

# INITIAL TITLE V AIR PERMIT APPLICATION REVIEW

Revised 7/12/99

<b>APPLICANT:</b>	<b>SITE LOCATION:</b>	<b>COUNTY:</b>	
Blue Ridge Paper Products, Inc.	Canton	Haywood	
<b>TECHNICAL CONTACT:</b>	<b>PHONE:</b>	<b>RESPONSIBLE OFFICIAL:</b>	<b>TITLE:</b>
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<b>APPLICATION NUMBER:</b>	<b>EXISTING PERMIT NUMBER:</b>	<b>NEW PERMIT NUMBER:</b>	
4400159A5.A	08961T04	08961R03	

## I. Introduction

The U.S. Environmental Protection Agency (EPA) has given interim approval to North Carolina's Title V operating permits program effective on December 15, 1995. This EPA approval triggered the requirements for Title V facilities to submit permit applications to the Division of Air Quality. Title V facilities are required to obtain an operating permit which addresses all applicable regulations under the State Implementation Plan, Federal Implementation Plan, and other provisions of the Clean Air Act (CAA). The Title V Operating Permit will define all of the facility's obligations under the CAA.

This Initial Title V Air Permit application Review intends to convey all pertinent emissions data, rules, policies, and engineering assumptions used to construct the DRAFT Title V operating permit. The primary source of information used to construct the DRAFT permit is the above referenced air permit application.

## II. Background Information

The DRAFT Title V operating permit replaces an existing Air Quality Construction and Operation Permit No. 08961R03 which was issued on August 19, 2003 and is currently scheduled to expire on July 31, 2006.

Pursuant to 15A NCAC 2Q .0506 Blue Ridge Paper Products, Inc. submitted its initial Title V application to the Division of Air Quality on August 12, 2003. The application was considered complete for processing on August 12, 2003. The DRAFT permit is required to go to public notice pursuant to 15A NCAC 2Q .0521.

## III. Facility Description

The Blue Ridge Paper Products' Canton facility is a bleached kraft pulp mill producing bleached kraft softwood and hardwood pulp, paper and paperboard. Existing sources include: five power boilers, a batch digester and brownstock washer system, two recovery boilers, black liquor evaporator system, turpentine recovery system, two lime kilns, a chlorine dioxide generator, two pulp bleaching systems, three paper machines and a paperboard dryer. Hazardous Air Pollutant compounds (HAP) from the pulping and chemical recovery systems are collected via a closed foul gas collection system and foul condensate steam stripper system for burning in the lime kilns per 40CFR63, Subpart S.

#### IV. Statement of Compliance

The DAQ has reviewed the compliance status of this facility. On its latest inspection, the facility was in compliance with all applicable requirements. The applicant has certified that the facility will be in compliance with all applicable requirements. The applicant has also certified that the facility will be in compliance with any applicable requirements taking effect during the term of the permit and will meet such requirements on a timely basis.

#### V. Summary of Emission Sources and Control Devices

The following table identifies all emission sources and associated control devices for which the Initial Title V Operating Permit is being issued.

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
G02004 NESHAPS, Subpart S	Digester area, including: eighteen (18) batch digesters  No.1 Blow Tank, No. 1 Fiberline Accumulator, No. 1 Secondary Condenser  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>NESHAPS, Subpart S</b>	No. 1 Fiberline brownstock washing		MACT required by April 17, 2006
G03006 <b>NSPS, Subpart BB NESHAPS, Subpart S</b>	No. 2 Fiberline brownstock washing		MACT required by April 17, 2006
G04009 <b>NESHAPS, Subpart S</b>	No. 1 Fiberline oxygen delignification system		MACT required by April 17, 2006
G04010 <b>NESHAPS, Subpart S</b>	No. 2 Fiberline oxygen delignification system		MACT required by April 17, 2006
G04011	white liquor oxidation system (40,500 pounds white liquor maximum throughput rate)	04-CD-021-01	demister
G04025 <b>NESHAPS, Subpart S</b>	No. 1 Fiberline Pulp Screening System		MACT required by April 17, 2006
G04026 <b>NESHAPS, Subpart S</b>	No. 2 Fiberline Pulp Screening System		MACT required by April 17, 2006
G05012 <b>NESHAPS, Subpart S</b>	<u>No. 1 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 white liquor design flow rate)
G05013 <b>NESHAPS, Subpart S</b>	<u>No. 2 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 white liquor design flow rate)

