virginia Corporation – Specialty Chemicals Division
Off Maryland Street boundary of MeadWestvaco complex
Covington, VA 24426 (Alleghany County)

Contact Person

N. J. Garris
Plant Manager
540-969-3674

Registration Number: 20329

AIRS Identification Number: 51-580-0011

Facility Description: 2819 – This manufacturing plant produces activated carbon and activated carbon products. The plant has four operating units: Woodbase Carbon Plant, Extruder Plant, Catalyst Plant, and Pilot Plant. Each unit is described in the Statement of Basis dated July 1, 2005. MeadWestvaco claims exclusion of the pilot plant from this permit under the general exclusion for research and development facilities located at manufacturing sites. This facility is located within the boundaries of the MeadWestvaco Pulp and Paper facility. The carbon facility produces a product substantially different from the pulp and paper facility, has different SIC and NAICS codes, and has separate operations management. Therefore the carbon plant is receiving its own federal operating permit for air emissions in addition to the permit for the pulp and paper facility.

II. Emission Units

Equipment to be operated consists of:

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity	Pollution Control Device Description (PCD)	PCD ID	Pollutant Controlled	Applicable Permit Date
Woodbase Carbon Plant							
EU-54	C	Grinding Mill, related equipment	4.8 tons/hr	Cyclone & Bag Filter	E7	PM	10/08/08
EU-65	A	Mixing System for No. 2 Kiln	26.4 tons/hr	Venturi Scrubber, Wet Fan Scrubber, Afterburner	E1, AB1	PM	10/08/08
EU-66	A	No. 2 Rotary Kiln (John Zink AHYE-6-6)	50 MMBTU/hr	Venturi Scrubber, Wet Fan Scrubber, Afterburner	E1, AB1	PM, VOC, CO, HAP	10/08/08
EU-67	A	Mixing System for No. 3 Kiln	26.4 tons/hr	Venturi Scrubber, Wet Fan Scrubber, Afterburner	E2, AB1	PM	10/08/08
EU-68	A	No. 3 Rotary Kiln (John Zink AHYE-6-6)	50 MMBTU/hr	Venturi Scrubber, Wet Fan Scrubber, Afterburner	E2, AB1	PM, VOC, CO, HAP	10/08/08
EU-69	A	Acid Washing System	20.3 tons/hr	Venturi Scrubber	E4	PM	10/08/08
EU-70	B	No. 1 Rotary Kiln (Louisville with Hauck Ecostar II burner)	28.6 MMBTU/hr	Cyclone & Bag Filter	E6	PM	10/08/08
EU-71	B, C	Granular Storage & Conveying	4.8 tons/hr	Bag & Cartridge Filters	E7, E8	PM	10/08/08
EU-72	B, C	Screening System	4.8 tons/hr	Torit, Cartridge & Bag Filters	E7, E8, E12	PM	10/08/08
EU-73	B	Grinding Mill, related equipment	4.8 tons/hr	Cyclone & Bag Filter	E8	PM	10/08/08
EU-74	B, C	Powder & Bulk Weighing, Conveying & Storage, Bulk Storage Tanks	4.8 tons/hr	Bag & Cartridge Filters	E7, E8	PM	10/08/08
EU-75	E	Aqua Bulk Tank	4.8 tons/hr	Cartridge Filters	E7, E10	PM	10/08/08
EU-76	D	Warehouse Conveying & Storage	4.8 tons/hr	Cartridge Filter	E9	PM	10/08/08
EU-77	D	Bag Packing Line	8.5 tons/hr	Cartridge Filter	E9	PM	10/08/08
EU-103	B	Pre-Drying Operation	17.1 tons/hr	Spray Condenser & Bag Filter	E5, E6	PM	10/08/08
EU-114	A	Mixing System & No. 4 Kiln	50 MMBTU/hr	Venturi, Reverse Jet, & Wet Fan Scrubbers, Afterburner	E3, AB1	PM, VOC, CO, HAP	10/08/08

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity	Pollution Control Device Description (PCD)	PCD ID	Pollutant Controlled	Applicable Permit Date
Woodbase Carbon Plant continued							
EU-115	A	Primary Shapers	10.1 tons/hr	Venturi scrubber	E4	PM	10/08/08
EU-116	A	Secondary Shapers	11.2 tons/hr	Venturi scrubber	E4	PM	10/08/08
EU-117	A	Tertiary Shapers	10.0 tons/hr	Venturi scrubber	E4	PM	10/08/08
EU-118	A	Shaped Product Screening	10.0 tons/hr	Venturi scrubber	E4	PM	10/08/08
EU-119	A	Shaped Product Dryer	14 MMBTU/hr	Venturi & wet fan scrubbers	E1, E2	PM	10/08/08
Extruder Plant							
EU-53A	F	Rotary Kiln B (Bartlett-Snow-Pacific)	7.9 MMBTU/hr	Afterburner, wet fan, reverse jet scrubber	PCD5, 8, & 10	VOC, PM	10/13/08
EU-55	G	WV-IS Process	1500 tpy	Wet fan scrubber	PCD14	PM	10/13/08
EU-78	G	Storage & Batching Lines 1 & 2	2227 lb/hr	Dust collector	PCD1	PM	10/13/08
EU-79	G	Mixing & Extrusion Lines 1 & 2	2227 lb/hr	Dust collector	PCD1	PM	10/13/08
EU-80	G	Drying Lines 1 & 2	2231 lb/hr	Wet fan scrubber	PCD6	PM	10/13/08
EU-81	F	Finishing Lines 1 & 2	1987 lb/hr	Dust collector	PCD9	PM	10/13/08
EU-82	F	Rotary Kiln C (KVS)	1.4 MMBTU/hr	Afterburner, wet fan, reverse jet scrubber	PCD5, 8, & 10	VOC, PM	10/13/08
EU-90	G	Storage & Batching Line 3	1138 lb/hr	Dust collector	PCD2	PM	10/13/08
EU-91	G	Mixing & Extrusion Line 3	1138 lb/hr	Dust collector	PCD2	PM	10/13/08
EU-93	G	Drying Line 3	1115 lb/hr	Wet fan scrubber	PCD6	PM	10/13/08
EU-94	F	Rotary Kiln A (Bartlett-Snow-Pacific)	10.9 MMBTU/hr	Wet fan, reverse jet scrubber	PCD7 & 8	PM	10/13/08
EU-95	F	Finishing Line 3	969 lb/hr	Dust collector	PCD9	PM	10/13/08
EU-97	G	Clay Storage	106.5 tons	Dust collector	PCD 2	PM	10/13/08
EU-97A	G	Organic Binder Storage	1800 lbs	Dust collector	PCD3A	PM	10/13/08
Catalyst Plant							
EU-85A	None	Day Storage Tank & Bulk Feed Tanks	980 lbs/hr	Vent filters	E19/E20	PM	3/08/05
EU-85	None	Reactor Feed System	980 lbs/hr	Enclosure (vent filter)	(E20)	PM	3/08/05
EU-86A	F	Reactor Preheaters	800 lbs/hr	Venturi scrubbers, absorber, afterburner, wet fan scrubber, reverse jet scrubber	E15, E16, E17, AB2	PM,VOC, CO, HAP	3/08/05

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity	Pollution Control Device Description (PCD)	PCD ID	Pollutant Controlled	Applicable Permit Date
Catalyst Plant continued							
EU-86	F	Reactors	800 lbs/hr	Afterburner, wet fan scrubber, reverse jet scrubber	AB2, E16, E17	PM, VOC, CO, HAP	3/08/05
EU-86B	F	Mix Tank & Recirculation Tanks	N/A	Wet fan scrubber, reverse jet scrubber	E16, E17	PM, HAP	3/08/05
EU-87	F	Screening, crushing & finishing equipment	500 lbs/hr	Dust collector	E18	PM	3/08/05
EU-88	F	Storage tanks & bulk packaging line	500 lbs/hr	Dust collector	E18	PM	3/08/05
EU-88A	None	Bulk loading tank	500 lbs/hr	Dust collector	E20	PM	3/08/05
Miscellaneous Sources							
M-12	None	No. 4 Acid Storage Tank	16,000 gal	None			
M-13	None	No. 5 Acid Storage Tank	16,000 gal	None			

III. Woodbase Carbon Plant Requirements

A. Limitations

1. Except where this permit is more restrictive than the applicable requirement, the permittee shall operate the affected facility in compliance with all applicable requirements of the National Emissions Standards for Hazardous Air Pollutants; Miscellaneous Organic Chemical Manufacturing Industry (40 CFR Part 63 Subpart FFFF), in accordance with the compliance schedule set forth under these standards. (9 VAC 5-60-70, 9 VAC 5-80-110 and 40 CFR Part 63, Subpart FFFF).
2. **Emission Controls** - Particulate emissions from the No. 2 and No. 3 activating kilns (EU-65/66 and EU-67/68) shall each be controlled by a Venturi scrubber and wet fan. The scrubber and wet fan shall be in operation at all times that the corresponding activating kiln is operating. The scrubbers and fans shall be provided with adequate access for inspection. A kiln is considered to be in operation when material is being fed to the kiln and for sixty minutes after such feed has stopped.
(9 VAC 5-50-260 and Condition 2 of the 10/08/08 Permit)
3. **Emission Controls** - Particulate emissions from the No. 4 cooking kiln (EU-114) shall be controlled by a Venturi scrubber, wet fan, and a reverse jet scrubber. Both scrubbers shall be in operation at all times that the No. 4 cooking/activating kiln is operating. The scrubbers shall be provided with adequate access for inspection. The kiln is considered to be in operation when material is being fed to the kiln and for sixty minutes after such feed has stopped.
(9 VAC 5-50-260 and Condition 3 of the 10/08/08 Permit)
4. **Emission Controls** - Particulate emissions from the shaped product dryer (EU-119) shall be controlled by a venturi scrubber. The venturi scrubber for either the No. 2 activating kiln, the No. 3 activating kiln or a separate scrubber may be used. The scrubber shall be in operation at all times that the shaped product dryer is operating. The shaped product dryer is in operation when activated carbon is being fed to the dryer and for ten minutes thereafter. The scrubber shall be provided with adequate access for inspection.
(9 VAC 5-50-260 and Condition 4 of the 10/08/08 Permit)
5. **Emission Controls and Efficiency** - Particulate emissions from the particle shaping equipment other than the shaped product dryer (EU-115, EU-116, EU-117, & EU-118), shall be controlled by a venturi scrubber with a minimum control efficiency of 95 percent. The scrubber shall be in operation at all times that the particle shaping equipment is operating. The particle shaping equipment is in operation when activated carbon is being conveyed to the equipment and for ten minutes thereafter. The scrubber shall be provided with adequate access for inspection.
(9 VAC 5-50-260 and Condition 5 of the 10/08/08 Permit)

6. **Emission Controls** - Particulate emissions from the No. 1 drying kiln (EU-70) shall be controlled by a baghouse. The baghouse shall be in operation at all times that the No. 1 drying kiln is operating. The baghouse shall be provided with adequate access for inspection. The No. 1 kiln is considered to be in operation when material is being fed to the kiln and for sixty minutes after such feed has stopped.
(9 VAC 5-50-260 and Condition 6 of the 10/08/08 Permit)
7. **Emission Controls** - Particulate emissions from the washed product predryer (EU-103) shall be controlled by a spray condenser and a baghouse. The spray condenser and baghouse shall be in operation at all times that the predryer is operating. The spray condenser and baghouse shall be provided with adequate access for inspection.
(9 VAC 5-50-260 and Condition 7 of the 10/08/08 Permit)
8. **Emission Controls** - Particulate emissions from each grinding mill (EU-54 or EU-73) shall be controlled by a baghouse or cartridge filter. Each baghouse or cartridge filter shall be in operation at all times that the corresponding grinding mill is operating. A grinding mill is considered in operation when carbon is being fed to the grinding mill. Each baghouse or cartridge filter shall be provided with adequate access for inspection.
(9 VAC 5-50-260 and Condition 8 of the 10/08/08 Permit)
9. **Emission Controls** - Particulate emissions from the granular carbon storage and conveying operation (EU-71) and the granular carbon screening system (EU-72) shall be controlled by total enclosure vented to one or more cartridge filters or baghouses. The cartridge filter(s) or baghouse(s) shall be in operation at all times that the granular storage and conveying operation or the screening system is operating. The granular carbon storage, conveying, and screening operation is considered in operation when material is being conveyed to the granular carbon storage or screening system. The cartridge filter(s) or baghouse(s) shall be provided with adequate access for inspection.
(9 VAC 5-50-260 and Condition 9 of the 10/08/08 Permit)
10. **Emission Controls** - Particulate emissions from the powdered carbon weighing system and the bulk carbon storage and loading system (EU-74) shall be controlled by total enclosure vented to one or more baghouses or cartridge filters. The baghouse(s) or cartridge filter(s) shall be in operation at all times that the granular storage and conveying operation or the screening system is operating. The weighing system and bulk storage and loading system are considered in operation when carbon is being conveyed to the equipment. The baghouse and/or cartridge filter shall be provided with adequate access for inspection.
(9 VAC 5-50-260 and Condition 10 of the 10/08/08 Permit)

