

**CERTIFIED MAIL**

[date]

Mr. Robert A. Shanahan  
VP, Manufacturing and Mill Management  
Blue Ridge Paper Products, Inc  
P.O. Box 4000  
Canton, North Carolina 28716

DRAFT

Dear Mr. Shanahan:

SUBJECT: Air Quality Permit No. 08961T08  
Facility ID: 4400159  
Blue Ridge Paper Products, Inc.  
Canton, Haywood County, North Carolina  
Fee Class: Title V  
Site No. 01/44/0159

In accordance with your completed Air Quality Permit Application for Equivalency by Permit (EBP) and in accordance with the February 13, 2006 Contested Case Settlement Agreement, we are forwarding herewith Air Quality Permit No. 08961T08 to Blue Ridge Paper Products, Inc., Canton, North Carolina authorizing the operation, as outlined in Part I, and the construction, as outlined in Part II, of the emission source(s) and associated air pollution control device(s) specified herein. Additionally, any emissions activities determined from your Air Quality Permit Application as being insignificant per 15A North Carolina Administrative Code 2Q .0503 have been listed for informational purposes as an "ATTACHMENT." Please note the requirements for the annual compliance certification are contained in General Condition P in Section 3 of Part I.

As the designated responsible official it is your responsibility to review, understand, and abide by all of the terms and conditions of the attached permit. It is also your responsibility to ensure that any person who operates any emission source and associated air pollution control device subject to any term or condition of the attached permit reviews, understands, and abides by the condition(s) of the attached permit that are applicable to that particular emission source.

If any parts, requirements, or limitations contained in this Air Quality Permit are unacceptable to you, you have the right to request a formal adjudicatory hearing within 30 days following receipt of this permit, identifying the specific issues to be contested. This hearing request must be in the form of a written petition

Mr. Robert A. Shanahan

[date]

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conforming to NCGS (North Carolina General Statutes) 150B-23, and filed with the Office of Administrative Hearings, 6714 Mail Service Center, Raleigh, North Carolina 27699-6714. The form for requesting a formal adjudicatory hearing may be obtained upon request from the Office of Administrative Hearings. Unless a request for a hearing is made pursuant to NCGS 150B-23, this Air Quality Permit shall be final and binding.

You may request modification of your Air Quality Permit through informal means pursuant to NCGS 150B-22. This request must be submitted in **writing** to the Director and must identify the specific provisions or issues for which the modification is sought. Please note that this Air Quality Permit will become final and binding regardless of a request for informal modification unless a request for a hearing is also made under NCGS 150B-23.

**The construction of new air pollution emission source(s) and associated air pollution control device(s), or modifications to the emission source(s) and air pollution control device(s) described in this permit must be covered under an Air Quality Permit issued by the Division of Air Quality prior to construction. Failure to do so is a violation of GS 143-215.108 and may subject the Permittee to civil or criminal penalties as described in GS 143-215.114A and 143-215.114B.**

This Air Quality Permit shall be effective from **xx days after the issuance date** until **5 years after effective date**, is nontransferable to future owners and operators, and shall be subject to the conditions and limitations as specified therein.

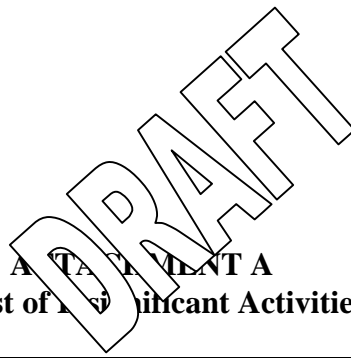
Should you have any questions concerning this matter, please contact Mr. Jay Evans at (919) 715-7711.

Sincerely yours,

Donald R. van der Vaart, Ph.D., P.E.  
Chief

Enclosure

c: Title V File  
Gregg Worley, EPA Region 4 with review  
Asheville Regional Office  
Central Files



**ATTACHMENT A**  
**List of Significant Activities**

<b>Emission Source I.D.</b>	<b>Emission Source Description</b>	<b>Regulatory Basis for Exemption</b>
G01001	Chip Unloading	2Q .0503(8)
G03008	Brownstock Washing Other Units	2Q .0503(8)
G06015	Methanol Storage	2Q .0503(8)
G07017	Evaporator Other Units	2Q .0503(8)
G08074	Chloride Removal Process (CRP)	2Q .0503(8)
G09030	Lime Kiln Scrubber Sump Tanks	2Q .0503(8)
G09033	Lime Kiln Area Other Sources	2Q .0503(8)
G10036	Causticizing - Other Sources	2Q .0503(8)
G10091	Lime Mud Washers and Storage	2Q .0503(8)
G11041	No. 4 Boiler Coal Bunker	2Q .0503(8)
G11043	Bark Storage and Handling	2Q .0503(8)
G11046	Cooling Towers	2Q .0503(8)
G11047	Power Boilers Other Units	2Q .0503(8)
11-CU-006-01	Urea solution storage tanks for SNCR System	2Q .0503(8)
G12052	No. 20 Paper Machine Trim System	2Q .0503(8)
G12077	No. 19 Machine Calendar Nip Heaters	2Q .0503(8)
G13053	Paper Machine Additives Area	2Q .0503(8)
G16057	Backup Lime Dewatering System	2Q .0503(8)
G16080	WTP Low Lift and Splitter Box	2Q .0503(8)
G16083	WTP Secondary Clarifiers	2Q .0503(8)
G16084	WTP Sludge Presses and Pile	2Q .0503(8)
G16085	WTP Other Sources	2Q .0503(8)
G20075	Main Turpentine Tank	2Q .0503(8)
G21062	Tall Oil Finishing Plant	2Q .0503(8)
G21063	Tall Oil Manufacturing Plant	2Q .0503(8)
G21076	MQB Storage Tank	2Q .0503(8)
G23064	Liquid Chemical Storage	2Q .0503(8)
G23065	Bleached Stock Storage	2Q .0503(8)
G23066	Miscellaneous Units -Sewer Lines -Truck Traffic Fugitives -Coal Handling Fugitives -Water Treatment -Depoly System -Emergency Generators -Propane Vaporizer -Paint Shop Activities -Maintenance Shop Activities -Carpentry Shop Activities	2Q .0503(8)
G23067	Parts Washers	2Q .0503(8)
G24093	Pre-Bleach Other Sources	2Q .0503(8)

State of North Carolina,  
Department of Environment,  
and Natural Resources

Division of Air Quality



**AIR QUALITY PERMIT**

Permit No.	Replaces Permit No.(s)	Effective Date	Expiration Date
08961T08	08961R07	TBD	5 years from effective date

Until such time as this permit expires or is modified or revoked, the below named Permittee is authorized to operate, as outlined in Part I, and to construct, as outlined in Part II, the emission source(s) and associated air pollution control device(s) specified herein, in accordance with the terms, conditions, and limitations within this permit. This permit is issued under the provisions of Article 21B of Chapter 143, General Statutes of North Carolina as amended, and Title 15A North Carolina Administrative Codes (15A NCAC), Subchapters 2D and 2Q, and other applicable Laws.

Pursuant to Title 15A NCAC, Subchapter 2Q, the Permittee shall not construct, operate, or modify any emission source(s) or air pollution control device(s) without having first submitted a complete Air Quality Permit Application to the permitting authority and received an Air Quality Permit, except as provided in this permit.

**Permittee:**

**Blue Ridge Paper Products, Inc.**

**Facility ID:**

**4400159**

**Facility Site Location:**

**175 Main Street**

**City, County, State, Zip:**

**Canton, Haywood County, North Carolina, 28716**

**Mailing Address:**

**P.O. Box 4000**

**City, State, Zip:**

**Canton, North Carolina 28716**

**Application Numbers:**

**4400159.06A**

**Complete Application Date:**

**November 17, 2006**

**Renewal Application Due Date:**

**9 months prior to expiration date**

**Primary SIC Code:**

**2621**

**Division of Air Quality,**

**Asheville Regional Office**

**Regional Office Address:**

**2090 US Highway 70 Swannanoa, North Carolina 28778**

Permit issued this the [date]

Donald R. van der Vaart, Ph.D., P.E., Chief, Air Permits Section  
By Authority of the Environmental Management Commission

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**PART I**

The Division of Air Quality (DAQ), the United States Environmental Protection Agency (EPA), and citizens as defined under the Federal Clean Air Act have the authority to enforce the terms, conditions, and limitations contained in Part I of this permit unless otherwise specified.

Under Title 15A NCAC 2Q, the operation of emission source(s) and associated air pollution control device(s) and appurtenances listed in Part I of this permit is based on plans, specifications, operating parameters, and other information as submitted in the Air Quality Permit Application.

**SECTION 1- PERMITTED EMISSION SOURCE(S) AND ASSOCIATED AIR POLLUTION CONTROL DEVICE(S) AND APPURTENANCES**

The following table contains a summary of all permitted emission sources and associated air pollution control devices and appurtenances:

<b>Emission Source ID No.</b>	<b>Emission Source Description</b>	<b>Control Device ID No.</b>	<b>Control Device Description</b>
G01002*	Chip Handling Operations	NA	NA
G01003*	Chip Storage Area	NA	NA
G02004 <b>MACT, Subpart S</b>	Digester area, including:  eighteen (18) batch digesters  Hardwood - No.1 Blow Tank, No. 1 Fiberline Accumulator, No. 1 Secondary Condenser  Pine - No.2 Blow Tank, No. 2 Fiberline Accumulator, No. 2 Secondary Condenser	G09028 (primary)  or  G09029 (backup)  G07018	Lime Kiln No. 4 via NCG closed collection system           Lime Kiln No. 5 via NCG closed collection system       Foul condensate via closed collection system
G03005 <b>MACT, Subpart S</b>	No. 1 Hardwood Fiberline brownstock washing		NA
G03006 <b>MACT, Subpart S</b>	No. 2 Pine Fiberline brownstock washing		
G03007*	Reject Knots	NA	NA
G04009 <b>MACT, Subpart S</b>	No. 1 Hardwood Fiberline oxygen delignification system		NA
G04010 <b>MACT, Subpart S</b>	No. 2 Pine Fiberline oxygen delignification system		
G04011	white liquor oxidation system (40,500 pounds white liquor maximum throughput rate)	04-CD-021-01	demister

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
G04025 <b>MACT, Subpart S</b>	No. 1 Hardwood Fiberline Pulp Screening System		NA
G04026 <b>MACT, Subpart S</b>	No. 2 Pine Fiberline Pulp Screening System		NA
G05012 <b>MACT, Subpart S</b>	<u>No. 1 Hardwood Fiber Bleaching Line</u> chlorine dioxide stage (D1), extraction stage (EO), final chlorine dioxide stage (D2), washer hoods, towers and filtrate tanks of the hardwood bleaching system	05-CD-002-01	one counter-current packed tower wet scrubber (190 gallons per minute oxidized white liquor design flow rate)
G05013 <b>MACT, Subpart S</b>	<u>No. 2 Pine Fiber Bleaching Line</u> chlorine dioxide stage (D1), extraction stage (EO), final chlorine dioxide stage (D2), towers and filtrate tanks of the pine bleaching system	05-CD-017-01	one counter-current packed tower wet scrubber (70 gallons per minute oxidized white liquor design flow rate)
G05073*	Minerals Removal Process (MRP)	NA	NA
G06014  06-PU-002  06-TK-007 06-TK-008 06-TK-009 <b>112(r)</b>	chlorine dioxide generation system including :  one R-8 chlorine dioxide generator, and  three chlorine dioxide solution storage tanks (125,000 gallons capacity, each)	06-CD-002-01  When the No.1 Fiber Bleach Line is in operation, the No. 1 Fiber Bleach Line (ID No. 05-CD-002-01) wet scrubber is operated in series with the above unit	one two section packed tower wet scrubber (70 to 80 gallons of chilled water per minute)  one counter-current packed tower wet scrubber (190 gallons per minute white liquor design flow rate)

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
G07016 <b>MACT, Subpart S</b>	Swenson counter current evaporator (147,402 pounds per hour black liquor solids maximum capacity) consisting of six effects and one concentrator, with the fourth, fifth, and sixth effect venting to the foul condensate collection system via the hotwell;  West GB counter-current evaporator (131,614 pounds per hour black liquor solids maximum capacity) consisting of six effects and steam liquor heater, with the second through the sixth effect venting to the foul condensate collection system via the hotwell;	G09028 (primary)  or  G09029 (backup)  G07018	Lime Kiln No. 4 via NCG closed collection system   Lime Kiln No. 5 via NCG closed collection system  Foul condensate via closed collection system
G07018 <b>NSPS, Subpart BB</b> <b>MACT, Subpart S</b>	foul condensate collection system consisting of a steam stripper (CD-006-01) and associated stripper feed tank and reflux tank	G09029 (primary)  or  G09028 (backup)	Lime Kiln No. 5 via NCG closed collection system   Lime Kiln No. 4 via closed collection system
G07019	Four (4) Heavy Black Liquor Storage Tanks	NA	NA
G07086	Eight (8) Weak Black Liquor Storage Tanks	NA	NA
G08020 <b>MACT, Subpart MM</b>	No. 10 new design recovery furnace (121,000 pounds per hour maximum black liquor solids firing rate and 382 million Btu per hour maximum heat input rate from No. 6 fuel oil)	08-CD-001-01	3-Chamber, 6-field electrostatic precipitator (115,236 square feet of plate area)
G08021 <b>MACT, Subpart MM</b>	No. 11 new design recovery furnace (121,000 pounds per hour maximum black liquor solids firing rate, 382 million Btu per hour maximum heat input rate from No. 6 fuel oil, and 0.25 million Btu per hour maximum heat input rate from propane ignition)	08-CD-002-01	3-Chamber, 4-Field electrostatic precipitator (115,236 square feet of plate area)

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
G08022	black liquor oxidation system (228,000 pounds per hour maximum feed rate based on calendar day average)	CD-BLOcyclone  CD-BLOXRTO  CD-RTOSCR	3 cyclones (60 inches in diameter each);  one natural gas-fired regenerative thermal oxidizer (4.2 million Btu per hour heat input);  one caustic scrubber (5 to 7 gallon per minute NaOH injection design flow rate)
G08023 <b>MACT, Subpart MM</b>	No. 10 recovery furnace smelt dissolving tank	08-CD-011-01	chevron mist eliminator (33.5 square feet of collection surface area)
G08024 <b>MACT, Subpart MM</b>	No. 11 recovery furnace smelt dissolving tank	08-CD-012-01	chevron mist eliminator (33.2 square feet of collection surface area)
G9027	Nos. 4, 5, and 6 Lime Precoat Filters	NA	NA
G09028 <b>MACT, Subpart MM</b>	No. 6 fuel oil-fired No. 4 lime kiln (9.0 tons per hour maximum calcium oxide design capacity; 60 million Btu/hr maximum heat input rate with primary NCG and backup SOG combustion)	09-CD-009-01	cyclonic mist eliminator (120 inches in diameter) installed in series with a flooded disc-type wet scrubber (360 gallons per minute liquid design flow rate, with pH control)
G09029 <b>MACT, Subpart MM</b>	No. 6 fuel oil-fired No. 5 lime kiln (12.0 tons per hour maximum calcium oxide design capacity; 100 million Btu/hr maximum heat input rate with backup NCG and primary SOG combustion)	09-CD-010-01	one 4-stage MicroMist™ venturi scrubber [quench, venturi, impingement tray, and chevron mist eliminator (156 inches in diameter)] (250 gallons per minute venturi design rate, with pH control)
G09031	No. 6 lime storage silo and No. 6 fresh lime storage silo (150 tons maximum capacity each) and associated conveyor	09-CD-018-01	cartridge filter (1,728 square feet of filter area)
G09032	No. 5 lime dust collection system installed on the hot lime conveyor, lime crusher, bucket elevator and lime storage silo (400 tons maximum capacity)	09-CD-013-01	cartridge filter (1,728 square feet of filter area)

<b>Emission Source ID No.</b>	<b>Emission Source Description</b>	<b>Control Device ID No.</b>	<b>Control Device Description</b>
G10035	No. 5 lime slaker serving No. 5 lime kiln	10-CD-027-01	one natural draft condensing scrubber (nominal 30 gallons per minute mill water injection rate)
G10034	No. 6 lime slaker serving No. 4 lime kiln	10-CD-036-01	one natural draft scrubber (nominal 30 gallons per minute mill water injection rate)
G10036	Green Liquor Clarification	NA	NA
G10090*	Green Liquor Stabilization	NA	NA
G11037 <b>MACT Subpart DDDDD</b>	coal -fired Big Bill utility boiler (364 million Btu per hour maximum heat input rate) equipped with low NOx burners and natural gas igniters to be installed	11-CD-003-01	2-Chamber, 3-Field electrostatic precipitator (51,840 square feet of plate area)
G11038 <b>MACT Subpart DDDDD</b>	coal-fired Peter G. utility boiler (364 million Btu per hour maximum heat input rate) equipped with low NOx burners and natural gas igniters	11-CD-004-01	2-Chamber, 3-Field electrostatic precipitator (51,840 square feet of plate area)
G11039 <b>MACT Subpart DDDDD</b>	coal-fired Riley Coal utility boiler (399 million Btu per hour maximum heat input rate) equipped with low NOx burners and natural gas igniters	11-CD-005-01	2-Chamber, 3-Field electrostatic precipitator (67,392 square feet of plate area)
G11040 <b>NSPS, Subpart D PSD MACT Subpart DDDDD</b>	coal / No. 6 fuel oil-fired No. 4 utility boiler (535 million Btu per hour maximum heat input rate) equipped with low NOx burner components and Separated Over fire Air (SOFA) system	11-CD-006-01  11-CD-006-02	2-Chamber, 4-Field electrostatic precipitator (115,000 square feet of plate area)  urea-based Selective Non-Catalytic Reduction (SNCR) NOx emission reduction system
G11042 <b>MACT Subpart DDDDD</b>	woodwaste/ bark/ depoly waste/ fiber-based roll cores/coal-fired Riley bark boiler (380 million Btu per hour maximum heat input rate) with partial flyash reinjection, equipped with a multicyclone and a venturi-type wet scrubber in series	11-CD-016-01  11-CD-016-02	multicyclone (approximately 160 tubes, 9 inches in diameter each)  venturi-type wet scrubber

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
G11044	a bark fuel feed system and associated transfer cyclone and a depoly feed system and associated transfer cyclone	NA	NA
G11045 G11025	Utility boiler flyash handling system consisting of the main flyash silo (25,300 cubic feet) and pneumatic flyash collection system and separate No. 4 Power Boiler flyash transfer silo (600 cubic feet)	11-CD-021-01 11-CD-021-02 11-CD-021-03	One bin vent bagfilter (95 square feet of filter area); one cyclone separator with bagfilter (479 square feet of filter area); one bin vent bagfilter (26 square feet of filter area)
G12048 G12049 G12051 G12052	Nos. 20, 19, 12, and 11 Paper Machines	NA	NA
G13054 G13055 G13056	three starch storage silos, East, West, and Center, respectively (30 tons per hour maximum throughput, each)	13-CD-014-01 13-CD-016-01 13-CD-020-01	one bagfilter (255 square feet of filter area); one bin vent filter (183 square feet of filter area); one bagfilter (255 square feet of filter area);
G16081	WTP Primary Clarifiers	NA	NA
G16082	WTP Aeration and Digestion Basins	NA	NA
G19058	Rewinders on Trim System #1	NA	NA
G10959	Rewinders on Trim System #2	NA	NA
G20060 <b>MACT, Subpart S</b>	No.1 Hardwood Turpentine Recovery System	G09028 (primary) or G09029 (backup) G07018	Lime Kiln No. 4 via closed NCG collection system  Lime Kiln No. 5 via closed collection system  Foul condensate via closed collection system
G20062 <b>MACT, Subpart S</b>	No.2 Pine Turpentine Recovery System	G09028 (primary) or G09029 (backup) G07018	Lime Kiln No. 4 via closed NCG collection system  Lime Kiln No. 5 via closed NCG collection system  Foul condensate via closed collection system

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
G21072	Tall Oil Reactor	21-ST-008-01	packed tower-type wet scrubber
G23078	NCG Collection System	NA	NA
G24087 <b>MACT, Subpart S</b>	No. 1 Hardwood Fiberline Deckers	NA	NA
G24088 <b>MACT, Subpart S</b>	No. 2 Pine Fiberline Deckers	NA	NA
G24092*	Hardwood Brownstock High Density Storage	NA	NA
G24094*	Pine Brownstock High Density Storage	NA	NA
16-CU-001 <b>MACT, Subpart ZZZZ</b>	one 1850 horsepower, diesel-fired emergency generator	NA	NA

\*Sources with no applicable requirements that emit greater than de minimis for classification as Insignificant Activities per 15A NCAC 2Q .0503(8).

## SECTION 2 - SPECIFIC LIMITATIONS AND CONDITIONS

### 2.1- Emission Source(s) and Control Device(s) Specific Limitations and Conditions

The emission source(s) and associated air pollution control device(s) and appurtenances listed below are subject to the following specific terms, conditions, and limitations, including the testing, monitoring, recordkeeping, and reporting requirements as specified herein:

#### DIGESTER AREA (AREA 02)

- A. The Digester Area (ID No. G02004) containing:**  
**eighteen (18) batch digesters (ID Nos. 02-PU-001 thru 018);**  
**the No. 1 Hardwood Blow Heat System consisting of:**  
     **the No. 1 Blow Tank (ID No. 02-PU-005),**  
     **the No. 1 Fiberline Accumulator (ID No. 02-PU-006), and**  
     **the No. 1 Secondary Condenser (ID No. 02-PU-008);**  
**the No. 2 Pine Blow Heat System consisting of:**  
     **the No. 2 Blow Tank (ID No. 02-PU-003),**  
     **the No. 2 Fiberline Accumulator (ID No. 02-PU-007), and**  
     **the No. 2 Secondary Condenser (ID No. 02-PU-009).**

**Foul gases are collected by the Low Volume, High Concentration (LVHC) Gas Collection System (ID No. G23078) for burning in Lime Kiln No. 4 (ID No. G09028) or Lime Kiln No. 5 (ID No. G09029). Foul condensates are collected via the closed Foul Condensate Collection System.**

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
total reduced sulfur (TRS)	5 ppm by volume on a dry basis	15A NCAC 2D .0528
Toxic Air Pollutants	State Enforceable Only (See Section 2.3.A.)	15A NCAC 2D .1100
HAP	40CFR63, Subpart S (See Section 2.2.C.)	15A NCAC 2D .1111

#### 1. 15A NCAC 2D .0528: TOTAL REDUCED SULFUR FROM KRAFT PULP MILLS

- a. The emissions of total reduced sulfur shall not exceed five parts per million from any digester system, measured as hydrogen sulfide on a dry gas basis and averaged per discrete contiguous 12-hour time period. [15A NCAC 2D .0528]

**Testing** [15A NCAC 2D .0501(c)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1 A. 1. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0528

**Monitoring/Recordkeeping** [15A NCAC 2Q .0508(f)]

- c. The Digester Area emission sources, shall comply with the limitation above by ensuring the following:
- i. The gases are combusted in the No. 4 Lime Kiln (ID No. G09028) or;
  - ii. The gases are combusted in the No. 5 Lime Kiln (ID No. G09029).
- d. The Permittee shall follow the closed vent inspection procedures per Specific Condition 2.2 .C. to insure that the emissions are routed to either the No. 4 Lime Kiln (ID No. G09028) or No. 5 Lime Kiln (ID No. G09029) as specified above. The Permittee shall be deemed in noncompliance with 2D .0528 if these procedures are not followed or if the records are not maintained.

**Reporting** [15A NCAC 2Q .0508(f)]

- e. The Permittee shall submit a summary report of the monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

**BROWNSTOCK WASHING (Area 03)**

**B. The Brownstock Washing Area containing:  
 the No. 1 Hardwood Fiberline Brownstock Washing System (ID No. G03005) and  
 the No. 2 Pine Fiberline Brownstock Washing System (ID No. G03006).**

The following table provides a summary of limits and standards for the emission source(s) described above:

<b>Regulated Pollutant</b>	<b>Limits/Standards</b>	<b>Applicable Regulation</b>
Toxic Air Pollutants	State Enforceable Only (See Section 2.3.A.)	15A NCAC 2D .1100
HAP	40CFR63, Subpart S (See Section 2.2.C.)	15A NCAC 2D .1111

**OXYGEN DELIGNIFICATION (Area 04)**

**C. The Oxygen Delignification Area containing:  
 the No. 1 Hardwood Fiberline Oxygen Delignification System (ID No. G04009) and  
 the No. 2 Pine Fiberline Oxygen Delignification System (ID No. G04010).**

The following table provides a summary of limits and standards for the emission source(s) described above:

<b>Regulated Pollutant</b>	<b>Limits/Standards</b>	<b>Applicable Regulation</b>
Toxic Air Pollutants	State Enforceable Only (See Section 2.3.A.)	15A NCAC 2D .1100
HAP	40CFR63, Subpart S (See Section 2.2.C.)	15A NCAC 2D .1111

**D. White Liquor Oxidizer (ID No. G04011) equipped with a chevron demister (ID No. 04-CD-021-01)**

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
particulate	$E = 4.10 \times P^{0.67}$ Where: E = allowable emission rate in pound per hour P = process weight rate in tons per hour	15A NCAC 2D .0515
visible emissions	20 percent opacity	15A NCAC 2D .0521
Toxic Air Pollutants	State Enforceable Only (See Section 2.3.A.)	15A NCAC 2D .1100

**1. 15A NCAC 2D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES**

- a. Emissions of particulate matter from these sources shall not exceed an allowable emission rate as calculated by the following equation: [15A NCAC 2D .0515(a)]

$$E = 4.10 \times P^{0.67} \quad \text{Where } E = \text{allowable emission rate in pounds per hour}$$

$$P = \text{process weight in tons per hour}$$

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

**Testing** [15A NCAC 2D .0501(c)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1 D. 1. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515.

**Monitoring/Recordkeeping** [15A NCAC 2Q .0508(f)]

- c. Particulate matter emissions from the White Liquor Oxidizer (**ID No. G04011**) shall be controlled by the demister. To assure compliance, the Permittee shall perform inspections and maintenance. As a minimum, the inspection and maintenance requirement shall include the following:
  - i. a monthly visual inspection (for each calendar month, not to exceed 6 weeks from the previous inspection) of the system ductwork and material collection unit for leaks; and
  - ii. an annual internal inspection (for each calendar year, not to exceed 14 months from the previous inspection) of the demister's structural integrity.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if the ductwork and demister are not inspected and maintained.

- d. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
  - i. the date and time of each recorded action;
  - ii. the results of each inspection;
  - iii. the results of any maintenance performed on the demister; and
  - iv. any corrections made.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if these records are not maintained.

**Reporting** [15A NCAC 2Q .0508(f)]

- e. The Permittee shall submit the results of any maintenance performed on the demister within 30 days of a written request by the DAQ.
- f. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

**2. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS**

- a. Visible emissions from the White Liquor Oxidizer (**ID No. G04011**) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 2D .0521 (d)]

**Testing** [15A NCAC 2D .0501(c)(8)]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .0501(c)(8) and General Condition JJ found in Section 3. If the results of this test are above the limit given in 2.1 D.2.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

**Monitoring** [15A NCAC 2Q .0508(f)]

- c. To assure compliance, once a month the Permittee shall observe the emission points of this source for any visible emissions above normal. If the emission source(s) are not operating, a record of this fact along with the corresponding date and time shall substitute for the monthly observation. The Permittee shall establish “normal” for the source in the first 30 days following the effective date of permit 08961T08. If visible emissions from this source are observed to be above normal, the Permittee shall either:
- i. take appropriate action to correct the above-normal emissions within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
  - ii. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 2D .0501(c)(8) is below the limit given in Section 2.1 D. 2.a. above.
- The Permittee shall be deemed in noncompliance with 15A NCAC 2D.0521 unless (within the monitoring period) either: 1) the above-normal emissions are corrected per (i) above or, 2) the demonstration per (ii) above is made.

**Recordkeeping** [15A NCAC 2Q .0508(f)]

- d. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
- i. the date and time of each recorded action;
  - ii. the results of each observation and/or test noting those sources with emissions that were observed to be above normal along with any corrective actions taken to reduce visible emissions; and
  - iii. the results of any corrective actions performed.
- The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521 if these records are not maintained.