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)
G07016 <b>NESHAPS, Subpart S</b>	Swenson counter current evaporators (147,402 pounds per hour black liquor solids maximum capacity)  West GB counter-current evaporator (131,614 pounds per hour black liquor solids maximum capacity)	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 NESHAPS, 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	Heavy Black Liquor Storage Tanks	NA	NA
G08020 <b>NESHAPS, 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	electrostatic precipitator (115,236 sq.ft. of plate area)

G08021 <b>NESHAPS, 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	electrostatic precipitator (115,236 sq.ft. of plate area)
G08022 <b>NESHAPS, Subpart MM</b>	black liquor oxidation system (228,000 pounds per hour maximum feed rate based on calendar day average)	-----	cyclone (60 inches in diameter)
G08023 <b>NESHAPS, Subpart MM</b>	No. 10 recovery furnace smelt dissolving tank	08-CD-011-01	chevron mist eliminator (33.5 sq.ft. of collection surface area)
G08024 <b>NESHAPS, Subpart MM</b>	No. 11 recovery furnace smelt dissolving tank	08-CD-012-01	chevron mist eliminator (33.5 sq.ft. of collection surface area)
G09028 <b>NESHAPS, 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 LVHC 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 caustic injection design rate)
G09029 <b>NESHAPS, 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 LVHC NCG and primary SOG combustion)	09-CD-010-01	cyclonic mist eliminator (132 inches in diameter) installed in series with a flooded disc-type wet scrubber (450 gallons per minute caustic injection design rate)
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 (___ 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)
G09033	Nos. 4, 5, and 6 Lime Precoat Filters	NA	NA

## VI. Emission Source-by-Source Evaluation

**A. The Digester Area (ID No. G02004) containing: eighteen (18) batch digesters (ID Nos. 02-PU-001 thru 018); the No. 1 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); and the No. 2 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 Non-Condensable Gas Collection System (ID No. 07-CD-006-01) for burning in Lime Kiln No. 4 (ID No. ES-G09028) or Lime Kiln No. 5 (ID No. G09028). Foul condensates are collected via the closed Foul Condensate Collection System.**

There are no direct emissions from these sources to the atmosphere. Gaseous emissions are collected in a closed collection system for burning in Lime Kiln Nos. 4 or 5. Foul condensates are collected via the closed Foul Condensate Collection System (ID No. G07018) and steam stripped, the stripper offgases (SOG) being burned in the Lime Kilns.

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 measured as hydrogen sulfide on a dry gas basis. Limitation is an average of contiguous twelve hour time periods.	15A NCAC 2D .0528
Toxic Air Pollutants	State Enforcable Only (See Toxics)	15A NCAC 2D .1100
HAP	40CFR63, Subpart S (See MACT)	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 corrected to 10 percent oxygen from any digester system. Limitation is an average of contiguous twelve hour time periods. [15A NCAC 2D .0528]
- b. Proper operation of the foul gas and foul condensate collection systems per 40CFR63, Subpart S (see MACT) will achieve compliance with 2D.0528 for these sources. No monitoring, recordkeeping or reporting is required.

**2. 15A 2D .1100: CONTROL OF AIR TOXICS**

These sources were listed as specific sources of Toxic Air Pollutants for which a compliance modeling demonstration was made (see TOXICS).

**3. 15A 2D .1111: 40CFR63, Subpart S**

HAP emissions from these sources are subject to the Pulp and Paper MACT (40CFR63, Subpart S) (See MACT).

**B. The Brownstock Washing Area contains the No. 1 Fiberline Brownstock Washing System (ID No. G03005) and the No. 2 Fiberline Brownstock Washing System (ID No. G03006)**

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 Enforcable Only (See Toxics)	15A NCAC 2D .1100
HAP	40CFR63, Subpart S (See MACT)	15A NCAC 2D .1111

**1. 15A 2D .1100: CONTROL OF AIR TOXICS**

These sources were listed as specific sources of ToxicAir Pollutants for which a compliance modeling demonstration was made(see TOXICS).

**2. 15A 2D .1111: 40CFR63, Subpart S**

HAP emissions from these sources are subject to the Pulp and Paper MACT(40CFR63, Subpart S) (See MACT).

**C. The Oxygen Delignification Area contains the No. 1 Fiberline Oxygen Delignification System (ID No. G04009) and the No. 2 Fiberline Oxygen Delignification System (ID No. G04010)**

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 Enforcable Only (See Toxics)	15A NCAC 2D .1100
HAP	40CFR63, Subpart S (See MACT)	15A NCAC 2D .1111

**1. 15A 2D .1100: CONTROL OF AIR TOXICS**

These sources were listed as specific sources of ToxicAir Pollutants for which a compliance modeling demonstration was made(see TOXICS).