11. **Emission Controls** - Particulate emissions from the Aqua BulkTank (EU-75) shall be controlled by a cartridge filter. The cartridge filter shall be in operation at all times that the bulk tank is operating. The Aqua bulk tank is considered in operation when carbon is being conveyed to the Aqua bulk tank. The cartridge filter shall be provided with adequate access for inspection.
(9 VAC 5-50-260 and Condition 11 of the 10/08/08 Permit)

12. **Emission Controls** - Particulate emissions from the warehouse conveying and storage operation (EU-76) and the bag packaging operation (EU-77) shall be controlled by a cartridge filter. The cartridge filter shall be in operation at all times that either controlled operation is in progress. The conveying, storage, and bag packaging operations are considered in operation when carbon is being fed to the equipment. The cartridge filter shall be provided with adequate access for inspection.
(9 VAC 5-50-260 and Condition 12 of the 10/08/08 Permit)

13. **Emission Controls** - Particulate emissions from mechanical conveying systems for dry feed or dry product will be controlled by enclosure of the conveying system or other methods acceptable to VDEQ.
(9 VAC 5-50-260 and Condition 13 of the 10/08/08 Permit)

14. **Emission Controls** – Hazardous Air Pollutant (HAP) emissions and Volatile Organic Compound emissions from the No. 2 activating kiln (EU-66), No 3 activating kiln (EU-68), No. 4 cooking/activating kiln (EU-114), and shaped product dryer (EU-119) shall be controlled by an afterburner (AB1) with a minimum 24 hour daily average period operating temperature of 1660 °F when feed is on any activating or cooking kiln or the shaped product system. Sections 63.152(f)(7)(ii) through (iv) and 63.998(b)(2)(iii) and (b)(6)(i)(A), which apply to the exclusion of monitoring data collected during periods of SSM from daily averages, do not apply for the purposes of this subpart. The afterburner shall be provided with adequate access for inspection and shall be in operation when any of the kilns is operating.
[9 VAC 5-50-260, Condition 14 of the 10/08/08 Permit, 9 VAC 5-60-60, 9 VAC 5-60-100, Part 63, Subpart FFFF, 40 CFR 63.982(c), 40 CFR 63.988, 40 CFR 63.998(b)(3)(A) and (B) and 40 CFR 63.2450(1)]

15. **Control Efficiency** – The afterburner (AB1) shall achieve a minimum control efficiency for Volatile Organic Compounds and Hazardous Air Pollutants (HAPs) as specified below:
 - a. 98% while material is fed to any activating or cooking kiln or shaped product dryer; or,
 - b. from the exhaust of the afterburner achieve a total organic HAPs concentration less than or equal to 20 ppmv

(Volatile organic compounds measurement and HAPs measurement based on stack testing.) A kiln is considered in operation when sawdust is being fed to the kiln and for sixty minutes after such feed has stopped.

(9 VAC 5-50-260, Condition 15 of the 10/08/08 Permit, 9 VAC 5-60-60, 9 VAC 5-60-100 and 40 CFR 63.2455)

16. **Particulate Disposal** – The disposal of collected particulate matter shall be performed in a manner which minimizes the introduction of air contaminants to the ambient air.

(9 VAC 5-170-160 and Condition 18 of the 10/08/08 Permit)

17. **Fugitive Dust Emission Controls** - Fugitive dust controls shall include the following, or equivalent, as a minimum:

- a. Dust from material handling, stockpiles, and load-outs, shall be controlled by wet suppression or equivalent (as approved by the DEQ).
- b. All material being stockpiled shall be kept adequately moist to control dust during storage and handling or covered at all times to minimize emissions.
- c. Dust from haul roads and traffic areas shall be controlled by the application of asphalt, water, suitable chemicals, or equivalent methods approved by the DEQ.
- d. Reasonable precautions shall be taken to prevent deposition of dirt on public roads and subsequent dust emissions. Dirt, product, or raw material spilled or tracked onto paved surfaces shall be promptly removed to prevent particulate matter from becoming airborne.

(9 VAC 5-50-90 and Condition 19 of the 10/08/08 Permit)

18. **Fuel** - The approved fuel for the kilns and dryers is natural gas. A change in the fuel may require a permit to modify and operate.

(9 VAC 5-80-1100 and Condition 21 of the 10/08/08 Permit)

19. **Emission Limits** - Emissions from the operation of the No. 2 activating kiln (EU-65/66) shall not exceed the limits specified below:

Particulate Matter	22.2 lbs/hr	72.2 tons/yr
PM-10	22.2 lbs/hr	72.2 tons/yr

(9 VAC 5-50-260 and Condition 23 of the 10/08/08 Permit)

20. **Emission Limits** - Emissions from the operation of the No. 3 activating kiln (EU-67/68) shall not exceed the limits specified below:

Particulate Matter	22.2 lbs/hr	72.2 tons/yr
PM-10	22.2 lbs/hr	72.2 tons/yr

(9 VAC 5-50-260 and Condition 24 of the 10/08/08 Permit)

21. **Emission Limits** - Emissions from the operation of the No. 4 cooking/activating kiln (EU-119) shall not exceed the limits specified below:

Particulate Matter	6.7 lbs/hr	21.8 tons/yr
PM-10	6.7 lbs/hr	21.8 tons/yr

(9 VAC 5-50-260 and Condition 25 of the 10/08/08 Permit)

22. **Emission Limits** - Emissions from the operation of the washed product predryer (EU-103) and the No. 1 drying kiln (EU-70) (Wheelabrator baghouse) shall not exceed the limits specified below:

Particulate Matter	0.020 gr/dscf	13.2 tons/yr
PM-10	0.020 gr/dscf	13.2 tons/yr
Nitrogen Oxides (as NO ₂)	5.4 lbs/hr	23.6 tons/yr
Carbon Monoxide	5.49 lbs/hr	24.9 tons/yr

(9 VAC 5-50-260 and Condition 26 of the 10/08/08 Permit)

23. **Emission Limits** - Emissions from the operation of the particle shaping equipment (EU-115, EU-116, EU-117, & EU-118) shall not exceed the limits specified below:

Particulate Matter	4.5 lbs/hr	18.7 tons/yr
PM-10	4.5 lbs/hr	18.7 tons/yr

(9 VAC 5-50-260 and Condition 27 of the 10/08/08 Permit)

24. **Emission Limits** - Emissions from the afterburner (AB1) stack (Stack A) shall not exceed the limitations specified below:

Total Suspended Particulate	45.1 lb/hr	145.0 tons/yr
PM-10	45.1 lb/hr	145.0 tons/yr
Nitrogen Dioxide	46.8 lb/hr	205.1 tons/yr
Carbon Monoxide	101.2 lb/hr	399.9 tons/yr

Volatile Organic Compounds	168.8 lb/hr	628.2 tons/yr
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(9 VAC 5-50-260 and Condition 28 of the 10/08/08 Permit)

25. **Emission Limits** - Emissions from the operation of the Dustex bag filter (E8) shall not exceed the limits specified below:

Particulate Matter	0.010 gr/dscf	6.6 tons/yr
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PM-10	0.010 gr/dscf	6.6 tons/yr
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(9 VAC 5-50-260 and Condition 29 of the 10/08/08 Permit)

26. **Emission Limits** - Emissions from the operation of the Pangborn cartridge filter (E7) shall not exceed the limits specified below:

Particulate Matter	0.006 gr/dscf	4.4 tons/yr
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PM-10	0.006 gr/dscf	4.4 tons/yr
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(9 VAC 5-50-260 and Condition 30 of the 10/08/08 Permit)

27. **Emission Limits** - Emissions from the operation of the Aqua bulk tank cartridge filter (E10) shall not exceed the limits specified below:

Particulate Matter	0.005 gr/dscf	2.35 tons/yr
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PM-10	0.005 gr/dscf	2.35 tons/yr
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(9 VAC 5-50-260 and Condition 31 of the 10/08/08 Permit)

28. **Emission Limits** - Emissions from the operation of the granular carbon storage and conveying operation and granular carbon screening system cartridge filter (E12) shall not exceed the limits specified below:

Particulate Matter	0.005 gr/dscf	4.35 tons/yr
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PM-10	0.005 gr/dscf	4.35 tons/yr
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(9 VAC 5-50-260 and Condition 32 of the 10/08/08 Permit)

29. **Emission Limits** - Emissions from the operation of the warehouse cartridge filter (E9) shall not exceed the limits specified below:

Particulate Matter	0.005 gr/dscf	4.35 tons/yr
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PM-10	0.005 gr/dscf	4.35 tons/yr
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(9 VAC 5-50-260 and Condition 33 of the 10/08/08 Permit)

30. **Visible Emission Limit** - Visible emissions from the afterburner stack (Stack A) shall not exceed 50 percent opacity as determined by EPA Method 9 (reference 40 CFR 60, Appendix A), and in accordance with the Board order of January 4, 1979. This condition applies at all times except during startup, shutdown, and malfunction, and may be revised based on actual operating data from the afterburner.
(9 VAC 5-50-120 and Condition 34 of the 10/08/08 Permit)
31. **Visible Emission Limit** - Visible emissions from Stack B (the Wheelabrator baghouse and the Dustex baghouse) shall not exceed 5 percent opacity as determined by EPA Method 9 (reference 40 CFR 60, Appendix A). This condition applies at all times except during startup, shutdown, and malfunction.
(9 VAC 5-50-260, and Condition 35 of the 10/08/08 permit)
32. **Visible Emission Limit** - Visible emissions from Stack C (the Pangborn and Torit cartridge filters) shall not exceed 5 percent opacity as determined by EPA Method 9 (reference 40 CFR 60, Appendix A). This condition applies at all times except during startup, shutdown, and malfunction.
(9 VAC 5-50-260, and Condition 36 of the 10/08/08 Permit)
33. **Visible Emission Limit** - Visible emissions from Stack D (the warehouse cartridge filter) shall not exceed 5 percent opacity as determined by EPA Method 9 (reference 40 CFR 60, Appendix A). This condition applies at all times except during startup, shutdown, and malfunction.
(9 VAC 5-50-260 and Condition 37 of the 10/08/08 Permit)
34. **Visible Emission Limit** - Visible emissions from Stack E (the bulk tank cartridge filter) shall not exceed 5 percent opacity as determined by EPA Method 9 (reference 40 CFR 60, Appendix A). This condition applies at all times except during startup, shutdown, and malfunction.
(9 VAC 5-50-260 and Condition 38 of the 10/08/08 Permit)
35. **Visible Fugitive Emissions** – Particulate fugitive emissions from the sawdust handling operation shall be minimized in accordance with provisions in 9 VAC 5-50-90. Opacity in excess of 20% from storage piles when handling activities are not occurring may require modification of storage practices.
(9 VAC 5-50-90 and Condition 39 of the 10/08/08 Permit)
36. **Startup, Shutdown and Malfunction Plan** – The owner or operator of an affected source must develop a written startup, shutdown, and malfunction plan for the applicable Group 1 processes of the Woodbase Plant: kiln 2 (EU 66), kiln 3 (EU 67), kiln 4 (EU114) and the shaped product dryer (EU 119) that describes in detail, procedures for operating and maintaining the source during periods of startup, shutdown, and malfunction; and a program of corrective action for malfunctioning process, air pollution control, and monitoring equipment used to comply with the relevant standard. This plan must be developed by the owner or operator by May 10,

2008. The plan must be developed in accordance with applicable requirements listed in 40 CFR Part 63.

[9 VAC 5-60-90, 9 VAC 5-60-100, 40 CFR 63.6(e)(3)(i, ii, v-viii), 40 CFR 63.2520(e)(4), 40 CFR 63.2525(h) and (j), 40 CFR 63.998(d)(3) and 40 CFR 63.998(c)(1)(ii)(D)-(G)]

37. **Hydrogen Halide Reduction**– The permittee shall perform an annual mass balance analysis of natural hydrogen halide sources which includes, sawdust and supply water, to verify that the applicable hydrogen halide reduction continues to be below 20 ppmv regulatory threshold cited in Table 3 to Subpart FFFF of Part 63.