**Reporting** [15A NCAC 2Q .0508(f)]

- e. The Permittee shall submit a summary report of the monitoring activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

**BLEACHING (Area 05)**

- E. The No. 1 Hardwood Fiberline Bleaching System (ID No. G05012) consisting of:**  
a chlorine dioxide stage (D1), extraction stage (Eo), final chlorine dioxide stage (D2), washer hoods, towers and filtrate tanks of the hardwood bleaching system exhausts to the No. 1 Fiberline Bleaching packed tower-type wet scrubber (190 gallons per minute oxidized white liquor design flow rate, ID No. 05-CD-002-01); and
- The No. 2 Pine Fiberline Bleaching System (ID No. G05013) consisting of:**  
a chlorine dioxide stage (D1), extraction stage (Eo), final chlorine dioxide stage (D2), towers and filtrate tanks of the pine bleaching system exhausts to the No. 2 Fiberline Bleaching packed tower-type wet scrubber (70 gallons per minute oxidized white liquor design flow rate, ID No. 05-CD-017-01).
- The Eo stages are not required to be controlled for MACT compliance. Total production of 1,420 air dried bleached tons of combined hardwood and pine per calendar day.**

The following table provides a summary of limits and standards for the emission source(s) described above:

<b>Regulated Pollutant</b>	<b>Limits/Standards</b>	<b>Applicable Regulation</b>
Toxic Air Pollutants	State Enforceable Only (See Section 2.3.A.)	15A NCAC 2D .1100
HAP	40CFR63, Subpart S (See Section 2.2.C.)	15A NCAC 2D .1111

**Chlorine Dioxide Preparation (Area 06)**

**F. Chlorine dioxide generation system (ID No. G06014) consisting of :  
 one R-8 chlorine dioxide generator (ID No. 06-PU-002) and three chlorine dioxide solution storage tanks (125,000 gallons capacity, each, ID Nos. 06-TK-007, 06-TK-008, and 06-TK-009) controlled by a two section packed tower wet scrubber (70 to 80 gallons of chilled water per minute minimum flow rate, ID No. 06-CD-006-01) either normally in series with the No. 1 Hardwood Fiberline Bleaching System counter current type packed tower wet scrubber (ID No. 06-CD-002-01 (POS) or alone (AOS) if the No. 1 Hardwood Fiberline Bleaching System is not operating or for other reasons.**

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulations
Toxic Air Pollutants	State Enforceable Only (See Section 2.3.A.)	15A NCAC 2D .1100
Hazardous Air Pollutants	112(r) - Prevention of accidental releases.	15A NCAC 2Q .0508(g)

**1. 15A NCAC 2Q .0508(g): PREVENTION OF ACCIDENTAL RELEASES - SECTION 112 (r) OF THE CLEAN AIR ACT**

a. The Permittee is subject to Section 112(r) of the Clean Air Act and shall comply with all applicable requirements in accordance with 40 CFR Part 68 [15A NCAC 2Q .0508(g)].

**Monitoring** [15A NCAC 2Q .0508(f)]

- b. Chlorine dioxide emissions from the Chlorine Dioxide System (ID No. G06014) shall be controlled by the wet scrubber (ID No. 06-CD-006-01) either in series with the No. 1 Hardwood Fiberline Bleaching System wet scrubber (ID No. 06-CD-002-01) or alone. To assure compliance, the Permittee shall perform inspections and maintenance. As a minimum, the inspection and maintenance requirement must include the following:
- i. a monthly external visual inspection (for each calendar month, not to exceed 6 weeks from the previous inspection) of the system ductwork and material collection unit for leaks; and
  - ii. an annual internal inspection (for each calendar year, not to exceed 14 months from the previous inspection) of the wet scrubber's structural integrity.
  - iii. inspection of the wet scrubber spray nozzles to detect clogging or corrosion damage of nozzles and perform maintenance and repair when necessary to assure proper operation of the scrubber;
  - iv. inspection of packing material to assure proper packing depth and to check for clogging; and
  - v. inspection, cleaning, and calibration of all instrumentation associated with the wet scrubber.
- c. The Permittee shall be deemed in noncompliance with 15A NCAC 2Q .0508 if the wet scrubber (ID No. 06-CD-006-01) is not inspected and maintained.
- d. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
- i. the date and time of each recorded action;
  - ii. the results of each inspection;
  - iii. the results of any maintenance performed on the wet scrubber; and
  - iv. any corrections made.

**Reporting** [15A NCAC 2Q .0508(f)]

e. The Permittee shall submit a summary report of the monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

**EVAPORATORS (Area 07)**

- G. Two (2) Black Liquor Evaporators (ID No. G07016) consisting of:  
 the Swenson Evaporator (ID No. 07-PU-002) and associated Swenson Evaporator  
 Hotwell (ID No. 07-TK-006) and;  
 the West G.B. Evaporator (ID No. 07-PU-003) and associated West G.B. Evaporator  
 Hotwell (ID No. 07-TK-007).**

**Foul gases are collected by the LVHC Gas Collection System (ID No. G23078) for  
 burning in Lime Kiln No. 5 (ID No. G09029) or Lime Kiln No. 4 (ID No. G09028). Foul  
 condensates are controlled by the Condensate Stripper System (ID No. G07018).**

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
TRS	5 ppm by volume on a dry basis	15A NCAC 2D .0528
Toxic Air Pollutants	State Enforceable Only (See Section 2.3.A.)	15A NCAC 2D .1100
HAP	40CFR63, Subpart S (See Section 2.2.C.)	15A NCAC 2D .1111

**1. 15A NCAC 2D .0528: TOTAL REDUCED SULFUR FROM KRAFT PULP MILLS**

- a. The emissions of total reduced sulfur shall not exceed five parts per million from any multiple effect evaporator, measured as hydrogen sulfide on a dry gas basis and averaged per discrete contiguous 12-hour time period. [15A NCAC 2D .0528]

**Testing** [15A NCAC 2D .0501(c)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1 G. 1. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0528

**Monitoring/Recordkeeping** [15A NCAC 2Q .0508(f)]

- c. The Evaporators Area emission sources, shall comply with the limitation above by ensuring the following:  
 i. The gases are combusted in the No. 4 Lime Kiln (ID No. G09028) or;  
 ii. The gases are combusted in the No. 5 Lime Kiln (ID No. G09029).  
 d. The Permittee shall follow the closed vent inspection procedures per Specific Condition 2.2 .C. to insure that the emissions are routed to either the No. 4 Lime Kiln (ID No. G09028) or No. 5 Lime Kiln (ID No. G09029) as specified above. The Permittee shall be deemed in noncompliance with 2D .0528 if these procedures are not followed or if the records are not maintained.

**Reporting** [15A NCAC 2Q .0508(f)]

- e. The Permittee shall submit a summary report of the monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

**H. Eight (8) Weak Black Liquor Storage Tanks (ID No. G07086)**

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulations
Toxic Air Pollutants	State Enforceable Only (See Section 2.3.A.)	15A NCAC 2D .1100

**I. Condensate Stripper System (ID No. G07018) (40CFR60, Subpart BB) consisting of: the Condensate Stripper (ID No. 07-PU-015) and associated Stripper Feed Tank (ID No. 07-TK-011) and Reflux Tank (ID No. 07-TK-014).**

**Foul gases are collected by the LVHC Gas Collection System (ID No.G23078) for burning in Lime Kiln No. 5 (ID No. G09029) or Lime Kiln No. 4 (ID No. G09028).**

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulations
Total Reduced Sulfur (TRS)	5 ppm by volume on a dry basis, corrected to 10 percent oxygen	15A NCAC 2D .0524 (40 CFR Part 60 Subpart BB)
Toxic Air Pollutants	State Enforceable Only (See Section 2.3.A.)	15A NCAC 2D .1100
HAP Emissions	See Permit Condition 2.2. C.	15A NCAC 2D .1111 (40 CFR Part 63 Subpart S)

**1. 15A NCAC 2D .0524: NEW SOURCE PERFORMANCE STANDARDS (40 CFR 60 SUBPART BB)**

- a. The Permittee shall comply with all applicable provisions, including the notification, testing, reporting, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 2D .0524 “New Source Performance Standards” (NSPS) as promulgated in 40 CFR Part 60 Subpart BB, including Subpart A “General Provisions.”[15A NCAC 2D .0524]

**Emissions Limitations** [15A NCAC 2D .0524]

- b. No owner or operator shall cause to be discharged into the atmosphere any gases which contain TRS in excess of 5 ppm by volume on a dry basis, corrected to 10 percent oxygen, unless the following conditions are met [40 CFR Part 60, Subpart 60.283(a)(1)]:
  - i. The gases are burned with other waste gases in an incinerator or other device, and are subjected to a minimum temperature of 650 EC (1200 EF) for at least 0.5 second.

**Monitoring** [15A NCAC 2Q .0508(f) and 2D .0524]

- c. The Permittee shall follow the closed vent inspection procedures per Specific Condition 2.2 .C. to insure that the emissions are routed to the No. 5 Lime Kiln (ID No. G09029) or the No. 4 Lime Kiln (ID No. G09028) as specified above. The Permittee shall be deemed in noncompliance with 2D .0524 if these procedures are not followed or if the records are not maintained.
- d. 40 CFR 60.284(b)(1) - The Permittee shall calibrate, maintain, and operate a monitoring device for measuring the combustion temperature at the point of incineration of effluent gases in the No. 5 Lime Kiln (ID No. G09029) and the No. 4 Lime Kiln (ID No. G09028) to assure the minimum temperature as specified above is maintained.

**Reporting/ Recordkeeping** [15A NCAC 2Q .0508(f) and 2D .0524]

- e. The Permittee shall follow 40 CFR 60.284(d) for reporting of excess emissions.
- f. The Permittee shall submit a summary report of the monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

**J. Four (4) Heavy Black Liquor Storage Tanks (ID No. G07019)**

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulations
Toxic Air Pollutants	State Enforceable Only (See Section 2.3.A.)	15A NCAC 2D .1100

**RECOVERY (AREA 08)**

**K. No. 10 new design recovery furnace (121,000 pounds per hour maximum black liquor solids firing rate and 382 million Btu per hour maximum heat input rate from No. 6 fuel oil; ID No. G08020) equipped with one 3-chamber, 6-field electrostatic precipitator (nominal 115,236 square feet of collection plate area; wet-bottom design; ID No. 08-CD-001-01).**

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
particulate	3.0 lbs. per ton of air dried pulp	15A NCAC 2D .0508
sulfur dioxide	2.3 lbs. per million Btu heat input	15A NCAC 2D .0516
visible emissions	40 percent opacity	15A NCAC 2D .0521
total reduced sulfur	5 ppm by volume on a dry basis, corrected to 8 percent oxygen	15A NCAC 2D .0528
sulfur dioxide	Monitoring Requirements (See Condition 2.1 K. 2)	15A NCAC 2D .0608
Toxic Air Pollutants	State Enforceable Only (See Section 2.3.A.)	15A NCAC 2D .1100
HAP	40CFR63, Subpart MM (See Section 2.2.D.)	15A NCAC 2D .1111

**1. 15A NCAC 2D .0508: PARTICULATES FROM PULP AND PAPER MILLS**

- a. Emissions from the production of pulp and paper that are discharged from the No. 10 Recovery Furnace (**ID No. G08020**) into the atmosphere shall not exceed 3.0 pounds of particulate matter per equivalent tons of air dried pulp [15A NCAC 2D .0508.a.1.]

**Testing** [15A NCAC 2D .0501 (c)(3)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1.K. 1. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0508.
- c. Under the provisions of NCGS 143-215.108, the Permittee shall demonstrate compliance with the emission limit(s) above by testing the No. 10 recovery furnace (**ID No. G08020**) for particulate matter in accordance with a testing protocol approved by the DAQ. Details of the emissions testing and reporting requirements can be found in Section 3 - General Condition JJ. Testing shall be completed and the results submitted within the calendar year of the effective date of Permit No. 08961T08 unless an alternate date is approved by the DAQ. The testing shall be performed annually thereafter. If the results of the testing demonstrate results at less than 80 percent of the limit above, the testing frequency may reduced to every two years. If the results of this or any test are above the limit given in Section 2.1 K. 1. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0508.

**Monitoring/ Recordkeeping/ Reporting** [15A NCAC 2Q .0508(f), 40 CFR 70.6(a)(3)(A)]

- d. Particulate matter emissions from the No. 10 recovery furnace (**ID No. G08020**) shall be controlled by an electrostatic precipitator (ESP) (ID No. 08-CD-001-01). To assure compliance with the emission limits in condition 2.1 K.1 a, the Permittee shall follow the 40 CFR 63, Subpart MM monitoring, recordkeeping, and reporting requirements as specified in Section 2.2 D.

The Permittee shall determine compliance with the emission limit(s) in Section 2.1.K.1.a. above pursuant to the ongoing compliance determination provisions per 40 CFR 63.864(k)(2) and the applicable portions of MACT Subpart MM as specified in the monitoring, recordkeeping, and reporting requirements of Section 2.2 D. However, excess emissions shall be reported in accordance with 15A NCAC 2D .0535 as outlined in General Condition I.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0508 if either 1) the applicable MACT Subpart MM requirements above are not monitored and recorded or 2) the MACT Subpart MM monitoring determines a violation of the applicable PM emission standard per 63.864(k)(2) as detailed above

**2. 15A NCAC 2D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES**

- a. Emissions of sulfur dioxide from this source shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard. [15A NCAC 2D .0516]

**Testing** [15A NCAC 2D .0501(c) and 2D .0608]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1.K.2. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516.

**Monitoring/Recordkeeping** [15A NCAC 2Q .0508(f), and 2D .0608]

- c. To assure compliance with 2.1.K.2.a, the Permittee shall monitor the sulfur content and heat content of the No. 6 fuel oil by using fuel oil supplier certification per month. The results of the fuel oil supplier certifications shall be recorded in a logbook (written or electronic format) and include the following information:
- i. the name of the fuel oil supplier; and
  - ii. a statement verifying that the methods used to determine the maximum sulfur content of the fuel oil was in accordance with the following:
    - (A) sample collection – ASTM D4177 or D4057;
    - (B) heat of combustion (Btu) – ASTM D240 or D2015; and
    - (C) sulfur content – ASTM D129, D-4294, or D1552;Alternate test methods may be used upon prior DAQ approval per 15A NCAC 2D .0501(c)(18).
  - iii. the maximum sulfur content of the fuel oil received during the month;
  - iv. the average heat content of the fuel oil received during the month; and
  - v. a certified statement signed by the responsible official that the records of fuel oil supplier certification submitted represent all of the fuel oil fired during the period.
- d. Additionally, the Permittee is required to calculate and record in a logbook (written or electronic format) the pounds of sulfur dioxide per million Btu heat content of the fuel oil per month using the above information. The Permittee shall be deemed in noncompliance if the results show an exceedance of the limit given in Section 2.1 K. 2. a. above.  
The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516 and 2D .0608 if the requirements above are not monitored and recorded.

**Reporting** [15A NCAC 2Q .0508(f) and 2D .0608]

- e. The Permittee shall submit a summary report of the fuel oil supplier certifications and calculated emission rates postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0608 if the reports are not submitted.

**3. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS**

- a. Visible emissions from the No. 10 Recovery Furnace (**ID No. G08020**) shall not be more than **40 percent**

**opacity** (except during startups) when averaged over a six-minute period except that six-minute periods averaging not more than 90 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period. [15A NCAC 2D .0521(d)]

- b. For sources required to install, operate, and maintain continuous opacity monitoring systems (COMS), compliance with the 40 percent opacity limit shall be determined as follows:[15A NCAC 2D .0521(g)]
  - i. No more than four six-minute periods shall exceed the opacity standard in any one day; and
  - ii. The percent of excess emissions (defined as the percentage of monitored operating time in a calendar quarter above the opacity limit) shall not exceed 0.8 percent of the total operating hours. If a source operates less than 500 hours during a calendar quarter, the percent of excess emissions shall be calculated by including hours operated immediately previous to this quarter until 500 operational hours are obtained.

Excess emissions during startup and shutdown shall be excluded from the determinations in paragraphs b.i. and b.ii. above, if the excess emissions are exempted according to the procedures set out in 2D .0535(g). Excess emissions during malfunctions shall be excluded from the determinations in paragraphs b.i. and b.ii. above, if the excess emissions are exempted according to the procedures set out in 2D .0535(c). All periods of excess emissions shall be included in the determinations in paragraphs b.i. and b.ii above until such time that the excess emissions are exempted according to the procedures in 2D .0535.

**Testing** [15A NCAC 2D .0501(c)(8)]

- c. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .0501(c)(8) and General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1 K. 3.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

**Monitoring/Recordkeeping** [15A NCAC 2Q .0508(f)]

- d. The Permittee shall use a continuous opacity monitoring system (COMS) to monitor and record opacity. Continuous emissions monitoring and recordkeeping of opacity shall be performed as described in Paragraphs 2 and 3.1.1 through 3.1.5 of Appendix P of 40 CFR Part 51. The monitoring systems shall meet the minimum specifications described in Paragraphs 3.3 through 3.8 of Appendix P of 40 CFR Part 51. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521 if the monitoring is not performed, if the monitored values exceed the limitations given above, or if the records are not maintained.

**Reporting** [15A NCAC 2Q .0508(f)]

- e. The Permittee shall submit a summary report of the monitoring data postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

**4. 15A NCAC 2D .0528: TOTAL REDUCED SULFUR FROM KRAFT PULP MILLS**

- a. The emissions of total reduced sulfur from the No. 10 Recovery Furnace (**ID No. G08020**) shall not exceed 5 parts per million corrected to 8 percent oxygen, measured as hydrogen sulfide on a dry gas basis and averaged per discrete contiguous 12-hour time period. [15A 2D .0528.c.1.]

**Testing** [15A NCAC 2D .0501(c)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1.K. 4. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0528.

**Monitoring** [15A NCAC 2Q .0508(f)]

- c. To ensure compliance, the Permittee shall calibrate, maintain, and operate a continuous monitoring system for determining the total reduced sulfur (as hydrogen sulfide, dry basis, corrected to 8 percent oxygen) emissions discharged to the atmosphere and record the output of the system. The continuous monitoring system shall be operated in accordance with the applicable performance specifications in 40 CFR 60 Appendix B and quality assurance procedures in Appendix F, Section 3, unless an alternative monitoring and quality assurance program is approved by the DAQ. The monitoring system downtime shall not exceed 5 percent. If any 12-hour block average exceeds the limit above or the records are not maintained, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0528, except that one percent of all 12-hour total reduced sulfur averages per quarter year in excess of the limitation given above, in the absence of start-ups,

shutdowns, and malfunctions, shall not be considered in violation.

**Reporting** [15A NCAC 2Q .0508(f)]

- d. The Permittee shall submit a summary report of the monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

**L. No. 11 new design recovery furnace (121,000 pounds per hour maximum black liquor solids firing rate, 382 million Btu per hour maximum heat input rate from No. 6 fuel oil, and 0.25 million Btu per hour maximum heat input rate from propane igniters; ID No. G08021) equipped with one 3-chamber, 4-field electrostatic precipitator (nominal 115,236 square feet of collection plate area; wet-bottom design; ID No. 08-CD-002-01)**

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
particulate	3.0 lbs. per ton of air dried pulp	15A NCAC 2D .0508
visible emissions	35 percent opacity	15A NCAC 2D .0508
sulfur dioxide	2.3 lbs. per million Btu heat input	15A NCAC 2D .0516
total reduced sulfur	5 ppm by volume on a dry basis, corrected to 8 percent oxygen	15A NCAC 2D .0528
sulfur dioxide	Monitoring Requirements (See Condition 2.1 L. 2)	15A NCAC 2D .0608
Toxic Air Pollutants	State Enforceable Only (See Section 2.3.A.)	15A NCAC 2D .1100
HAP	40CFR63, Subpart MM (See Section 2.2.D.)	15A NCAC 2D .1111

**1. 15A NCAC 2D .0508: PARTICULATES FROM PULP AND PAPER MILLS**

- a. Emissions from the production of pulp and paper that are discharged from the No. 11 recovery furnace (**ID No. G08021**) into the atmosphere shall not exceed:
  - i. 3.0 pounds of particulate matter per equivalent tons of air dried pulp. [15A NCAC 2D .0508(a)], or
  - ii. Visible emissions shall not be more than 35 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 35 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 89 percent opacity. [15A NCAC 2D .0508 (b)]

**Testing** [15A NCAC 2D .0501 (c)(3)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1.L. 1. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0508.
- c. Under the provisions of NCGS 143-215.108, the Permittee shall demonstrate compliance with the emission limit(s) above by testing the No. 11 recovery furnace (**ID No. G08021**) for particulate matter in accordance with a testing protocol approved by the DAQ. Details of the emissions testing and reporting requirements can be found in Section 3 - General Condition JJ. Testing shall be completed and the results submitted within the calendar year of the effective date of Permit No. 08961T08 unless an alternate date is approved by the DAQ. The testing shall be performed annually thereafter. If the results of the testing demonstrate results at less than 80 percent of the limit above, the testing frequency may reduced to every two years. If the results of this or any test are above the limit given in Section 2.1 L. 1. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0508.

**Monitoring/Recordkeeping/Reporting** [15A NCAC 2Q .0508(f) , 40 CFR 70.6(a)(3)(A)]

- d. Particulate matter emissions from the No. 11 recovery furnace (**ID No. G08021**) shall be controlled by an electrostatic precipitator (ESP) (ID No. 08-CD-001-01).  
 The Permittee shall determine compliance with the particulate matter emission limit in Section 2.1.L.1.a. i. above pursuant to the ongoing compliance determination provisions per 40 CFR 63.864(k)(2) and the applicable portions of MACT Subpart MM as specified in the monitoring, recordkeeping, and reporting requirements of Section 2.2 D. However, excess emissions shall be in reported in accordance with 15A NCAC 2D .0535 as outlined in General Condition I.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0508 if either 1) the applicable MACT Subpart MM requirements above are not monitored and recorded or 2) the MACT Subpart MM monitoring determines a violation of the applicable PM emission standard per 63.864(k)(2) as detailed above.

**Monitoring/Recordkeeping** [15A NCAC 2Q .0508(f) , 40 CFR 70.6(a)(3)(A)]

- e. To determine compliance with the opacity limits in condition 2.1 L.1 a. ii., the Permittee shall follow the 40 CFR 63, Subpart MM continuous opacity monitoring system (COMS) monitoring requirements as specified in Section 2.2 D. to monitor and record opacity.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0508 if the monitoring is not performed, if the monitored values exceed the limitations given above, or if the records are not maintained.

**Reporting** [15A NCAC 2Q .0508(f)]

- f. The Permittee shall submit a summary report of the monitoring data postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

**2. 15A NCAC 2D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES**

- a. Emissions of sulfur dioxide from this source shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard. [15A NCAC 2D .0516]

**Testing** [15A NCAC 2D .0501(c) and 2D .0608]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1.L.2. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516.

**Monitoring/Recordkeeping** [15A NCAC 2Q .0508(f), and 2D .0608]

- c. To assure compliance with 2.1.L.2.a, the Permittee shall monitor the sulfur content and heat content of the No. 6 fuel oil by using fuel oil supplier certification per month. The results of the fuel oil supplier certifications shall be recorded in a logbook (written or electronic format) and include the following information:
- i. the name of the fuel oil supplier; and
  - ii. a statement verifying that the methods used to determine the maximum sulfur content of the fuel oil was in accordance with the following:
    - (A) sample collection – ASTM D4177 or D4057;
    - (B) heat of combustion (Btu) – ASTM D240 or D2015; and
    - (C) sulfur content – ASTM D129, D-4294, or D1552;Alternate test methods may be used upon prior DAQ approval per 15A NCAC 2D .0501(c)(18).
  - iii. the maximum sulfur content of the fuel oil received during the month;
  - iv. the average heat content of the fuel oil received during the month; and
  - v. a certified statement signed by the responsible official that the records of fuel oil supplier certification submitted represent all of the fuel oil fired during the period.
- d. Additionally, the Permittee is required to calculate and record in a logbook (written or electronic format) the pounds of sulfur dioxide per million Btu heat content of the fuel oil per month using the above information. The Permittee shall be deemed in noncompliance if the results show an exceedance of the limit given in Section 2.1 K. 2. a. above.  
The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516 and 2D .0608 if the requirements above are not monitored and recorded.

**Reporting** [15A NCAC 2Q .0508(f) and 2D .0608]

- e. The Permittee shall submit a summary report of the fuel oil supplier certifications and calculated emission rates postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0608 if the reports are not submitted.

**3. 15A NCAC 2D .0528: TOTAL REDUCED SULFUR FROM KRAFT PULP MILLS**

- a. The emissions of total reduced sulfur from the No. 11 Recovery Furnace (**ID No. G08021**) shall not exceed 5 parts per million corrected to 8 percent oxygen, measured as hydrogen sulfide on a dry gas basis and averaged per discrete contiguous 12-hour time period. [15A 2D .0528(c)1]

**Testing** [15A NCAC 2D .0501(c)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1.L. 3. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0528.

**Monitoring** [15A NCAC 2Q .0508(f)]

- d. To ensure compliance, the Permittee shall calibrate, maintain, and operate a continuous monitoring system for determining the total reduced sulfur (as hydrogen sulfide, dry basis, corrected to 8 percent oxygen) emissions discharged to the atmosphere and record the output of the system. The continuous monitoring system shall be operated in accordance with the applicable performance specifications in 40 CFR 60 Appendix B and quality assurance procedures in Appendix F, Section 3, unless an alternative monitoring and quality assurance program is approved by the DAQ. The monitoring system downtime shall not exceed 5 percent. If any

12-hour block average exceeds the limit above or the records are not maintained, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0528, except that one percent of all 12-hour total reduced sulfur averages per quarter year in excess of the limitation given above, in the absence of start-ups, shutdowns, and malfunctions, shall not be considered in violation.

**Reporting** [15A NCAC 2Q .0508(f)]

- d. The Permittee shall submit a summary report of the monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

**M. Black liquor oxidation system (228,000 pounds per hour black liquor solids feed rate, ID No. G08022) equipped with three cyclones, one on each oxidizer tank (60 inches in diameter, ID No CD-BLOcylcone) followed by a natural gas-fired regenerative thermal oxidizer (ID No. CD-BLOXRTO) and a caustic scrubber (ID No. CD-RTOSCR) Only two of the three oxidizer tanks are required to operate if one of the recovery furnaces is down.**

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Toxic Air Pollutants	State Enforceable Only (See Section 2.3.A.)	15A NCAC 2D .1100
Sulfur dioxide	Less than 40 tons per consecutive twelve month period	15A NCAC 2Q .0317 (15A NCAC 2D .0530 Avoidance)
Sulfuric acid	Less than 7 tons per consecutive twelve month period	15A NCAC 2Q .0317 (15A NCAC 2D .0530 Avoidance)
HAP	40CFR63, Subpart S via Equivalency by Permit (EBP) (See Section 2.2.D.)	15A NCAC 2D .1111 and 40 CFR 63.94

**1. 15A NCAC 2Q. 0317: AVOIDANCE CONDITIONS for 15A NCAC 2D. 0530: PREVENTION OF SIGNIFICANT DETERIORATION**

- a. In order to avoid applicability of 15A NCAC 2D .0530 (g) for major sources and major modifications, the BLOX System (**G08022**) shall discharge into the atmosphere:
  - i. less than 40 tons per consecutive twelve month period of sulfur dioxide; and
  - ii. less than 7 tons per consecutive twelve month period of sulfuric acid.
- b. To ensure that emissions are less than the above-specified limits, the Black Liquor Oxidation System thermal oxidizer (ID No. CD-BLOXRTO) is permitted to burn only BLOX gases and natural gas as an auxiliary fuel.

**Testing** [15A NCAC 2D .0501(c)(8)]

- c. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limits given in Section 2.1 M. 1. a. (**G08022**) above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530.

**Monitoring/ Recordkeeping** [15A NCAC 2Q .0508(f)]

- d. Sulfur dioxide and sulfuric acid emissions from the BLOX system shall be controlled by the RTO scrubber (ID Nos. CD-RTOSCR). To ensure compliance, the Permittee shall install, calibrate, operate, and maintain a pH indicator and a scrubbing liquid flow meter on the RTO scrubber. These parameters shall be recorded once per day. The Permittee shall be allowed three (3) days of absent observations per semi-annual period. If the emission source(s) is not operating, a record of this fact along with the corresponding date and time shall substitute for the daily observation.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530 if these records are not maintained.

- e. The Permittee shall establish a “normal range” for flow meter and pH readings in the first 30 days following

the commencement of operation of the scrubber and submit the proposed ranges to the DAO for incorporation into this permit within 60 days of establishing these values.

- f. The Permittee shall calculate the sulfur dioxide emissions from the BLOX System (**G08022**) on a monthly basis to ensure compliance with the limits given in Section 2.1 M. 1. a. above. The RTO scrubber is required to be operated only as necessary to achieve compliance with the limitations above. Sulfur dioxide emissions shall be determined by the following:
  - i. When the RTO Scrubber is operating within the monitoring parameter values established above, the sulfur dioxide emissions shall be calculated by multiplying the total amount of operating time by the maximum controlled emission factor of 5 pounds per hour;
  - ii. When the RTO Scrubber is not in operation or is not operating within the monitoring parameter values established above, the sulfur dioxide emissions shall be calculated by multiplying the total amount of operating time by the maximum uncontrolled emission factor of 50 pounds per hour; and
  - iii. When the thermal oxidizer (ID No. CD-BLOXRTO) is not in operation, the RTO scrubber is not required and the sulfur dioxide emissions are zero.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530 if the amounts of sulfur dioxide emissions are not calculated and recorded.
- g. Calculations and the total amount of sulfur dioxide emissions from the BLOX System (**G08022**) shall be recorded monthly in a logbook (written or electronic format), maintained on-site and made available to officials of the Division of Air Quality, upon request. The Permittee must keep each entry in the log and all required records on file for a minimum of five years. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530 if the sulfur dioxide emissions exceed the limit in Section 2.1 M. 1. a. above or if the records are not maintained.

**Reporting** [15A NCAC 2Q .0508(f)]

- h. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified. The report shall contain the following:
  - i. The monthly sulfur dioxide emissions shall be totaled for the previous seventeen months. The emissions shall be calculated for each of the twelve month periods over the previous seventeen months.