**2. 15A 2D .1111: 40CFR63, Subpart S**

HAP emissions from these sources are subject to the Pulp and Paper MACT(40CFR63, Subpart S) (See MACT).

**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	$E = 4.10 \times P^{0.67}$	15A NCAC 2D .0515
visible emissions	20 percent opacity	15A NCAC 2D .0521
Toxic Air Pollutants	State Enforcable Only (See Toxics)	15A NCAC 2D .1100

**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.

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

- b. 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 recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there is no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:
- i. a monthly visual inspection of the system ductwork and material collection unit for leaks; and
  - ii. an annual (for each 12 month period following the initial inspection) internal 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.
- c. 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 variance from manufacturer's recommendations, if any, and corrections made.
- The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if these records are not maintained.

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

- a. Visible emissions from this source (**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)]

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

- b. To assure compliance, once a week the Permittee shall observe the emission points of this source for any visible emissions above normal. The Permittee shall establish "normal" for the source in the first 30 days following the effective date of the permit. If visible emissions from this source are observed to be above normal, the Permittee shall either: (a) be deemed to be in noncompliance with 15A NCAC 2D .0521 or (b) 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. If the demonstration in (b) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0521.

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

- c. 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.

**3. 15A 2D .1100: CONTROL OF AIR TOXICS**

These sources were listed as specific sources of ToxicAir Pollutants for which a compliance modeling demonstration was made(see TOXICS).

**E. The No. 1 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 white liquor design flow rate, ID No. 05-CD-002-01); and the No. 2 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 white liquor design flow rate, ID No. 05-CD-017-01)**

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 Enforcable Only (See Toxics)	15A NCAC 2D .1100
HAP	40CFR63, Subpart S (See MACT)	15A NCAC 2D .1111

**1. 15A 2D .1100: CONTROL OF AIR TOXICS**

These sources were listed as specific sources of ToxicAir Pollutants for which a compliance modeling demonstration was made(see TOXICS).

**2. 15A 2D .1111: 40CFR63, Subpart S**

HAP emissions from these sources are subject to the Pulp and Paper MACT(40CFR63, Subpart S) (See MACT).

**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 flowrate, ID No. 06-CD-006-01)in series with the No. 2 Fiberline Bleaching System counter current type packed tower wet scrubber (ID No. 05-CD-002-01(POS) or packed tower-type wet scrubber (ID No. 06-CD-002-01) only (AOS) if the No. 2 Fiberline Bleaching System is not operating.**

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 Enforcable Only (See Toxics)	15A NCAC 2D .1100

Regulated Pollutant	Limits/Standards	Applicable Regulations
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. ES 06-PU-002-01) either in series with the No. 2 Fiberline Bleaching System wet scrubber (ID No. 05-CD-002-01) or alone. To assure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there is no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement must include the following:
  - i. a monthly external visual inspection of the system ductwork and material collection unit for leaks; and
  - ii. an annual (for each 12 month period from initial inspection) internal 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 .0504 if the wet scrubber (ID No. 06-CD-002-0)1 is not inspected and maintained.

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

- d. 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.

**G. Two (2) Black Liquor Evaporators (ID No. G07016) consisting of the Swepson Evaporator (ID No. 07-PU-002) and associated Swepson Evaporator Hotwell (ID No. 07-TK-006) and 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 Non-Condensable Gas Collection System (ID No. 07-CD-006-01) for incineration in Lime Kiln No. 4 (IDNo. G09028) or Lime Kiln No. 5 (IDNo. G09028). Foul condensates are controlled by the Condensate Stripper System (ID No. G07018).**

There are no direct emissions from these sources to the atmosphere. Gaseous emissions are collected in a closed collection system for burning in Lime Kiln Nos. 4 or 5. Foul condensates are collected via the closed Foul Condensate Collection System (ID No. G07018) and steam stripped, the stripper offgases (SOG) being burned in the Lime Kilns.

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 measured as hydrogen sulfide on a dry gas basis corrected to 10 percent oxygen. Limitation is an average of contiguous twelve hour time periods.	15A NCAC 2D .0528
Toxic Air Pollutants	State Enforcable Only (See Toxics)	15A NCAC 2D .1100
HAP	40CFR63, Subpart S (See MACT)	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 corrected to 10 percent oxygen from any multiple effect evaporator. Limitation is an average of contiguous twelve hour time periods. [15A NCAC 2D .0528]
- b. Proper operation of the foul gas and foul condensate collection systems per 40CFR63, Subpart S (see MACT) will achieve compliance with 2D.0528 for these sources. No monitoring , recordkeeping or reporting is required.