(9 VAC 5-60-60, 9 VAC 5-60-100 and 40 CFR 63.2465)

B. Monitoring

1. **Emission Control Monitoring** - Each Venturi scrubber controlling the No. 2 and No. 3 activating kilns (EU-65/66 and EU-67/68) shall be equipped with a flow meter for scrubbing liquor and a device to continuously measure the differential pressure across the scrubber. The scrubbing liquor flow rate and differential pressure of each scrubber shall be observed and recorded by the data acquisition system (DAS), and during DAS outages at least once per shift, when the corresponding kiln is in operation.

(9 VAC 5-50-260 and Condition 2 of the 10/08/08 Permit)

2. **Emission Control Monitoring** - The Venturi scrubber and the reverse jet scrubber controlling the No. 4 cooking/activating kiln (EU-114) shall each be equipped with a flow meter for the scrubbing liquor and a device to continuously measure the differential pressure across each scrubber. The scrubbing liquor flow rate and differential pressure of each scrubber shall be observed and recorded by the data acquisition system (DAS), and during DAS outages at least once per shift, when the kiln is in operation.

(9 VAC 5-50-260 and Condition 3 of the 10/08/08 Permit)

3. **Emission Control Monitoring** - The Venturi scrubber controlling the shaped product dryer (EU-119) shall be equipped with a flow meter for the scrubbing liquor and a device to continuously measure the differential pressure across the scrubber. The scrubbing liquor flow rate and differential pressure of each scrubber shall be observed and recorded by the data acquisition system (DAS), and during DAS outages at least once per shift, when the shaped product dryer is in operation.

(9 VAC 5-50-260 and Condition 4 of the 10/08/08 Permit)

4. **Emission Control Monitoring** - The Venturi scrubber controlling the particle shaping equipment (EU-115, EU-116, EU-117, & EU-118) other than the shaped product dryer shall be equipped with a flow meter for the scrubbing liquor and a device to continuously measure the differential pressure across the scrubber. The scrubbing liquor flow rate and differential pressure of each scrubber shall be observed and recorded by the data acquisition system (DAS), and during DAS outages at least once per shift, when the particle shaping equipment is in operation.
(9 VAC 5-50-260 and Condition 5 of the 10/08/08 Permit)
5. **Emission Control Monitoring** - The Wheelabrator baghouse (E6) controlling the No. 1 drying kiln (EU-70) and the washed product predryer (EU-70) shall be equipped with a Triboguard or equivalent bag break detector. The detector shall be installed in an accessible location and shall be maintained by the permittee such that it is in proper working order at all times. The signal from the bag break detector shall be recorded continuously when the baghouse is in operation, excluding brief periods of instrument maintenance. The detector shall be equipped with an alarm. The detector alarm setpoint shall be no higher than a signal output corresponding to 90% of the emission limit. The alarm shall activate when the setpoint is reached for more than ten seconds.
(9 VAC 5-50-260 and Condition 6 of the 10/08/08 Permit)
6. **Emission Control Monitoring** - The spray condenser controlling the washed product predryer (EU-103) shall be equipped with a flowmeter for the spray water and temperature indicating device to measure the predryer offgas temperature. The flow rate and operating temperature of the spray condenser shall be observed and recorded at least once per shift when the predryer is in operation.
(9 VAC 5-50-260 and Condition 7 of the 10/08/08 Permit)
7. **Emission Control Monitoring** - The Pangborn cartridge filter (E7) shall be provided with adequate access for inspection and shall be equipped with a Triboguard or equivalent bag break detector. The detector shall be installed in an accessible location and shall be maintained by the permittee such that it is in proper working order at all times. The signal from the bag break detector shall be recorded continuously when the cartridge filter is in operation, excluding brief periods of instrument maintenance. The detector shall be equipped with an alarm. The detector alarm setpoint shall be no higher than a signal output corresponding to 90% of the emission limit. The alarm shall activate when the setpoint is reached for more than ten seconds.
(9 VAC 5-50-260 and Conditions 8, 9, and 10 of the 10/08/08 Permit)
8. **Emission Control Monitoring** - The Dustex baghouse (E8) shall be provided with adequate access for inspection and shall be equipped with a Triboguard or equivalent bag break detector. The detector shall be installed in an accessible location and shall be maintained by the permittee such that it is in proper working order at all times. The signal from the bag break detector shall be recorded continuously when the baghouse

is in operation, excluding brief periods of instrument maintenance. The detector shall be equipped with an alarm. The detector alarm setpoint shall be no higher than a signal output corresponding to 90% of the emission limit. The alarm shall activate when the setpoint is reached for more than ten seconds.

(9 VAC 5-50-260 and Condition 8, 9, and 10 of the 10/08/08 Permit)

9. **Emission Control Monitoring** - The Torit cartridge (E12) filter shall be provided with adequate access for inspection and shall be equipped with a Triboguard or equivalent bag break detector. The detector shall be installed in an accessible location and shall be maintained by the permittee such that it is in proper working order at all times. The signal from the bag break detector shall be recorded continuously when the baghouse is in operation, excluding brief periods of instrument maintenance. The detector shall be equipped with an alarm. The detector alarm setpoint shall be no higher than a signal output corresponding to 90% of the emission limit. The alarm shall activate when the setpoint is reached for more than ten seconds.
(9 VAC 5-50-260 and Condition 10 of the 10/08/08 Permit)
10. **Emission Control Monitoring** - The Bulk Tank cartridge filter (E10) shall be provided with adequate access for inspection and shall be equipped with a Triboguard or equivalent bag break detector. The detector shall be installed in an accessible location and shall be maintained by the permittee such that it is in proper working order at all times. The signal from the bag break detector shall be recorded continuously when the baghouse is in operation, excluding brief periods of instrument maintenance. The detector shall be equipped with an alarm. The detector alarm setpoint shall be no higher than a signal output corresponding to 90% of the emission limit. The alarm shall activate when the setpoint is reached for more than ten seconds.
(9 VAC 5-50-260 and Condition 11 of the 10/08/08 Permit)
11. **Emission Control Monitoring** - The warehouse cartridge filter (E9) shall be provided with adequate access for inspection and shall be equipped with a Triboguard or equivalent bag break detector. The detector shall be installed in an accessible location and shall be maintained by the permittee such that it is in proper working order at all times. The signal from the bag break detector shall be recorded continuously when the baghouse is in operation, excluding brief periods of instrument maintenance. The detector shall be equipped with an alarm. The detector alarm setpoint shall be no higher than a signal output corresponding to 90% of the emission limit. The alarm shall activate when the setpoint is reached for more than ten seconds.
(9 VAC 5-50-260 and Condition 12 of the 10/08/08 Permit).
12. **Emission Control Monitoring** - The afterburner (AB1) controlling volatile organic compound and hazardous air pollutant emissions from the No. 2 activating kiln, No 3 activating kiln, No. 4 cooking/activating kiln, and shaped product dryer shall be equipped with one or more devices to continuously measure and record the temperature of the exhaust gas stream in the combustion zone of the afterburner. Each device shall be accurate to one percent of the temperature range normally being measured (plus or minus 20 °F). 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 at least one device shall be in operation when the afterburner is operating.

[9 VAC 5-80-1180, 9 VAC 5-50-260, Condition 16 of the 10/08/08 Permit, 9 VAC 5-60-40, 40 CFR 63.2450(e)(1), 40 CFR 63.982(c)(1), 40 CFR 63.988(c)(1) and 40 CFR 63.998(c)(1)]

13. **Emission Control Monitoring** - The stack (Stack A) directly downstream of the afterburner controlling volatile organic compound emissions from the No. 2 activating kiln, No. 3 activating kiln, No. 4 cooking/activating kiln and shaped product dryer shall be equipped with a device to continuously measure and record the oxygen content of the exhaust gas stream of the afterburner. This monitoring device shall be installed, maintained, calibrated, and operated in accordance with approved requirements or recommendations. The monitoring device shall be provided with adequate access for inspection and shall be in operation when the afterburner is operating, excepting brief periods of instrument maintenance.

(9 VAC 5-80-1180, 9 VAC 5-50-260 and Condition 17 of the 10/08/08 Permit)

14. **Emission Control Monitoring** - The permittee shall conduct a weekly observation of Stacks B, C, D, and E during normal operation of the woodbase carbon plant using a modified 40 CFR 60 Appendix A Method 22 type evaluation. If any visible emission is observed, the control device shall be adjusted to remove observable emissions and the adjustment recorded or a 40 CFR 60 Appendix A Method 9 evaluation shall be performed to determine if the opacity source is in compliance with the conditions of this permit. If visible emissions inspections conducted during twelve (12) consecutive weeks show no visible emissions for a particular emissions unit capable of generating opacity, the permittee may reduce the monitoring frequency to once per month for that stack. The permittee shall notify the Director, Blue Ridge Regional Office, when the monitoring frequency is reduced from at least each calendar week to at least each calendar month. Anytime a monthly visible emissions evaluation shows visible emissions, the monitoring frequency shall be increased to once per week for that stack until no visible emissions are observed for twelve consecutive weeks. When requested by DEQ the monitoring frequency shall be increased to once per week for any stack.

(9 VAC 5-80-110)

C. Recordkeeping

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

1. Data Acquisition System records, or during outages once per shift records, of the scrubbing liquor flow rate (hourly average flow rates of scrubbing liquor) and pressure differential across each Venturi scrubber controlling particulate emissions from the No. 2 kiln (EU-66) and No. 3 kiln (EU-68), when the corresponding kiln is in operation.
2. Data Acquisition System records, or during outages once per shift records, of the scrubbing liquor flow rate (hourly average flow rates of scrubbing liquor) and pressure differential across the Venturi scrubber and the reverse jet scrubber controlling particulate emissions from the No. 4 kiln (EU-114), when the kiln is in operation.
3. Data Acquisition System records, or during outages once per shift records, of the flow meter for spray water and the temperature indicator on the spray condenser controlling the washed product predryer (EU-103), when the predryer is in operation.
4. Monthly continuous signal records and report of alarms for all bag break detectors.
5. Monthly continuous temperature records of at least one temperature indicator in the combustion zone of the afterburner (AB1), when the afterburner is in operation.
6. The annual production of WVA-1500, WVA-1100, SA, and other activated carbon products, as measured as the amount of product from the No. 1 kiln, calculated monthly as the sum of each consecutive 12 month period.
7. Monthly logs of dates, time, duration (total hours), and total sawdust feed during the following operating scenarios: 1 kiln operating (normal, 1500 process), 2 kilns operating (normal, 1500 process), 3 kilns operating (normal, 1500 process), and plant idling (no sawdust feed). Monthly sawdust feed shall be calculated from recorded daily average, or partial day average for days with multiple scenarios, showing actual average feed and average feed corrected to 42% moisture.
8. Daily or more frequent moisture analysis of the saw dust feed stream to the No. 2 kiln (EU-66), No. 3 kiln (EU-68) and/or No. 4 kiln (EU-114) (dependant upon to which kilns feed is being sent).
9. Monthly and annual consumption of natural gas for the No. 1 kiln (EU-70), the No. 2 kiln (EU-66), the No. 3 kiln (EU-68), the No. 4 kiln (EU-114), the afterburner (AB1), and shaped product dryer (EU-119).
10. Hours of operation of the No. 2 kiln (EU-66), the No. 3 kiln (EU-68), and the No. 4 kiln (EU-114).