**N. No. 10 recovery furnace smelt dissolving tank (121,000 lbs. per hour black liquor solids feed rate, ID No. G08023) equipped with a chevron mist eliminator (33.5 square feet of collection surface area, ID No. 08-CD-011-01) and No. 11 recovery furnace smelt dissolving tank (121,000 lbs. per hour black liquor solids feed rate, ID No. G08024) equipped with a chevron mist eliminator (33.2 square feet of collection surface area, ID No. 08-CD-012-01)**

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
particulate	0.6 lbs. per ton of air dried pulp	15A NCAC 2D .0508
visible emissions	40 percent opacity ( <b>ID No. G08023</b> ) 20 percent opacity ( <b>ID No. G08024</b> )	15A NCAC 2D .0521
total reduced sulfur	0.032 lbs. per ton black liquor solids (dry weight)	15A NCAC 2D .0528
Toxic Air Pollutants	State Enforceable Only (See Section 2.3.A.)	15A NCAC 2D .1100
HAP	40CFR63, Subpart MM (See Section 2.2.D.)	15A NCAC 2D .1111

**1. 15A NCAC 2D .0508: PARTICULATES FROM PULP AND PAPER MILLS**

- a. Emissions from the production of pulp and paper that are discharged from these sources into the atmosphere shall not exceed 0.6 pounds of particulate matter per equivalent tons of air dried pulp. [15A NCAC 2D .0508(a)]

**Testing** [15A NCAC 2D .0501(c)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1 N. 1. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0508.

**Monitoring/Recordkeeping/Reporting** [15A NCAC 2Q .0508(f) , 40 CFR 70.6(a)(3)(A)]

- c. Particulate matter emissions from the No. 10 recovery furnace smelt dissolving tank (**ID No. G08023**) shall be controlled by a chevron mist eliminator (ID No. 08-CD-011-01). Particulate matter emissions from the No. 11 recovery furnace smelt dissolving tank (ID No. G08023) shall be controlled by a chevron mist eliminator (ID No. 08-CD-012-01). The Permittee shall determine compliance with the emission limit(s) in Section 2.1.N.1.a above pursuant to the ongoing compliance determination provisions per 40 CFR 63.864(k)(2) and the applicable portions of MACT Subpart MM as specified in the monitoring, recordkeeping, and reporting requirements of Section 2.2 D. However, excess emissions shall be in reported in accordance with 15A NCAC 2D .0535 as outlined in General Condition I.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0508 if either 1) the applicable MACT Subpart MM requirements above are not monitored and recorded or 2) the MACT Subpart MM monitoring determines a violation of the applicable PM emission standard per 63.864(k)(2) as detailed above.

## 2. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions from the No. 10 smelt dissolving tank (**ID No. G08023**) shall not be more than 40 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 40 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 90 percent opacity. [15A NCAC 2D .0521 (c)]  
Visible emissions from the No. 11 smelt dissolving tank (**ID No. G08024**) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 2D .0521 (d)]

**Testing** [15A NCAC 2D .0501(c)(8)]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .0501(c)(8) and General Condition JJ found in Section 3. If the results of this test are above the limits given in 2.1 N.2.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

**Monitoring** [15A NCAC 2Q .0508(f)]

- c. To assure compliance, once a week the Permittee shall observe the emission points of these sources for any visible emissions above normal. If the emission source(s) are not operating, a record of this fact along with the corresponding date and time shall substitute for the monthly observation. The Permittee shall establish "normal" for the source in the first 30 days following the effective date of permit 08961T08. If visible emissions from this source are observed to be above normal, the Permittee shall either:
  - i. take appropriate action to correct the above-normal emissions within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
  - ii. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 2D .0501(c)(8) is below the limit given in Section 2.1 N. 2.a. above.The Permittee shall be deemed in noncompliance with 15A NCAC 2D.0521 unless (within the monitoring period) either: 1) the above-normal emissions are corrected per (i) above or, 2) the demonstration per (ii) above is made.

**Recordkeeping** [15A NCAC 2Q .0508(f)]

- d. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
  - i. the date and time of each recorded action;
  - ii. the results of each observation and/or test noting those sources with emissions that were observed to be above normal along with any corrective actions taken to reduce visible emissions; and

iii. the results of any corrective actions performed.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521 if these records are not maintained.

**Reporting** [15A NCAC 2Q .0508(f)]

- e. The Permittee shall submit a summary report of the monitoring activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

**3. 15A NCAC 2D .0528: TOTAL REDUCED SULFUR FROM KRAFT PULP MILLS**

- a. The emissions of total reduced sulfur shall not exceed 0.032 pounds per ton of black liquor solids (dry weight) from No. 10 smelt dissolving tank (**ID No. G08023**) or the No. 11 smelt dissolving tank (**ID No. G08024**). [15A NCAC 2D .0528]

**Testing** [15A NCAC 2D .0501(c)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ found in Section 3. If the results of this test are above the limits given in Section 2.1 N. 3. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0528

**Monitoring/Recordkeeping** [15A NCAC 2D .0501(c)]

- c. Under the provisions of NCGS 143-215.108, the Permittee shall demonstrate compliance with the emission limit(s) above by testing the No. 10 smelt dissolving tank (**ID No. G08023**) and the No. 11 smelt dissolving tank (**ID No. G08024**) for TRS in accordance with a testing protocol approved by the DAQ. Details of the emissions testing and reporting requirements can be found in Section 3 - General Condition JJ. Testing shall be completed and the results submitted within the calendar year of the effective date of Permit No. 08961T08 unless an alternate date is approved by the DAQ. The testing shall be performed annually thereafter. If the results of the testing demonstrate results at less than 80 percent of the limit above, the testing frequency may be reduced to once per five years. If the results of this or any test are above the limit given in Section 2.1 N. 3. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0528.

**Reporting** [15A NCAC 2Q .0508(f)]

- d. The Permittee shall submit a summary report of the monitoring activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

**LIME PRODUCTION (Area 09)**

- O. No. 6 fuel oil-fired No. 4 Lime Kiln (60.0 million Btu per hour maximum permitted heat input rate , with gas igniters; ID No. G09028) equipped with a flooded-disc type wet scrubber (ID No. 09-CD-009-01); and**  
**No. 6 fuel oil-fired No. 5 Lime Kiln (100.0 million Btu per hour maximum permitted heat input rate, with gas igniters; ID No. G09029) equipped with a 4-stage MicroMist™ venturi scrubber (ID No. 09-CD-010-01).**  
**No. 4 Lime Kiln is the primary burner and No. 5 Lime Kiln is backup burner for collected NCG foul gases; No. 5 Lime Kiln is the primary burner and No. 4 Lime Kiln is backup burner for Stripper Off Gases (SOG) from the Condensate Stripper System (ID No. G07018).**

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutants	Limits / Standards	Applicable Regulation
particulate	0.5 lbs. per ton of air dried pulp	15A NCAC 2D .0508
sulfur dioxide	2.3 lbs. per million Btu heat input	15A NCAC 2D .0516
visible emissions	40 percent opacity	15A NCAC 2D .0521
total reduced sulfur	20 ppm by volume on a dry basis, corrected to 10 percent oxygen	15A NCAC 2D .0528
HAP	40CFR63, Subpart MM (See Section 2.2.D.)	15A NCAC 2D .1111

**1. 15A NCAC 2D .0508: PARTICULATES FROM PULP AND PAPER MILLS**

- a. Emissions from the production of pulp and paper that are discharged from these sources into the atmosphere shall not exceed 0.5 pounds of particulate matter per equivalent tons of air dried pulp. [15A NCAC 2D .0508(a)1].

**Testing** [15A NCAC 2D .0501(c)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ found in Section. If the results of this test are above the limit given in Section 2.1 O. 1. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0508.
- c. Under the provisions of NCGS 143-215.108, the Permittee shall demonstrate compliance with the emission limit(s) above by testing the No. 4 and No. 5 Lime Kilns (**ID Nos. G09028 and G09029**) for particulate matter in accordance with a testing protocol approved by the DAQ. Details of the emissions testing and reporting requirements can be found in Section 3 - General Condition JJ. Testing shall be completed and the results submitted within the calendar year of the effective date of Permit No. 08961T08 unless an alternate date is approved by the DAQ. The testing shall be performed annually thereafter. If the results of the testing demonstrate results at less than 80 percent of the limit above, the testing frequency may reduced to every two years. If the results of this or any test are above the limit given in Section 2.1 O. 1. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0508.

**Monitoring/Recordkeeping/Reporting**[15A NCAC 2Q .0508(f), 40 CFR 70.6(a)(3)(A)]

- d. Particulate matter emissions from the No. 4 Lime Kiln (**ID No. G09028**) shall be controlled by the flooded disc-type wet scrubber (ID No.09-CD-009-01). Particulate matter emissions from the No. 5 Lime Kiln (**ID No. G09029**) shall be controlled by the 4-stage MicroMist™ venturi scrubber (ID No.09-CD-010-01). The Permittee shall determine compliance with the emission limit(s) in Section 2.1.O.1.a above pursuant to the ongoing compliance determination provisions per 40 CFR 63.864(k)(2) and the applicable portions of MACT Subpart MM as specified in the monitoring, recordkeeping, and reporting requirements of Section 2.2 D. However, excess emissions shall be in reported in accordance with 15A NCAC 2D .0535 as outlined in

General Condition I.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0508 if either 1) the applicable MACT Subpart MM requirements above are not monitored and recorded or 2) the MACT Subpart MM monitoring determines a violation of the applicable PM emission standard per 63.864(k)(2) as detailed above.

## 2. 15A NCAC 2D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES

- a. Emissions of sulfur dioxide from this source shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard. [15A NCAC 2D .0516]

### **Testing** [15A NCAC 2D .0501 (c)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1 O. 2. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0508.

### **Monitoring/Recordkeeping** [15A NCAC 2Q .0508(f)]

- c. To assure compliance with 2.1.O.2.a , the Permittee shall monitor the sulfur content and heat content of the No. 6 fuel oil by using fuel oil supplier certification per month. The results of the fuel oil supplier certifications shall be recorded in a logbook (written or electronic format) on a quarterly basis and include the following information:
  - i. the name of the fuel oil supplier;
  - ii. the maximum sulfur content of the fuel oil received during the month;
  - iii. the average heat content of the fuel received during the month;
  - iv. the method used to determine the maximum sulfur and heat content of the fuel oil;
  - v. the calculation of lb SO<sub>2</sub> per million Btu; and
  - vi a certified statement signed by the responsible official that the records of fuel oil supplier certification submitted represent all of the fuel oil fired during the period.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516 if the sulfur and heat content of the oil are not monitored and recorded.

### **Reporting** [15A NCAC 2Q .0508(f)]

- d. The Permittee shall submit a summary report of the fuel oil supplier certifications postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

## 3. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions from the No. 4 Lime Kiln (**ID No. G09028**) and the No. 5 Lime Kiln (**ID No. G09029**) shall not be more than 40 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 40 percent of more than once in any hour and not more than four times in any 24-hour period. In no event shall the six- minute average exceed 90 percent opacity. [15A NCAC 2D .0521(c)]

### **Testing** [15A NCAC 2D .0501(c)(8)]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .0501(c)(8) and General Condition JJ. If the results of this test are above the limits given in Section 2.1 O. 3. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

### **Monitoring** [15A NCAC 2Q .0508(f)]

- c. To assure compliance, once a day the Permittee shall observe the emission points of this source for any visible emissions above normal. The daily observation must be made for each day of the calendar year period to ensure compliance with this requirement. The Permittee shall be allowed three (3) days of absent observations per semi-annual period. If the emission source(s) is not operating, a record of this fact along with the corresponding date and time shall substitute for the daily observation. If the weather conditions (i.e. fog) are such that the source emission points of this source cannot be observed, the Permittee shall make a minimum of two (2) attempts to make the required observation, a record of this fact along with the

corresponding date and time(s) shall substitute for the daily observation. The Permittee shall establish “normal” for the source in the first 30 days following the effective date of permit 08961T08. If visible emissions from this source are observed to be above normal, the Permittee shall either:

- i. take appropriate action to correct the above-normal emissions within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
- ii. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 2D .0501(c)(8) is below the limit given in Section 2.1 O. 3. a. above.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D.0521 unless (within the monitoring period) either: 1) the above-normal emissions are corrected per (i) above or, 2) the demonstration per (ii) above is made.

**Recordkeeping** [15A NCAC 2Q .0508(f)]

- d. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
  - i. the date and time of each recorded action;
  - ii. the results of each observation and/or test noting those sources with emissions that were observed to be above normal along with any corrective actions taken to reduce visible emissions; and
  - iii. the results of any corrective actions performed.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521 if these records are not maintained.

**Reporting** [15A NCAC 2Q .0508(f)]

- e. The Permittee shall submit a summary report of the monitoring activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

**4. 15A NCAC 2D .0528: TOTAL REDUCED SULFUR FROM KRAFT PULP MILLS**

- a. The emissions of total reduced sulfur shall not exceed 20 ppm by volume on a dry basis, corrected to 10 percent oxygen, measured as hydrogen sulfide and averaged per discrete contiguous 12-hour time period, from the No. 4 Lime Kiln (**ID No. G09028**) or the No. 5 Lime Kiln (**ID No. G09029**). [15A NCAC 2D .0528]

**Testing** [15A NCAC 2D .0501(c)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1 O 4. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0528

**Monitoring/Recordkeeping** [15A NCAC 2Q .0508(f)]

- c. To ensure compliance, the Permittee shall calibrate, maintain, and operate a continuous monitoring system for determining the total reduced sulfur (as hydrogen sulfide, dry basis, corrected to 10 percent oxygen) emissions discharged to the atmosphere and record the output of the system. The continuous monitoring system shall be operated in accordance with the applicable performance specifications in 40 CFR 60 Appendix B and quality assurance procedures in Appendix F, Section 3, unless an alternative monitoring and quality assurance program is approved by the DAQ. The monitoring system downtime shall not exceed 5 percent. If any 12-hour block average exceeds the limit above or the records are not maintained, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0528, except that two percent of all 12-hour total reduced sulfur averages per quarter year in excess of the limitation given above, in the absence of start-ups, shutdowns, and malfunctions, shall not be considered in violation.

**Reporting** [15A NCAC 2Q .0508(f)]

- d. The Permittee shall submit a summary report of the monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

**P. No. 5 lime silo system (ID No. G09032), including:**

**the hot lime conveyor, lime crusher, bucket elevator, and No. 5 lime storage silo (400 tons maximum capacity), equipped with a cartridge-type bagfilter (1,728 square feet of filter area, ID No. 09-CD-013-01).**

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
particulate	$E = 4.10 P^{0.67}$	15A NCAC 2D .0515
visible emissions	20 percent opacity	15A NCAC 2D .0521

**1. 15A NCAC 2D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES**

- a. Emissions of particulate matter from these sources shall not exceed an allowable emission rate as calculated by the following equation: [15A NCAC 2D .0515(a)]

$$E = 4.10 \times P^{0.67} \quad \text{Where } E = \text{allowable emission rate in pounds per hour}$$

$$P = \text{process weight in tons per hour}$$

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

**Testing** [15A NCAC 2D .0501 (c)(3)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1 P. 1. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515.

**Monitoring/Recordkeeping** [15A NCAC 2Q .0508(f)]

- c. Particulate matter emissions from the No. 5 lime silo system (**ID No. G09032**) shall be controlled by the cartridge filter. To assure compliance, the Permittee shall perform inspections and maintenance. As a minimum, the inspection and maintenance requirement shall include the following:
  - i. a monthly visual inspection (for each calendar month, not to exceed 6 weeks from the previous inspection) of the system ductwork and material collection unit for leaks; and
  - ii. an annual internal inspection (for each calendar year, not to exceed 14 months from the previous inspection) of the cartridge filter structural integrity.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if the ductwork and cartridge filter are not inspected and maintained.
- d. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
  - i. the date and time of each recorded action;
  - ii. the results of each inspection;
  - iii. the results of any maintenance performed on the cartridge filter; and
  - iv. any corrections made.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if these records are not maintained.

**Reporting** [15A NCAC 2Q .0508(f)]

- e. The Permittee shall submit a summary report of the monitoring activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

**2. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS**

- a. Visible emissions from the No. 5 lime silo system (**ID No. G09032**) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-

minute average exceed 87 percent opacity. [15A NCAC 2D .0521 (d)]

**Testing** [15A NCAC 2D .0501(c)(8)]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .0501(c)(8) and General Condition JJ found in Section 3. If the results of this test are above the limit given in 2.1 P.2.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

**Monitoring** [15A NCAC 2Q .0508(f)]

- c. To assure compliance, once a month the Permittee shall observe the emission points of the sources for any visible emissions above normal. If the emission source(s) are not operating, a record of this fact along with the corresponding date and time shall substitute for the monthly observation. The Permittee shall establish “normal” for the source in the first 30 days following the effective date of permit 08961T08. If visible emissions from this source are observed to be above normal, the Permittee shall either:
- i. take appropriate action to correct the above-normal emissions within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
  - ii. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 2D .0501(c)(8) is below the limit given in Section 2.1 P. 2.a. above.
- The Permittee shall be deemed in noncompliance with 15A NCAC 2D.0521 unless (within the monitoring period) either: 1) the above-normal emissions are corrected per (i) above or, 2) the demonstration per (ii) above is made.

**Recordkeeping** [15A NCAC 2Q .0508(f)]

- d. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
- i. the date and time of each recorded action;
  - ii. the results of each observation and/or test noting those sources with emissions that were observed to be above normal along with any corrective actions taken to reduce visible emissions; and
  - iii. the results of any corrective actions performed.
- The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521 if these records are not maintained.

**Reporting** [15A NCAC 2Q .0508(f)]

- e. The Permittee shall submit a summary report of the monitoring activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

**Q. No. 6 Lime Silos (ID No. G09031) including:**

**No. 6 lime storage silo (150 tons maximum capacity, ID 09-TK-018),  
 No. 6 fresh lime storage silo (150 tons maximum capacity, ID No. 09-TK-019),  
 the hot lime conveyor, lime crusher, and bucket elevator,  
 equipped with a cartridge-type bagfilter (1,728 square feet of filter area,  
 ID No. 09-CD-018-01).**

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
particulate	$E = 4.10 \times P^{0.67}$	15A NCAC 2D .0515
visible emissions	20 percent opacity	15A NCAC 2D .0521

**1. 15A NCAC 2D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES**

- a. Emissions of particulate matter from these sources shall not exceed an allowable emission rate as calculated by the following equation: [15A NCAC 2D .0515(a)]

$$E = 4.10 \times P^{0.67} \quad \text{Where } E = \text{allowable emission rate in pounds per hour}$$

$$P = \text{process weight in tons per hour}$$

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

**Testing** [15A NCAC 2D .0501 (c)(3)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1 Q. 1. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515.

**Monitoring/Recordkeeping** [15A NCAC 2Q .0508(f)]

- c. Particulate matter emissions from the No. 6 lime dust collection system (**ID No. G09031**) shall be controlled by the cartridge filter. To assure compliance, the Permittee shall perform inspections and maintenance. As a minimum, the inspection and maintenance requirement shall include the following:
  - i. a monthly visual inspection (for each calendar month, not to exceed 6 weeks from the previous inspection) of the system ductwork and material collection unit for leaks; and
  - ii. an annual internal inspection (for each calendar year, not to exceed 14 months from the previous inspection) of the cartridge filter structural integrity.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if the ductwork and cartridge filter are not inspected and maintained.

- d. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
  - i. the date and time of each recorded action;
  - ii. the results of each inspection;
  - iii. the results of any maintenance performed on the cartridge filter; and
  - iv. any corrections made.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if these records are not maintained.

**Reporting** [15A NCAC 2Q .0508(f)]

- e. The Permittee shall submit a summary report of the monitoring activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

**2. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS**

- a. Visible emissions from the No. 6 lime dust collection system (**ID No. G09031**) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 2D .0521 (d)]

**Testing** [15A NCAC 2D .0501(c)(8)]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .0501(c)(8) and General Condition JJ found in Section 3. If the results of this test are above the limit given in 2.1 Q.2.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

**Monitoring** [15A NCAC 2Q .0508(f)]

- c. To assure compliance, once a month the Permittee shall observe the emission points of the sources for any visible emissions above normal. If the emission source(s) are not operating, a record of this fact along with the corresponding date and time shall substitute for the monthly observation. The Permittee shall establish “normal” for the source in the first 30 days following the effective date of permit 08961T08. If visible emissions from this source are observed to be above normal, the Permittee shall either:
  - i. take appropriate action to correct the above-normal emissions within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
  - ii. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 2D .0501(c)(8) is below the limit given in Section 2.1 Q. 2.a. above.
 The Permittee shall be deemed in noncompliance with 15A NCAC 2D.0521 unless (within the monitoring period) either: 1) the above-normal emissions are corrected per (i) above or, 2) the demonstration per (ii) above is made.

**Recordkeeping** [15A NCAC 2Q .0508(f)]

- d. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
  - i. the date and time of each recorded action;
  - ii. the results of each observation and/or test noting those sources with emissions that were observed to be above normal along with any corrective actions taken to reduce visible emissions; and
  - iii. the results of any corrective actions performed.
 The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521 if these records are not maintained.

**Reporting** [15A NCAC 2Q .0508(f)]

- e. The Permittee shall submit a summary report of the monitoring activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

**R. Lime Production - Other Units (ID No. G09033) consisting of:  
 Lime Pre-Coat Filter Nos. 4, 5, and 6 (ID Nos. 09-PU-001, 09-PU-002,  
 and 09-PU-003, respectively)**

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Toxic Air Pollutants	State Enforceable Only (See Section 2.3.A.)	15A NCAC 2D .1100

**CAUSTICIZING (Area 10)**

- S. No. 5 Lime Slaker (ID No. G10035) controlled by a natural draft wet scrubber (ID No. 10-CD-027-01) and  
 No. 6 Lime Slaker (ID No. G10034) controlled by a natural draft wet scrubber (ID No. 10-CD-036-01), and  
 Green Liquor Clarification (ID No. G10036)**

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
particulate	$E = 4.10 \times P^{0.67}$	15A NCAC 2D .0515
visible emissions	20 percent opacity	15A NCAC 2D .0521

**1. 15A NCAC 2D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES**

- a. Emissions of particulate matter from each of these sources shall not exceed an allowable emission rate as calculated by the following equation: [15A NCAC 2D .0515(a)]

$$E = 4.10 \times P^{0.67} \quad \text{Where } E = \text{allowable emission rate in pounds per hour}$$

$$P = \text{process weight in tons per hour}$$

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

**Testing** [15A NCAC 2D .0501 (c)(3)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1 S. 1. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515.

**Monitoring/Recordkeeping** [15A NCAC 2Q .0508(f)]

- c. Particulate matter emissions from the No. 5 Lime Slaker (**ID No. G10035**) shall be controlled by the natural draft scrubber (ID No.10-CD-027-01). Particulate matter emissions from the No. 6 Lime Slaker (**ID No. G10036**) shall be controlled by the natural draft wet scrubber (ID No.10-CD-036-01). The Permittee shall install, operate, and maintain a wet scrubbing liquid flowmeter on each scrubber. To ensure compliance and the effective operation of the scrubbers, the Permittee shall monitor and record, once per day, scrubbing liquid flow rate. The Permittee shall be allowed three (3) days of absent observations per semi-annual period. If the emission source(s) is not operating, a record of this fact along with the corresponding date and time shall substitute for the daily observation. The readings shall be recorded in a logbook (written or electronic format) on-site and made available to an authorized representative of DAQ upon request. To ensure quality, the flow rate gauges and pressure devices shall be calibrated annually.

The scrubber shall be operated to ensure the following operational parameters are maintained:

- i. The scrubbing liquid flow rate shall be greater than 30 gallons per minute.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if the scrubber liquid flow rate is not maintained above the above prescribed limit or if these records are not maintained.

- d. If the scrubber liquid flow rate readings recorded as required in 2.1.S.1.c. above are observed to be outside the prescribed range, the Permittee shall inspect the scrubber(s) for malfunctions and clean or repair, as necessary. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if the inspections, cleaning, and repairs are not performed.
- e. The results of inspection and maintenance activities, discussed above for the scrubbers, shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative of DAQ upon request. The logbook shall record the following:
- i. the date and time of each recorded action
  - ii. the results of each inspection;
  - iii. the causes for any variance from the prescribed operating range for the scrubber(s); and

iv. corrective actions taken.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if these records are not maintained.

**Reporting** [15A NCAC 2Q .0508(f)]

- f. The Permittee shall submit a summary report of the monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

**2. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS**

- a. Visible emissions from these sources shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 2D .0521 (d)]

**Testing** [15A NCAC 2D .0501(c)(8)]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .0501(c)(8) and General Condition JJ found in Section 3. If the results of this test are above the limit given in 2.1 S.2.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

**Monitoring** [15A NCAC 2Q .0508(f)]

- c. To assure compliance, once a month the Permittee shall observe the emission points of the sources for any visible emissions above normal. If the emission source(s) are not operating, a record of this fact along with the corresponding date and time shall substitute for the monthly observation. The Permittee shall establish "normal" for the source in the first 30 days following the effective date of permit 08961T08. If visible emissions from this source are observed to be above normal, the Permittee shall either:
- i. take appropriate action to correct the above-normal emissions within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
  - ii. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 2D .0501(c)(8) is below the limit given in Section 2.1 S. 2.a. above.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D.0521 unless (within the monitoring period) either: 1) the above-normal emissions are corrected per (i) above or, 2) the demonstration per (ii) above is made.

**Recordkeeping** [15A NCAC 2Q .0508(f)]

- d. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
- i. the date and time of each recorded action;
  - ii. the results of each observation and/or test noting those sources with emissions that were observed to be above normal along with any corrective actions taken to reduce visible emissions; and
  - iii. the results of any corrective actions performed.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521 if these records are not maintained.

**Reporting** [15A NCAC 2Q .0508(f)]

- e. The Permittee shall submit a summary report of the monitoring activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

**POWER (Area 11)**

**T. Power Boilers:**

**Coal -fired Big Bill utility boiler (364 million Btu per hour maximum heat input rate, ID No. G11037) equipped with low NOx burners, and a 2 chamber, 3 field electrostatic precipitator (51,840 square feet of plate area, ID No. 11-CD-003-01);**

**Coal -fired Peter G. utility boiler (364 million Btu per hour maximum heat input rate, ID No. G11038) equipped with low NOx burners, and a 2 chamber, 3 field electrostatic precipitator (51,840 square feet of plate area, ID No. 11-CD-004-01); and**

**Coal -fired Riley Coal utility boiler (399 million Btu per hour maximum heat input rate, ID No. G11039) equipped with low NOx burners, and a 2 chamber, 3 field electrostatic precipitator (67,392 square feet of plate area, ID No. 11-CD-005-01);**

The following table provides a summary of limits and standards for the emission source(s) described above:

<b>Regulated Pollutant</b>	<b>Limits/Standards</b>	<b>Applicable Regulation</b>
particulate matter	0.16 lb/million Btu heat input	15A NCAC 2D .0503
particulate matter	0.15 lb/million Btu heat input (See Section 2.2.A.)	15A NCAC 2D .0530
sulfur dioxide	2.3 lb/million Btu heat input	15A NCAC 2D .0516
sulfur dioxide	sulfur dioxide emissions from the Big Bill, Peter G., Riley Coal and No. 4 Power Boilers shall be limited to 8,277 tons per rolling consecutive 12 months (See Section 2.2.A.)	15A NCAC 2Q .0317 Avoidance of 15A NCAC 2D .0530
nitrogen oxides	1.8 lb/million Btu heat input	15A NCAC 2D .0519
nitrogen oxides	nitrogen oxides emissions from the Big Bill, Peter G., Riley Coal and No. 4 Power Boilers shall be limited to 4,368 tons per rolling consecutive 12 months (See Section 2.2.A.)	15A NCAC 2D .0530
nitrogen oxides	NC SIP nitrogen oxides emissions allocations during ozone season (See Section 2.2.B.)	15A NCAC 2D .1417
visible emissions	40 percent opacity	15A NCAC 2D .0521
carbon monoxide	carbon monoxide emissions from the Big Bill, Peter G., Riley Coal and No. 4 Power Boilers shall be limited to 898.2 tons per consecutive 12 months (See Section 2.2.A.)	15A 2D NCAC .0530
visible emissions	Excess Emissions Monitoring Requirements (40 CFR 51, Appendix P)	15A NCAC 2D .0606
sulfur dioxide	Monitoring Requirements (See Condition 2.1 T. 2)	15A NCAC 2D .0608
HAPs	See Section 2.2 E	15A NCAC 2D .1111, 40 CFR 63, Subpart DDDDD

**1. 15A NCAC 2D .0503: PARTICULATES FROM FUEL BURNING INDIRECT HEAT EXCHANGERS**

- a. Emissions of particulate matter from the combustion of coal that are discharged from each of these sources (**ID No(s) G11037, G11038, and G11039**) into the atmosphere shall not exceed 0.16 pounds per million Btu heat input. [15A NCAC 2D .0503(a)]

**Testing** [15A NCAC 2D .0501(c)]

- b. If emission testing is required, the testing shall be performed in accordance General Condition JJ found in Section 3. If the results of the test are above the limit given in Section 2.1 T. 1. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0503.