**2. 15A 2D .1100: CONTROL OF AIR TOXICS**

These sources were listed as specific sources of ToxicAir Pollutants for which a compliance modeling demonstration was made(see TOXICS).

**3. 15A 2D .1111: 40CFR63, Subpart S**

HAP emissions from these sources are subject to the Pulp and Paper MACT(40CFR63, Subpart S) (See MACT).

**K. Evaporator Area, Other Units (ID No. G0717) including eight (8) Weak Black Liquor Storage Tanks (ID Nos. 07-TK-004, 07-TK-013, and 07-TK-016 thru 07-TK-021); Evaporator Boilout Tank (ID No. 07-TK-005); Evaporator Condensate Tank (ID No. 07-TK-010; and ( ) Multipurpose Liquor Storage Tanks (ID Nos. 07-TK- )**

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 Enforcable Only (See Toxics)	15A NCAC 2D .1100
HAP	40CFR63, Subpart S (See MACT)	15A NCAC 2D .1111

**1. 15A 2D .1100: CONTROL OF AIR TOXICS**

These sources were listed as specific sources of ToxicAir Pollutants for which a compliance modeling demonstration was made(see TOXICS).

**2. 15A 2D .1111: 40CFR63, Subpart S**

HAP emissions from these sources are subject to the Pulp and Paper MACT(40CFR63, Subpart S) (See MACT).

**L. Condensate Stripper System (ID No. G07018) (40CFR60, Subpart BB) consisting of the Condensate Stripper (ID No. 07-PU-015) and associated Stripper FeedTank (ID No. 07-TK-011) and Reflux Tank (ID No. 07-014). Foul gases are collected by the Non-Condensable Gas Collection System (ID No. 07-CD-006-01) for incineration in Lime Kiln No. 5 (IDNo. G09029) or Lime Kiln No. 4 (IDNo. G09028).**

There are no direct emissions from these sources to the atmosphere. Gaseous emissions are collected in a closed collection system for burning in Lime Kiln Nos. 4 or 5. Foul condensates are collected via the closed Foul Condensate Collection System (ID No. G07018) and steam stripped, the stripper offgases (SOG) being burned in the Lime Kilns.

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 Regulations</b>
Total Reduced Sulfur (TRS)	5 ppm by volume on a dry basis, corrected to 10 percent oxygen. Limitation is an average of contiguous twelve hour time periods	15A NCAC 2D .0524 (40 CFR Part 60 Subpart BB)
Toxic Air Pollutants	State Enforcable Only (See Toxics)	15A NCAC 2D .1100
HAP	40CFR63, Subpart S (See MACT)	15A NCAC 2D .1111

**1. 15A NCAC 2D .0524: NSPS 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 C (1200 F) for at least 0.5 second
- c. Proper operation of the foul gas and foul condensate collection systems per 40CFR63, Subpart S (see MACT) will achieve compliance with 40CFR60, Subpart BB for these sources.

**M. 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 Enforcable Only (See Toxics)	15A NCAC 2D .1100

**1. 15A 2D .1100: CONTROL OF AIR TOXICS**

These sources were listed as specific sources of ToxicAir Pollutants for which a compliance modeling demonstration was made(see TOXICS).

- N. 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 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 per cent opacity	15A NCAC 2D .0521
total reduced sulfur	5 ppm measured as hydrogen sulfide on a dry gas basis, corrected to 8% oxygenby volume. Limitation is an average of contiguous twelve hour time periods	15A NCAC 2D .0528
Toxic Air Pollutants	State Enforcable Only (See Toxics)	15A NCAC 2D .1100
HAP	40CFR63,Subpart MM (See MACT)	15A NCAC 2D .1111

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

- a. Emissions of particulate matter from this source shall not exceed an allowable emission rate of 3.0 lbs. per equivalent ton of air dried pulp [15A NCAC 2D .0508.a.1.]

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

- b. 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, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there is no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:

- i. a monthly visual inspection of the system ductwork and material collection unit for leaks;
- ii. an annual (for each 12 month period following the initial inspection) internal inspection of the electrostatic precipitator's structural integrity.