11. All actual measurements of inlet and outlet VOC and HAPs from the afterburner with corresponding production or feed rates, afterburner temperature, and oxygen content measurements
12. Monthly and annual emissions of volatile organic compounds and HAPs from the afterburner stack (Stack A) based on emission factors acceptable to VDEQ. Annual VOC emissions calculated monthly as the sum of each consecutive 12 month period.
13. The results of the monthly performance tests for particulate matter emissions from each activating and cooking kiln (EU-66, EU-68, & EU-114).
14. Monthly and annual estimated emissions of particulate matter and PM-10 from each kiln based on emission factors derived from the monthly performance tests of each kiln, in a manner acceptable to the DEQ. Annual particulate matter and PM-10 emissions calculated monthly as the sum of each consecutive 12 month period.
15. Monthly and annual emissions of particulate matter and PM-10 from the particle shaping equipment (EU-115, EU-116, EU-117, & EU-118) based on emission factors derived from performance tests, in a manner acceptable to the DEQ. Annual particulate matter and PM-10 emissions calculated monthly as the sum of each consecutive 12 month period.
16. Monthly and annual emissions of particulate matter and PM-10 from the afterburner stack (Stack A) based on the monthly particulate matter and PM-10 emissions from each kiln and the particle shaping equipment. Annual particulate matter and PM-10 emissions calculated monthly as the sum of each consecutive 12 month period.
17. Continuous readings of the device to measure the oxygen content of the exhaust stream of the afterburner (AB1) when the afterburner is in operation, excepting brief period of instrument maintenance.
18. Monthly and annual emissions of nitrogen oxides and carbon monoxide from the afterburner stack (Stack A) based on emission factors derived from performance tests on the afterburner, in a manner acceptable to the DEQ. Annual nitrogen oxides and carbon monoxide emissions calculated monthly as the sum of each consecutive 12 month period.
19. Monthly and annual emissions of particulate matter, PM-10, nitrogen oxides, and carbon monoxide from the Wheelabrator baghouse (E6) based on emission factors derived from performance tests, in a manner acceptable to the DEQ. Annual particulate matter, PM-10, nitrogen oxides, and carbon monoxide emissions calculated monthly as the sum of each consecutive 12 month period.
20. Records of all pertinent values involved in the calculation of the above estimated emissions, such as feed or production rates, estimated emissions prior to a control

device or such other information as deemed necessary by VDEQ to determine the accuracy of emission estimates. This shall include noting any emission factor that changed from the previous reporting period.

21. Annual hours of operation of the Dustex baghouse (E8), if different than unit operating hours and used in monthly emission estimates, calculated monthly as the sum of each consecutive 12 month period.
22. Monthly and annual emissions of particulate matter and PM-10 from the Dustex baghouse (E8). Annual particulate matter and PM-10 emissions calculated monthly as the sum of each consecutive 12 month period.
23. Annual hours of operation of the Pangborn (E7) and Torit (E12) cartridge filters, if different than unit operating hours and used in monthly emission estimates, calculated monthly as the sum of each consecutive 12 month period.
24. Monthly and annual emissions of particulate matter and PM-10 from the Pangborn (E7) and Torit (E12) cartridge filters, annual particulate matter and PM-10 emissions calculated monthly as the sum of each consecutive 12 month period.
25. Annual hours of operation of the warehouse cartridge filter (E9), if different than unit operating hours and used in monthly emission estimates, calculated monthly as the sum of each consecutive 12 month period.
26. Monthly and annual emissions of particulate matter and PM-10 from the warehouse cartridge filter (E9). Annual particulate matter and PM-10 emissions calculated monthly as the sum of each consecutive 12 month period.
27. Annual hours of operation of the Aqua bulk tank cartridge filter (E10), if different than unit operating hours and used in monthly emission estimates, calculated monthly as the sum of each consecutive 12 month period.
28. Monthly and annual emissions of particulate matter and PM-10 from the Aqua bulk tank cartridge filter (E10). Annual particulate matter and PM-10 emissions calculated monthly as the sum of each consecutive 12 month period.
29. Records of all bag break detector sensitivity and setpoint changes for Wheelabrator, Dustex, Pangborn, Torit, Aqua bulk tank cartridge filter, and Warehouse cartridge filter.
30. Monthly and annual estimated plant-wide point source emissions of particulate matter, PM-10, carbon monoxide, nitrogen oxides, volatile organic compounds, and HAPs, annual emissions calculated monthly as the sum of each consecutive 12 month period.

31. Results of all stack tests, visible emission evaluations and performance evaluations.
32. Certified Product Data Sheets or other vendor information showing VOC content for all cleaners or non-lubricant maintenance products used in regular production. This condition does not include such products used in consumer capacity containers.
33. Records of operator training and maintenance, including preventative maintenance, on air pollution control equipment.
34. Weekly records of required visible emission observations, including all modified Method 22 type evaluations, all Method 9 evaluations, all equipment adjustments associated with opacity observations, and a record of any processes which did not operate during the weekly evaluation period.
35. 24 hour daily average temperature records of at least one temperature indicator in the combustion zone of the woodbase afterburner (AB1), when feed is on at least one of the activating kilns 2, 3, or 4 or the shaped product dryer, including the period one hour after all feed as stopped in the average.
36. Continuous hourly averages of at least one temperature indicator in the combustion zone of the woodbase afterburner (AB1), when feed is on at least one of the activating kilns 2, 3 or 4, or the shaped product dryer including the period one hour after all feed has stopped in average.
37. Annual emissions of hydrogen halide and halogen HAP based on testing as set forth in DEQ letter dated December 21, 2007.
38. The permittee shall maintain the reports and records specified in 40 CFR 63 Subpart FFFF of all measurements needed to show compliance with MACT FFFF.

These records shall be available on-site for inspection by the VDEQ, or off-site in a manner acceptable to VDEQ, and shall be current for the most recent five (5) years.

[(9 VAC 5-50-50, 9 VAC 5-80-110, Condition 45 of the 10/08/08 Permit [except # 34], 9 VAC 5-60-50, 40 CFR 63.2450(e)(1), 40 CFR 63.982(c)(1), 40 CFR 63.988(c)(1) and 40 CFR 63.998(c)(1)]

D. Testing

1. **Ambient Air Testing** – The permittee shall continue to conduct ambient sampling for phosphoric acid seven days per week at the Carbon Tech Center. The details of the tests shall be arranged with the Director, Blue Ridge Regional Office.
(9 VAC 5-160-170 and Condition 40 of the 10/08/08 Permit)
2. **Stack Tests** – Monthly and upon request by the DEQ, the permittee shall conduct performance tests for particulate matter from each activating and cooking kiln (EU-66, EU-68, & EU-114) to demonstrate compliance with the emission limits contained in this permit. Monthly tests shall be run at the average operating conditions for the

previous month. Tests shall be conducted and reported and data reduced as set forth in 9 VAC 5-50-30, and the test methods and procedures contained in each applicable section or subpart listed in 9 VAC 5-50-410. The details of the tests shall be arranged with the Director, Blue Ridge Regional Office. Upon request, similar testing for PM-10 shall be performed.

(9 VAC 5-50-30 G, 9 VAC 5-160-170 and 9 VAC 5-50-120, and Condition 41 of the 10/08/08 Permit)

3. **Stack Tests** - Within the first eighteen months after issuance of this permit and upon request by the DEQ, the permittee shall conduct performance tests for particulate matter and PM-10 from the particle shaping equipment (EU-115, EU-116, EU-117, & EU-118) to demonstrate compliance with the emission limits contained in this permit. The details of the tests shall be arranged with the Director, Blue Ridge Regional Office.
(9 VAC 5-50-30 G)
4. **Stack Tests** – Within the first eighteen months after issuance of this permit, the permittee shall conduct performance tests for particulate matter, PM-10, nitrogen oxides, and carbon monoxide from the Wheelabrator baghouse (E6) (the washed product predryer (EU-103) and the No. 1 kiln (EU-70)), to demonstrate compliance with the emission limits and record keeping requirements contained in this permit. Upon request by the DEQ, the permittee shall conduct part or all of the tests required in the previous sentence, and/or tests for volatile organic compounds. The details of the tests shall be arranged with the Director, Blue Ridge Regional Office.
(9 VAC 5-50-30 G)
5. **Stack Tests** - Within the first eighteen months after issuance of this permit and upon request by the DEQ, the permittee shall conduct performance tests for particulate matter and/or PM-10 from the Dustex baghouse (E8), the Pangborn cartridge filter (E7), the Torit cartridge filter (E12), the Aqua bulk tank cartridge filter (E10), and the warehouse cartridge filter (E9) to demonstrate compliance with the emission limits contained in this permit. Upon request by the DEQ, the permittee shall conduct part or all of the tests required in the previous sentence. The details of the tests shall be arranged with the Director, Blue Ridge Regional Office.
(9 VAC 5-50-30 G)
6. **Stack Tests (MON)** - Within eighteen months after July 1, 2010, the permittee shall conduct performance tests for nitrogen oxides, carbon monoxide, oxygen* and for either the removal efficiency of Hazardous Air Pollutants or the HAP concentration from the afterburner (AB1) stack (Stack A) to demonstrate compliance with the emission limits and control efficiency requirements of the Woodbase Plant permit limitation III.A.15 and III. A. 24. The details of the test shall be arranged with the Air Compliance Manager, Blue Ridge Regional Office. Tests for particulate matter/PM-10 shall normally be performed simultaneously on each kiln. However, DEQ may request direct measurement for particulate matter/PM-10 at Stack A. The permittee may use approved US EPA methods for HAPs testing or NCASI Method 99.02 which

was approved by the US EPA for this source due to low recovery of acetaldehyde by EPA Methods 18 and 25a.

*Oxygen reading required for comparison to variable combustion conditions during operating year [9 VAC 5-60-30, 40 CFR 63.982, 40 CFR 63.988 and 40 CFR 63.7(f), 9 VAC 5-50-30 G]

7. **Visible Emissions Evaluation** - Upon request by the DEQ, the permittee shall conduct visible emission evaluations from Stack A, Stack B, Stack C, Stack D, and/or Stack E to demonstrate compliance with the visible emission limits contained in this permit. The details of the tests shall be arranged with the Director, Blue Ridge Regional Office.

(9 VAC 5-50-30 G and Condition 44 of the 10/08/08 Permit)

8. **Test Methods** - If testing to demonstrate compliance is conducted in addition to the monitoring specified in this permit, the permittee shall use the following methods in accordance with procedures approved by the DEQ as follows:

Pollutant	Test Method (40 CFR Part 60, Appendix A)
VOC	EPA Methods 18, 25, 25a or other method approved by DEQ
VOC Content	EPA Methods 24, 24a or other method approved by DEQ
HAP Content	EPA Methods 18, 25, 25a, NCASI Method 99.02 or other method approved by DEQ
NO _x	EPA Method 7 or other method approved by DEQ
CO	EPA Method 10 or other method approved by DEQ
PM/PM-10	EPA Method 5, 17 or other method approved by DEQ
Visible Emission	EPA Method 9

(9 VAC 5-80-110)

E. Reporting

1. **Notification** - The permittee shall furnish written notification to the Director, Blue Ridge Regional Office:
 - a. The date on which any of the E6, E7, E8, E9, E10, or E12 bag break detectors was adjusted to a set point increase of 100% or more or a setpoint decrease of 50% or more from a setpoint value established within in the previous twelve-month period.

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

All other reporting requirements for this section are satisfied by the record keeping requirements in this section and by the General Permit Conditions in the Facility-Wide and General Requirements section.