**Monitoring** [15A NCAC 2Q .0508(f)]

- c. The Permittee shall demonstrate compliance with the emission limit(s) above by testing each of these sources (**ID No(s) G11037, G11038, and G11039**) for particulate matter in accordance with a testing protocol approved by the DAQ. Details of the emissions testing and reporting requirements can be found in Section 3 - General Condition JJ. Testing shall be completed and the results submitted within the 180 days of the effective date of Permit No. 08961T08 unless an alternate date is approved by the DAQ. The testing shall be performed annually thereafter. If the results of the testing demonstrate results at less than 80 percent of the limit above, the testing frequency may be reduced to every permit cycle. If the results of this or any test are above the limit given in Section 2.1 T. 1. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0503.

**Monitoring** [15A NCAC 2Q .0508(f)]

- d. Particulate matter emissions from these boilers (**ID Nos. G11037, G11038, and G11039**) shall be controlled by their respective electrostatic precipitators (ESP) (ID Nos. 11-CD-003-01, 11-CD-004-001, and 11-CD-005-001). The Permittee shall monitor the following parameters daily for values outside the normal operating range in each field or section:
- i. primary voltage,
  - ii. primary current, and
  - iii. secondary current.

The Permittee shall establish “normal” for these parameters within the first 30 days following the effective date of permit 08961T08 and submit the proposed ranges to the DAQ for incorporation into this permit within 60 days of the effective date of said permit. The permit shall be administratively amended to incorporate the approved values.

The Permittee shall be allowed three (3) days of absent observations per semi-annual period. If the emission source(s) is not operating, a record of this fact along with the corresponding date and time shall substitute for the daily observation.

- e. If the ESP parameters above are observed to be outside the prescribed range, the Permittee shall inspect the ESP for malfunctions, take the necessary measures to correct any problems, and return the parameter to the proper range within the monitoring period.

Notwithstanding any prior reduced testing frequency allowed per 2.1.T.1.c above, if the ESP parameter readings recorded as required above are observed to be outside the allowable range, in order to ensure that the abnormal value(s) is indicative of compliance, the Permittee shall be required to perform annual testing as outlined in 2.1.T.1.c above. If the ESP parameter is observed to be outside the allowable range within 60 days prior to the end of the calendar year, the testing may be conducted the following calendar year. However, testing in this case shall be performed within the first quarter of the following year.

**Recordkeeping** [15A NCAC 2Q .0508(f)]

- f. The results of the electrostatic precipitator monitoring shall be maintained in a logbook (written or electronic form) on site and made available to an authorized representative upon request. The logbook shall record the following:
- i. the date and time of actions recorded,
  - ii. the normal range of values for each parameter,
  - iii. the values of each parameter,
  - iv. the causes for any variance from the prescribed operating range(s); and
  - v. corrective actions taken.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0508 if these parameters are not monitored or these records are not maintained.

**Reporting** [15A NCAC 2Q .0508(f)]

- g. The Permittee shall submit a summary report of the monitoring and recordkeeping postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

**2. 15A NCAC .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES**

- a. Emissions of sulfur dioxide from these sources (**ID No(s). G11037, G11038, and G11039**) shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard. [15A NCAC 2D .0516]

**Testing** [15A NCAC 2D .0501(c) and 2D .0608]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1.T.2. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516.

**Monitoring/Recordkeeping** [15A NCAC 2Q .0508(f), 2D .0608, and 2D .0613]

- c. To assure compliance with 2.1.T.2.a, the Permittee shall monitor the sulfur content and heat content of the coal by using coal supplier certification per total shipment received. The results of the coal supplier certifications shall be recorded in a logbook (written or electronic format) and include the following information:
  - i. the name of the coal supplier;
  - ii. a statement verifying that the methods used to determine the maximum sulfur content and heat content of the coal were in accordance with the following:
    - (A) sampling - ASTM Method D 2234;
    - (B) preparation - ASTM Method D 2013;
    - (C) gross calorific value (Btu) - ASTM Method D-2015, D-3286, D-1989, or D-5865;
    - (D) moisture content - ASTM Method D 3173 or D-3302; and
    - (E) sulfur content - ASTM Method D 3177 or ASTM Method D 4239.
- d. Additionally, the Permittee is required to calculate and record in a logbook (written or electronic format) the equivalent emission rate in pounds of sulfur dioxide per million Btu heat content of the coal per total shipment. The equivalent sulfur dioxide emission rate (pounds per million Btu heat input) shall be calculated in accordance with Method 19 of 40 CFR 60, Appendix A, Section 12.6 – Sulfur Retention Credit for Compliance Fuel. The Permittee shall be deemed in noncompliance if the results show an exceedance of the limit given in Section 2.1 T. 2. a. above.  
The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516 and 2D .0608 if the requirements above are not monitored and recorded.

**Reporting** [15A NCAC 2Q .0508(f) and 2D .0608]

- e. The Permittee shall submit a summary report of the coal supplier certifications and calculated emission rates postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.  
The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0608 if the reports are not submitted.

**3. 15A NCAC 2D .0519: CONTROL OF NITROGEN DIOXIDE AND NITROGEN OXIDES**

- a. Emissions of nitrogen oxides shall not exceed 1.8 pounds per million Btu of heat input from any coal-fired boiler with a capacity of 250 million Btu per hour or more. [15A NCAC 2D .0519(b)]

**Testing** [15A NCAC 2D .0501(c)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1 T. 3. a. above, the Permittee

shall be deemed in noncompliance with 15A NCAC 2D .0519.

**Monitoring/Recordkeeping/Reporting** [15A NCAC 2Q .0508(f)]

- c. No monitoring/recordkeeping/reporting is required from the firing of coal in these sources for this regulation.

**4. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS**

- a. Visible emissions from these sources (**ID No(s), G11037, G11038, and G11039**) shall not be more than **40 percent opacity** (except during startups) when averaged over a six-minute period except that six-minute periods averaging not more than 90 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period. [15A NCAC 2D .0521(c)]

- b. For sources required to install, operate, and maintain continuous opacity monitoring systems (COMS), compliance with the 40 percent opacity limit shall be determined as follows:[15A NCAC 2D .0521(g)]
- i. No more than four six-minute periods shall exceed the opacity standard in any one day; and
  - ii. The percent of excess emissions (defined as the percentage of monitored operating time in a calendar quarter above the opacity limit) shall not exceed 0.8 percent of the total operating hours. If a source operates less than 500 hours during a calendar quarter, the percent of excess emissions shall be calculated by including hours operated immediately previous to this quarter until 500 operational hours are obtained.

Excess emissions during startup and shutdown shall be excluded from the determinations in paragraphs b.i. and b.ii. above, if the excess emissions are exempted according to the procedures set out in 2D .0535(g). Excess emissions during malfunctions shall be excluded from the determinations in paragraphs b.i. and b.ii. above, if the excess emissions are exempted according to the procedures set out in 2D .0535(c). All periods of excess emissions shall be included in the determinations in paragraphs b.i. and b.ii above until such time that the excess emissions are exempted according to the procedures in 2D .0535.

**Testing** [15A NCAC 2D .0501(c)(8)]

- c. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .0501(c)(8) and General Condition JJ. If the results of this test are above the limit given in Section 2.1 T.4.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

**Monitoring/Recordkeeping** [15A NCAC 2Q .0508(f)]

- d. The Permittee shall use a continuous opacity monitoring system (COMS) to monitor and record opacity. Continuous emissions monitoring and recordkeeping of opacity shall be performed as described in Paragraphs 2 and 3.1.1 through 3.1.5 of Appendix P of 40 CFR Part 51. The monitoring systems shall meet the minimum specifications described in Paragraphs 3.3 through 3.8 of Appendix P of 40 CFR Part 51. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521 if the monitoring is not performed, if the monitored values exceed the limitations given above, or if the records are not maintained.

**Reporting** [15A NCAC 2Q .0508(f)]

- e. The Permittee shall submit a summary report of the monitoring data postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

**5. 15A NCAC 2D .0606: SOURCES COVERED BY APPENDIX P OF 40 CFR PART 51 (CONTINUOUS OPACITY MONITORING AND EXCESS EMISSIONS)**

For the “Big Bill”, “Peter G.”, and Riley Coal Boilers (**ID Nos. G11037, G11038, and G11039**, respectively) the provisions of 15A NCAC 2D .0606 apply as follows:

**Monitoring/Recordkeeping** [15A NCAC 2Q .0508(f) and 2D .0606]

- a. The Permittee shall use a continuous opacity monitoring system (COMS) to monitor and record opacity. Continuous emissions monitoring and recordkeeping of opacity shall be performed as described in Paragraphs 2 and 3.1.1 through 3.1.5 of Appendix P of 40 CFR Part 51. The monitoring systems shall meet the minimum specifications described in Paragraphs 3.3 through 3.8 of Appendix P of 40 CFR Part 51.
- b. The quarterly excess emissions (EE) reports required under Appendix P of 40 CFR Part 51 shall be used as an indication of good operation and maintenance of the electrostatic precipitators. These sources shall be deemed to

be properly operated and maintained if the percentage of time the opacity emissions, calculated on a 6-minute average, in excess of **40 percent** (including startups, shutdowns, and malfunctions) does not exceed 3.0 percent of the total operating time for any given calendar quarter, adjusted for monitor downtime (MD) as calculated below. In addition, these sources shall be deemed to be properly operated and maintained if the %MD does not exceed 2.0 percent.

Calculations for %EE and %MD

Percent Excess Opacity Emission (%EE) Calculation:

$$\%EE = \frac{\text{Total Excess Emission Time}^*}{(\text{Total Source Operating Time}^{***}) - (\text{Monitor Downtime})} \times 100$$

Percent Monitor Downtime (%MD) Calculation for COMS:

$$\%MD = \frac{\text{Total Monitor Downtime}^{**}}{(\text{Total Source Operating Time}^{***})} \times 100$$

- \* Total Excess Emission Time contains any 6-minute period greater than 40% opacity including startup, shutdown, and malfunction.
- \*\* Total Monitor Downtime includes Quality Assurance (QA) activities unless exempted by regulation or defined in an agency approved QA Manual. The amount of exempt QA Time will be reported in the quarterly report as such.
- \*\*\* If a source operates less than 2200 hours during any quarter, the source may calculate the %EE and/or %MD using all operating data for the current quarter and the preceding quarters until 2200 hours of data are obtained. [N.C.G.S. 143-215.110]

**Reporting** [15A NCAC 2Q .0508(f) and 2D .0606]

- c. The Permittee shall submit the excess emissions and monitor downtime reports as required under Appendix P of 40 CFR Part 51 no later than January 30 of each calendar year for the preceding three-month period between October and December, April 30 of each calendar year for the preceding three-month period between January and March, July 30 of each calendar year for the preceding three-month period between April and June, and October 30 of each calendar year for the preceding three-month period between July and September. For periods of excess emissions, defined as each six-minute period average greater than **40 percent opacity**, the opacity measurements recorded by the COMS shall be reported as described in Paragraphs 4 and 5.1 of Appendix P of 40 CFR Part 51 except that a six-minute time period shall be deemed as an appropriate alternative opacity averaging period as described in Paragraph 4.2 of Appendix P of 40 CFR Part 51. A minimum of 36 data points, equally spaced, is required to determine a valid six-minute value. All instances of deviations from the requirements of this permit must be clearly identified.

**U. Coal/No. 6 fuel oil-fired No. 4 Power Boiler (535 million Btu per hour maximum heat input; pulverized dry bottom type design; ID No. G11040; NSPS Subpart D; PSD) equipped with low NO<sub>x</sub> burner components, a Separated Over Fire Air (SOFA) system, a urea-based Selective Non-Catalytic Reduction (SNCR) NO<sub>x</sub> emission reduction system (ID No. 11-CD-006-02), and an electrostatic precipitator (115,236 square feet of plate area, ID No. 11-CD-006-01);**

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
nitrogen oxides	0.8 pounds per million Btu heat input while burning oil; 1.8 pounds per million Btu heat input while burning coal; or  $E = [(E_c)(Q_c) + (E_o)(Q_o)]/Q_t$ Where; E = the emission limit in pounds per million Btu heat input for the fuel combination; E <sub>c</sub> = 1.8 pounds per million Btu heat input while burning coal; E <sub>o</sub> = 0.8 pounds per million Btu heat input while burning oil; Q <sub>c</sub> = coal heat input in Btu per hour; Q <sub>o</sub> = oil heat input in Btu per hour; and Q <sub>t</sub> = Q <sub>c</sub> + Q <sub>o</sub>	15A NCAC 2D .0519
particulate	0.10 lb/million Btu heat input (all fuels)	15A NCAC 2D .0524 40 CFR 60, Subpart D
particulate	0.085 lb/million Btu heat input (See Section 2.2.A.)	15A NCAC 2D .0530
sulfur dioxide	0.8 lb/million Btu heat input (oil) 1.2 lb/million Btu heat input (coal)	15A NCAC 2D .0524 40 CFR 60, Subpart D
sulfur dioxide	sulfur dioxide emissions from the Big Bill, Peter G., Riley Coal and No. 4 Power Boilers shall be limited to 8,277 tons per rolling consecutive 12 months (See Section 2.2.A.)	15A NCAC 2Q .0317 Avoidance of 15A NCAC 2D .0530
nitrogen oxides	0.3 lb/million Btu heat input (oil) 0.7 lb/million Btu heat input (coal)	15A NCAC 2D .0524 40 CFR 60, Subpart D
nitrogen oxides	nitrogen oxides emissions from the Big Bill, Peter G., Riley Coal and No. 4 Power Boilers shall be limited to 4,368 tons per rolling consecutive 12 months (See Section 2.2.A.)	15A NCAC 2D .0530
nitrogen oxides	NC SIP nitrogen oxides emissions allocations during ozone season (see Section 2.2.B.)	15A NCAC 2D .1417
visible emissions	20% opacity	15A NCAC 2D .0524 40 CFR 60, Subpart D
carbon monoxide	carbon monoxide emissions from the Big Bill, Peter G., Riley Coal and No. 4 Power Boilers shall be limited to 898.2 tons per rolling consecutive 12 months (See Section 2.2.A.)	15A NCAC 2D .0530
HAPs	See Section 2.2 E	15A NCAC 2D .1111, 40 CFR 63, Subpart DDDDD

**1. 15A NCAC 2D .0519: CONTROL OF NITROGEN OXIDES EMISSIONS**

- a. Emissions of nitrogen oxides from these sources when burning coal and oil shall be calculated by the following equation [15A NCAC 2D .0519]:

$$E = [(Ec)(Qc) + (Eo)(Qo)]/Qt$$

where: E = emission limit for combined burning of coal and oil in pounds per million Btu heat input  
 Ec = 1.8 pounds per million Btu heat input for coal only  
 Eo = 0.8 pounds per million Btu heat input for oil only  
 Qc = coal heat input in Btu per hour  
 Qo = oil heat input in Btu per hour  
 Qt = Qc + Qo

**Testing** [15A NCAC 2D .0501(c)]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .0501(c) and General Condition JJ. If the results of this test are above the limit given in Section 2.1 U.1.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0519.
- c. **Monitoring/Recordkeeping** [15A NCAC 2Q .0508(f)]  
 No monitoring recordkeeping or reporting are required for the burning of coal or oil in this source.

**2. 15A NCAC 2D .0524: NEW SOURCE PERFORMANCE STANDARDS (40 CFR PART 60 SUBPART D)**

- a. The Permittee shall comply with all applicable provisions, including the notification, testing, reporting, recordkeeping, and monitoring requirements in accordance with 15A NCAC 2D .0524, “New Source Performance Standards” (NSPS) as promulgated in 40 CFR Part 60, Subpart D, including Subpart A “General Provisions.”[15A NCAC 2D .0524]
- b. For the No. 4 Power Boiler (ID No. G1140) the following emission limits shall not be exceeded [15A NCAC 2D .0524; 40 CFR 60.42, 60.43, and 60.44]:

Regulated Pollutant	Limits/Standards
particulates	0.10 lb/million Btu heat input (all fuels)
visible emissions	20 percent opacity (except during periods of startup, shutdown and malfunction) except for one six-minute period per hour of not more than 27 percent opacity
sulfur dioxide	0.8 lb (oil only) / million Btu heat input 1.2 lb (coal only) / million Btu heat input or $S = [y (0.8) + z (1.2)] / y + z$ Where y = % total heat input from oil z = % total heat input from coal
nitrogen oxides	0.3 lb (oil only) / million Btu heat input 0.7 lb (coal only) / million Btu heat input or $S = [y (0.3) + z (1.2)] / y + z$ Where y = % total heat input from oil z = % total heat input from coal

**Testing** [15A NCAC 2D .0501(c)]

- c. If emission testing is required, the testing shall be performed in accordance General Condition JJ found in Section 3. If the results of the test are above the limits given in Section 2.1 U. 2. b. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524.

**Monitoring** [15A NCAC 2Q .0508(f)]

- d. The Permittee shall demonstrate compliance with the emission limit(s) above by testing the No. 4 Power Boiler (ID No. G1140) for particulate matter in accordance with a testing protocol approved by the DAQ. Details of the emissions testing and reporting requirements can be found in Section 3 - General Condition JJ. Testing shall be completed and the results submitted within the 180 days of the effective date of Permit No. 08961T08 unless an alternate date is approved by the DAQ. The testing shall be performed annually thereafter. If the results of the testing demonstrate results at less than 80 percent of the limit above, the testing frequency may be reduced to every permit cycle. If the results of this or any test are above the limit given in Section 2.1 U. 2. b. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524.

**Monitoring** [15A NCAC 2Q .0508(f)]

- e. Particulate matter emissions from this boiler (**ID No. G11040**) shall be controlled by the ESP (ID Nos. 11-CD-006-01). The Permittee shall monitor the following parameters daily for values outside the normal operating range in each field or section:
- i. primary voltage,
  - ii. primary current, and
  - iii. secondary current.

The Permittee shall establish "normal" for these parameters within the first 30 days following the effective date of permit 08961T08 and submit the proposed ranges to the DAQ for incorporation into this permit within 60 days of the effective date of said permit. The permit shall be administratively amended to incorporate the approved values.

The Permittee shall be allowed three (3) days of absent observations per semi-annual period. If the emission source(s) is not operating, a record of this fact along with the corresponding date and time shall substitute for the daily observation.

- f. If the ESP parameters above are observed to be outside the prescribed range, the Permittee shall inspect the ESP for malfunctions, take the necessary measures to correct any problems, and return the parameter to the proper range.

Notwithstanding any prior reduced testing frequency allowed per 2.1.U.2.d above, if the ESP parameter readings recorded as required above are observed to be outside the allowable range, in order to ensure that the abnormal value(s) is indicative of compliance, the Permittee shall be required to perform annual testing as outlined in 2.1.U.2.d above. If the ESP parameter is observed to be outside the allowable range within 60 days prior to the end of the calendar year, the testing may be conducted the following calendar year. However, testing in this case shall be performed within the first quarter of the following year.

**Recordkeeping** [15A NCAC 2Q .0508(f)]

- h. The results of the electrostatic precipitator monitoring shall be maintained in a logbook (written or electronic form) on site and made available to an authorized representative upon request. The logbook shall record the following:
- i. the date and time of actions recorded,
  - ii. the normal range of values for each parameter,
  - iii. the values of each parameter,
  - iv. the causes for any variance from the prescribed operating range(s), and
  - v. corrective actions taken.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524 if these parameters are not monitored or these records are not maintained.

**Monitoring/Recordkeeping** [15A NCAC 2D .0524]

- i. The Permittee shall install, maintain, and operate a continuous opacity monitoring system (COMS) for measuring the opacity of emissions meeting the requirements of 40 CFR Part 60. [40 CFR 60.45]
- j. Compliance with opacity limit of Section 2.1.U.2.b above, shall be determined using six-minute averages of the COMS values. If any six-minute period average exceeds 20 percent opacity (except during periods of startup, shutdown and malfunction) except for one six-minute period per hour of not more than 27 percent opacity, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524. [40 CFR 60.45]
- k. The COMS and the facility shall be assessed for good operation and maintenance (O&M) practices in accordance with 40 CFR Part 60, Subpart A, Section 60.11(d); Subpart D, Section 60.45; and the EPA Region IV Continuous Emission Monitor Enforcement Plan (CEP).

**Monitoring / Recordkeeping** [15A NCAC 2D .0524, 2Q .0508(f)]

- l. As allowed per 40 CFR 60.45(b)(2) for a fossil fuel-fired steam generator that does not use a flue gas desulfurization device, a continuous monitoring system for measuring sulfur dioxide emissions is not required if the owner or operator monitors sulfur dioxide emissions by fuel sampling and analysis.
- m. As required by 15A NCAC 2D .0524 under 40 CFR Subpart D, 60.45, to assure compliance, the Permittee shall monitor the sulfur and heat content of all the coal burned during the period by using coal supplier certification per total shipment received. The coal supplier certification shall be recorded in a logbook (written or electronic format) per total shipment and include the following information:
  - i. the name of the coal supplier;
  - ii. a statement verifying that the methods used to determine the maximum sulfur content of the coal was in accordance with the following:
    - (A) sampling - ASTM Method D 2234;
    - (B) preparation - ASTM Method D 2013;
    - (C) gross calorific value (Btu) - ASTM Method D-2015, D-3286, D-1989, or D-5865;
    - (D) moisture content - ASTM Method D 3173 or D-3302; and
    - (E) sulfur content - ASTM Method D 3177 or ASTM Method D 4239.

Alternate test methods may be used upon prior DAQ approval per 15A NCAC 2D .0501(c)(18).

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524 if the sulfur and heat content of the coal is not monitored and recorded.

- n. The maximum equivalent sulfur dioxide emission rate (as SO<sub>2</sub>) of any coal received and burned in the boiler shall not exceed 1.2 pounds per million Btu. The Permittee is required to calculate and record in a logbook (written or electronic format) the pounds of sulfur dioxide per million Btu heat content of the coal per total shipment. The equivalent sulfur dioxide emission rate (pounds per million Btu heat input) shall be calculated in accordance with Method 19 of 40 CFR 60, Appendix A, Section 12.6 – Sulfur Retention Credit for Compliance Fuel. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524 if the results show an exceedance of the limit given above if the requirements above are not monitored and recorded.
- o. As required by 15A NCAC 2D .0524 under 40 CFR Subpart D, 60.45, to assure compliance, the Permittee shall monitor the sulfur content and heat content of the No. 6 fuel oil by using fuel oil supplier certifications per shipment and/or site specific fuel oil storage tank sampling and analysis. The fuel oil supplier certifications and/or sampling results shall be recorded in a logbook (written or electronic format) and include the following information:
  - i. the name of the fuel oil supplier; and
  - ii. a statement verifying that the methods used to determine the maximum sulfur content of the fuel oil was in accordance with the following:
    - (A) sample collection – ASTM D4177 or D4057;
    - (B) heat of combustion (Btu) – ASTM D240 or D2015; and
    - (C) sulfur content – ASTM D129, D-4294, or D1552.

Alternate test methods may be used upon prior DAQ approval per 15A NCAC 2D .0501(c)(18).

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524 if the sulfur and heat content of the fuel oil are not monitored and recorded.

- p. The maximum sulfur content (as SO<sub>2</sub>) of any No. 6 fuel oil received and burned in the boiler shall not exceed 0.8 pounds per million Btu. The Permittee is required to calculate and record in a logbook (written or electronic format) the pounds of sulfur dioxide per million Btu heat content of the fuel oil per month. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524 if the results show an exceedance of the limit given above or if the requirements above are not monitored and recorded

**Monitoring / Recordkeeping** [15A NCAC 2D .0524, 2Q .0508(f)]

- q. As allowed per 40 CFR 60.45(b)(3) the Permittee has demonstrated that emissions of nitrogen oxides are less than 70 percent of the applicable standards in 40 CFR 60.44, and a continuous monitoring system for measuring nitrogen oxides emissions is not required pursuant to NSPS Subpart D.
- r. However, the Permittee is required to install and operate a continuous emission monitoring system (CEM) for nitrogen oxides pursuant to the requirements of Section 2.2.B. Therefore, whenever the Permittee operates the nitrogen oxide CEM system (regardless of the time of year), the Permittee shall use the CEM data to determine compliance with the applicable NSPS Subpart D nitrogen oxides standard in Section 2.1.U.2.b above as follows:
  - i. The Permittee may evaluate the hourly emissions data produced by the nitrogen oxide CEM system for

- comparison against the nitrogen oxides standard in Section 2.1.U.2.b above. If any hourly value(s) exceeds the limit, the Permittee shall calculate the nitrogen oxide emissions for the relevant time period pursuant to 2.1.U.2.r.ii, below; or
- ii. Compliance with the NSPS Subpart D nitrogen oxides standard in Section 2.1.U.2.b above shall be determined based on any three-hour period during which the average emissions (arithmetic average of three contiguous one-hour periods) exceed the applicable standard.

When operated outside of the timeframe required under Section 2.2.B, the continuous monitoring system shall be operated in accordance with the applicable performance specifications in 40 CFR 60 Appendix B and quality assurance procedures in Appendix F, unless an alternative monitoring and quality assurance program is approved by the DAQ.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524 if the results show an exceedance of the limit given above.

**Reporting** [15A NCAC 2D .0524, 2Q .0508(f)]

- s. The Permittee shall submit a summary report of the ESP monitoring and recordkeeping postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.
- t. The Permittee shall submit excess emissions and monitoring system performance reports for the continuous opacity monitoring system, postmarked by the 30th day following the end of each calendar year quarter. The report shall include, as a minimum, the information required in 40 CFR 60.7(c), as follows:
  - i. all six-minute periods of **excess emissions** including all six-minute periods exempted during startup, shutdown, and malfunction.
- u. The Permittee shall submit a summary report of the fuel suppliers certifications and calculations of the pounds of sulfur dioxide per million Btu heat content of each fuel per month post marked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.
- v. The Permittee shall submit a summary report of the nitrogen oxides monitoring results. All instances of deviations from the requirements of this permit must be clearly identified.

**V. Woodwaste, bark, “depoly” waste, fiber-based roll cores, on-site generated waste oil, and coal-fired Riley Bark Boiler (380 million Btu per hour maximum heat input rate, IDNo.G11042) with partial flyash reinjection, equipped with a multicyclone (approximately 160 nine inches in diameter tubes, ID No. 11-CD- 016-01)in series with a venturi-type wet scrubber (water with pH adjustment, ID No. 11-CD-016-02);**

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
particulate matter	0.16 pounds per million Btu heat input (when firing coal/ fuel oil only);  0.31 pounds per million Btu heat input (when firing woodwaste only); or  $Ec = [(0.31)(Qw) + (0.16)(Qo)]/Qt$ Where; Ec = emission limit for combined firing (pound per mmBtu); Qw=actual wood heat input including woodwaste; Qo=actual heat input other than wood heat input; and Qt = Qw + Qo	15A NCAC 2D .0503  15A NCAC 2D .0504
sulfur dioxide	2.3 lb/million Btu heat input	15A NCAC 2D .0516
Nitrogen oxides	1.8 lb/million Btu heat input (when firing coal)	15A NCAC 2D .0519
Nitrogen oxides	NC SIP nitrogen oxides emissions allocations during ozone season (See Section 2.2.B.)	15A NCAC 2D .1417
visible emissions	40 percent opacity	15A NCAC 2D .0521
visible emissions	Excess Emissions Monitoring Requirements (40 CFR 51, Appendix P)	15A NCAC 2D .0606
sulfur dioxide	Monitoring Requirements (See Condition 2.1 V. 3)	15A NCAC 2D .0608
HAPs	See Section 2.2 E	15A NCAC 2D .1111, 40 CFR 63, Subpart DDDDD

**1. 15A NCAC 2D .0503: PARTICULATES FROM FUEL BURNING INDIRECT HEAT EXCHANGERS**

- a. Emissions of particulate matter from the combustion of coal and fuel oil that are discharged from this source into the atmosphere shall not exceed 0.16 pound per million Btu heat input. [15A NCAC 2D .0503(c)]

**Testing** [15A NCAC 2D .0501(c)]

- b. If emissions testing is required, the testing shall be performed in accordance General Condition JJ. If the results of this test are above the limit given in Section 2.1 V. 1. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0503.

**Monitoring/Recordkeeping** [15A NCAC 2Q .0508(f)]

- c. To assure compliance, the Permittee shall follow the monitoring, recordkeeping, and reporting requirements per Specific Conditions 2.1 V. 2. d-h. The Permittee shall be deemed in noncompliance with 2D .0503 if the monitoring and recordkeeping is not maintained.

**2. 15A NCAC 2D .0504: PARTICULATES FROM WOOD BURNING INDIRECT HEAT EXCHANGERS**

- a. Emissions of particulate matter from this source shall not exceed an allowable emission rate as calculated by the following equation: [15A NCAC 2D .0504]

$$E_c = [(0.31)(Q_w) + (0.16)(Q_o)]/Q_t$$

Where;

$E_c$  = emission limit for combined firing (pound per mmBtu);

$Q_w$  = actual wood heat input including woodwaste;

$Q_o$  = actual heat input other than wood heat input; and

$Q_t$  =  $Q_w + Q_o$

**Testing** [15A NCAC 2D .0501(c)]

- b. If emissions testing is required, the testing shall be performed in accordance General Condition JJ. If the results of this test are above the limit given in Section 2.1 V. 2. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0504.
- c. Under the provisions of NCGS 143-215.108, the Permittee shall demonstrate compliance with the emission limit(s) above by testing the boiler for particulate matter in accordance with a testing protocol approved by the DAQ. Details of the emissions testing and reporting requirements can be found in Section 3 - General Condition JJ. Testing shall be completed and the results submitted within the calendar year of the effective date of Permit No. 08961T08 unless an alternate date is approved by the DAQ. The testing shall be performed annually thereafter. If the results of the testing demonstrate results at less than 80 percent of the limit above, the testing frequency may reduced to every five years. If the results of this or any test are above the limit given in Section 2.1 V. 2. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0504.