- iii. visual inspections shall include:
  - a. visual checks of critical components such as rappers and ash removal equipment;
  - b. checks for any equipment that does not generate an alarm in the turned-off state, to ensure it is switched on;
  - c. measurement of average particulate deposits on discharge and collecting electrodes, for comparison with past and future inspections;
  - d. checks for signs of plugging of gas distribution plates, and excessive buildup on inlet and outlet plenum floor surfaces;
  - e. checks for signs of hopper plugging; and
  - f. checks for broken rapper rod insulators, cracked support bushing insulators, and broken or loose stabilizer bar insulators (if installed), and replacement as required.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0508 if the ductwork and electrostatic precipitator are not inspected and maintained.

- c. 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 electrostatic precipitator; and
  - iv. any variance from manufacturer's recommendations, if any, and corrections made.

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

**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]

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

- b. The maximum sulfur content of any No. 6 fuel oil received and burned in the boiler shall not exceed 2.1 percent by weight. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516 if the sulfur content of the fuel oil exceeds this limit. [15A NCAC 2Q .0508(bb)]
- c. To assure compliance, the Permittee shall monitor the sulfur content of the No. 6 fuel oil by using fuel oil supplier certification per shipment received. 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 quarter;
  - iii. the method used to determine the maximum sulfur content of the fuel oil; and
  - iv. a certified statement signed by the responsible official that the records of fuel oil supplier certification submitted represent all of the No. 6 fuel oil fired during the period.

**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. 10 Recovery Furnace (**ID No. G08020**) 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)]
- b. 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.

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

- a. TRS emissions from the No. 10 Recovery Furnace (**ID No. G08020**) shall not be more than 5 ppm measured as hydrogen sulfide on a dry gas basis, corrected to 8% oxygen by volume. Limitation is an average of contiguous twelve hour time periods.(15A 2D .0528.c.1.)

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

- b. A continuous emissions monitor for TRS emissions shall be installed, calibrated, maintained, tested, and operated in accordance with 40 CFR Part 60 Appendix B "Performance Specifications" and Appendix F "Quality Assurance Procedures."

**5. 15A 2D .1100: CONTROL OF AIR TOXICS**

These sources were listed as specific sources of Toxic Air Pollutants for which a compliance modeling demonstration was made(see TOXICS).

**6. 15A 2D .1111: 40CFR63, Subpart MM**

HAP emissions from these sources are subject to the Pulp and Paper MACT(40CFR63, Subpart MM) (See MACT).

**P. No. 11 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. G08021) 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-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 (when firing black liquor only)
sulfur dioxide	2.3 lbs. per million Btu heat input	15A NCAC 2D .0516
visible emissions	35 per cent opacity	15A NCAC 2D .0508

total reduced sulfur	5 ppm measured as hydrogen sulfide on a dry gas basis, corrected to 8% oxygen by volume. Limitation is an average of contiguous twelve hour time periods	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 of particulate matter from this source shall not exceed an allowable emission rate of 3.0 lbs. per equivalent ton of air dried pulp [15A NCAC 2D .0508.a.1.]

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

b. 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). To assure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there is no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:

- i. a monthly visual inspection of the system ductwork and material collection unit for leaks;
- ii. an annual (for each 12 month period following the initial inspection) internal inspection of the electrostatic precipitator's structural integrity.
- iii. visual inspections shall include:
  - a. visual checks of critical components such as rappers and ash removal equipment;
  - b. checks for any equipment that does not generate an alarm in the turned-off state, to ensure it is switched on;
  - c. measurement of average particulate deposits on discharge and collecting electrodes, for comparison with past and future inspections;
  - d. checks for signs of plugging of gas distribution plates, and excessive buildup on inlet and outlet plenum floor surfaces;
  - e. checks for signs of hopper plugging; and
  - f. checks for broken rapper rod insulators, cracked support bushing insulators, and broken or loose stabilizer bar insulators (if installed), and replacement as required.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0508 if the ductwork and electrostatic precipitator are not inspected and maintained.

c. 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 electrostatic precipitator; and
- iv. any variance from manufacturer's recommendations, if any, and corrections made.

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

**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]

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

- b. The maximum sulfur content of any No. 6 fuel oil received and burned in the boiler shall not exceed 2.1 percent by weight. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516 if the sulfur content of the fuel oil exceeds this limit. [15A NCAC 2Q .0508(bb)]
- c. To assure compliance, the Permittee shall monitor the sulfur content of the No. 6 fuel oil by using fuel oil supplier certification per shipment received. 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 quarter;
  - iii. the method used to determine the maximum sulfur content of the fuel oil; and
  - iv. a certified statement signed by the responsible official that the records of fuel oil supplier certification submitted represent all of the No. 6 fuel oil fired during the period.