IV. Extruder Plant Requirements

A. Limitations

1. Except where this permit is more restrictive than the applicable requirement, the permittee shall operate the affected facility in compliance with all applicable requirements of the National Emissions Standards for Hazardous Air Pollutants; Miscellaneous Organic Chemical Manufacturing Industry (40 CFR Part 63 Subpart FFFF), in accordance with the compliance schedule set forth under these standards. (9 VAC 5-60-70, 9 VAC 5-80-110 and 40 CFR Part 63, Subpart FFFF).
2. **Emission Controls** - Particulate emissions from Storage and Batching Lines 1 & 2 (EU-78) and Mixing and Extrusion Lines 1 & 2 (EU-79) shall be controlled by a cartridge filter dust collector (PCD-1), when either process is in operation. The equipment is considered in operation when feed is being routed to the equipment. The dust collector shall be provided with adequate access for inspection.
(9 VAC 5-50-260 and Condition 2 of the 10/13/08 Permit)
3. **Emission Controls** - Particulate emissions from Storage and Batching Line 3 (EU-90) and Mixing and Extrusion Line 3 (EU-91) shall be controlled by a cartridge filter dust collector (PCD-2), when either line is in operation. The equipment is considered in operation when feed is being routed to the equipment. The dust collector shall be provided with adequate access for inspection.
(9 VAC 5-50-260 and Condition 3 of the 10/13/08 Permit)
4. **Emission Controls** - Particulate emissions from Drying Lines 1 & 2 (EU-80) and Drying Line 3 (EU-93) shall be controlled by a wet fan scrubber (PCD-6), when either line is in operation. The equipment is considered in operation when feed is being routed to the equipment. The wet fan scrubber shall be provided with adequate access for inspection.
(9 VAC 5-50-260 and Condition 4 of the 10/13/08 Permit)
5. **Emission Controls** - Particulate emissions from Kiln B (EU-53A) and Kiln C (EU-82) shall be controlled by a wet fan scrubber (PCD-10) in series with a reverse jet scrubber (PCD-8), when either kiln is in operation. A kiln is considered in operation when material is being processed in the kiln. The scrubbers shall be provided with adequate access for inspection.
(9 VAC 5-50-260 and Condition 5 of the 10/13/08 Permit)
6. **Emission Controls** - Particulate emissions from Kiln A (EU-94) shall be controlled by a wet fan scrubber (PCD-7) in series with a reverse jet scrubber (PCD-8), when Kiln A is in operation. The kiln is considered in operation when material is being processed in the kiln. The scrubbers shall be provided with adequate access for inspection.
(9 VAC 5-50-260 and Condition 6 of the 10/13/08 Permit)

7. **Emission Controls** - Particulate emissions from Finishing Lines 1, 2, and 3 (EU-81 & EU-95)) shall be controlled by a cartridge filter dust collector (PCD-9), when any line is in operation. The equipment is considered in operation when feed is being routed to the equipment. The dust collector shall be provided with adequate access for inspection.
(9 VAC 5-50-260 and Condition 7 of the 10/13/08 Permit)
8. **Emission Controls** - Particulate emissions from inorganic binder storage (EU-97) shall be controlled by one cartridge filter dust collector (PCD-2) when material is being transported to or from storage. The dust collector shall be provided with adequate access for inspection.
(9 VAC 5-50-260 and Condition 8 of the 10/13/08 Permit)
9. **Emission Controls** - Particulate emissions from organic binder storage (EU-97A) shall be controlled by a fabric filter dust collector (PCD-3A) when material is being transported to or from storage. The dust collector shall be provided with adequate access for inspection.
(9 VAC 5-50-260 and Condition 9 of the 10/13/08 Permit)
10. **Emission Controls** - Particulate emissions from the WV-IS carbon process (EU-55) shall be controlled by a wet fan scrubber (PCD-14) when the process is in operation. The equipment is considered in operation when feed is being routed to the equipment. The wet fan scrubber shall be provided with adequate access for inspection.
(9 VAC 5-50-260 and Condition 10 of the 10/13/08 Permit)
11. **Emission Controls** - During the production of organic bound extruded carbon, volatile organic compound emissions (including volatile organic hazardous air pollutants) from Kiln B (EU-53A) and Kiln C (EU-82) shall be controlled by a direct flame afterburner (PCD-5) when either kiln is in operation. A kiln is considered in operation when material is being processed in the kiln. The afterburner shall maintain a minimum temperature of 1500 °F and shall be provided with adequate access for inspection.
(9 VAC 5-50-260 and Condition 11 of the 10/13/08 Permit)
12. **Extruder HAPs Emission Control** – B Kiln (EU-53a) and C Kiln (EU-82) when processing organic carbon must process less than 250,000 lbs per year of organic binder (Novalac) to emit less than 10 tons per year of HAPs. Under this operating restriction, the MACT regulations define the extruder afterburner (PCD 5) as a “small control device” on organic production runs when HAPs are generated. 40 CFR 63.1257(a)(1)(i) Subpart GGG Test methods and compliance procedures, states that “an enclosed combustion device used to comply with the provision must have a minimum residence time of 0.5 seconds and a minimum temperature of 760 degrees C or 1400 degrees F. Permit limit IV.A.11. requires that the extruder afterburner operate at a minimum temperature of 1500 degrees F during organic production runs. The extruder afterburner has a minimum residence time of 1.1 seconds based on air flow of 2221 scfm and extruder afterburner combustion chamber volume of 160

cubic feet. The permittee must obtain a permit modification and comply with additional Subpart FFFF requirements before processing more than 250,000 lbs per year of organic binder (Novalac).

[9 VAC 5-80-110, 9 VAC 5-60-60, 9 VAC 5-60-100, 40 CFR 63.2550, 40 CFR 63.2450(h) and 40 CFR 63.1257(a)(1)]

13. **Emission Controls** – Hazardous Air Pollutant (HAP) emissions from the B kiln (EU-53a) and C kiln (EU-82) shall be controlled by an afterburner (PCD5) with a minimum 24 hour daily average period operating temperature of 1500° F when organic feed is on B and C kilns. Sections 63.152(f)(7)(ii) through (iv) and 63.998(b)(2)(iii) and (b)(6)(i)(A), which apply to the exclusion of monitoring data collected during periods of SSM from daily averages, do not apply for the purposes of this subpart. The afterburner shall be provided with adequate access for inspection and shall be in operation when kilns B and C are operating.
(9 VAC 5-80-110, 9 VAC 5-60-60, 9 VAC 5-60-100, 40 CFR 63.2450(3)(1), 40 CFR 63.998(c)(1), 40 CFR 63.998 and 40 CFR 63.2450(l))

14. **Fuel** - The approved fuel for kilns A, B, and C (EU-53A, EU-82 & EU-94) is natural gas. A change in the fuel may require a permit to modify and operate.
(9 VAC 5-80-1100 and Condition 14 of the 10/13/08 Permit)

15. **Emission Limits** – Particulate emissions from the carbon extrusion operation shall not exceed the limits for operation components specified below:

Storage and Batching (EU-78A), Mixing and Extrusion (EU-79) PCD-1 exhaust	-	0.29 lb/hr	1.02 tons/yr
Storage and Batching (EU-90), Mixing and Extrusion (EU-91) and Inorganic Binder Storage (EU-97)– PCD-2 exhaust		0.21 lb/hr	0.72 tons/yr
Organic binder storage (EU-97A) – PCD-3A exhaust		0.01 lb/hr	0.04 tons/yr
Drying (EU-80 and EU-93) – PCD-6 exhaust		1.54 lb/hr	5.28 tons/yr
B kiln (EU-53A), C kiln (EU-82) and A kiln (EU-94) – PCD-8 exhaust		2.05 lb/hr	7.01 tons/yr
Finishing (EU-81 and EU-95) PCD-9 exhaust		0.58 lb/hr	1.97 tons/yr
WV-IS Drying (EU-55)		0.25 lb/hr	0.99 tons/yr

(9 VAC 5-50-260 and Condition 16 of the 10/13/08 Permit)

16. **Emission Limits** – Emissions from the operation of the B kiln (EU-53A) and C kiln (EU-82) shall not exceed the limits specified below:

Carbon Monoxide	11.3 lbs/hr	47.0 tons/yr
Volatile Organic Compounds	0.21 lbs/hr	0.87 tons/yr

Nitrogen Oxides (as NO ₂)	2.5 lbs/hr	10.4 tons/yr
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(9 VAC 5-50-260 and Condition 17 of the 10/13/08 Permit)

17. **Emission Limits** – Emissions from the operation of the A Kiln (EU-94) shall not exceed the limits specified below:

Carbon Monoxide	20.0 lbs/hr	83.3 tons/yr
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Nitrogen Oxides (as NO ₂)	0.83 lbs/hr	3.27 tons/yr
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(9 VAC 5-50-260 and Condition 18 of the 10/13/08 Permit)

18. **Visible Emission Limit** - Visible emissions from Stack G shall not exceed 5 percent opacity as determined by EPA Method 9 (reference 40 CFR 60, Appendix A).

(9 VAC 5-50-80, 9 VAC 5-50-260 and Condition 19 of the 10/13/08 Permit)

19. **Visible Emission Limit** - Visible emissions from Stack F shall not exceed 10 percent opacity as determined by EPA Method 9 (reference 40 CFR 60, Appendix A).

(9 VAC 5-50-80, 9 VAC 5-50-260 and Condition 20 of the 10/13/08 Permit)

20. **Visible Emission Limit** - Visible emissions from the exhaust of PCD-3A shall not exceed 5 percent opacity as determined by EPA Method 9 (reference 40 CFR 60, Appendix A).

(9 VAC 5-50-80, 9 VAC 5-50-260 and Condition 21 of the 10/13/08 Permit)

21. **Startup, Shutdown and Malfunction Plan** – The owner or operator of an affected source must develop a written startup, shutdown, and malfunction plan for the applicable Group I processes of the Extruder Plant, B kiln (EU-53a) and C kiln (EU-82) during organic runs that describes in detail, procedures for operating and maintaining the source during periods of startup, shutdown, and malfunction; and a program of corrective action for malfunctioning process, air pollution control, and monitoring equipment used to comply with the relevant standard. This plan must be developed by the owner or operator by May 10, 2008. The plan must be developed in accordance with applicable requirements listed in 40 CFR Part 63.

[9 VAC 5-60-90, 9 VAC 5-60-100, 40 CFR 63.6(e)(3)(i, ii, v-viii), 40 CFR 63.2520(e)(4), 40 CFR 63.2525(h) and (j), 40 CFR 63.998(d)(3) and 40 CFR 63.998(c)(1)(ii)(D)-(G)]

B. Monitoring

1. **Emission Control Monitoring** - The cartridge filter dust collectors PCD-1 and PCD-2 shall be equipped with one or more Triboguard or equivalent bag break detector(s). The detector(s) shall be installed in an accessible location and shall be maintained by the permittee such that it is in proper working order at all times. The signal from the bag break detector shall be recorded continuously when the filter is in operation, excluding brief periods of instrument maintenance. The detector shall be equipped

with an alarm. The detector alarm setpoint shall be no higher than a signal output corresponding to 90% of the emission limit. The alarm shall activate when the setpoint is reached for more than ten seconds. If one detector is used in the common discharge line of PCD-1 and PCD-2, the previous signal output shall be adjusted to reflect the more stringent limit, when the limits differ.

(9 VAC 5-50-260 and Conditions 2 and 3 of the 10/13/08 Permit)

2. **Emission Control Monitoring** - The PCD-6 wet fan scrubber shall be equipped with a flow meter for scrubbing liquor and shall be provided with adequate access for inspection. The scrubbing liquor flow rate shall be observed and recorded by the data acquisition system (DAS), and during DAS outages at least once per shift, when the scrubber is in operation, excluding brief periods of instrument maintenance.

(9 VAC 5-50-260 and Condition 4 of the 10/13/08 Permit)

3. **Emission Control Monitoring** - The PCD-7 and the PCD-10 wet fan scrubbers and the PCD-8 reverse jet scrubber shall each be equipped with flow meters for scrubbing liquor. In addition, the reverse jet scrubber shall be equipped with a device to continuously measure the differential pressure through the scrubber. The flow meter readings and pressure differential reading shall be observed and recorded by the data acquisition system (DAS), and during DAS outages at least once per shift, when the scrubbers are in operation, excluding brief periods of instrument maintenance.