**Monitoring/Recordkeeping** [15A NCAC 2Q .0508(f)]

- d. Particulate matter emissions from the boiler shall be controlled by the multicyclone and venturi-type wet scrubber. The Permittee shall install, operate, and maintain a wet scrubbing liquid flowmeter and pressure drop indicator on the scrubber. To assure compliance and the effective operation of the scrubber, the Permittee shall continuously monitor and record scrubbing liquid flow rate and pressure drop on a 3-hour block average.

The scrubber parameter monitoring system downtime shall not exceed two (2) percent of the monitoring time in any semi-annual reporting period. If the emission source(s) is not operating, a record of this fact along with the corresponding date and time shall substitute for the observation. The readings shall be recorded in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. To ensure quality, the flow rate gauges or devices shall be calibrated annually.

The scrubber shall be operated to ensure the following operational parameters are maintained:

i. The pressure drop across the scrubber shall be greater than 4 inches water column, and

ii. The scrubbing liquid flow rate shall be greater than 450 gallons per minute

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0504 if the scrubbing liquid flow rate or pressure drop is not maintained above the above prescribed value(s) or if these records are not maintained.

- e. If the scrubber liquid flow rate or pressure drop readings recorded as required in Section 2.1. V.2.d., above, are observed to be outside the prescribed range, the Permittee shall inspect the scrubber(s) for malfunctions and clean or repair, as necessary. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0504 if the inspections, cleaning, and repairs are not performed.
- f. The results of inspection and maintenance activities, discussed above for the scrubbers, shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative of DAQ upon request. The logbook shall record the following:
- i. the date and time of each recorded action
- ii. the results of each inspection;
- iii. the causes for any variance from the prescribed operating range for the scrubbers(s); and
- iii. corrective actions taken.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0504 if these records are not maintained.

**Reporting** [15A NCAC 2Q .0508(f)]

- g. The Permittee shall submit a summary report of the monitoring and recordkeeping activities postmarked on or

before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

**3. 15A NCAC .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES**

- a. Emissions of sulfur dioxide from this source shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard. [15A NCAC 2D .0516]

**Testing** [15A NCAC 2D .0501(c) and 2D .0608]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1.V.3. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516.

**Monitoring/Recordkeeping** [15A NCAC 2Q .0508(f), and 2D .0608]

- c. To assure compliance with 2.1.V.3.a, the Permittee shall monitor the sulfur content and heat content of the coal by using coal supplier certification per total shipment received. The results of the coal supplier certifications shall be recorded in a logbook (written or electronic format) and include the following information:

- i. the name of the coal supplier;
- ii. a statement verifying that the methods used to determine the maximum sulfur content of the coal was in accordance with the following:
  - (A) sampling - ASTM Method D 2234;
  - (B) preparation - ASTM Method D 2013;
  - (C) gross calorific value (Btu) - ASTM Method D-2015, D-3286, D-1989, or D-5865;
  - (D) moisture content - ASTM Method D 3173 or D-3302; and
  - (E) sulfur content - ASTM Method D 3177 or ASTM Method D 4239.

Alternate test methods may be used upon prior DAQ approval per 15A NCAC 2D .0501(c)(18).

- d. Additionally, the Permittee is required to calculate and record in a logbook (written or electronic format) the equivalent emission rate in pounds of sulfur dioxide per million Btu heat content of the coal per total shipment. This equivalent sulfur dioxide emission rate (pounds per million Btu heat input) shall be calculated in accordance with Method 19 of 40 CFR 60, Appendix A, Section 12.6 – Sulfur Retention Credit for Compliance Fuel. The Permittee shall be deemed in noncompliance if the results show an exceedance of the limit given in Section 2.1 V. 3. a. above.  
The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516 and 2D .0608 if the requirements above are not monitored and recorded.

**Reporting** [15A NCAC 2Q .0508(f) and 2D .0608]

- e. The Permittee shall submit a summary report of the coal supplier certifications and calculated emission rates postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0608 if the reports are not submitted.

**4. 15A NCAC 2D .0519: CONTROL OF NITROGEN OXIDES EMISSIONS**

- a. Emissions of nitrogen oxides from these sources when burning coal and oil shall be calculated by the following equation [15A NCAC 2D .0519]:

$$E = [(Ec)(Qc) + (Eo)(Qo)]/Qt$$

- where: E = emission limit for combined burning of coal and oil in pounds per million Btu heat input
- Ec = 1.8 pounds per million Btu heat input for coal only
  - Eo = 0.8 pounds per million Btu heat input for oil only
  - Qc = coal heat input in Btu per hour
  - Qo = oil heat input in Btu per hour

$$Q_t = Q_c + Q_o$$

**Testing** [15A NCAC 2D .0501(c)]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .0501(c) and General Condition JJ. If the results of this test are above the limit given in Section 2.1 V.4.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0519.
- c. **Monitoring/Recordkeeping** [15A NCAC 2Q .0508(f)]  
No monitoring recordkeeping or reporting is required for the burning of coal or oil in this source.

**5. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS**

- a. Visible emissions from this sources shall not be more than **40 percent opacity** (except during startups) when averaged over a six-minute period except that six-minute periods averaging not more than 90 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period. [15A NCAC 2D .0521(c)]
- b. For sources required to install, operate, and maintain continuous opacity monitoring systems (COMS), compliance with the 40 percent opacity limit shall be determined as follows:[15A NCAC 2D .0521(g)]
  - i. No more than four six-minute periods shall exceed the opacity standard in any one day; and
  - ii. The percent of excess emissions (defined as the percentage of monitored operating time in a calendar quarter above the opacity limit) shall not exceed 0.8 percent of the total operating hours. If a source operates less than 500 hours during a calendar quarter, the percent of excess emissions shall be calculated by including hours operated immediately previous to this quarter until 500 operational hours are obtained.

Excess emissions during startup and shutdown shall be excluded from the determinations in paragraphs b.i. and b.ii. above, if the excess emissions are exempted according to the procedures set out in 2D .0535(g). Excess emissions during malfunctions shall be excluded from the determinations in paragraphs b.i. and b.ii. above, if the excess emissions are exempted according to the procedures set out in 2D .0535(c). All periods of excess emissions shall be included in the determinations in paragraphs b.i. and b.ii above until such time that the excess emissions are exempted according to the procedures in 2D .0535.

**Testing** [15A NCAC 2D .0501(c)(8)]

- c. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .0501(c)(8) and General Condition JJ. If the results of this test are above the limit given in Section 2.1 V.5.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

**Monitoring/Recordkeeping** [15A NCAC 2Q .0508(f)]

- d. The Permittee shall use a continuous opacity monitoring system (COMS) to monitor and record opacity. Continuous emissions monitoring and recordkeeping of opacity shall be performed as described in Paragraphs 2 and 3.1.1 through 3.1.5 of Appendix P of 40 CFR Part 51. The monitoring systems shall meet the minimum specifications described in Paragraphs 3.3 through 3.8 of Appendix P of 40 CFR Part 51. During periods of unreliability of the COMS on Riley Bark Boiler due to uncombined water in the stack, the Permittee shall demonstrate compliance with the opacity limit in Section 2.1.V.5.a using the scrubber monitoring in Section 2.1.V.2.d above. The Permittee shall document periods of unreliability due to uncombined water or in the stack.  
The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521 if the monitoring is not performed, if the monitored values exceed the limitations given above, or if the records are not maintained.

**Reporting** [15A NCAC 2Q .0508(f)]

- e. The Permittee shall submit a summary report of the monitoring data postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

**6. 15A NCAC 2D .0606: SOURCES COVERED BY APPENDIX P OF 40 CFR PART 51 (CONTINUOUS OPACITY MONITORING AND EXCESS EMISSIONS)**

For the Riley Bark Boilers (**ID No. G11042**) the provisions of 15A NCAC 2D .0606 apply as follows:

**Monitoring/Recordkeeping** [15A NCAC 2Q .0508(f) and 2D .0606]

- a. The Permittee shall use a continuous opacity monitoring system (COMS) to monitor and record opacity. Continuous emissions monitoring and recordkeeping of opacity shall be performed as described in Paragraphs 2 and 3.1.1 through 3.1.5 of Appendix P of 40 CFR Part 51. The monitoring systems shall meet the minimum specifications described in Paragraphs 3.3 through 3.8 of Appendix P of 40 CFR Part 51.

During periods of unreliability of the COMS on Riley Bark Boiler due to uncombined water in the stack, the Permittee shall demonstrate compliance with the opacity limit in Section 2.1.V.5.a using the scrubber monitoring in Section 2.1.V.2.d above. The Permittee shall document periods of unreliability due to uncombined water or in the stack. These periods shall be excluded from the excess emissions calculations below and shall not be to be considered monitor downtime, provided the monitors are otherwise operating during these periods.

- b. The quarterly excess emissions (EE) reports required under Appendix P of 40 CFR Part 51 shall be used as an indication of good operation and maintenance of the multicyclone and scrubber. These sources shall be deemed to be properly operated and maintained if the percentage of time the opacity emissions, calculated on a 6-minute average, in excess of **40 percent** (including startups, shutdowns, and malfunctions) does not exceed 3.0 percent of the total operating time for any given calendar quarter, adjusted for monitor downtime (MD) as calculated below. In addition, these sources shall be deemed to be properly operated and maintained if the %MD does not exceed 2.0 percent.

Calculations for %EE and %MD

Percent Excess Opacity Emission (%EE) Calculation:

$$\%EE = \frac{\text{Total Excess Emission Time}^*}{(\text{Total Source Operating Time}^{***}) - (\text{Monitor Downtime})} \times 100$$

Percent Monitor Downtime (%MD) Calculation for COMS:

$$\%MD = \frac{\text{Total Monitor Downtime}^{**}}{(\text{Total Source Operating Time}^{***})} \times 100$$

- \* Total Excess Emission Time contains any 6-minute period greater than 40% opacity including startup, shutdown, and malfunction.
- \*\* Total Monitor Downtime includes Quality Assurance (QA) activities unless exempted by regulation or defined in an agency approved QA Manual. The amount of exempt QA Time will be reported in the quarterly report as such.
- \*\*\* If a source operates less than 2200 hours during any quarter, the source may calculate the %EE and/or %MD using all operating data for the current quarter and the preceding quarters until 2200 hours of data are obtained. [N.C.G.S. 143-215.110]

**Reporting** [15A NCAC 2Q .0508(f) and 2D .0606]

- c. The Permittee shall submit the excess emissions and monitor downtime reports as required under Appendix P of 40 CFR Part 51 no later than January 30 of each calendar year for the preceding three-month period between October and December, April 30 of each calendar year for the preceding three-month period between January and March, July 30 of each calendar year for the preceding three-month period between April and June, and October 30 of each calendar year for the preceding three-month period between July and September. For periods of excess emissions, defined as each six-minute period average greater than **40 percent opacity**, the opacity measurements recorded by the COMS shall be reported as described in Paragraphs 4 and 5.1 of Appendix P of 40 CFR Part 51 except that a six-minute time period shall be deemed as an appropriate alternative opacity averaging period as described in Paragraph 4.2 of Appendix P of 40 CFR Part 51. A minimum of 36 data points, equally spaced, is required to determine a valid six-minute value. All instances of deviations from the requirements of this permit must be clearly identified. All excluded periods due to unreliability of the COMS on the Riley Bark Boiler due to uncombined water in the stack shall be clearly identified.

**W. Bark Fuel Feed System and associated transfer cyclone and “Depoly” Fuel Feed System and associated transfer cyclone (ID No. 11044) for Riley Bark Boiler.**

**Utility boiler flyash handling system consisting of the main flyash silo and pneumatic flyash collection system (ID No. 11045) and separate No. 4 Power Boiler flyash transfer silo (ID No. 11025).**

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
particulate	$E = 4.10 P^{0.67}$	15A NCAC 2D .0515
visible emissions	40 percent opacity	15A NCAC 2D .0521

**1. 15A NCAC 2D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES**

- a. Emissions of particulate matter from each of these sources shall not exceed an allowable emission rate as calculated by the following equation: [15A NCAC 2D .0515(a)]

$$E = 4.10 \times P^{0.67} \quad \text{Where } E = \text{allowable emission rate in pounds per hour}$$

$$P = \text{process weight in tons per hour}$$

**Testing** [15A NCAC 2D .0501 (c)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1.W.1. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515.

**Monitoring/Recordkeeping** [15A NCAC 2Q .0508(f)]

- c. Particulate matter emissions from the Bark Feed System and “Depoly” Feed System (**ID No. G11044**) shall be controlled by the respective, associated cyclone. Particulate matter emissions from the Utility Boiler Flyash Handling System (**ID Nos. G11045 and G11025**) shall be controlled by their respective bin vent bagfilters and the pneumatic system dust separator cyclone with bagfilters. To assure compliance, the Permittee shall perform inspections and maintenance. As a minimum, the inspection and maintenance requirement shall include the following:
  - i. a monthly visual inspection (for each calendar month, not to exceed 6 weeks from the previous inspection) of the system ductwork and material collection unit for leaks; and
  - ii. an annual internal inspection (for each calendar year, not to exceed 14 months from the previous inspection) of the bagfilters’ and cyclones’ structural integrity.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if the ductwork, bagfilters, and cyclones are not inspected and maintained.

- d. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
  - i. the date and time of each recorded action;
  - ii. the results of each inspection;
  - iii. the results of any maintenance performed on the bagfilters or cyclones; and
  - iv. any corrections made.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if these records are not maintained.

**Reporting** [15A NCAC 2Q .0508(f)]

- e. The Permittee shall submit the results of any maintenance performed on the bagfilters or cyclones within 30 days of a written request by the DAQ.
- f. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations

from the requirements of this permit must be clearly identified.

## 2. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions from the Bark Feed System and “Depoly” Feed System (**ID No. G11044**) and Utility Boiler Flyash Handling System (**ID Nos. G11045 and G11025**) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 2D .0521 (d)]

### **Testing** [15A NCAC 2D .0501(c)(8)]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .0501(c)(8) and General Condition JJ found in Section 3. If the results of this test are above the limit given in 2.1.W.2.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

### **Monitoring** [15A NCAC 2Q .0508(f)]

- c. To assure compliance, once a month the Permittee shall observe the emission points of the sources for any visible emissions above normal. The Permittee shall establish “normal” for the source in the first 30 days following the effective date of permit 08961T08. If visible emissions from any source are observed to be above normal, the Permittee shall either:
  - i. take appropriate action to correct the above-normal emissions within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
  - ii. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 2D .0501(c)(8) is below the limit given above.The Permittee shall be deemed in noncompliance with 15A NCAC 2D.0521 unless (within the monitoring period) either: 1) the above-normal emissions are corrected per (i) above or, 2) the demonstration per (ii) above is made.

### **Recordkeeping** [15A NCAC 2Q .0508(f)]

- d. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
  - i. the date and time of each recorded action;
  - ii. the results of each observation and/or test noting those sources with emissions that were observed to be above normal along with any corrective actions taken to reduce visible emissions; and
  - iii. the results of any corrective actions performed.The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521 if these records are not maintained.

### **Reporting** [15A NCAC 2Q .0508(f)]

- e. The Permittee shall submit a summary report of the observations postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

**PAPER MACHINES (Area 12)**

**X. No. 20 Paper Machine (ID No. G12048); No. 19 Paper Machine (ID No. G12049);  
 No. 12 Paper Machine (ID No. G12050); and No. 11 Paper Machine (ID No. G12051)**

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulations
Toxic Air Pollutants	State Enforceable Only (See Section 2.3.A.)	15A NCAC 2D .1100

**CHEMICAL PREPARATION (Area 13)**

**Y. Three starch storage silos (30 tons per hour maximum throughput each, ID Nos. G13054, G13055, and G13056) controlled by a 255 square feet of filter area bagfilter, a 183 square feet of filter area bin vent filter, and a 255 square feet of filter area bagfilter (ID Nos. 13-CD-014-01, 13-CD-016-01, and 13-CD-020-01), respectively.**

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
particulate	$E = 4.10 \times P^{0.67}$	15A NCAC 2D .0515
visible emissions	40 percent opacity	15A NCAC 2D .0521

**1. 15A NCAC 2D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES**

- a. Emissions of particulate matter from each of these sources shall not exceed an allowable emission rate as calculated by the following equation: [15A NCAC 2D .0515(a)]

$$E = 4.10 \times P^{0.67} \quad \text{Where } E = \text{allowable emission rate in pounds per hour}$$

$$P = \text{process weight in tons per hour}$$

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

**Testing** [15A NCAC 2D .0501 (c)(3)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1.Y. 1. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515.

**Monitoring/Recordkeeping** [15A NCAC 2Q .0508(f)]

- c. Particulate matter emissions from the starch silos (ID Nos. G13054, G13055, and G13056) shall be controlled by the bagfilters and bin vent filter. To assure compliance, the Permittee shall perform inspections and maintenance. As a minimum, the inspection and maintenance requirement shall include the following:
  - i. a monthly visual inspection (for each calendar month, not to exceed 6 weeks from the previous inspection) of the system ductwork and material collection unit for leaks; and
  - ii. an annual internal inspection (for each calendar year, not to exceed 14 months from the previous inspection) of the bagfilters' and bin vent filter's structural integrity.
 The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if the ductwork, bagfilters, and bin vent filter are not inspected and maintained.
- d. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
  - i. the date and time of each recorded action;
  - ii. the results of each inspection;
  - iii. the results of any maintenance performed on the bagfilters and bin vent filter; and
  - iv. any corrections made.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if these records are not maintained.

**Reporting** [15A NCAC 2Q .0508(f)]

- e. The Permittee shall submit a summary report of the observations postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

**2. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS**

- a. Visible emissions from the starch silos shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 2D .0521 (d)]

**Testing** [15A NCAC 2D .0501(c)(8)]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .0501(c)(8) and General Condition JJ found in Section 3. If the results of this test are above the limit given in 2.1Y.2.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

**Monitoring** [15A NCAC 2Q .0508(f)]

- c. To assure compliance, once a month the Permittee shall observe the emission points of the sources for any visible emissions above normal. The Permittee shall establish a “normal” for the source in the first 30 days following the effective date of permit 08961T08. If visible emissions from any source are observed to be above normal, the Permittee shall either:
  - i. take appropriate action to correct the above-normal emissions within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
  - ii. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 2D .0501(c)(8) is below the limit given above.The Permittee shall be deemed in noncompliance with 15A NCAC 2D.0521 unless (within the monitoring period) either: 1) the above-normal emissions are corrected per (i) above or, 2) the demonstration per (ii) above is made.

**Recordkeeping** [15A NCAC 2Q .0508(f)]

- d. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
  - i. the date and time of each recorded action;
  - ii. the results of each observation and/or test noting those sources with emissions that were observed to be above normal along with any corrective actions taken to reduce visible emissions; and
  - iii. the results of any corrective actions performed.The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521 if these records are not maintained.

**Reporting** [15A NCAC 2Q .0508(f)]

- e. The Permittee shall submit a summary report of the observations postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

**WASTEWATER TREATMENT PLANT (Area 16)**

**Z. WTP Primary Clarifiers (ID No. G16081) and WTP Aeration and Digestion Basins (ID No. G16082)**

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutants	Limits / Standards	Applicable Regulations
Toxic Air Pollutants	State Enforceable Only (See Section 2.3.A.)	15A NCAC 2D .1100

**PAPER CONVERTING (Area 19)**

**AA. Rewinders on Trim System #1 (ID No. G19058) and Rewinders on Trim System #2 (ID No. G19059)**

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
particulate	$E = 4.10 \times P^{0.67}$	15A NCAC 2D .0515
visible emissions	40 percent opacity	15A NCAC 2D .0521

**1. 15A NCAC 2D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES**

- a. Emissions of particulate matter from each of these sources shall not exceed an allowable emission rate as calculated by the following equation: [15A NCAC 2D .0515(a)]

$$E = 4.10 \times P^{0.67} \quad \text{Where } E = \text{allowable emission rate in pounds per hour}$$

$$P = \text{process weight in tons per hour}$$

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

**Testing** [15A NCAC 2D .0501 (c)(3)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1.AA. 1. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515.

**Monitoring/Recordkeeping** [15A NCAC 2Q .0508(f)]

- c. The Permittee shall maintain production records which specify the types of materials processed and shall make these records available to a DAQ authorized representative upon request. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if the production records are not maintained or the types of materials are not monitored.

**2. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS**

- a. Visible emissions from the rewinders shall not be more than 40 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 40 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 90 percent opacity. [15A NCAC 2D .0521 (c)]

**Testing** [15A NCAC 2D .0501(c)(8)]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .0501(c)(8) and General Condition JJ found in Section 3. If the results of this test are above the limit given in 2.1 AA. 2.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

**Monitoring** [15A NCAC 2Q .0508(f)]

- c. To assure compliance, once a month the Permittee shall observe the emission points of the sources for any

visible emissions above normal. The Permittee shall establish a “normal” for the source in the first 30 days following the effective date of permit 08961T08. If visible emissions from any source are observed to be above normal, the Permittee shall either:

- i. take appropriate action to correct the above-normal emissions within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
- ii. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 2D .0501(c)(8) is below the limit given above.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D.0521 unless (within the monitoring period) either: 1) the above-normal emissions are corrected per (i) above or, 2) the demonstration per (ii) above is made.

**Recordkeeping** [15A NCAC 2Q .0508(f)]

- d. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
  - i. the date and time of each recorded action;
  - ii. the results of each observation and/or test noting those sources with emissions that were observed to be above normal along with any corrective actions taken to reduce visible emissions; and
  - iii. the results of any corrective actions performed.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521 if these records are not maintained.

**Reporting** [15A NCAC 2Q .0508(f)]

- e. The Permittee shall submit a summary report of the observations postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

**TURPENTINE RECOVERY (Area 20)**

**BB. No. 1 Hardwood Turpentine Recovery System (ID No. G20060) and No. 2 Pine Turpentine Recovery System (ID No. G20062) exhausting to the NCG collection system (ID No. 07-CD-006-01) for incineration in the No. 4 Lime Kiln or No. 5 Lime Kiln.**

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
HAP	(See Section 2.2.C.)	15A NCAC 2D .1111 (40 CFR Part 63 Subpart S)

**TALL OIL PRODUCTION (Area 21)**

**CC. Tall Oil Reactor (ID No. G21072) controlled by a packed tower-type wet scrubber (10-15 gallons per minute minimum injection rate, ID No. 21-ST-008-01)**

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Toxic Air Pollutants	State Enforceable Only (See Section 2.3.A.)	15A NCAC 2D .1100

**DD. No. 1 Hardwood Fiberline Deckers (ID No. G24092) and No. 2 Pine Fiberline Deckers (ID No. G24094)**

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
HAP	(See Section 2.2.C.)	15A NCAC 2D .1111 (40 CFR Part 63 Subpart S)

**EE. One 1850 horsepower, diesel-fired emergency generator (ID No. 16-CU-001)**

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
sulfur dioxide	2.3 lb/million Btu heat input	15A NCAC 2D .0516
visible emissions	20 percent opacity	15A NCAC 2D .0521
HAPs	Notification Requirements	15A NCAC 2D .1111 (40 CFR Part 63 Subpart ZZZZ)

**1. 15A NCAC 2D .0516: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES**

- a. Emissions of particulate matter from each of these sources shall not exceed an allowable emission rate as calculated by the following equation: [15A NCAC 2D .0515(a)]

$$E = 4.10 \times P^{0.67} \quad \text{Where } E = \text{allowable emission rate in pounds per hour}$$

P = process weight in tons per hour

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

**Testing** [15A NCAC 2D .0501 (c)(3)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1.EE. 1. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515.

**Monitoring/Recordkeeping/Reporting** [15A NCAC 2Q .0508(f)]

- c. No monitoring/recordkeeping/reporting is required from the firing of diesel fuel oil in this source for this regulation.

**2. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS**

- a. Visible emissions from the generator shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 2D .0521 (d)]

**Testing** [15A NCAC 2D .0501(c)(8)]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .0501(c)(8) and General Condition JJ found in Section 3. If the results of this test are above the limit given in 2.1 EE. 2.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

**Monitoring/Recordkeeping/Reporting** [15A NCAC 2Q .0508(f)]

- c. No monitoring/recordkeeping/reporting is required from the firing of diesel fuel oil in this source for this regulation.

**3. 15A NCAC 2D .1111: MACT 40 CFR 63 SUBPART ZZZZ**

- a. The Permittee shall comply with all applicable provisions, including the notification, testing, reporting, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 2D .1111 “Maximum Achievable Control Technology” (MACT) as promulgated in 40 CFR Part 63 Subpart ZZZZ, including Subpart A “General Provisions.”
  - i. For the reciprocating internal combustion engine (ID No. 16-CU-001), the Permittee shall comply with the Initial Notification Requirements per 40 CFR 63.6645(d) contained in Environmental Management Commission Standard 15A NCAC 2D .1111 “Maximum Achievable Control Technology” (MACT) as promulgated in 40 CFR 63 Subpart ZZZZ.
  - ii. The Permittee shall submit an Initial Notification no later than 120 calendar days after initial start-up.

## 2.2- Multiple Emission Sources Specific Limitations and Conditions

### A. Prevention of Significant Deterioration (PSD) BACT-affected Sources:

#### 1. 15A NCAC 2D .0530: PREVENTION OF SIGNIFICANT DETERIORATION

- a. The Permittee shall comply with all applicable provisions, including the notification, testing, reporting, recordkeeping, and monitoring requirements in accordance with 15A NCAC 2D .0530, "Prevention of Significant Deterioration of Air Quality" as promulgated in 40 CFR 51.166. [15A NCAC 2D .0530]

##### Operations Restrictions [15A NCAC 2D .0530]

- b. As required by 40 CFR 51.166 and as approved by the Western North Carolina Air Pollution Control Agency in the Final BACT Determination dated July 27, 1984, the following requirements on the No. 4 Power Boiler (**ID No. G11040**) shall be met:
  - i. a dust suppression system and enclosed conveyor system for feeding coal to the boilers shall be installed and maintained;
  - ii. the boiler design shall incorporate low excess air in the primary combustion zone and staged combustion, and tangential firing to control NOx emissions;
  - iii. the coal fuel shall be low sulfur coal, and the NSPS limits for sulfur dioxide, and nitrogen oxides shall apply;
  - iv. the particulate matter emissions shall be limited to 0.085 pounds per million Btu;
  - v. boilers Big Bill (**ID No. G11037**), Peter G (**ID No. G11038**), and Riley Coal (**ID No. G11039**) shall be limited to a steam production of no more than 274,000 lb steam/hr (364 million Btu per hour heat input), 274,000 lb steam/hr (364 million Btu per hour heat input), and 300,000 lb steam/hr (399 million Btu per hour heat input), respectively;
  - vi. boilers Big Bill (**ID No. G11037**), Peter G (**ID No. G11038**), and Riley Coal (**ID No. G11039**) shall be limited to particulate matter emissions of no more than 0.15 pounds per million Btu, each;
  - vii. nitrogen oxide emissions from boilers Big Bill, Peter G, Riley Coal, and No. 4 Power Boiler shall be limited to 4,368 tons per 12-month rolling total; and
  - viii. carbon monoxide emissions from boiler Big Bill, Peter G, Riley Coal, and No. 4 Power Boiler shall be limited to 898.2 tons per 12-month rolling total.

The Permittee shall be deemed in noncompliance with 2D .0530 if these operational restrictions are exceeded.

##### Testing [15A NCAC 2D .0501 (c)]

- c. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ found in Section 3. If the results of the testing are above the limits given in Section 2.2. A. 1.b. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530.
- d. Under the provisions of NCGS 143-215.108, the Permittee shall demonstrate compliance with the emission limit(s) above by utilizing the test results of the particulate matter testing required per Section 2.1.T and 2.1.U. If the results of the testing are above the limits given in Section 2.2. A. 1.b. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530.

##### Monitoring, Recordkeeping, and Reporting [15A NCAC 2Q .0508(f)]

- e. For compliance purposes, the following shall be monitored and recorded (in written or electronic format):
  - i. the monthly usage of all fuels burned at the facility, categorized by source, for the previous fourteen months. The usage must be calculated for each of the three twelve month periods over the previous fourteen months;
  - ii. the total monthly nitrogen oxide, and carbon monoxide emissions from Big Bill, Peter G, Riley Coal, and No. 4 Power Boiler for the previous fourteen months. The emissions shall be provided for each of the three twelve month periods over the previous fourteen months; and
  - iii. The Permittee shall keep each monthly record on file for a minimum of three years.
  - iv. The Permittee shall follow the ESP monitoring, and recordkeeping per Specific Conditions 2.1 T. 1. d-e, and 2.1 U.2 d-h.

The Permittee shall be deemed in noncompliance with 2D .0530 if these requirements are not monitored or if the records are not maintained.

**Reporting** [15A NCAC 2Q .0508(f)]

- f. The Permittee shall submit a summary report, acceptable to the Regional Air Quality Supervisor, of monitoring and recordkeeping activities within 30 days after each calendar year quarter, due and postmarked on or before January 30 of each calendar year for the preceding three-month period between October and December, April 30 of each calendar year for the preceding three-month period between January and March, July 30 of each calendar year for the preceding three-month period between April and June, and October 30 of each calendar year for the preceding three-month period between July and September.

**2. 15A NCAC 2Q .0317: AVOIDANCE CONDITIONS for  
15A NCAC 2D .0530: PREVENTION OF SIGNIFICANT DETERIORATION**

- a. In order to avoid applicability of 15A NCAC 2D .0530 for major sources and major modifications, sulfur dioxide emissions from boilers Big Bill, Peter G, Riley Coal, and No. 4 Power Boiler shall be limited to 8,277 tons per 12-month rolling total as approved by the Western North Carolina Air Pollution Control Agency in the PSD application and subsequent permit dated July 27, 1984. [15A NCAC 2D .0530]

**Testing** [15A NCAC 2D .0501 (c)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ found in Section 3. If the result of the testing is above the limit given in Section 2.2. A. 2.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530.

**Monitoring, Recordkeeping, and Reporting** [15A NCAC 2Q .0508(f)]

- c. For compliance purposes, the following shall be monitored and recorded (in written or electronic format):
  - i. the monthly usage of all fuels burned at the facility, categorized by source, for the previous fourteen months. The usage must be calculated for each of the three twelve month periods over the previous fourteen months;
  - ii. the total monthly sulfur dioxide emissions from Big Bill, Peter G, Riley Coal, and No. 4 Power Boiler for the previous fourteen months. The sulfur dioxide data shall utilize fuel sulfur sampling results for coal and fuel oil. The emissions shall be provided for each of the three twelve month periods over the previous fourteen months; and
  - iii. The Permittee shall keep each monthly record on file for a minimum of three years. The Permittee shall be deemed in noncompliance with 2D .0530 if these requirements are not monitored or if the records are not maintained.

**Reporting** [15A NCAC 2Q .0508(f)]

- d. The Permittee shall submit a summary report, acceptable to the Regional Air Quality Supervisor, of monitoring and recordkeeping activities within 30 days after each calendar year quarter, due and postmarked on or before January 30 of each calendar year for the preceding three-month period between October and December, April 30 of each calendar year for the preceding three-month period between January and March, July 30 of each calendar year for the preceding three-month period between April and June, and October 30 of each calendar year for the preceding three-month period between July and September.

**B. Nitrogen Oxides Emissions Allocation-affected Sources:**

**1. 15A NCAC 2D .1417 EMISSION ALLOCATIONS FOR LARGE COMBUSTION SOURCES**

- a. The facility shall comply with 15A NCAC 2D .1417. The Permittee has the following allocations of nitrogen oxide emissions during the May 31, 2004 through September 30, 2004 ozone season and the May 1st through September 30th ozone seasons thereafter, from the affected sources as summarized in the table below:

Source	NO <sub>x</sub> Emission Allocations (tons/ozone season) 2004	NO <sub>x</sub> Emission Allocations (tons/ozone season) 2005	NO <sub>x</sub> Emission Allocations (tons/ozone season) 2006 and later
Big Bill Boiler	212	265	141
Peter G Boiler	187	234	125
Riley Coal Boiler	358	447	239
No. 4 Power Boiler	365	456	244
Riley Bark Boiler	135	169	90

**Monitoring/Recordkeeping** [15A NCAC 2D .0508(f), 15A NCAC 2D .1417(e), 15A NCAC 2D .1404(d)]

- b. The sources listed above shall comply with the requirements of 15 A NCAC 2D .1417 using the nitrogen oxide budget trading program set out in 15A NCAC 2D .1419 and as follows:
  - i. Sources shall using the procedures of and complying with the requirements of 40 CFR Part 96, Nitrogen Oxide Budget Trading Program for State Implementation Plans, with the following exceptions:
    - (1) Permit applications shall be submitted following the procedures and schedules in this Section and in Subchapter 2Q of this Title instead of the procedures and schedules in 40 CFR Part 96; and
    - (2) The dates and schedules for monitoring systems in 40 CFR Part 96 shall not apply; however, if a source operates during the ozone season, it shall have installed and begun operating by May 31, 2004, a continuous emissions monitoring system that complies with 40 CFR Part 96.
- c. During the ozone season, the Permittee shall show compliance using continuous emissions monitors that meet the requirements of 40 CFR Part 75, Subpart H or 40 CFR Part 96 [15A NCAC 2D .1417(e)].
- d. All emission control devices and techniques installed to comply with 15A NCAC 2D .1417 shall be operated during the ozone season as defined above in the manner in which they are designed and permitted to be operated.
- e. The Permittee shall submit an application, to revise the permit in order to make a modification or to construct and begin operating a control device, before source modification(s) or control device installation(s).

**Reporting** [15A NCAC 2D .1404]

- f. The Permittee shall comply with the reporting requirements of 40 CFR Part 96, Budget Trading Program for State Implementation Plans. No later than October 30, the owner or operator shall report to the Director the tons of nitrogen oxides emitted during the previous ozone season. The Division of Air Quality shall make this information publicly available.

**C. 40 CFR 63, Subpart S Affected Sources:**

Source ID No.	Source Description	Control ID No	Control Description
<b>Bleaching System Sources</b>			
<b>G05012</b>	<b>No. 1 Hardwood Fiberline Bleaching System:</b>	05-CD-002-01	No.1 Hardwood Fiberline Bleach Plant Wet Scrubber (via closed-vent collection system)
ES 05-PU-003	D1 (ClO <sub>2</sub> ) Stage Tower		
ES 05-PU-004	D1 (ClO <sub>2</sub> ) Stage Washer		
ES 05-TK-003	D1 (ClO <sub>2</sub> ) Stage Filtrate Tank		
ES 05-PU-010	D2 (ClO <sub>2</sub> ) Stage Tower		
ES 05-PU-012	D2 (ClO <sub>2</sub> ) Stage Washer		
ES 05-TK-011	D2 (ClO <sub>2</sub> ) Stage Filtrate Tank		
<b>G05013</b>	<b>No. 2 Pine Fiberline Bleaching System:</b>	05-CD-017-01	No.2 Pine Fiberline Bleach Plant Wet Scrubber (via closed-vent collection system)
ES 05-PU-017	D1 (ClO <sub>2</sub> ) Stage Tower		
ES 05-TK-018	D1 (ClO <sub>2</sub> ) Stage Filtrate Tank		
ES 05-PU-021	D2 (ClO <sub>2</sub> ) Stage Tower		
ES 05-TK-027	D2 (ClO <sub>2</sub> ) Stage Filtrate Tank		

**C. 40 CFR 63, Subpart S Affected Sources, continued:**

Source ID No.	Source Description	Control ID No	Control Description
<b>LVHC System Sources</b>			
<b>G07018</b>	<b>Foul Condensate System:</b>	ES G09029	No. 5 Lime Kiln (primary) (via closed-vent Collection System)
ES 07-PU-015	Condensate Stripper	or	or
ES 07-TK-011	Stripper Feed Tank		
ES 07-TK-014	Reflux Tank LVHC Foul Gas Collection System Cooler	ES G09028	No. 4 Lime Kiln (backup) (via closed-vent Collection System)
	HVLC Foul Gas Collection System Cooler		
<b>G02004</b>	<b>Digester Area:</b>	ES G09029	No. 5 Lime Kiln (primary) (via closed-vent Collection System)
ES 02-PU-001 thru ES 02-PU-0018	18 batch digesters	or	or
ES 02-PU-005	No. 1 Hardwood Blow Tank	ES G09028	No. 4 Lime Kiln (backup) (via closed-vent Collection System)
ES 02-PU-006	No. 1 Hwd Fiberline Accumulator		
ES 02-PU-008	No. 1 Hwd Secondary Condenser		
ES 02-PU-003	No. 2 Pine Blow Tank		
ES 02-PU-007	No. 2 Pine Fiberline Accumulator		
ES 02-PU-009	No. 2 Pine Secondary Condenser		
<b>G20060</b>	<b>No. 1 Hardwood Turpentine System:</b>	ES G09029	No. 5 Lime Kiln (primary) (via closed-vent Collection System)
ES 20-PU-001	Turpentine Entrainment System	or	or
ES 20-PU-002	Turpentine Condenser	ES G09028	No. 4 Lime Kiln (backup) (via closed-vent Collection System)
ES 20-TK-003	Turpentine Decanter		
ES 20-TK-004	Turpentine Underflow Tank		
ES 20-TK-005	Turpentine Transfer Tank		
<b>G20061</b>	<b>No. 2 Pine Turpentine System:</b>	ES G09029	No. 5 Lime Kiln (primary) (via closed-vent Collection System)
ES 20-PU-006	Turpentine Entrainment System	or	or
ES 20-PU-007	Turpentine Condenser	ES G09028	No. 4 Lime Kiln (backup) (via closed-vent Collection System)
ES 20-TK-008	Turpentine Decanter		
ES 20-TK-009	Turpentine Underflow Tank		
ES 20-TK-010	Turpentine Transfer Tank		
<b>G07016</b>	<b>Evaporator Area:</b>	ES G09029	No. 5 Lime Kiln (primary) (via closed-vent Collection System)
ES 07-PU-002	Swenson Evaporators	or	or
ES 07-TK-006	Swenson Evaporator Hotwell	ES G09028	No. 4 Lime Kiln (backup) (via closed-vent Collection System)
ES 07-PU-003	West GB Evaporators		
ES 07-TK-006	West GB Evaporator Hotwell		

**C. 40 CFR 63, Subpart S Affected Sources, continued:**

Source ID No.	Source Description	Control ID No	Control Description
<b>HVLC System Sources</b>			
<b>G03005</b>	<b>No. 1 Hardwood Fiberline Brownstock Washing:</b>	NA	NA
ES 03-PU-001	Washers / Filtrate Tanks		
ES 03-TK-003	Foam Tank No. 1		
ES 03-TK-004	Foam Tank No. 2		
<b>G03006</b>	<b>No. 2 Pine Fiberline Brownstock Washing:</b>	NA	NA
ES 03-PU-032	Washers / Filtrate Tanks (enclosed sources)		
ES 03-TL-015	Pre-O <sub>2</sub> Feed Tank No. 1		
ES 03-TL-016	Pre-O <sub>2</sub> Feed Tank No. 2		
ES 03-TL-017	Pre-O <sub>2</sub> Feed Tank No. 3		
<b>G04009</b>	<b>No. 1 Hardwood Fiberline Oxygen Delignification:</b>	NA	NA
ES 04-PU-001	Oxygen Reactor (enclosed source)		
ES 04-TK-005	O <sub>2</sub> Blow Tank		
ES 04-PU-002	Post O <sub>2</sub> Washer		
ES 04-TK-008	Primary Screen Feed		
ES 04-PU-009	East Decker		
ES 04-PU-004	West Decker		
ES 04-TK-007	Decker Filtrate Tank		
<b>G04010</b>	<b>No. 2 Pine Fiberline Oxygen Delignification:</b>	NA	NA
ES 04-PU-014	Oxygen Reactor (enclosed source)		
ES 04-TK-018	O <sub>2</sub> Blow Tank		
ES 04-PU-016	Post O <sub>2</sub> Washer		
ES 04-PU-015	Decker		
ES 04-TK-017	Decker Filtrate Tank		
<b>G04025</b>	<b>No. 1 Hardwood Fiberline Pulp Screening System</b>	NA	NA
<b>G04026</b>	<b>No. 2 Pine Fiberline Pulp Screening System</b>	NA	NA

**C. 40 CFR 63, Subpart S Affected Sources, continued:**

The following table provides a summary of limits and standards for the emission source(s) describe above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Hazardous Air Pollutants	<p><b><u>Bleaching System</u></b>                      10 ppmv total chlorinated HAP</p> <p><b><u>LVHC System</u></b>                      Route system vents to No. 4 Lime Kiln or No. 5 Lime Kiln</p> <p><b><u>HVLC System</u></b>                      Route non-exempt system vents to control device complying with the requirements of the MACT (See Permit Condition 2.2 C.1.d)</p> <p>No control is required for HAP emissions from brownstock washing and oxygen delignification systems under an alternate compliance approach using the equivalency by permit option authorized under 40 CFR §63.94. (See Permit Condition 2.2 C.2.)</p> <p><b><u>Pulping Condensate Collection</u></b>                      Collect a minimum 11.1 pounds HAP per ODTP followed by treatment in the Condensate Steam Stripper, meeting: 92 percent HAP removal, or 10.2 pounds HAP per ODTP removal</p>	15 A NCAC 2D .1111 (40 CFR 63 Subpart S)

**1. 15A NCAC 2D .1111: MACT 40 CFR 63 SUBPART S**

- a. The Permittee shall comply with all applicable provisions, including the notification, testing, reporting, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 2D .1111 “Maximum Achievable Control Technology” (MACT) as promulgated in 40 CFR Part 63 Subpart S, including Subpart A “General Provisions.” Terms used throughout this section are defined in the Clean Air Act as amended in 1990 and in 40 CFR 63.2 and 63.441. Units and abbreviations are defined in 40 CFR 63.3 [15A NCAC 2D .1111]

**Emission Limitations** [15A NCAC 2D .1111]

**Standards for the Bleaching Systems** (40 CFR 63.445)

- b. The Permittee shall meet the following control requirements for bleaching systems using chlorinated compounds [40 CFR 63, Subpart 63.445]:
  - i. The equipment at each bleaching stage of the bleaching systems, where chlorinated compounds are introduced shall be enclosed and vented into a closed vent system meeting the requirements specified in 40 CFR 63.450 and introduced into the respective Bleach Plant Scrubbers (ID Nos. 05-CD-002-01 and 05-CD-017-01);
  - ii. The scrubbers (ID Nos. 05-CD-002-01 and 05-CD-017-01) shall achieve a treatment device outlet concentration of 10 ppmv or less of total chlorinated HAP; and
  - iii. The Permittee shall not use hypochlorite or chlorine for bleaching in the bleaching systems listed above.

**Standards for the LVHC and HVLC pulping systems at kraft processes** (40 CFR 63.443(a)).

- c. The Permittee shall meet the following control requirements for the total HAP emissions from the LVHC system [40 CFR 63, Subpart 63.443]:
  - i. Each LVHC system component shall be enclosed and vented into a closed vent system meeting the requirements of 40 CFR 63.450, and routed to:
    - A. The Lime Kilns (ID Nos. ES G09028 and G09029) by introducing the HAP emission stream with the primary fuel or into the flame zone.

- d. Except as specified in Specific Condition 2.2.C.2, the Permittee shall meet the following control requirements for the HAP emissions from the HVLC system [40 CFR 63, Subpart 63.443]
  - i. Unless otherwise exempt per Specific Condition 2.2.C.2 or 40 CFR 63.443, each HVLC system component shall be enclosed and vented into a closed vent system meeting the requirements of 40 CFR 63.450, and routed to a control device meeting the requirements of the MACT.
    - A. Pursuant to 40 CFR 63.443(a)(1)(ii)(C), each knotter and screen system with total emissions of less than 0.3 pounds of total HAP per ton of ODTP are exempt from the HVLC control requirements of Subpart S. Based on the June 2004 exemption analysis, the following sources are exempt:
      - (1). ES-04-TK-008, G04025, and G04026.
    - B. Pursuant to 40 CFR 63.443(a)(1)(iv)(B), each decker system that does not use any process water with a total HAP concentration greater than 400 parts per million by weight are exempt from the HVLC control requirements of Subpart S. Based on the June 2004 exemption analysis, the following sources are exempt:
      - (1). ES-04-PU-009, ES-04-PU-004, ES-04-TK-007, ES-04-PU-015, and ES-04-TK-017.
- e. Periods of excess emissions reported under Sec. 63.455 shall not be a violation of Sec. 63.443 (c) and (d) provided that the time of excess emissions (excluding periods of startup, shutdown, or malfunction) divided by the total process operating time in a semi-annual reporting period does not exceed the following levels:
  - i. One percent for the LVHC System.

**Standards for kraft pulping process condensates** (40 CFR 63.446).

- f. The pulping process condensates as identified per 40 CFR 63.446(b) shall be conveyed in a closed collection system that is designed and operated to meet the following requirements
  - i. Each closed collection system shall meet the individual drain system requirements specified in 40 CFR 63.960, 63.961, and 63.962, except for closed vent systems;
  - ii. Closed vent systems shall be designed and operated in accordance with 40 CFR 63.450;
  - iii. The process condensate streams collected in total shall contain a minimum of 11.1 pounds HAP per ton of oven dried pulp produced (based on a 30-day rolling average);
  - iv. The Stripper Feed Tank (ID Nos. ES 07-TK-011) shall meet the requirements of 40 CFR 63.446(d)(2); and
  - v. The pulping process condensates collected shall be treated by the Foul Condensate Steam Stripper (ID No. ES 07-PU-015) which shall:
    - A. Reduce or destroy the total HAPs by at least 92 percent or more by weight; or
    - B. Remove a minimum of 10.2 pounds HAP per ton of oven dried pulp (ODTP).
  - vi. For the foul condensate steam stripper system used to comply with the requirements specified in paragraph 63.446(e)(3) or (5), periods of excess emissions reported under Sec. 63.455 shall not be a violation of paragraphs 63.446(d), (e), and (f) provided that the time of excess emissions (including periods of startup, shutdown, or malfunction) divided by the total process operating time in a semi-annual reporting period does not exceed 10 percent.
- g. **Testing** [15A NCAC 2D .0501(c)]

If emissions testing is required, the testing shall be performed in accordance General Condition JJ found in Section 3. If the results of this test are above the limits given in Section 2.2 C.1 b. through e. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111.

**Monitoring for the Bleaching System Scrubbers** [15A NCAC 2Q .0508(f)]

- h. The Permittee shall install, calibrate, certify, operate, and maintain according to the manufacturer's specifications, a continuous monitoring system (CMS), on the No. 1 Bleach Plant Wet Scrubber (**ID No. 05-CD-002-01**). The CMS shall include a continuous recorder. The CMS shall be operated to ensure the following operational parameters are maintained [40 CFR 60, Subpart 63.453]:
  - i. The minimum pH of the scrubber's effluent shall be 9.23 (averaged over three hours);
  - ii. The scrubber's inlet vent gas fan operating status of "on" (on or off based on motor load); and
  - iii. The minimum scrubber liquid recirculation rate for the respective scrubber shall be 85.8 gallons per minute.

If any monitoring parameter values are exceeded or if the monitoring procedures are not followed, the Permittee shall be deemed in noncompliance with 2D .1111.

The Permittee shall install, calibrate, certify, operate, and maintain according to the manufacturer's specifications, a continuous monitoring system (CMS), on the No. 2 Bleach Plant Wet Scrubber (**ID No. 05-CD-017-01**). The CMS shall include a continuous recorder. The CMS shall be operated to ensure the following operational parameters are maintained [40 CFR 60, Subpart 63.453]:

- iv. The minimum pH of each scrubber's effluent shall be 8.38 (averaged over three hours);
- v. The scrubber's inlet vent gas fan operating status of "on" (on or off based on motor load) ; and
- vi. The minimum scrubber liquid recirculation rate for the respective scrubber shall be 27.57 gallons per minute.

If any monitoring parameter values are exceeded or if the monitoring procedures are not followed, the Permittee shall be deemed in noncompliance with 2D .1111.

**Monitoring for the LVHC pulping systems Control Devices** [15A NCAC 2D .1111]

- i. No control device parameter monitoring is required for pulping vent systems routed to the No. 4 Lime Kiln (ID No. ES G09028) or the No. 5 Lime Kiln (ID No. ES G09029). [40 CFR 60, Subpart 63.453]

**Monitoring for the pulping process Condensate Collection:**[15A NCAC 2D .1111]

- j. The Permittee shall install, calibrate, certify, operate, and maintain according to the manufacturer's specifications, a continuous monitoring system (CMS) to monitor condensate collection. The CMS shall include a continuous recorder. The CMS shall be operated to ensure the following operational parameters are maintained on a 15-day rolling average of stripper operating days. [40 CFR 60, Subpart 63.453]:
  - i. Foul condensates collected in the Stripper Feed Tank shall be equal to or greater than 379 gallons per minute; and
  - ii. Foul condensates from the Black Liquor Oxidizer gas collection system shall be collected and sent to the Stripper Feed Tank.

If any monitoring parameter values are exceeded or if the monitoring procedures are not followed, the Permittee shall be deemed in noncompliance with 2D .1111.

**Monitoring for the pulping process condensates Steam Stripper (ID No ES 07-PU-015)** [15A NCAC 2D .1111];

- k. The Permittee shall install, calibrate, certify, operate, and maintain according to the manufacturer's specifications, a continuous monitoring system (CMS) on the Condensate Stripper (ID No ES 07-PU-015). The CMS shall include a continuous recorder. The CMS shall be operated to ensure the following operational parameters are maintained on a 15-day rolling average of stripper operating days. [40 CFR 60, Subpart 63.453]:
  - i. Foul condensates feed from the Stripper Feed Tank shall be equal to or greater than 379 gallons per minute;
  - ii. The temperature of the foul condensates feed shall be equal to or greater than 161Deg. F; and
  - iii. Steam feed to the Foul Condensate Stripper shall be equal to or greater than 38,021 lb/hour.

If any monitoring parameter values are exceeded or if the monitoring procedures are not followed, the Permittee shall be deemed in noncompliance with 2D .1111.

**Monitoring for Enclosures and Closed Vent Systems** [15A NCAC 2D .1111]

- l. Each enclosure and closed vent system shall meet the monitoring requirements of 40 CFR 63.453. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 if the monitoring is not performed.

**Recordkeeping/Reporting** [15A NCAC 2D .1111]

- m. The results or the CMS monitoring, Enclosure System monitoring, and Closed-Vent System monitoring shall be maintained (in written or electronic format) per the requirements of 40 CFR 63.454 and 63.455. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 if these records are not maintained.
- n. When actions taken during a startup, shutdown, or malfunction (including an action taken to correct a malfunction) are not consistent with the procedures specified in the facility's Startup Shutdown Malfunction (SSM) Plan, the Permittee shall record the actions taken for that event for inclusion in the semiannual SSM report. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 if these records are not maintained.
- o. When actions taken by the Permittee during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) are consistent with the procedures specified in the facility's SSM plan, the Permittee

shall keep records for that event that demonstrate that the procedures specified in the SSM plan were followed. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 if these records are not maintained.

**Reporting** [15A NCAC 2D .1111]

- p. Permittee shall submit a summary report of excess emissions postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified. When no exceedances of an operating parameter have occurred, such information shall be included in the report.
- q. The Permittee shall comply with the reporting requirements of 40 CFR 63, Subpart A as specified in Table 1 of 40 CFR 63.440.

**2. 15A NCAC 2D .1111: MACT 40 CFR 63 SUBPART S via 40 CFR 63.94 Equivalency by Permit – HVLC System Sources**

The Permittee shall comply with all applicable provisions, including the notification, testing, reporting, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 2D .1111 “Maximum Achievable Control Technology” (MACT) as promulgated in 40 CFR Part 63 Subpart S, including Subpart A “General Provisions” as defined per 63.440(g) and indicated per Table 1 of Subpart S. As outlined in Table 1, per 40 CFR 63.6(f)(1), these emission standards shall apply at all times except during periods of startup, shutdown, and malfunction and as otherwise specified in 40 CFR Part 63, Subpart S. Terms used throughout this section are defined in the Clean Air Act as amended in 1990 and in 40 CFR 63.2 and 63.441. Units and abbreviations are defined in 40 CFR 63.3 [15A NCAC 2D .1111].

The authority for the alternate control requirements for Equivalency by Permit (EBP) is given in 40 CFR parts 63.91 63.94, and 63.99 as promulgated in “Approval of Section 112(l) Authority for Hazardous Air Pollutants; Equivalency by Permit Provisions; National Emission Standards for Hazardous Air Pollutants from the Pulp and Paper Industry; State of North Carolina”, Federal Register, Vol. 69, No. 70/Monday, April 12, 2004 pp 19106-19109. Section 63.99 “Delegated Federal Authorities” of Subpart E “Approval of State Programs and Delegation of Federal Authorities” was also amended at FR Vol. 69, No. 70/Monday, April 12, 2004 p 19110 to add 63.99(a)(33)(ii) North Carolina.

**Standards for the affected HVLC pulping system processes** [40 CFR Part 63.443 and 63.94]

- a. No later than April 16, 2007, in lieu of controlling the 40 CFR 63, Subpart S-affected HAP emissions from:

The Brownstock Washing Areas (G03005 and G03006) Sources:

*Vacuum Drum Brown Stock Washers (ID No. ES-03-PU-001);  
Foam Tank No.1 (ID No. ES-03-TK-003);  
Foam Tank No. 2 (ID No. ES-03-TK-004);  
Pre-O<sub>2</sub> Washer Feed Tank No. 1 (ID No. ES-03-TL-015);  
Pre-O<sub>2</sub> Washer Feed Tank No. 2 (ID No. ES-03-TL-016);  
Pre-O<sub>2</sub> Washer Feed Tank No. 3 (ID No. ES-03-TL-017); and*

The Oxygen Delignification Systems (G04009 and G04010) Sources:

*HW O<sub>2</sub> Blow Tank (ID No. ES-04-TK-005);  
HW Post O<sub>2</sub> Washer (ID No. ES-04-PU-002); and  
HW Post O<sub>2</sub> Filtrate Chest (ID No. ES-04-TK-008);  
Pine O<sub>2</sub> Blow Tank (ID No. ES-04-TK-018); and  
Pine Post O<sub>2</sub> Washer (ID No. ES-04-PU-016).*

The Permittee shall control HAP emissions from the Black Liquor Oxidation (BLOX) System (G08022) sources as required below.

**Standards for the BLOX system** [40 CFR Part 63.443 and 63.94]

- b. No later than April 16, 2007, the Permittee shall meet the following control requirements for the total HAP emissions from the BLOX System (G08022) sources [40 CFR 63.94, Subpart 63.443]:
  - i. Each BLOX system component shall be enclosed and vented into a closed vent system meeting the

requirements of 40 CFR 63.450 and controlled per the following requirements:

- A. Reduce total HAP emissions by 98 percent or more by weight; or
  - B. Reduce total HAP emissions using a thermal oxidizer designed and operated at a minimum temperature of 871°C (1600°F) and a minimum residence time of 0.75 seconds.
- c. Periods of excess emissions reported under Sec. 63.455 shall not be a violation of the above requirements provided that the time of excess emissions (excluding periods of startup, shutdown, or malfunction) divided by the total process operating time in a semi-annual reporting period does not exceed the following levels:
- i. Four percent for control devices used to reduce the total HAP emissions from the BLOX system.

When excess emissions exceed the level set forth in Section 2.2 C.2.c.i, the facility shall be deemed in non-compliance with 15A NCAC 2D .1111 via 40 CFR 63.94.

- d. The Black Liquor Oxidation (BLOX) System thermal oxidizer is permitted to burn only BLOX gases and natural gas as an auxiliary fuel.
- e. The Permittee must operate and maintain the emission source(s) in accordance with the procedures specified in the facility's start-up, shut-down, and malfunction (SSM) plan. At all times, including periods of startup, shutdown, and malfunction, the Permittee shall operate and maintain the emission source(s), including associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions at least to the levels required by all relevant standards. Malfunctions shall be corrected as soon as practicable after their occurrence in accordance with the startup, shutdown, and malfunction plan.

**Testing** [15A NCAC 2D .0501(c), 40 CFR 63.94, 40 CFR 63.457]

- f. If emissions testing is required, the testing shall be performed in accordance General Condition JJ found in Section 3. If the results of this or any testing are above the limits contained herein, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 via 40 CFR 63.94.
  - i. Pursuant to 40 CFR 63.457(a), an initial performance test is not required to show compliance with the HAP destruction efficiency if the Permittee selects the compliance method per paragraph 2.2 C.2.b.i.B. Otherwise, a performance test shall be conducted no later than April 16, 2007 and in accordance with General Condition JJ found in Section 3 of this permit and with the requirements of 40 CFR 63.457.
  - ii. If emission testing is required for parity demonstration, the testing shall be done in accordance with General Condition JJ found in Section 3 of this permit, and the test methods and procedures contained in 40 CFR 63.457. The testing will consist of (1) determining the emissions from the sources that were subject to 40 CFR 63 Subpart S as identified in 2.2 C.2.a. but are not controlled under the EBP option and (2) the uncontrolled emissions from the BLOX system. If the emissions from (1) above exceed the emissions from (2) above then the facility shall be deemed in non-compliance with 15A NCAC 2D .1111 via 40 CFR 63.94.

**Production Monitoring for Parity with 40 CFR 63, Subpart S** [40 CFR 63.94]

- g. To assure continuing parity, the hardwood pulp production shall not exceed 83 percent of the total pulp production on a 12-month rolling average basis. The Permittee shall keep records of the monthly hardwood pulp production and the monthly total pulp production.
  - i. The initial 12-month rolling average shall cover the period May 2007 through April 2008.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 via 40 CFR 63.94 if the monitoring is not performed, or if the 12 month rolling average hardwood pulp production exceeds 83 percent of the total pulp production.

**Monitoring for BLOX System Control Device** [40 CFR 63.453(a),(b),(n),(o), 40 CFR 63.94]

- h. The Permittee shall install, calibrate, operate, and maintain according to the manufacturer's specifications, a continuous monitoring system (CMS) to measure the temperature in the thermal oxidizer firebox or in the ductwork immediately downstream of the firebox and before any substantial heat exchange occurs. The CMS shall include a continuous recorder. The CMS shall be operated to ensure the following operational parameters are maintained [40 CFR 63, Subpart 63.453 and 40 CFR 63.94]:

- i. If, prior to April 16, 2007, the Permittee elects to comply with paragraph 2.2 C.2.b.i.A , the minimum operating temperature established during testing conducted per 2.2 C.2.f. shall be recorded and maintained. This permit shall be administratively amended prior to April 16, 2007 to incorporate the minimum temperature determined during the initial performance testing.