(9 VAC 5-50-260 and Conditions 5 and 6 of the 10/13/08 Permit)

4. **Emission Control Monitoring** - The PCD-9 dust collector shall be equipped with a Triboguard or equivalent bag break detector. The detector shall be installed in an accessible location and shall be maintained by the permittee such that it is in proper working order at all times. The signal from the bag break detector shall be recorded continuously when the filter is in operation, excluding brief periods of instrument maintenance. The detector shall be equipped with an alarm. The detector alarm setpoint shall be no higher than a signal output corresponding to 90% of the emission limit. The alarm shall activate when the setpoint is reached for more than ten seconds

(9 VAC 5-50-260 and Condition 7 of the 10/13/08 Permit)

5. **Emission Control Monitoring** - The PCD-3A dust collector shall be equipped with a Triboguard or equivalent bag break detector. The detector shall be installed in an accessible location and shall be maintained by the permittee such that it is in proper working order at all times. The signal from the bag break detector shall be recorded continuously when the filter is in operation, excluding brief periods of instrument maintenance. The detector shall be equipped with an alarm. The detector alarm setpoint shall be no higher than a signal output corresponding to 90% of the emission limit. The alarm shall activate when the setpoint is reached for more than ten seconds

(9 VAC 5-50-260 and Conditions 9 of the 10/13/08 Permit)

6. **Emission Control Monitoring** - The PCD-14 wet fan scrubber shall be equipped with a flow meter for scrubbing liquor and shall be provided with adequate access for inspection. The flow meter reading shall be observed and recorded by the data acquisition system (DAS), and during DAS outages at least once per shift, when the scrubber is in operation, excluding brief periods of instrument maintenance.
(9 VAC 5-50-260 and Condition 10 of the 10/13/08 Permit)

7. **Emission Control Monitoring** - The PCD-5 afterburner shall maintain a minimum temperature of 1500 °F and shall be provided with adequate access for inspection. The afterburner shall be equipped with a device to continuously measure and record the temperature of the combustion chamber. The device shall be installed in an accessible location and shall be maintained by the permittee such that it is in proper working order at all times. The temperature readings shall be recorded continuously when the afterburner is in operation.
(9 VAC 5-50-260 and Condition 11 of the 10/13/08 Permit)

8. **Emission Control Monitoring** - The permittee shall conduct a weekly observation of Stacks F and G and PCD-3A during normal operation of the extruder plant using a modified 40 CFR 60 Appendix A Method 22 type evaluation. If any visible emission is observed, the control device shall be adjusted to remove observable emissions and the adjustment recorded or a 40 CFR 60 Appendix A Method 9 evaluation shall be performed to determine if the opacity source is in compliance with the conditions of this permit. If visible emissions inspections conducted during twelve (12) consecutive weeks show no visible emissions for a particular emissions unit capable of generating opacity, the permittee may reduce the monitoring frequency to once per month for that stack. The permittee shall notify the Director, Blue Ridge Regional Office, when the monitoring frequency is reduced from at least each calendar week to at least each calendar month. Anytime a monthly visible emissions evaluation shows visible emissions, the monitoring frequency shall be increased to once per week for that stack until no visible emissions are observed for twelve consecutive weeks. When requested by DEQ the monitoring frequency shall be increased to once per week for any stack.
(9 VAC 5-80-110)

C. Recordkeeping

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

1. Annual production of extruded carbon for each process line, calculated monthly as the sum of each consecutive 12 month period.
2. Annual production of WV-IS carbon (sodium carbonate soaked carbon) for each process line, calculated monthly as the sum of each consecutive 12 month period.

3. Annual consumption of organic and inorganic binders, calculated monthly as the sum of each consecutive 12 month period.
4. Annual consumption of natural gas by each kiln, each dryer, and the afterburner, calculated monthly as the sum of each consecutive 12 month period.
5. Annual hours of operation of PCD-1, PCD-2, PCD-3A, PCD-6, PCD-7, PCD-8, PCD-9, and PCD-10, if different than unit operating hours and used in monthly emission estimates, calculated monthly as the sum of each consecutive 12 month period.
6. Pressure differential records for PCD-8.
7. Bag break detector signal records for PCD-1/PCD-2, PCD-3A, and PCD-9.
8. Records of all bag break detector sensitivity and setpoint changes for PCD-1/PCD-2, PCD-3A, and PCD-9.
9. Flow meter records (Data Acquisition System records or once per shift records during DAS outages) for PCD-6, PCD-7, PCD-8, PCD-10, and PCD-14.
10. Temperature indicator records for PCD-5.
11. Estimated annual emissions of particulate matter from PCD-1, PCD-2, PCD-6, PCD-8, and PCD-9, calculated monthly as the sum of each consecutive 12 month period. These estimates to be based on the most recent performance test or other emission factors acceptable to DEQ.
12. Estimated annual emissions of volatile organic compounds, carbon monoxide and nitrogen oxides from Kilns B and C as controlled by the afterburner and from drying lines 1 and 2 and 3; and estimated annual emissions of carbon monoxide and nitrogen oxides from Kiln A, calculated monthly as the sum of each consecutive 12 month period. Emissions from these sources may be estimated in combination as a process group if the grouping is acceptable to DEQ. These estimates to be based on the most recent performance test, AP-42 burner emission factors, or other emission factors acceptable to DEQ.
13. Results of all stack tests, visible emission evaluations and performance evaluations.
14. Weekly records of required visible emission observations including all modified Method 22 type evaluations, all Method 9 evaluations, all equipment adjustments associated with opacity observations, and a record of any processes which did not operate during the weekly evaluation period.
15. During extruder organic runs, record the 24 hour daily average temperature of the temperature indicator in the combustion zone of the extruder afterburner (PCD5), when organic feed is on kilns B and/or C, including the period one hour after all feed has stopped.

16. During extruder organic runs, record the continuous hourly averages of the temperature indicator in the combustion zone of the extruder afterburner (PCD5), when organic feed is on kilns B and/or C, including the period one hour after all feed has stopped.
17. The permittee shall maintain the reports and records specified in 40 CFR 63 Subpart FFFF of all measurements needed to show compliance with MACT FFFF.

These records shall be available on site for inspection by the VDEQ, or off-site in a manner acceptable to VDEQ, and shall be current for the most recent five (5) years. [9 VAC 5-50-50, 9 VAC 5-80-110, and Condition 24 of the 10/13/08 Permit (except #14), 9 VAC 5-60-50, 40 CFR 63.2450(e)(1), 40 CFR 63.998(c)(1) and 40 CFR 63.998(b)].

D. Testing

1. **Stack Tests** - Within the first eighteen months after issuance of this permit, the permittee shall conduct performance tests for particulate matter emissions from the PCD-3A dust collector, the PCD-6 wet fan scrubber, and the PCD-8 reverse jet scrubber, to verify emission factors used in the estimates required by this permit and/or to demonstrate compliance with the emission limits contained in this permit. Within the first three years after issuance of this permit, the permittee shall conduct performance tests for particulate matter emissions from the PCD-1 dust collector, the PCD-2 dust collector, and the PCD-9 dust collector to verify emission factors used in the estimates required by this permit and/or to demonstrate compliance with the emission limits contained in this permit. Upon request by the DEQ, the permittee shall conduct performance tests for particulate matter emissions from any or all of the devices cited in this condition. The details of the tests shall be arranged with the Director, Blue Ridge Regional Office.
(9 VAC 5-50-30 G)
2. **Stack Tests** - Upon request by the DEQ, but no later than twelve months prior to expiration of this permit, the permittee shall conduct performance tests for volatile organic compounds from the B kiln (EU-53A) and C kiln (EU-82) through the PCD-5 afterburner to verify emission factors used in the estimates required by this permit and/or to demonstrate compliance with the emission limits contained in this permit. The details of the tests shall be arranged with the Director, Blue Ridge Regional Office.
(9 VAC 5-50-30 G)
3. **Stack Tests** –No later than twelve months prior to expiration of this permit, the permittee shall conduct performance tests for carbon monoxide and nitrogen oxides from A kiln (EU-94) and from B kiln (EU-53A) and C kiln (EU-82) through the PCD-5 afterburner to verify emission factors used in the estimates required by this permit and/or to demonstrate compliance with the emission limits contained in this permit. Upon request by the DEQ, the permittee shall conduct part or all of the tests

required in the previous sentence. The details of the tests shall be arranged with the Director, Blue Ridge Regional Office.

(9 VAC 5-50-30 G)

4. **Visible Emissions Evaluation** - Upon request by the DEQ, the permittee shall conduct visible emission evaluations from Stack F, Stack G, and the PCD-3A dust collector to demonstrate compliance with the visible emission limits contained in this permit. The details of the tests shall be arranged with the Director, Blue Ridge Regional Office.

(9 VAC 5-50-30 G and Condition 23 of the 10/13/08 Permit)

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

(9 VAC 5-50-30 F and Condition 13 of the 10/13/08 Permit)

6. **Test Methods** If testing to demonstrate compliance is conducted in addition to the monitoring specified in this permit, the permittee shall use the following methods in accordance with procedures approved by the DEQ as follows:

Pollutant	Test Method (40 CFR Part 60, Appendix A)
VOC	EPA Methods 18, 25, 25a or other method approved by DEQ
VOC Content	EPA Methods 24, 24a or other method approved by DEQ
NO _x	EPA Method 7 or other method approved by DEQ
CO	EPA Method 10 or other method approved by DEQ
PM/PM-10	EPA Method 5, 17 or other method approved by DEQ
Visible Emission	EPA Method 9

(9 VAC 5-80-110)

E. Reporting

1. **Notifications** - The permittee shall furnish written notification to the Director, Blue Ridge Regional Office:

- a. The date on which any bag break detector (PCD-1, PCD-2, PCD-3A, or PCD-9) was adjusted to a set point increase of 100% or more or a setpoint decrease of 50% or more from a setpoint value established within in the previous twelve-month period.
- b. Any revision of the emission factors used for facility emission estimates and the calculation used in revising the factors, including test results where appropriate.

(9 VAC 5-50-50 and Condition 26 of the 10/13/08 Permit)

All other reporting requirements for this section are satisfied by the recordkeeping requirements in this section and by the General Permit Conditions in the Facility-Wide and General Requirements section.

V. Catalyst Plant Requirements

A. Limitations

- 1. Emission Controls** - Particulate emissions from the fluidized bed reactor system preheater section (EU-86A) shall be controlled by two venturi scrubbers (E15A&B), two packed bed scrubbers (E15C&D), a direct flame afterburner (AB2), a wet fan scrubber (E16), and a reverse jet scrubber (E17) when the preheater section is operating. Particulate emissions from the fluidized bed reactor system main reactor section (EU-86) shall be controlled by a direct flame afterburner (AB2), a wet fan scrubber (E16), and a reverse jet scrubber (E17) when the main reactor section is operating. Particulate emissions from the mix tank and recirculation tanks (EU-86B) shall be controlled by a wet fan scrubber (E16) and a reverse jet scrubber (E17) when the mix tank and recirculation tanks are in operation. Equipment is in operation when material is being conveyed to the system and for thirty minutes thereafter. The control equipment shall be provided with adequate access for inspection and shall be in operation when the reactors and preheaters are operating.
(9 VAC 5-50-260 and Condition 3 of the 3/08/05 Permit)
- 2. Emission Controls** - Carbon monoxide emissions from the fluidized bed reactor system (EU-86) shall be controlled by a direct flame afterburner when the reactor system is in operation. Equipment is in operation when material is being conveyed to the system and for thirty minutes thereafter. The direct flame afterburner shall be provided with adequate access for inspection.
(9 VAC 5-50-260 and Condition 4 of the 3/08/05 Permit)
- 3. Emission Control Operation** - The minimum operation temperature for the catalyst carbon process afterburner (AB2) shall be 1600 °F.
(9 VAC 5-50-260 and Condition 8 of the 3/08/05 Permit)
- 4. Emission Controls** - Particulate emissions from the operation of the No.1, No. 2, and No. 3 Bulk Feed Tanks (EU-85A); the screen, the Crusher Feed Tank, the crusher, classifiers, finishing equipment, and miscellaneous materials handling equipment (EU-87); and the No. 4 Bulk Tank and the bulk packaging line (EU-88) shall be controlled by a fabric filter dust collector (E18) when any of the equipment listed in this condition is in operation. The equipment is in operation whenever material is being conveyed to or from the equipment. The dust collector shall be provided with adequate access for inspection and shall be in operation when the equipment is operating.
(9 VAC 5-50-260 and Condition 9 of the 3/08/05 Permit)

5. **Emission Controls** - Particulate emissions from the Day Storage Tank and the bulk loading tank (EU-88A) shall be controlled by a vent filters (E19 and E20) when the tanks are in operation. These tanks are considered to be in operation when material is being conveyed to or from the tank. The filters shall be provided with adequate access for inspection and the appropriate filter shall be in operation when material is being charged to the corresponding tank.
(9 VAC 5-50-260 and Condition 10 of the 3/08/05 Permit)

6. **Particulate Disposal** – The disposal of collected particulate matter shall be performed in a manner which minimizes the introduction of air contaminants to the ambient air.
(9 VAC 5-170-160 and Condition 12 of the 3/08/05 Permit)

7. **Fuel** - The approved fuel for catalyst carbon process afterburner is natural gas. A change in the fuel may require a permit to modify and operate.
(9 VAC 5-80-1100 and Condition 13 of the 3/08/05 Permit)

8. **Emission Limits** - Emissions from the operation of the Product Dust Collector (E18) shall not exceed the limits specified below:

Particulate Matter	0.20 lbs/hr	0.90 tons/yr
PM-10	0.20 lbs/hr	0.90 tons/yr

(9 VAC 5-50-260, 9 VAC 5-80-1180, and Condition 14 of the 3/08/05 Permit)