If, after April 16, 2007, the Permittee elects to comply with paragraph 2.2 C.2.b.i.A, the minimum operating temperature shall be established during testing conducted per 2.2 C.2.f. This permit shall be administratively amended to incorporate the new minimum operating temperature determined during this performance testing prior to using the operating temperature as a measurement of compliance.

An alternate minimum operating temperature may be established per additional approved testing performed per 2.2 C.2.f. This permit shall be administratively amended to incorporate the new minimum operating temperature determined during this additional performance testing prior to using the new operating temperature as a measurement of compliance.

- ii. If the Permittee elects to comply with paragraph 2.2 C.2.b.i.B , then a minimum operating temperature of 871°C (1600°F) shall be recorded and maintained.

Operation of the black liquor oxidation system control device (ID. No. CD-BLOXRTO) below established minimum operating temperatures (as set forth in Section 2.2 C.2.h.i or ii, as appropriate), or failure to perform the required monitoring shall be reported as a period of excess emissions.

**Standards for Enclosures and Closed Vent Systems** [40 CFR 63.450, 40 CFR 63.94]

- i. The Black Liquor Oxidation System enclosure and closed vent system shall meet the requirements of 40 CFR 63.450.

**Monitoring for Enclosures and Closed Vent Systems** [40 CFR 63.453, 40 CFR 63.94]

- j. The Black Liquor Oxidation System enclosure and closed vent system shall meet the monitoring requirements of 40 CFR 63.453. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 via 40 CFR 63.94 if the monitoring is not performed.

**Recordkeeping/Reporting** [40 CFR 63.454; 63.455, 40 CFR 63.94]

- k. The results of the CMS monitoring, Enclosure System monitoring, and Closed-Vent System monitoring shall be maintained (in written or electronic format) per the requirements of 40 CFR 63.454 and 63.455.
- l. The results of the monthly hardwood and total pulp production monitoring required by condition 2.2 C.2.g shall be maintained in written or electronic format.
- m. When actions taken during a startup, shutdown, or malfunction (including an action taken to correct a malfunction) are not consistent with the procedures specified in the facility's Startup Shutdown Malfunction (SSM) Plan, the Permittee shall record the actions taken for that event for inclusion in the semiannual SSM report.
- n. When actions taken by the Permittee during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) are consistent with the procedures specified in the facility's SSM plan, the Permittee shall keep records for that event that demonstrate that the procedures specified in the SSM plan were followed.

**Reporting** [40 CFR 63.454; 63.455, 40 CFR 63.94]

- o. Beginning with the semi-annual period that ends June 30, 2007, the Permittee shall submit a summary report of excess emissions postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified. When no exceedances of an operating parameter have occurred, such information shall be included in the report. This report shall also include the 12-month rolling average percent hardwood pulp production for each month in the reporting period, or the average percent hardwood pulp production since April 16, 2007 if 12 months of data are not yet available.
- p. The Permittee shall comply with the reporting requirements of 40 CFR 63, Subpart A as specified in Table 1 of 40 CFR 63.440.
- q. As required in 63.455(b), the Permittee shall submit, with the initial notification report and update every two years thereafter, a non-binding control strategy report containing, at a minimum, the information specified in 63.455(b)(1)-(3) in addition to the information required in 63.9(b)(2) of 40 CFR 63 Subpart A.



**D. 40 CFR 63, Subpart MM Affected Sources:**

Source ID No.	Source Description	Control ID No	Control Description
ES G08020	No. 10 Recovery Furnace	08-CD-001-01	Wet Bottom electrostatic precipitator
ES G08021	No. 10 Smelt Dissolving Tank	08-CD-011-01	Chevron Mist Eliminator
ES G08023	No. 11 Recovery Furnace	08-CD-002-01	Wet Bottom electrostatic precipitator
ES G08024	No. 11 Smelt Dissolving Tank	08-CD-012-01	Chevron Mist Eliminator
ES G09028	No. 4 Lime Kiln	08-CD-009-01	Flooded Disk-type wet scrubber
ES G09029	No. 5 Lime Kiln	09-CD-010-01	MicroMist venturi scrubber

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Hazardous Air Pollutants	<p><b><u>No. 4 Lime Kiln</u></b>                      PM emissions shall be no greater than 0.10 gr/dscf, corrected to 10% oxygen.</p> <p><b><u>No. 5 Lime Kiln</u></b>                      PM emissions shall be no greater than 0.10 gr/dscf, corrected to 10% oxygen.</p> <p><b><u>No. 10 Recovery Furnace</u></b>                      PM emissions shall be no greater than 0.032 gr/dscf, corrected to 8% oxygen.</p> <p><b><u>No. 11 Recovery Furnace</u></b>                      PM emissions shall be no greater than 0.032 gr/dscf, corrected to 8% oxygen.</p> <p><b><u>No. 10 Smelt Dissolving Tank</u></b>                      PM emissions shall be no greater than 0.268 gr/dscf.</p> <p><b><u>No. 11 Smelt Dissolving Tank</u></b>                      PM emissions shall be no greater than 0.239 gr/dscf.</p> <p><b><u>Overall Chemical Recovery System PM Limit</u></b>                      Total PM emissions from the Nos. 4 and 5 Lime Kilns, Nos. 10 and 11 Recovery Furnaces, and Nos. 10 and 11 Smelt Dissolving Tanks shall be no greater than 1.49 lb/TBLS.</p>	15A NCAC 2D .1111 (40 CFR 63, Subpart MM)

**1. 15A NCAC 2D .1111: MACT 40 CFR 63 SUBPART MM**

- a. The Permittee shall comply with all applicable provisions, including the notification, testing, reporting, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 2D .1111 “Maximum Achievable Control Technology” (MACT) as promulgated in 40 CFR Part 63 Subpart MM, including Subpart A “General Provisions” as defined per 63.440(g) and indicated per Table 1 of Subpart MM. As outlined in Table 1, per 40 CFR 63.6(f)(1), these emission standards shall apply at all times except during periods of startup, shutdown, and malfunction and as otherwise specified in 40 CFR Part 63, Subpart MM. Terms used throughout this section are defined in the Clean Air Act as amended in 1990 and in 40 CFR 63.2 and 63.861. Units and abbreviations are defined in 40 CFR 63.3. [15A NCAC 2D .1111]

**Emission Limitations** [15A NCAC 2D .1111]

- b. Emissions of PM from the Nos. 4 and 5 Lime Kilns, Nos. 10 and 11 Recovery Furnaces, and Nos. 10 and 11 Smelt Dissolving Tanks shall not exceed the limits presented in the Table 2.2 D-1 below: [63.865(a)]

**Table 2.2. D-1**

Variable	Description	Units	Value	Basis
<b>EL<sub>PM</sub></b>	<b>Bubble Limit for MACT MM</b>	<b>lb/ton BLS</b>	<b>1.490</b>	<b>(Eqn 1 in MACT MM)</b>
<b>No. 10 Recovery Furnace No 10 (RF10)</b>				
ER <sub>RF</sub>	emission limit for RF10	lb/ton BLS	0.827	(Eqn 2 in MACT MM)
F1	conversion factor	Min-lb/day-gr	0.206	set value
<b>C<sub>EL, RF</sub></b>	<b>emission limit for RF10</b>	<b>gr/dscf</b>	<b>0.032</b>	<b>mill-specific</b>
Q <sub>RF</sub>	measured stack flowrate from RF10	dscfm	176,354	mill-specific
BLS <sub>RF</sub>	measured BLS firing rate of RF10	ton BLS/d	1,405	mill-specific
<b>No. 11 Recovery Furnace (RF11)</b>				
ER <sub>RF</sub>	emission limit for RF11	lb/ton BLS	0.785	(Eqn 2 in MACT MM)
<b>C<sub>EL, RF</sub></b>	<b>emission limit for RF11</b>	<b>gr/dscf</b>	<b>0.032</b>	<b>mill-specific</b>
Q <sub>RF</sub>	measured stack flowrate from RF11	dscfm	163,503	mill-specific
BLS <sub>RF</sub>	measured BLS firing rate of RF11	ton BLS/d	1,373	mill-specific
PR <sub>RFtot</sub>	total BLS firing rates, all RF's	ton BLS/d	2,778	(BLS <sub>RF1</sub> ) + ... + (BLS <sub>RFi</sub> )
ER <sub>RFtot</sub>	calculated emission rate, all RF's	lb/ton BLS	0.807	(Eqn 5 in MACT MM)
<b>No. 10 Smelt Dissolving Tank (SDT-10)</b>				
ER <sub>SDT</sub>	emission limit for SDT-10	lb/ton BLS	0.400	(Eqn 3 in MACT MM)
<b>C<sub>EL, SDT</sub></b>	<b>emission limit for SDT-10</b>	<b>gr/dscf</b>	<b>0.268</b>	<b>mill-specific</b>
Q <sub>SDT</sub>	measured stack flowrate from SDT-10	dscfm	10,183	mill-specific
BLS <sub>SDT</sub>	measured BLS firing rate of RF10*100%	ton BLS/d	1,405	mill-specific
<b>No. 11 Smelt Dissolving Tank (SDT-11)</b>				
ER <sub>SDT</sub>	emission limit for SDT-11	lb/ton BLS	0.399	(Eqn 3 in MACT MM)
<b>C<sub>EL, SDT</sub></b>	<b>emission limit for SDT-11</b>	<b>gr/dscf</b>	<b>0.239</b>	<b>mill-specific</b>
Q <sub>SDT</sub>	measured stack flowrate from SDT-11	dscfm	11,115	mill-specific
BLS <sub>SDT</sub>	measured BLS firing rate of RF11*100%	ton BLS/d	1,373	mill-specific
PR <sub>SDTtot</sub>	total BLS firing rates, all RF's	ton BLS/d	2,778	same as PR <sub>RFtot</sub>
ER <sub>SDTtot</sub>	calculated emission rate, all SDT's	lb/ton BLS	0.399	(Eqn 5 in MACT MM)
<b>No. 4 Lime Kiln (LK-4)</b>				
ER <sub>LK</sub>	emission limit for LK-4	lb/ton BLS	0.295	(Eqn 4 in MACT MM)
<b>C<sub>EL, LK</sub></b>	<b>emission limit for LK-4</b>	<b>gr/dscf</b>	<b>0.100</b>	<b>mill-specific</b>
Q <sub>LK</sub>	measured stack flowrate from LK-4	dscfm	13,557	mill-specific
CaO <sub>LK</sub>	measured lime production from LK-4	ton CaO/d	89	mill-specific
BLS <sub>tot</sub>	total BLS firing rates, all RF's	ton BLS/d	2,778	
<b>No. 5 Lime Kiln (LK-5)</b>				
ER <sub>LK</sub>	emission limit for LK-5	lb/ton BLS	0.277	(Eqn 4 in MACT MM)
<b>C<sub>EL, LK</sub></b>	<b>emission limit for LK-5</b>	<b>gr/dscf</b>	<b>0.100</b>	<b>mill-specific</b>
Q <sub>LK</sub>	measured stack flowrate from LK-5	dscfm	24,681	mill-specific
CaO <sub>LK</sub>	measured lime production from LK-5	ton CaO/d	173	mill-specific
PR <sub>LKtot</sub> (CaO <sub>tot</sub> )	total lime production, all LK's	ton CaO/d	262	(CaO <sub>LK1</sub> ) + ... + (CaO <sub>LKi</sub> )
ER <sub>LKtot</sub>	calculated emission rate, all LK's	lb/ton BLS	0.284	(Eqn 5 in MACT MM)
<b>ERTot</b>	<b>Total emission rate, all sources</b>	<b>lb/ton BLS</b>	<b>1.489</b>	<b>(Eqn 6 in MACT MM)</b>

- c. The chemical recovery system emission limits must be re-established if either (1) the air pollution control system for the No. 4 or 5 Lime Kiln, No. 10 or 11 Recovery Furnace, or No. 10 or 11 Smelt Dissolving Tank is modified (as defined in 63.861) or replaced, or (2) the No. 4 or 5 Lime Kiln, No. 10 or 11 Recovery Furnace, or No. 10 or 11 Smelt Dissolving Tank is shut down for more than 60 consecutive days. [63.862(a)(1)(ii)(D)]

**Testing** [15A NCAC 2D .1111]

- d. If emissions testing is required to re-establish the chemical recovery system emission limits, emissions testing shall be performed according to the procedures in 63.7, 63.865, and General Condition JJ. If the results of the testing indicate that the chemical recovery system emission rate is greater than the emission limits presented in the table above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111. [63.865]

**Monitoring** [15A NCAC 2D .1111]

- e. The Permittee must install, calibrate, maintain, and operate a continuous opacity monitoring system (COMS) at the outlet of No. 10 Recovery Furnace ESP (08-CD-001-01) and No. 11 Recovery Furnace ESP (08-CD-002-01) that can be used to determine opacity at least once every successive 10-second period and calculate and record each successive 6-minute average opacity using the procedures in 63.6(h) and 63.8. The COMS data must be reduced as specified in 63.8(g)(2). If these monitoring procedures are not followed, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111. [63.864(d)(10)]
- f. The Permittee must install, calibrate, maintain, and operate a continuous monitoring system that can be used to determine and record the pressure drop and the scrubbing liquid flow rate on the No. 4 Lime Kiln Scrubber (08-CD-009-01), No. 5 Lime Kiln Scrubber (09-CD-010-01), No. 10 Smelt Dissolving Tank Scrubber (08-CD-011-01), and No. 11 Smelt Dissolving Tank Scrubber (08-CD-012-01). Pressure drop and scrubbing liquid flow rate must be monitored at least once every successive 15-minute period using the procedures in 63.8(c), as well as the following procedures [63.864(e)(10) and (13)]:
  - i. The monitoring device used for the continuous measurement of the pressure drop of the gas stream across the scrubber must be certified by the manufacturer to be accurate to within a gauge pressure of  $\pm 500$  pascals ( $\pm 2$  inches of water gauge pressure); and
  - ii. The monitoring device used for continuous measurement of the scrubbing liquid flow rate must be certified by the manufacturer to be accurate within  $\pm 5$  percent of the design scrubbing liquid flow rate.If these monitoring procedures are not followed, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111.
- g. The Permittee may base operating ranges on values recorded during the initial performance tests or conduct additional performance tests for the specific purpose of establishing operating ranges, provided that test data used to establish the operating ranges are or have been obtained using the test methods required in Subpart MM. The Permittee must certify that all control devices and processes have not been modified subsequent to the testing upon which the data used to establish the operating parameter ranges were obtained. The Permittee may establish expanded or replacement operating ranges during subsequent performance tests using the test methods in 63.865. The Permittee must continuously monitor each parameter and determine the arithmetic average value of each parameter during each performance test. Multiple performance tests may be conducted to establish a range of parameter values. [63.864(j)]
- h. The Permittee is required to implement corrective action, as specified in the startup, shutdown, and malfunction plan prepared under 63.866(a), if the following monitoring exceedances occur [63.864(k)(1)]:
  - i. For Nos. 10 and 11 Recovery Furnaces, when the average of ten consecutive 6-minute averages results in a measurement greater than 20 percent opacity;
  - ii. For Nos. 4 and 5 Lime Kiln and Nos. 10 and 11 Smelt Dissolving Tanks, when any 3-hour average wet scrubber parameter value is outside the range of values established during performance testing as indicated in the table above.

- i. The Permittee is in violation of 63.862 if the following monitoring exceedances occur [63.864(k)(2)]:
  - i. For Nos. 10 and 11 Recovery Furnaces, when opacity is greater than 35 percent for 6 percent or more of the operating time within any quarterly period;
  - ii. For Nos. 4 and 5 Lime Kilns and Nos. 10 and 11 Smelt Dissolving Tanks, when six or more 3-hour average parameter values within any 6-month reporting period are outside the range of values established during performance testing as indicated in Table 2.2 D-2 below:

**Table 2.2 D-2**

Source Description	Parameter Values
<b>No. 4 Lime Kiln</b>	1. Scrubber recirculation liquid flow [FT1958] shall be no less than 289 gpm (3-hour average), and 2. Scrubber differential pressure [PT0018] shall be no less than 20 in. H <sub>2</sub> O (3-hour average).
<b>No. 5 Lime Kiln</b>	1. Scrubber venturi liquid flow [FT3173] shall be no less than 224 gpm (3-hour average), 2. Scrubber quench liquid flow [FT3172] shall be no less than 152 gpm (3-hour average), and 3. Scrubber differential pressure shall be no less than 19.2 in. H <sub>2</sub> O (3-hour average).
<b>No. 10 Smelt Dissolving Tank</b>	1. Scrubber liquid flow to spout floor [FT1580] shall be no less than 51 gpm (3-hour average), 2. Scrubber liquid flow to firing floor [FT1581] shall be no less than 35 gpm (3-hour average), and 3. Scrubber pressure drop [FT1582] shall be no less than 0.22 in H <sub>2</sub> O.
<b>No. 11 Smelt Dissolving Tank</b>	1. Scrubber liquid flow [FT0201] shall be no less than 85 gpm (3-hour average), and 2. Scrubber pressure drop [PT1584] shall be no less than 0.04 in H <sub>2</sub> O.

- j. For purposes of determining the number of non-opacity monitoring exceedances, no more than one exceedance will be attributed in any given 24-hour period. [63.864(k)(3)]

**Recordkeeping** [15A NCAC 2D .1111]

- k. The Permittee must develop and implement a written plan as described in 63.6(e)(3) that contains specific procedures to be followed for operating and maintaining the source during periods of startup, shutdown, and malfunction, and a program of corrective action for malfunctioning process and control systems used to comply with Subpart MM. In addition to the information required in 63.6(e), the plan must include the requirements given in 63.866(a)(1) and (2). [63.866(a)]
- l. The Permittee must maintain records of any occurrence when corrective action is required under condition 2.2.D.1.h, and when a violation is noted under condition 2.2.D.1.i. [63.866(b)]
- m. In addition to the general records required by 63.10(b)(2), the Permittee must maintain records of the following information [63.864 (c)]:
  - i. Records of black liquor solids firing rates in units of ton/d for Nos. 10 and 11 Recovery Furnaces;
  - ii. Records of CaO production rates in units of ton/d for Nos. 4 and 5 Lime Kilns;
  - iii. Records of parameter monitoring data required under condition 2.2.D.1.f, including any period when the operating parameter levels were inconsistent with the levels established during the initial performance test or subsequent testing, with a brief explanation of the cause of the deviation, the time the deviation occurred, the time corrective action was initiated and completed, and the corrective action taken;
  - iv. Records and documentation of supporting calculations for the chemical recovery system emissions limit;
  - v. Records of monitoring parameter ranges established under condition 2.2.D.1.g; and
  - vi. Records of the hours of operation for Nos. 4 and 5 Lime Kilns, Nos. 10 and 11 Recovery Furnaces, and Nos. 10 and 11 Smelt Dissolving Tanks.

**Reporting** [15A NCAC 2D .1111]

- n. After the Director has approved the emissions limits for any process unit, the Permittee must notify the Director before any of the following actions are taken [63.867(b)]:

- i. The air pollution control system for any process unit subject to Subpart MM is modified or replaced;
  - ii. The No. 4 or 5 Lime Kiln, No. 10 or 11 Recovery Furnace, or No. 10 or 11 Smelt Dissolving Tank is shut down for more than 60 consecutive days;
  - iii. A continuous monitoring parameter or the value or range of values of a continuous monitoring parameter for any process unit subject to Subpart MM is changed; or
  - iv. The black liquor solids firing rate for No. 10 or No. 11 Recovery Furnace during any 24-hour averaging period is increased by more than 10 percent above the level measured during the most recent performance test.
- o. If the Permittee (1) modifies the air pollution control device for the No. 4 or 5 Lime Kiln, No. 10 or 11 Recovery Furnace, or No. 10 or 11 Smelt Dissolving Tank or (2) shuts down the No. 4 or 5 Lime Kiln, No. 10 or 11 Recovery Furnace, or No. 10 or 11 Smelt Dissolving Tank for more than 60 consecutive days, or (3) increases the black liquor solids firing rate for the No. 10 or No. 11 Recovery Furnace during any 24-hour averaging period by more than 10 percent above the level measured during the most recent performance test, the Permittee must recalculate the overall PM emissions limit for the Nos. 4 and 5 Lime Kilns, Nos. 10 and 11 Recovery Furnaces, and Nos. 10 and 11 Smelt Dissolving Tanks and resubmit the documentation required in 63.865 to the Director. All modified PM emissions limits are subject to approval by the Director. [63.867(b)]
- p. The Permittee must report quarterly if measured parameters meet any of the conditions specified in condition 2.2.D.1.i. This report must contain the information specified in 40 CFR 63.10(c) as well as the number and duration of occurrences when the source met or exceeded the conditions in condition 2.2.D.1.h, and the number and duration of occurrences when the source met or exceeded the conditions in condition 2.2.D.1.i. All instances of deviations from the requirements of this permit must be clearly identified in the report. Reporting excess emissions below the violation thresholds of conditions 2.2.D.1.h and i does not constitute a violation of the applicable standard. [63.867(c)]
- i. When no exceedances of parameters have occurred, the Permittee must submit a semiannual report stating that no excess emissions occurred during the reporting period.
  - ii. The Permittee may combine excess emissions and/or summary reports for the facility for Subpart MM and Subpart S.

**E. Subpart DDDDD Sources:**

Source ID No.	Source Description	Control ID No	Control Description
G11037	coal -fired Big Bill utility boiler (364 million Btu per hour maximum heat input rate) equipped with low NOx burners and natural gas igniters to be installed	11-CD-003-01	2-Chamber, 3-Field electrostatic precipitator (51,840 square feet of plate area)
G11038	coal-fired Peter G. utility boiler (364 million Btu per hour maximum heat input rate) equipped with low NOx burners and natural gas igniters	11-CD-004-01	2-Chamber, 3-Field electrostatic precipitator (51,840 square feet of plate area)
G11039	coal-fired Riley Coal utility boiler (399 million Btu per hour maximum heat input rate) equipped with low NOx burners and natural gas igniters	11-CD-005-01	2-Chamber, 3-Field electrostatic precipitator (67,392 square feet of plate area)
G11040	coal / No. 6 fuel oil-fired No. 4 utility boiler (535 million Btu per hour maximum heat input rate) equipped with low NOx burner components and Separated Over fire Air (SOFA) system	11-CD-006-01	2-Chamber, 4-Field electrostatic precipitator (115,000 square feet of plate area)
		11-CD-006-02	urea-based Selective Non-Catalytic Reduction (SNCR) NOx emission reduction system
G11042	woodwaste/ bark/ depoly waste/ fiber-based roll cores/coal-fired Riley bark boiler (380 million Btu per hour maximum heat input rate) with partial flyash reinjection, equipped with a multicyclone and a venturi-type wet scrubber in series	11-CD-016-01	multicyclone (approximately 160 tubes, 9 inches in diameter each)
		11-CD-016-02	venturi-type wet scrubber

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Hazardous Air Pollutants	Compliance with the requirements of 40 CFR 63, Subpart DDDDD by September 13, 2007.	15 A NCAC 2D .1111 (40 CFR 63, Subpart DDDDD)

**1. 15A NCAC 2D .1111: MACT 40 CFR 63 SUBPART DDDDD**

- a. The Permittee shall comply with all applicable provisions, including the notification, testing, reporting, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 2D .1111 “Maximum Achievable Control Technology” (MACT) as promulgated in 40 CFR Part 63 Subpart DDDDD, including Subpart A “General Provisions.”
- b. The owner or operator of an existing affected source or process unit must comply with the requirements in this subpart no later than September 13, 2007.

## 2.3 STATE ONLY ENFORCEABLE REQUIREMENTS

### A. North Carolina Air Toxics

#### 1. 15A NCAC 2D .1100 Control of Toxic Air Pollutants

TOXIC AIR POLLUTANT EMISSIONS LIMITATION AND REPORTING REQUIREMENT - Pursuant to 15A NCAC 2D .1100 “Control of Toxic Air Pollutants,” and in accordance with the approved application for the Bleached Filtrate Recycle (BFR) Process dated April 24, 2000 for an air toxic compliance demonstration, the following permit limits shall not be exceeded:

Emission Source(s)	Toxic Air Pollutant(s)	Emission Limit(s)
Facility-Wide Limit excluding unadulterated fuel combustion sources	Acetaldehyde	35.75 lb/hour
Facility-Wide Limit excluding unadulterated fuel combustion sources	Formaldehyde	2.75 lb/hour
Facility-Wide Limit excluding unadulterated fuel combustion sources	Manganese	3.24 lb/hour
Facility-Wide Limit excluding unadulterated fuel combustion sources	Phenol	9.15 lb/hour

#### 2. 15A NCAC 2Q .0705 Existing Facilities and SIC Calls

- a. Air Permit Application Submittal Requirements - In accordance with 15A NCAC 2Q .0705(b), for sources at a facility subject to a MACT standard, excluding the MACT for combustion sources, an air permit application shall be required demonstrating compliance with 15A NCAC 2D .1100 “Control of Toxic Air Pollutants”:
  - i. at the same time the facility submits an air permit application to comply with the last MACT standard (*excluding the MACT for combustion sources*); or
  - ii. on or before the last MACT standard (*excluding the MACT for combustion sources*) compliance deadline date. To allow the Division time to process an application before the compliance deadline date you should submit an application no later than three month prior to the compliance deadline date if you need a construction/operation permit for the installation of a control device(s) to comply with either 2D .1100 or the last MACT standard (*excluding the MACT for combustion sources*).
- b. The permit application demonstrating compliance with 15A NCAC 2D .1100 shall include an evaluation for all toxic air pollutants covered under rule 15A NCAC 2D .1104 for all sources at the facility, excluding those sources exempt from evaluation under 15A NCAC 2Q .0702. If the facility has already demonstrated facility-wide compliance with 2D .1100 the application should include the date of compliance demonstration, air permit number, and a list of applicable toxic pollutants.
- c. Compliance Deadline Date Requirement - The facility shall be in compliance with the 15A NCAC 2D .1100 Toxic Air Pollutants rule by the same deadline date that it is required to be in compliance with the last MACT standard (*excluding the MACT for combustion sources*) [April 17, 2007].

### SECTION 3 - GENERAL CONDITIONS

This section describes terms and conditions applicable to this Title V facility. All references to the “permit” in this section apply only to Part I of the permit.

A. **General Provisions** [NCGS 143-215 and 15A NCAC 2Q .0508(aa)(i)(16)]

1. Terms not otherwise defined in this permit shall have the meaning assigned to such terms as defined in 15A NCAC 2D and 2Q.
2. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are binding and enforceable pursuant to NCGS 143-215.114A and 143-215.114B, including assessment of civil and/or criminal penalties. Any unauthorized deviation from the conditions of this permit may constitute grounds for revocation and/or enforcement action by the DAQ.
3. This permit is not a waiver of or approval of any other Department permits that may be required for other aspects of the facility which are not addressed in this permit.
4. This permit does not relieve the Permittee from liability for harm or injury to human health or welfare, animal or plant life, or property caused by the construction or operation of this permitted facility, or from penalties therefore, nor does it allow the Permittee to cause pollution in contravention of state laws or rules, unless specifically authorized by an order from the North Carolina Environmental Management Commission.
5. Except as identified as state-only requirements in this permit, all terms and conditions contained herein shall be enforceable by the DAQ, the EPA, and citizens of the United States as defined in the Federal Clean Air Act.
6. Any stationary source of air pollution shall not be operated, maintained, or modified without the appropriate and valid permits issued by the DAQ, unless the source is exempted by rule. The DAQ may issue a permit only after it receives reasonable assurance that the installation will not cause air pollution in violation of any of the applicable requirements. A permitted installation may only be operated, maintained, constructed, expanded, or modified in a manner that is consistent with the terms of this permit.

B. **Permit Availability** [15A NCAC 2Q .0507(k) and .0508(aa)(i)(9)(B)]

The Permittee shall have available at the facility a copy of this permit and shall retain for the duration of the permit term one complete copy of the application and any information submitted in support of the application package. The permit and application shall be made available to an authorized representative of Department of Environment and Natural Resources upon request.

C. **Severability Clause** [15A NCAC 2Q .0508(i)(2)]

In the event of an administrative challenge to a final and binding permit in which a condition is held to be invalid, the provisions in this permit are severable so that all requirements contained in the permit, except those held to be invalid, shall remain valid and must be complied with.

D. **Submissions** [15A NCAC 2Q .0508(i)(16) 2Q .0507(c)(e)]

Except as otherwise specified herein, two copies of all documents, reports, test data, monitoring data, notifications, request for renewal, and any other information required by this permit shall be submitted to the appropriate Regional Office. Refer to the Regional Office address on the cover page of this permit. For continuous emissions monitoring systems (CEMS) reports, continuous opacity monitoring systems (COMS) reports, quality assurance (QA)/quality control (QC) reports, acid rain CEM certification reports, and NOx budget CEM certification reports, one copy shall be sent to the appropriate Regional Office and one copy shall be sent to:

Supervisor, Stationary Source Compliance  
North Carolina Division of Air Quality  
1641 Mail Service Center  
Raleigh, NC 27699-1641

E. **Duty to Comply** [15A NCAC 2Q .0508(j)(i)(2)]

The Permittee shall comply with all terms, conditions, requirements, limitations and restrictions set forth in this permit. Noncompliance with any permit condition except conditions identified as state-only requirements constitutes a violation of the Federal Clean Air Act. Noncompliance with any permit condition is grounds for enforcement action, for permit

termination, revocation and reissuance, or modification, or for denial of a permit renewal application.