9. **Emission Limits** - Emissions from the operation of the fluidized bed reactor system (ref 86, 86A, & 86B) shall not exceed the limits specified below:

Particulate Matter	1.7 lbs/hr	7.1 tons/yr
PM-10	1.7 lbs/hr	7.1 tons/yr
Nitrogen Oxides (as NO ₂)	6.9 lbs/hr	30.2 tons/yr
Carbon Monoxide	1.1 lbs/hr	4.7 tons/yr

(9 VAC 5-50-260, 9 VAC 5-80-1180, and Condition 15 of the 3/08/05 Permit)

10. **Visible Emission Limit** - Visible emissions from Stack F shall not exceed ten percent (10%) opacity as determined by EPA Method 9 (reference 40 CFR 60, Appendix A).
(9 VAC 5-50-260, 9 VAC 5-80-1180, and Condition 16 of the 3/08/05 Permit)

11. **Visible Emission Limit** - Visible emissions from the E19 and E20 cartridge filters shall not exceed five percent (5%) opacity as determined by EPA Method 9 (reference 40 CFR 60, Appendix A).
(9 VAC 5-50-260, 9 VAC 5-80-1180, and Condition 17 of the 3/08/05 Permit)

B. Monitoring

1. **Monitoring Devices** – Each venturi scrubber (E15A&B) shall be equipped with devices to continuously measure and record the scrubber liquid flow rate and the differential pressure drop across the scrubber. The scrubbing liquor flow rate and differential pressure of each scrubber shall be observed and recorded by the data acquisition system (DAS), and during DAS outages at least once per shift, when the corresponding equipment is in operation. 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 catalytic carbon process is operating, excluding brief periods of instrument maintenance.
(9 VAC 5-80-1180, 9 VAC 5-50-20 C, 9 VAC 5-50-260, and Condition 5 of the 3/08/05 Permit)
2. **Monitoring Devices** – The wet fan scrubber (E16) shall be equipped with a device to continuously measure and record the liquid flow rate. The reverse jet scrubber (E17) shall be equipped with devices to continuously measure and record the liquid flow rate and the differential pressure drop across scrubber. The scrubbing liquor flow rate of each scrubber and the differential pressure across the reverse jet scrubber shall be observed and recorded by the data acquisition system (DAS), and during DAS outages at least once per shift, when the corresponding equipment is in operation. 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 preheaters or reactors (EU-86A or EU-86) are operating, excluding brief periods of instrument maintenance.
(9 VAC 5-80-1180, 9 VAC 5-50-20 C, 9 VAC 5-50-260, and Condition 6 of the 3/08/05 Permit)
3. **Monitoring Devices** – The afterburner (AB2) shall be equipped with at least one device to continuously measure and record the temperature in the combustion chamber. The monitoring device(s) 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 at least one device shall be in operation when the catalytic carbon process is operating, excluding brief periods of instrument maintenance.
(9 VAC 5-80-1180, 9 VAC 5-50-20 C, 9 VAC 5-50-260, and Condition 7 of the 3/08/05 Permit)
4. **Emission Control Monitoring** - The fabric filter dust collector (E18) shall be equipped with a Triboguard or equivalent bag break detector. The detector shall be

installed in an accessible location and shall be maintained by the permittee such that it is in proper working order at all times. The signal from the bag break detector shall be recorded continuously when the dust collector is in operation, excluding brief periods of instrument maintenance. The detector shall be equipped with an alarm. The detector alarm setpoint shall be no higher than a signal output corresponding to 90% of the emission limit. The alarm shall activate when the setpoint is reached for more than ten seconds.

(9 VAC 5-50-260 and Condition 9 of the 3/08/05 Permit)

5. **Emission Control Monitoring** - The permittee shall conduct a weekly observation of Stack F and the E19 and E20 vent filters during normal operation of the catalyst carbon plant using a modified 40 CFR 60 Appendix A Method 22 type evaluation. If any visible emission is observed, the unit shall be adjusted to eliminate the emission and the adjustment recorded or a 40 CFR 60 Appendix A Method 9 evaluation shall be performed to determine if the opacity of the emission point is in compliance with the conditions of this permit. If visible emissions inspections conducted during twelve (12) consecutive weeks show no visible emissions for a particular emissions unit capable of generating opacity, the permittee may reduce the monitoring frequency to once per month for that stack. The permittee shall notify the Director, Blue Ridge Regional Office, when the monitoring frequency is reduced from at least each calendar week to at least each calendar month. Anytime a monthly visible emissions evaluation shows visible emissions, the monitoring frequency shall be increased to once per week for that stack until no visible emissions are observed for twelve consecutive weeks. When requested by DEQ the monitoring frequency shall be increased to once per week for any stack.

(9 VAC 5-80-110)

C. Recordkeeping

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

1. Annual production of catalyst carbon product, calculated monthly as the sum of each consecutive 12 month period.
2. Annual consumption of natural gas in the catalyst carbon process afterburner (AB2), calculated monthly as the sum of each consecutive 12 month period.
3. Data Acquisition System records, or once per shift records during DAS outages, of the scrubbing liquor flow rate and pressure differential across each Venturi scrubber (E15A&B) controlling emissions from the fluidized bed reactor system (ref 86A), when the system is in operation.
4. Data Acquisition System records, or once per shift records during DAS outages, of the scrubbing liquor flow rate through the wet fan scrubber (E16) controlling

emissions from the fluidized bed reactor system (ref 86, 86A & 86B), when the system is in operation.

5. Data Acquisition System records, or once per shift records during DAS outages, of the scrubbing liquor flow rate through and pressure differential across the reverse jet scrubber (E17) controlling emissions from the fluidized bed reactor system (ref 86, 86A & 86B), when the system is in operation.
6. Continuous temperature records for the afterburner (AB2) controlling emissions from the fluidized bed reactor system (Ref 86 & 86A), when the system is in operation.
7. Monthly continuous signal records and report of alarms for the E18 fabric filter bag break detector, once installed and calibrated.
8. Records of all bag break detector sensitivity and setpoint changes for the E18 bag break detector.
9. Results of all stack tests, visible emission evaluations and performance evaluations.
10. Monthly and annual estimated emissions (in pounds or tons) of particulate matter from the following sources: the reverse jet scrubber (E17), and the Product Dust Collector (E18). Annual emissions shall be calculated monthly as the sum of each consecutive 12 month period. Estimates based on emission factors or other methodology acceptable to VDEQ.
11. Hours of operation of the E18 filter, if used in the preceding estimate.
12. Monthly and annual estimated emissions of carbon monoxide and nitrogen oxides from the fluidized bed reactor system (ref 86, 86A & 86B). Annual emissions shall be calculated monthly as the sum of each consecutive 12 month period. Estimates based on emission factors or other methodology acceptable to VDEQ.
13. Hours of operation of the fluidized bed reactor system (ref 86, 86A & 86B), if used in the preceding estimate.
14. Any revision of the emission factors used for facility emission estimates, the date(s) when the revised factors began to be utilized, and the calculation used in revising the factors, including test results where appropriate.
15. Scheduled and unscheduled maintenance of all air pollution control devices.
16. Weekly records of required visible emissions observations including all modified Method 22 type evaluations, all Method 9 evaluations, all equipment adjustments associated with opacity observations, and a record of any processes which did not operate during the weekly evaluation period.

These records shall be available on site for inspection by the VDEQ, or off-site in a manner acceptable to VDEQ, and shall be current for the most recent five (5) years. (9 VAC 5-50-50, 9 VAC 5-80-110, and Condition 21 of the 3/08/05 Permit [except #16])

D. Testing

1. **Stack Tests** – At least once during the first eighteen months of this permit, and upon request by the DEQ, the permittee shall conduct performance tests for particulate matter from the reverse jet scrubber (E17) and the product dust collector (E18), to demonstrate compliance with the emission limits contained in this permit. The details of the tests shall be arranged with the Director, Blue Ridge Regional Office.
(9 VAC 5-50-30 and Condition 18 of the 3/08/05 Permit)

2. **Stack Tests** - Upon request by the DEQ, but no later than twelve months prior to expiration of this permit, the permittee shall conduct performance tests for carbon monoxide and nitrogen oxides from the fluidized bed reactor system downstream of the afterburner (AB2) to demonstrate compliance with the emission limits contained in this permit. The details of the tests shall be arranged with the Director, Blue Ridge Regional Office.
(9 VAC 5-50-30 and Condition 19 of the 3/08/05 Permit)

3. **Visible Emissions Evaluation** - Upon request by the DEQ, the permittee shall conduct visible emission evaluations from Stack F, the E19 cartridge filter and/or the E20 cartridge filter to demonstrate compliance with the visible emission limits contained in this permit. The details of the tests shall be arranged with the Director, Blue Ridge Regional Office.
(9 VAC 5-50-30 and Condition 20 of the 3/08/05 Permit)

4. **Testing/Monitoring Ports** - The permitted facility shall be constructed so as to allow for emissions testing upon reasonable notice at any time, using appropriate methods. Test ports shall be provided when requested at the appropriate locations.
(9 VAC 5-50-30 F and Condition 11 of the 3/08/05 Permit)

5. **Test Methods** - If testing to demonstrate compliance is conducted in addition to the monitoring specified in this permit, the permittee shall use the following methods in accordance with procedures approved by the DEQ as follows:

Pollutant	Test Method (40 CFR Part 60, Appendix A)
VOC	EPA Methods 18, 25, 25a or other method approved by DEQ
VOC Content	EPA Methods 24, 24a or other method approved by DEQ
NO _x	EPA Method 7 or other method approved by DEQ
CO	EPA Method 10 or other method approved by DEQ
PM/PM-10	EPA Method 5, 17 or other method approved by DEQ
Visible Emission	EPA Method 9

(9 VAC 5-80-110)

E. Reporting

1. **Notification** - The permittee shall furnish written notification to the Director, Blue Ridge Regional Office:
 - a. The date on which the E18 bag break detector was adjusted to a set point increase of 100% or more or a setpoint decrease of 50% or more from a setpoint value established within in the previous twelve-month period.

(9 VAC 5-50-50 and Condition 23 of the 3/08/05 Permit)

All other reporting requirements for this section are satisfied by the recordkeeping requirements in this section and by the General Permit Conditions in the Facility-Wide and General Requirements section.

VI. Facility Wide Conditions

A. Limitations

1. **Maintenance/Operating Procedures** - The permittee shall take the following measures in order to minimize the duration and frequency of excess emissions, with respect to air pollution control equipment, monitoring devices, and process equipment which affect such emissions:
 - a) Develop a maintenance schedule and maintain records of all scheduled and non-scheduled maintenance. These records shall be available on site for inspection by the VDEQ, or off-site in a manner acceptable to VDEQ, and shall be current for the most recent five (5) years.
 - b) Maintain an inventory of spare parts.
 - c) Have available written operating procedures for equipment. These procedures shall be based on the manufacturer's recommendations, at a minimum.
 - d) Train operators in the proper operation of all such equipment and familiarize the operators with the written operating procedures. The permittee shall maintain records of the training provided including the names of trainees, the date of training and the nature of the training.

(9 VAC 5-50-20, 9 VAC 5-80-110, Condition 35 of the 10/13/08 Permit, Condition 52 of the 10/08/08 Permit, and Condition 28 of the 3/08/05 Permit)

2. **Violation of Ambient Air Quality Standard** - The permittee shall, upon request of the DEQ, reduce the level of operation or shut down a facility, as necessary to avoid violating any primary ambient air quality standard and shall not return to normal operation until such time as the ambient air quality standard will not be violated.
(9 VAC 5-20-180 I, Condition 34 of the 10/13/08 Permit, Condition 51 of the 10/08/08 Permit, and Condition 27 of the 3/08/05 Permit)
3. **Requirements by Reference** - Except where this permit is more restrictive than the applicable requirement, those portions of the facility subject to the standard shall be operated in compliance with the requirements of 40 CFR 63.2430 et seq. (Subpart FFFF—National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing).
(9 VAC 5-60-90 and 9 VAC 5-60-100)
4. **Requirements by Reference** – The permittee shall comply with all applicable provisions of 40 CFR 64.1, et seq.
(9 VAC 5-80-10)
5. **Maintenance Waste Water Plan** – The owner or operator shall prepare a description of maintenance procedures for managing applicable wastewaters generated from the emptying and purging of equipment in the process during temporary shutdowns for inspections, maintenance, and repair (i.e. a maintenance – turn around) and during periods which are not shutdowns (i.e. routine maintenance) in accordance with 40 CFR 63.105.
(9 VAC 5-60-90, 9 VAC 5-60-10, 40 CFR Part 63.2485, 40 CFR Part 63.101, and 40 CFR Part 63.105)

B. Recordkeeping

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

1. Emission measurements or estimates of the monthly and annual plantwide emissions of particulate matter, PM-10, nitrogen oxides, sulfur dioxide, carbon mono xide, volatile organic compounds and HAPs using emission factors acceptable to VDEQ. Details of particular emission points not otherwise specified may be requested by VDEQ to clarify the estimation process. Annual emissions shall be calculated monthly as the sum of the previous consecutive 12 month period.
2. Records of operator training on air pollution control equipment.
3. Results of all stack tests, visible emission evaluations and performance evaluations.