F. **Circumvention** - STATE ENFORCEABLE ONLY

The facility shall be properly operated and maintained at all times in a manner that will effect an overall reduction in air pollution. Unless otherwise specified by this permit, no emission source may be operated without the concurrent operation of its associated air pollution control device(s) and appurtenances.

G. **Permit Modifications**

1. Administrative Permit Amendments [15A NCAC 2Q .0514]  
The Permittee shall submit an application for an administrative permit amendment in accordance with 15A NCAC 2Q .0514.
2. Transfer in Ownership or Operation and Application Submittal Content [15A NCAC 2Q .0524 and 2Q .0505]  
The Permittee shall submit an application for an ownership change in accordance with 15A NCAC 2Q.0524 and 2Q .0505.
3. Minor Permit Modifications [15A NCAC 2Q .0515]  
The Permittee shall submit an application for a minor permit modification in accordance with 15A NCAC 2Q .0515.
4. Significant Permit Modifications [15A NCAC 2Q .0516]  
The Permittee shall submit an application for a significant permit modification in accordance with 15A NCAC 2Q .0516.
5. Reopening for Cause [15A NCAC 2Q .0517]  
The Permittee shall submit an application for reopening for cause in accordance with 15A NCAC 2Q .0517.

H. **Changes Not Requiring Permit Modifications**

1. Section 502(b)(10) Changes [15A NCAC 2Q .0523(a)]
  - a. "Section 502(b)(10) changes" means changes that contravene an express permit term or condition. Such changes do not include changes that would violate applicable requirements or contravene federally enforceable permit terms and conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements.
  - b. The Permittee may make Section 502(b)(10) changes without having the permit revised if:
    - i. the changes are not a modification under Title I of the Federal Clean Air Act;
    - ii. the changes do not cause the allowable emissions under the permit to be exceeded;
    - iii. the Permittee notifies the Director and EPA with written notification at least seven days before the change is made; and
    - iv. the Permittee shall attach the notice to the relevant permit.
  - c. The written notification shall include:
    - i. a description of the change;
    - ii. the date on which the change will occur;
    - iii. any change in emissions; and
    - iv. any permit term or condition that is no longer applicable as a result of the change.
  - d. Section 502(b)(10) changes shall be made in the permit the next time that the permit is revised or renewed, whichever comes first.
2. Off Permit Changes [15A NCAC 2Q .0523(b)]  
The Permittee may make changes in the operation or emissions without revising the permit if:
  - a. the change affects only insignificant activities and the activities remain insignificant after the change; or
  - b. the change is not covered under any applicable requirement.
3. Emissions Trading [15A NCAC 2Q .0523(c)]  
To the extent that emissions trading is allowed under 15A NCAC 2D, including subsequently adopted maximum achievable control technology standards, emissions trading shall be allowed without permit revision pursuant to 15A NCAC 2Q .0523(c).

I.A. **Reporting Requirements for Excess Emissions and Permit Deviations**

[15A NCAC 2D .0535(f) and 2Q .0508(f)(2)]

**"Excess Emissions"** - means an emission rate that exceeds any applicable emission limitation or standard allowed by any rule in Sections .0500, .0900, .1200, or .1400 of Subchapter 2D; or by a permit condition; or that exceeds an emission limit established in a permit issued under 15A NCAC 2Q .0700. (*Note: Definitions of excess emissions under 2D .1110 and 2D .1111 shall apply where defined by rule.*)

**"Deviations"** - for the purposes of this condition, any action or condition not in accordance with the terms and conditions of

this permit including those attributable to upset conditions as well as excess emissions as defined above lasting less than four hours.

#### Excess Emissions

1. If a source is required to report excess emissions under NSPS (15A NCAC 2D .0524), NESHAPS (15A NCAC 2D .1110 or .1111), or the operating permit provides for periodic (e.g., quarterly) reporting of excess emissions, reporting shall be performed as prescribed therein.
2. If the source is not subject to NSPS (15A NCAC 2D .0524), NESHAPS (15A NCAC 2D .1110 or .1111), or these rules do NOT define "excess emissions," the Permittee shall report excess emissions in accordance with 15A NCAC 2D .0535 as follows:
  - a. Pursuant to 15A NCAC 2D .0535, if excess emissions last for more than four hours resulting from a malfunction, a breakdown of process or control equipment, or any other abnormal condition, the owner or operator shall:
    - i. notify the Regional Supervisor or Director of any such occurrence by 9:00 a.m. Eastern Time of the Division's next business day of becoming aware of the occurrence and provide:
      - name and location of the facility;
      - nature and cause of the malfunction or breakdown;
      - time when the malfunction or breakdown is first observed;
      - expected duration; and
      - estimated rate of emissions;
    - ii. notify the Regional Supervisor or Director immediately when corrective measures have been accomplished; and
    - iii. submit to the Regional Supervisor or Director within 15 days a written report as described in 15A NCAC 2D .0535(f)(3).

#### Permit Deviations

3. Pursuant to 15A NCAC 2Q .0508(f)(2), the Permittee shall report deviations from permit requirements (terms and conditions) as follows:
  - a. Notify the Regional Supervisor or Director of all other deviations from permit requirements not covered under 15A NCAC 2D .0535 on the next business day after becoming aware of the deviation quarterly. A written report shall be submitted within two business days to the Regional Supervisor and shall include the probable cause of such deviation and any corrective actions or preventative actions taken. All reports of deviations from permit requirements shall be certified by a responsible official. The responsible official shall certify all deviations from permit requirements

#### **I.B. Other Requirements under 15A NCAC 2D .0535**

The Permittee shall comply with all other applicable requirements contained in 15A NCAC 2D .0535, including 15A NCAC 2D .0535(c) as follows:

1. Any excess emissions that do not occur during start-up and shut-down shall be considered a violation of the appropriate rule unless the owner or operator of the sources demonstrates to the Director, that the excess emissions are a result of a malfunction. The Director shall consider, along with any other pertinent information, the criteria contained in 15A NCAC 2D .0535(c)(1) through (7).
2. 15A NCAC 2D .0535(g). Excess emissions during start-up and shut-down shall be considered a violation of the appropriate rule if the owner or operator cannot demonstrate that excess emissions are unavoidable.

#### **J. Emergency Provisions** [40 CFR 70.6 (g)]

The Permittee shall be subject to the following provisions with respect to emergencies:

1. An emergency means any situation arising from sudden and reasonably unforeseeable events beyond the control of the facility, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the facility to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation, or operator error.
2. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions specified in 3. below are met.
3. The affirmative defense of emergency shall be demonstrated through properly signed contemporaneous operating

logs or other relevant evidence that include information as follows:

- a. an emergency occurred and the Permittee can identify the cause(s) of the emergency;
  - b. the permitted facility was at the time being properly operated;
  - c. during the period of the emergency the Permittee took all reasonable steps to minimize levels of emissions that exceeded the standards or other requirements in the permit; and
  - d. the Permittee submitted notice of the emergency to the DAQ within two working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a description of the emergency, steps taken to mitigate emissions, and corrective actions taken.
4. In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
  5. This provision is in addition to any emergency or upset provision contained in any applicable requirement specified elsewhere herein.

K. **Permit Renewal** [15A NCAC 2Q .0508(e) 2Q .0513(b)]

This permit is issued for a fixed term of five years for facilities subject to Title IV requirements and for a term not to exceed five years in the case of all other facilities. This permit shall expire at the end of its term. Permit expiration terminates the facility's right to operate unless a complete renewal application is submitted at least nine months before the date of permit expiration. If the Permittee or applicant has complied with 15A NCAC 2Q .0512(b)(1), this permit shall not expire until the renewal permit has been issued or denied. All terms and conditions of this permit shall remain in effect until the renewal permit has been issued or denied.

L. **Need to Halt or Reduce Activity Not a Defense** [15A NCAC 2Q.0508(k)(i)(4)]

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.

M. **Duty to Provide Information (submittal of information)** [15A NCAC 2Q.0508(n)(i)(9)]

1. The Permittee shall furnish to the DAQ, in a timely manner, any reasonable information that the Director 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.
2. The Permittee shall furnish the DAQ copies of records required to be kept by the permit when such copies are requested by the Director. For information claimed to be confidential, the Permittee may furnish such records directly to the EPA upon request along with a claim of confidentiality.

N. **Duty to Supplement** [15A NCAC 2Q .0507(f)(i)(16)]

The Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to the DAQ. The Permittee shall also provide additional information as necessary to address any requirement that becomes applicable to the facility after the date a complete permit application was submitted but prior to the release of the draft permit.

O. **Retention of Records** [15A NCAC 2Q .0508(f)]

The Permittee shall retain records of all required monitoring data and supporting information for a period of at least five years from the date of the monitoring sample, measurement, report, or application. Supporting information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring information, and copies of all reports required by the permit. These records shall be maintained in a form suitable and readily available for expeditious inspection and review. Any records required by the conditions of this permit shall be kept on site and made available to DAQ personnel for inspection upon request.

P. **Compliance Certification** [15A NCAC 2Q .0508(t)(n)]

The Permittee shall submit to the DAQ and the EPA (Air and EPCRA Enforcement Branch, EPA, Region 4, 61 Forsyth Street, Atlanta, GA 30303) postmarked on or before **March 1** a compliance certification (for the preceding calendar year) by a responsible official with all federally-enforceable terms and conditions in the permit, including emissions limitations, standards, or work practices. It shall be the responsibility of the current owner to submit a compliance certification for the entire year regardless of who owned the facility during the year. The compliance certification shall comply with additional requirements as may be specified under Sections 114(a)(3) or 504(b) of the Federal Clean Air Act. The compliance certification shall specify:

1. the identification of each term or condition of the permit that is the basis of the certification;
2. the compliance status (with the terms and conditions of the permit for the period covered by the certification);

3. whether compliance was continuous or intermittent; and
4. the method(s) used for determining the compliance status of the source during the certification period.

Q. **Certification by Responsible Official** [15A NCAC 2Q .0520]

A responsible official shall certify the truth, accuracy, and completeness of any application form, report, or compliance certification required by this permit. All certifications shall state that based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

R. **Permit Shield for Applicable Requirements** [15A NCAC 2Q .0512]

1. Compliance with the terms and conditions of this permit shall be deemed compliance with applicable requirements, where such applicable requirements are included and specifically identified in the permit as of the date of permit issuance.
2. A permit shield shall not alter or affect:
  - a. the power of the Commission, Secretary of the Department, or Governor under NCGS 143-215.3(a)(12), or EPA under Section 303 of the Federal Clean Air Act;
  - b. the liability of an owner or operator of a facility for any violation of applicable requirements prior to the effective date of the permit or at the time of permit issuance;
  - c. the applicable requirements under Title IV; or
  - d. the ability of the Director or the EPA under Section 114 of the Federal Clean Air Act to obtain information to determine compliance of the facility with its permit.
3. A permit shield does not apply to any change made at a facility that does not require a permit or permit revision made under 15A NCAC 2Q .0523.
4. A permit shield does not extend to minor permit modifications made under 15A NCAC 2Q .0515.

S. **Termination, Modification, and Revocation of the Permit** [15A NCAC 2Q .0519]

The Director may terminate, modify, or revoke and reissue this permit if:

1. the information contained in the application or presented in support thereof is determined to be incorrect;
2. the conditions under which the permit or permit renewal was granted have changed;
3. violations of conditions contained in the permit have occurred;
4. the EPA requests that the permit be revoked under 40 CFR, 70.7(g) or 70.8(d); or
5. the Director finds that termination, modification, or revocation and reissuance of the permit is necessary to carry out the purpose of NCGS Chapter 143, Article 21B.

T. **Insignificant Activities** [15A NCAC 2Q .0503]

Because an emission source or activity is insignificant does not mean that the emission source or activity is exempted from any applicable requirement or that the owner or operator of the source is exempted from demonstrating compliance with any applicable requirement. The Permittee shall have available at the facility at all times and made available to an authorized representative upon request, documentation, including calculations, if necessary, to demonstrate that an emission source or activity is insignificant.

U. **Property Rights** [15A NCAC 2Q .0508(m)(i)(8)]

This permit does not convey any property rights in either real or personal property or any exclusive privileges.

V. **Inspection and Entry** [15A NCAC 2Q .0508(r)(l) and NCGS 143-215.3(a)(2)]

1. Upon presentation of credentials and other documents as may be required by law, the Permittee shall allow the DAQ, or an authorized representative, to perform the following:
  - a. enter the Permittee's premises where the permitted facility is located or emissions-related activity is conducted, or where records are kept under the conditions of the permit;
  - b. have access to and copy, at reasonable times, any records that are required to be kept under the conditions of the permit;
  - c. inspect at reasonable times and using reasonable safety practices any source, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
  - d. sample or monitor substances or parameters, using reasonable safety practices, for the purpose of assuring compliance with the permit or applicable requirements at reasonable times.

Nothing in this condition shall limit the ability of the EPA to inspect or enter the premises of the Permittee under Section 114 or other provisions of the Federal Clean Air Act.

2. No person shall refuse entry or access to any authorized representative of the DAQ who requests entry for purposes

of inspection, and who presents appropriate credentials, nor shall any person obstruct, hamper, or interfere with any such authorized representative while in the process of carrying out his official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.

W. **Annual Fee Payment** [15A NCAC 2Q .0508(o)(i)(10)]

1. The Permittee shall pay all fees in accordance with 15A NCAC 2Q .0200.
2. Payment of fees may be by check or money order made payable to the N.C. Department of Environment and Natural Resources. Annual permit fee payments shall refer to the permit number.
3. If, within 30 days after being billed, the Permittee fails to pay an annual fee, the Director may initiate action to terminate the permit under 15A NCAC 2Q .0519.

X. **Annual Emission Inventory Requirements** [15A NCAC 2Q .0207]

The Permittee shall report by **June 30 of each year** the actual emissions of each air pollutant listed in 15A NCAC 2Q .0207(a) from each emission source within the facility during the previous calendar year. The report shall be in or on such form as may be established by the Director. The accuracy of the report shall be certified by a responsible official of the facility.

Y. **Confidential Information** [15A NCAC 2Q .0107 and 2Q .0508(n)(i)(9)]

Whenever the Permittee submits information under a claim of confidentiality pursuant to 15A NCAC 2Q .0107, the Permittee may also submit a copy of all such information and claim directly to the EPA upon request. All requests for confidentiality must be in accordance with 15A NCAC 2Q .0107.

Z. **Construction and Operation Permits** [15A NCAC 2Q .0100 and .0300]

A construction and operating permit shall be obtained by the Permittee for any proposed new or modified facility or emission source which is not exempted from having a permit prior to the beginning of construction or modification, in accordance with all applicable provisions of 15A NCAC 2Q .0100 and .0300.

AA. **Standard Application Form and Required Information** [15A NCAC 2Q .0505 and .0507]

The Permittee shall submit applications and required information in accordance with the provisions of 15A NCAC 2Q .0505 and .0507.

BB. **Financial Responsibility and Compliance History** [15A NCAC 2Q .0507(d)(43)]

The DAQ may require an applicant to submit a statement of financial qualifications and/or a statement of substantial compliance history.

CC. **Refrigerant Requirements (Stratospheric Ozone and Climate Protection)** [15A NCAC 2Q .0501(e)]

1. If the Permittee has appliances or refrigeration equipment, including air conditioning equipment, which use Class I or II ozone-depleting substances such as chlorofluorocarbons and hydrochlorofluorocarbons listed as refrigerants in 40 CFR Part 82 Subpart A Appendices A and B, the Permittee shall service, repair, and maintain such equipment according to the work practices, personnel certification requirements, and certified recycling and recovery equipment specified in 40 CFR Part 82 Subpart F.
2. The Permittee shall not knowingly vent or otherwise release any Class I or II substance into the environment during the repair, servicing, maintenance, or disposal of any such device except as provided in 40 CFR Part 82 Subpart F.
3. The Permittee shall comply with all reporting and recordkeeping requirements of 40 CFR 82.166. Reports shall be submitted to the EPA or its designee as required.

DD. **Prevention of Accidental Releases - Section 112(r)** [15A NCAC 2Q .0508(g)(h)]

If the Permittee is required to develop and register a Risk Management Plan with EPA pursuant to Section 112(r) of the Clean Air Act, then the Permittee is required to register this plan in accordance with 40 CFR Part 68.

EE. **Prevention of Accidental Releases General Duty Clause - Section 112(r)(1) -  
FEDERALLY-ENFORCEABLE ONLY**

Although a risk management plan may not be required, if the Permittee produces, processes, handles, or stores any amount of a listed hazardous substance, the Permittee has a general duty to take such steps as are necessary to prevent the accidental release of such substance and to minimize the consequences of any release.

FF. **Title IV Allowances** [15A NCAC 2Q .0508(h)(i)(1)]

This permit does not limit the number of Title IV allowances held by the Permittee, but the Permittee may not use allowances as a defense to noncompliance with any other applicable requirement. The Permittee's emissions may not exceed any allowances that the facility lawfully holds under Title IV of the Federal Clean Air Act.

**GG. Air Pollution Emergency Episode** [15A NCAC 2D .0300]

Should the Director of the DAQ declare an Air Pollution Emergency Episode, the Permittee will be required to operate in accordance with the Permittee's previously approved Emission Reduction Plan or, in the absence of an approved plan, with the appropriate requirements specified in 15A NCAC 2D .0300.

**HH. Registration of Air Pollution Sources** [15A NCAC 2D .0200]

The Director of the DAQ may require the Permittee to register a source of air pollution. If the Permittee is required to register a source of air pollution, this registration and required information will be in accordance with 15A NCAC 2D .0202(b).

**II. Ambient Air Quality Standards** [15A NCAC 2D .0501(e)]

In addition to any control or manner of operation necessary to meet emission standards specified in this permit, any source of air pollution shall be operated with such control or in such manner that the source shall not cause the ambient air quality standards in 15A NCAC 2D .0400 to be exceeded at any point beyond the premises on which the source is located.

When controls more stringent than named in the applicable emission standards in this permit are required to prevent violation of the ambient air quality standards or are required to create an offset, the permit shall contain a condition requiring these controls.

**JJ. General Emissions Testing and Reporting Requirements** [15A NCAC 2Q .0508(aa)(i)(16)]

If emissions testing is required by this permit or the DAQ or if the Permittee submits emissions testing to the DAQ in support of a permit application, the Permittee shall perform such testing in accordance with the appropriate EPA reference method(s) as approved by the DAQ and follow the procedures outlined below. The Permittee must request **in writing** and receive approval from the DAQ for an alternate test method or procedure.

1. The Permittee shall submit a completed Protocol Submittal Form to the DAQ Regional Supervisor at least 45 days prior to the scheduled test date. A copy of the Protocol Submittal Form may be obtained from the Regional Supervisor.
2. The Permittee shall notify the Regional Supervisor of the specific test dates at least 15 days prior to testing in order to afford the DAQ the opportunity to have an observer on-site during the sampling program.
3. During all sampling periods, the Permittee shall operate the emission source(s) under maximum normal operating conditions or alternative operating conditions as deemed appropriate by the Regional Supervisor or his delegate.
4. The Permittee shall submit **two** copies of the test report to the DAQ. The test report shall contain at a minimum the following information:
  - a. a certification of the test results by sampling team leader and facility representative;
  - b. a summary of emissions results and text detailing the objectives of the testing program, the applicable state and federal regulations, and conclusions about the testing and compliance status of the emission source(s);
  - c. a detailed description of the tested emission source(s) and sampling location(s) process flow diagrams, engineering drawings, and sampling location schematics should be included as necessary;
  - d. all field, analytical, and calibration data necessary to verify that the testing was performed as specified in the applicable test methods;
  - e. example calculations for at least one test run using equations in the applicable test methods and all test results including intermediate parameter calculations; and
  - f. documentation of facility operating conditions during all testing periods and an explanation relating these operating conditions to maximum normal operation. If necessary, provide historical process data to verify maximum normal operation.
5. The testing requirement(s) shall be considered satisfied only upon written approval of the test results by the DAQ.
6. The DAQ will review emission test results with respect exclusively to the specified testing objectives as proposed by the Permittee and approved by the DAQ. The use of the test results beyond the stated objectives remains subject to the approval of the DAQ.

**KK. Reopening for Cause** [15A NCAC 2Q .0517]

1. A permit shall be reopened and revised under the following circumstances:
  - a. additional applicable requirements become applicable to a facility with remaining permit term of three or more years;

- b. additional requirements (including excess emission requirements) become applicable to a source covered by Title IV;
  - c. the Director or EPA finds 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; or
  - d. the Director or EPA determines that the permit must be revised or revoked to assure compliance with the applicable requirements.
2. Any permit reopening shall be completed or a revised permit issued within 18 months after the applicable requirement is promulgated. No reopening is required if the effective date of the requirement is after the expiration of the permit term unless the term of the permit was extended pursuant to 15A NCAC 2Q .0513(c).
  3. Except for the state-enforceable only portion of the permit, the procedures set out in 15A NCAC 2Q .0507, .0521, or .0522 shall be followed to reissue the permit. If the State-enforceable only portion of the permit is reopened, the procedures in 15A NCAC 2Q .0300 shall be followed. The proceedings shall affect only those parts of the permit for which cause to reopen exists.
  4. The Director shall notify the Permittee at least 60 days in advance of the date that the permit is to be reopened, except in cases of imminent threat to public health or safety the notification period may be less than 60 days.
  5. Within 90 days, or 180 days if the EPA extends the response period, after receiving notification from the EPA that a permit needs to be terminated, modified, or revoked and reissued, the Director shall send to the EPA a proposed determination of termination, modification, or revocation and reissuance, as appropriate.

LL. **Reporting Requirements for Non-Operating Equipment** [15A NCAC 2Q .0508(f)(i)(16)]

The Permittee shall maintain a record of operation for permitted equipment noting whenever the equipment is taken from and placed into operation. During operation the monitoring recordkeeping and reporting requirements as prescribed by the permit shall be implemented within the monitoring period.

ATTACHMENT

**List of Acronyms**

<b>AOS</b>	Alternate Operating Scenario
<b>BACT</b>	Best Available Control Technology
<b>Btu</b>	British thermal unit
<b>CEM</b>	Continuous Emission Monitor
<b>CFR</b>	Code of Federal Regulations
<b>CAA</b>	Clean Air Act
<b>DAQ</b>	Division of Air Quality
<b>DENR</b>	Department of Environment and Natural Resources
<b>EMC</b>	Environmental Management Commission
<b>EPA</b>	Environmental Protection Agency
<b>FR</b>	Federal Register
<b>GACT</b>	Generally Available Control Technology
<b>HAP</b>	Hazardous Air Pollutant
<b>MACT</b>	Maximum Achievable Control Technology
<b>NCAC</b>	North Carolina Administrative Code
<b>NCGS</b>	North Carolina General Statutes
<b>NESHAPS</b>	National Emission Standards for Hazardous Air Pollutants
<b>NO<sub>x</sub></b>	Nitrogen Oxides
<b>NSPS</b>	New Source Performance Standard
<b>OAH</b>	Office of Administrative Hearings
<b>PM</b>	Particulate Matter
<b>PM<sub>10</sub></b>	Particulate Matter with Nominal Aerodynamic Diameter of 10 Micrometers or Less
<b>POS</b>	Primary Operating Scenario
<b>PSD</b>	Prevention of Significant Deterioration
<b>SIC</b>	Standard Industrial Classification
<b>SIP</b>	State Implementation Plan
<b>SO<sub>2</sub></b>	Sulfur Dioxide
<b>tpy</b>	Tons Per Year
<b>VOC</b>	Volatile Organic Compound

## PART II

The Permittee is hereby authorized to construct air emission source(s) and associated air pollution control device(s) and appurtenances listed in Section 1, Part II of this permit, in accordance with the completed Air Quality Permit Application 4400159.05A received June 15, 2005, including all plans, specifications, previous applications, and other supporting data, all of which are filed with the DAQ and are incorporated in Part II of this Air Quality Permit.

### SECTION 1: EMISSION SOURCE(S) AND ASSOCIATED AIR POLLUTION CONTROL DEVICE(S) AND APPURTENANCES

**Table 1A:** The following table contains a summary of all authorized emission sources and associated air pollution control devices and appurtenances associated with Air Quality Permit Application 4400159.05A:

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
G08022	black liquor oxidation system (228,000 pounds per hour maximum feed rate based on calendar day average)	CD-BLOcyclone	3 cyclones (60 inches in diameter each);
		CD-BLOXRTO	one natural gas-fired regenerative thermal oxidizer (4.2 million Btu per hour heat input);
		CD-RTOSCR	one caustic scrubber (5 to 7 gallon per minute NaOH injection design flow rate)

### SECTION 2: SPECIFIC LIMITATIONS AND CONDITIONS

The air emission source(s) and associated air pollution control device(s) and appurtenances listed in Section 1 are subject to the following specific terms, conditions, and limitations, including the monitoring, recordkeeping, and reporting requirements as specified herein:

1. Any air emission sources or control devices authorized to construct in Section 1 must be constructed and maintained in accordance with the provisions contained herein and operated in accordance with provisions contained in Part I of this permit. The Permittee shall comply with applicable Environmental Management Commission Regulations, including Title 15A NCAC, Subchapter 2D .0317.
2. The Permittee shall file a Title V Air Quality Permit Application for the air emission source(s) and associated air pollution control device(s) listed in Section 1 on or before 12 months after commencing operation of the sources listed in Table 1A above.
3. **NOTIFICATION REQUIREMENT** – The Permittee shall notify the Regional Supervisor in **writing** with 15 days of commencing operation of the sources listed in Table 1A above. Any existing equipment being replaced is permitted to operate until the replacement equipment is operational.

## **SECTION 3: GENERAL CONDITIONS:**

This section describes terms and conditions applicable to the construction of the air emission source(s) and associated air pollution control device(s) listed in Section 1 and State-only emission sources listed in Part I of the permit. Unless otherwise specified herein all references to the “permit” in this section apply only to Part II of the permit.

A. **Operating Conditions**

All operating conditions for the air emission source(s) and associated air pollution control device(s) listed in Section 1 are under Part I of this permit.

B. **General Provisions**

1. This permit is nontransferable by the Permittee. Future owners and operators must obtain a new Air Quality Permit from the DAQ.
2. This issuance of this permit in no way absolves the Permittee of liability for any potential civil penalties which may be assessed for violations of state law which have occurred prior to the issuance date of this permit.
3. A violation of any term or condition of Part II of this permit shall subject the Permittee to enforcement pursuant to NCGS 143-215.114A, 143-215.114B, and 143-215.114C, including assessment of civil and/or criminal penalties.

C. **Submissions (reports, test data, monitoring data, notifications, and requests for renewal)**

Except as otherwise specified herein, two copies of all documents, reports, test data, monitoring data, notifications, request for renewal, and any other information required by this permit shall be submitted to the appropriate Regional Office. Refer to the Regional Office address on the cover page of this permit.

D. **Part II Renewal Request**

The Permittee shall request renewal of the emission source(s) and associated air pollution control device(s) listed in Section 1 at the same time as specified in Part I, Section 3 - General Condition K of this permit.

E. **Annual Fee Payment**

The Permittee shall pay all fees in accordance with 15A NCAC 2Q .0200 and in conjunction with Part I, Section 3 - General Condition W of this Air Quality Permit.

F. **Reporting Requirements**

Any of the following that would result in new or increased emissions from the emission source(s) listed in Section 1 must be reported to the Regional Supervisor, DAQ:

1. changes in the information submitted in the application;
2. changes that modify equipment or processes; or
3. changes in the quantity or quality of materials processed.

If appropriate, modifications to the permit may then be made by the DAQ to reflect any necessary changes in the permit conditions. In no case are any new or increased emissions allowed that will cause a violation of the emission limitations specified herein.

G. **Termination, Modification, and Revocation of the Permit**

The Director may terminate, modify, or revoke and reissue this permit if:

1. the information contained in the application or presented in support thereof is determined to be incorrect;
2. the conditions under which the permit or permit renewal was granted have changed;
3. violations of conditions contained in the permit have occurred; or
4. the Director finds that termination, modification, or revocation and reissuance of the permit is necessary to carry out the purpose of NCGS Chapter 143, Article 21B.

H. **Inspection and Entry**

Upon presentation of credentials and other documents as may be required by law, the Permittee shall allow the DAQ, or an authorized representative, to perform the following:

1. enter the Permittee's premises where the permitted facility is located or emissions-related activity is conducted, or where records are kept under the conditions of the permit;

2. have access to and copy, at reasonable times, any records that are required to be kept under the conditions of the permit;
3. inspect at reasonable times and using reasonable safety practices any source, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
4. sample or monitor substances or parameters, using reasonable safety practices, for the purpose of assuring compliance with the permit or applicable requirements at reasonable times.

I. **Circumvention** - STATE ENFORCEABLE ONLY

The facility shall be properly operated and maintained at all times in a manner that will effect an overall reduction in air pollution. Unless otherwise specified by this permit, no emission source may be operated without the concurrent operation of its associated air pollution control device(s) and appurtenances.