These records shall be available on site for inspection by the VDEQ, or off-site in a manner acceptable to VDEQ, and shall be current for the most recent five (5) years.
(9 VAC 5-50-50, 9 VAC 5-60-50 and 9 VAC 5-80-110)

C. Testing

1. **Testing/Monitoring Ports** - Any modifications to the permitted facility shall be constructed so as to allow for emissions testing and monitoring upon reasonable notice at any time, using appropriate methods. Test ports shall be provided when requested at the appropriate locations **or** in accordance with the applicable performance specification (reference 40 CFR Part 60, Appendix B).
(9 VAC 5-50-30 and 9 VAC 5-80-110)

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

Pollutant	Test Method (40 CFR Part 60, Appendix A)
VOC	EPA Methods 18, 25, 25a or other method approved by DEQ
VOC Content	EPA Methods 24, 24a or other method approved by DEQ
HAP Content	EPA Methods 18, 25, 25a, NCASI Method 99.02 or other method approved by DEQ
PM/PM-10	EPA Method 5, 17 or other method approved by DEQ
Visible Emission	EPA Method 9

(9 VAC 5-80-110)

D. Reporting

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

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

(9 VAC 5-20-180 and 9 VAC 5-80-110)

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

- a. Identification of the air pollution control equipment to be taken out of service, as well as its location, and registration number;
- b. The expected length of time that the air pollution control equipment will be out of service;
- c. The nature and quantity of emissions of air pollutants likely to occur during the shutdown period;
- d. Measures that will be taken to minimize the length of the shutdown or to negate the effect of the outage.

(9 VAC 5-20-180 B, Condition 49 of the 10/08/08 Permit, Condition 32 of the 10/13/08 Permit, and Condition 25 of the 3/08/05 Permit)

- 3. **Reports for Facility or Control Equipment Malfunction** - Within 30 days of a failure or malfunction that is expected to exist for 30 days or more, and semi-monthly thereafter until the failure or malfunction is corrected, the permittee shall furnish written reports to the Director, Blue Ridge Regional Office containing the following:

- a. Identification of the specific facility that is affected as well as its location and registration number;
- b. The expected length of time that the air pollution control equipment will be out of service;
- c. The nature and quantity of air pollutant emissions likely to occur during the breakdown period;
- d. Measures taken to reduce emissions to the lowest amount practicable during the breakdown period;
- e. A statement as to why the owner was unable to obtain repair parts or perform repairs that which would allow compliance with the provisions of these regulations within 30 days of the malfunction or failure;

- f. An estimate, with reasons given, of the duration of the shortage of repairs or repair parts which would allow compliance with the provisions of these regulations; and
- g. Any other pertinent information as may be requested by the board.

(9 VAC 5-20-180, Condition 28 of the 10/13/08 Permit, Condition 40 of the 10/08/08 Permit, and Condition 22 of the 3/08/05 Permit)

VII. 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(B):

Emission Unit No.	Emission Unit Description	Citation	Pollutant(s) Emitted (9 VAC 5-80-720 B)	Rated Capacity (9 VAC 5-80-720 C)
S-2	Sawdust transfer	9 VAC 5-80-720B	PM	40,000 lb/hr
S-3	Sawdust storage pile	9 VAC 5-80-720B	PM	NA
M-1	Ammonia from piping	9 VAC 5-80-720B	Ammonia	NA
M-2	Ammonia from tank filling	9 VAC 5-80-720B	Ammonia	NA
M-3	Catalyst Plant Acid Scrubber Tank	9 VAC 5-80-720B	PM	NA
M-4	HCl from piping	9 VAC 5-80-720B	HCl	NA
M-5	35% HCL Storage Tank	9 VAC 5-80-720B	HCl	NA
M-6	10% HCL Storage Tank	9 VAC 5-80-720B	HCl	NA
M-7	Spent Acid Tank	9 VAC 5-80-720B	PM, VOC	NA
M-8	Ion Exchange Units	9 VAC 5-80-720B	PM, HCl, VOC	NA
M-9	No 2 Kiln Scrubber Tank	9 VAC 5-80-720B	PM, VOC	NA
M-10	No 3 Kiln Scrubber Tank	9 VAC 5-80-720B	PM, VOC	NA
M-11	No 4 Kiln Scrubber Tank	9 VAC 5-80-720B	PM, VOC	NA
M-14	Wash Effluent Tank	9 VAC 5-80-720B	PM, VOC	NA
M-15	Virgin Acid Tank #3	9 VAC 5-80-720B	PM	NA
M-16	Mix Acid Tank	9 VAC 5-80-720B	PM, VOC	NA
M-17	Prayon Table	9 VAC 5-80-720B	PM, VOC	NA
M-18	Prayon Table Filtrate Tanks (5)	9 VAC 5-80-720B	PM, VOC	NA
M-19	Fugitive piping & pump emissions	9 VAC 5-80-720B	PM, VOC	NA
M-20	Filter Press	9 VAC 5-80-720B	PM, VOC	NA
M-21	No. 6 Tank	9 VAC 5-80-720B	PM, VOC	NA
M-22	Precoat tank	9 VAC 5-80-720B	PM, VOC	NA
M-23	Gasoline Tank (5 th Ave)	9 VAC 5-80-720B	VOC	NA
M-24	Gasoline Tank (Warehouse)	9 VAC 5-80-720B	VOC	NA
M-25	Acid Sumps (2).	9 VAC 5-80-720B	PM, VOC, HCl	NA
M-26	Woodbase Plant Open U Drains	9 VAC 5-80-720B	PM, VOC	NA
M-24	Gasoline Tank (Sawdust Pile)	9 VAC 5-80-720B	VOC	NA

In addition, the activities described by 9 VAC 5-80-720(A)(2), (3), (4), (5), (6), (7), (8), (9), (10), (11), (12), (15), (16), (20), (21), (22), (23), (24), (27), (28), (30), (31), (33),

(35), (38), (39), (42), (45), (46), (47), (48), (49), (50), (51), (57), (60), (61), (64), (65), (73), (78), (79), (81), (82), (84), (90), (91), (92), (98), and (99) occur at the facility.

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

VIII. 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. No inapplicable requirements were identified, however, several applicable requirements have been streamlined from this permit as detailed in the statement of basis.

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 (i) 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)

IX. 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 shall become invalid five years from the date of issuance. The permittee shall submit an application to Director, Blue Ridge Regional Office for renewal of this permit no earlier than 18 months and no later than six months prior to the date of expiration of this permit. Upon receipt of a complete and timely application for renewal, this source may continue to operate subject to final action by the DEQ on the renewal application.
(9 VAC 5-80-110 D and 9 VAC 5-80-80 F)

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. [Note that much of the recordkeeping required by this permit also serves as required periodic monitoring to determine emissions compliance and therefore needs to be addressed in the periodic reports.] The details of the reports are to be arranged with the Director, Blue Ridge Regional Office. The reports 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.”
- d. The report shall be sent to the following address:

VA DEQ
Director, Blue Ridge Regional Office
ATTN: Air Compliance Manager
3019 Peters Creek Road
Roanoke, VA 24019

(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 to 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. The identification of each term or condition of the permit that is the basis of the certification. The compliance status.
2. Whether compliance was continuous or intermittent, and if not continuous, documentation of each incident of non-compliance.
3. 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.
4. Such other facts as the permit may require to determine the compliance status of the source.

This annual compliance certification shall be sent to the following addresses:

Director, Blue Ridge Regional Office
Attn: Air Compliance Manager
Virginia DEQ
3019 Peters Creek Road
Roanoke, VA 24019

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, Blue Ridge Regional Office, within four (4) daytime business hours 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 occurrence, 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 quarterly or semi-annual compliance monitoring report required by this permit.
(9 VAC 5-80-110 F.2 and 9 VAC 5-80-250)

F. Failure/Malfunction Reporting

If, for any reason, the affected facilities or related air pollution control equipment fails or malfunctions and may cause excess emissions for more than one hour, the owner shall notify the Director, Blue Ridge Regional Office, as soon as practicable but no later than four daytime business hours after the malfunction is discovered. In addition, the owner shall provide a written statement, within 14 days, explaining the problem, corrective action taken, and the estimated duration of the breakdown/shutdown.
(9 VAC 5-80-250)

G. 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, 9 VAC 5-40-20)

H. 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 conditions of paragraph 2 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 malfunction, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit.
 - d. For malfunctions that occurred for one hour or more, the permittee submitted to the Board by the deadlines described in **Failure/Malfunction Reporting** above, a notice and written statement containing a description of the malfunction, any steps taken to mitigate emissions, and corrective actions taken. The notice fulfills the requirement of 9 VAC 5-80-110 F.2.b to report promptly deviations from permit requirements.
3. In any enforcement proceeding, the permittee seeking to establish the occurrence of a malfunction shall have the burden of proof. The provisions of this section are in addition to any malfunction, emergency or upset provision contained in any requirement applicable to the source.

(9 VAC 5-80-250)

I. 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)

J. 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)

K. 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)

L. 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)

M. Permit Action for Cause

1. This permit may be modified, revoked, reopened, and reissued, or terminated for cause as specified in 9 VAC 5-80-110 L, 9 VAC 5-80-240 and 9 VAC 5-80-260. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated

noncompliance does not stay any permit condition.
(9 VAC 5-80-110 G.4)

2. Such changes that may require a permit modification and/or revisions include, but are not limited to, the following:
 - a. Erection, fabrication, installation, addition, or modification of an emissions unit (which is the source, or part of it, which emits or has the potential to emit any regulated air pollutant), or of a source, where there is, or there is potential of, a resulting emissions increase;
 - b. Reconstruction or replacement of any emissions unit or components thereof such that its capital cost exceeds 50% of the cost of a whole new unit;
 - c. Any change at a source which causes emission of a pollutant not previously emitted, an increase in emissions, production, throughput, hours of operation, or fuel use greater than those allowed by the permit, or by 9 VAC 5-80-11, unless such an increase is authorized by an emissions cap; or any change at a source which causes an increase in emissions resulting from a reduction in control efficiency, unless such an increase is authorized by an emissions cap;
 - d. Any reduction of the height of a stack or of a point of emissions, or the addition of any obstruction which hinders the vertical motion of exhaust;
 - e. Any change at the source which affects its compliance with conditions in this permit, including conditions relating to monitoring, recordkeeping, and reporting;
 - f. Addition of an emissions unit which qualifies as insignificant by emissions rate (9 VAC 5-80-720 B) or by size or production rate (9 VAC 5-80-720 C);
 - g. Any change in insignificant activities, as defined by 9 VAC 5-80-90 D.1.a(1) and 9 VAC 5-80-720 B and 9 VAC 5-80-720 C.
(9 VAC 5-80-110 G, 9 VAC 5-80-110 J, 9 VAC 5-80-240, and 9 VAC 5-80-260)

N. Property Rights

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

O. 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)

P. Duty to Pay Permit Fees

The owner of any source for which a permit under 9 VAC 5-80-50 through 9 VAC 5-80-305 was issued shall pay permit fees consistent with the requirements of 9 VAC 5-80-310 through 9 VAC 5-80-355. 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)

Q. 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)

R. 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)

S. 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)

T. 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)

U. 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)

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 5-80-260)

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. 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)

Z. 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)

AA. 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)

X. State-Only Enforceable Requirements

Terms and conditions relating to the Virginia state toxics regulations are not required under the federal Clean Air Act or under any of its applicable federal requirements, and are not subject to the requirements of 9 VAC 5-80-290 concerning review of proposed permits by EPA and draft permits by affected states. Two New Source Review permits for this facility contain conditions required under this rule in sections designated “state only enforceable.”