**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. 11 Recovery Furnace (**ID No. G08021**) 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)]
- b. 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.

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

- a. TRS emissions from the No. 11 Recovery Furnace (**ID No. G08021**) shall not be more than 5 ppm measured as hydrogen sulfide on a dry gas basis, corrected to 8% oxygen by volume. Limitation is an average of contiguous twelve hour time periods. (15A 2D .0528.c.1.)

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

- b. A continuous emissions monitor for TRS emissions shall be installed, calibrated, maintained, tested, and operated in accordance with 40 CFR Part 60 Appendix B "Performance Specifications" and Appendix F "Quality Assurance Procedures."

**5. 15A 2D .1100: CONTROL OF AIR TOXICS**

These sources were listed as specific sources of Toxic Air Pollutants for which a compliance modeling demonstration was made (see TOXICS).

**6. 15A 2D .1111: 40CFR63, Subpart MM**

HAP emissions from these sources are subject to the Pulp and Paper MACT(40CFR63, Subpart MM) (See MACT).

**P. Black liquor oxidation system (228,000 pounds per hour black liquor solids feed rate, ID No. G08022) equipped with a cyclone (60 inches in diameter, ID No. \_\_\_\_\_)**

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 Enforcable Only (See Toxics)	15A NCAC 2D .1100

**1. 15A 2D .1100: CONTROL OF AIR TOXICS**

These sources were listed as specific sources of ToxicAir Pollutants for which a compliance modeling demonstration was made(see TOXICS).

**Q. 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)**

No. 10 Smelt Dissolving Tank was built before 1970. No. 11 Smelt Dissolving Tank was built in 1973. Therefore, the opacity limits per 2D .0521 are 40 percent and 20 percent, 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	0.6 lbs. per ton of air dried pulp	15A NCAC 2D .0508
visible emissions	40 percent opacity	15A NCAC 2D .0521
visible emissions	20 percent opacity	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 Enforcable Only (See Toxics)	15A NCAC 2D .1100
HAP	40CFR63,Subpart MM (See MACT)	15A NCAC 2D .1111

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

a. Emissions of particulate matter from these sources shall not exceed an allowable emission rate of 0.6 lbs. per equivalent ton of air dried pulp [15A NCAC 2D .0508.a.1.]

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

- b. 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). To assure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there is no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:
- i. a monthly visual inspection of the system ductwork and material collection unit for leaks;
  - ii. an annual (for each 12 month period following the initial inspection) internal inspection of the mist eliminators structural integrity.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0508 if the ductwork and mist eliminator are not inspected and maintained.

- c. 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 mist eliminators; and
  - iv. any variance from manufacturer's recommendations, if any, and corrections made.
- The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0508 if these records are not maintained.

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

a. i. 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)]

ii. 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. If the results of this test are above the limit given in Section 2.1Q. 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 this source for any visible emissions above normal. The Permittee shall establish "normal" for the source in the first 30 days following the effective date of the permit. If visible emissions from this source are observed to be above normal, the Permittee shall either: (a) be deemed to be in noncompliance with 15A NCAC 2D .0521 or (b) 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 R., 2. a. above. If the demonstration in (b) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0521.

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

- d. 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.

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

- a. TRS emissions from the No. 10 smelt dissolving tank (**ID No. G08023**) or the No. 11 smelt dissolving tank (**ID No. G08024**) shall not be more than 0.032 lbs. per ton black liquor solids (dry weight)

**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 limit given in Section 2.1.Q. 4. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0528.

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

- c. If the demonstration in (b) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0528.

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

- d. 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.

**4. 15A 2D .1100: CONTROL OF AIR TOXICS**

These sources were listed as specific sources of ToxicAir Pollutants for which a compliance modeling demonstration was made(see TOXICS).

**5. 15A 2D .1111: 40CFR63, Subpart MM**

HAP emissions from these sources are subject to the Pulp and Paper MACT(40CFR63, Subpart MM) (See MACT).

**R. No. 6 fuel oil-fired No. 4 Lime Kiln (60.0 million Btu per hour maximum permitted heat input rate , ID No. G09028) equipped with a flooded-disc type wet scrubber (ID No. 09-CD-009-01) and a cyclonic mist eliminator (10 feet in diameter, ID No. \_\_\_\_\_) in series; and No. 6 fuel oil-fired No. 5 Lime Kiln (60.0 million Btu per hour maximum permitted heat input rate , ID No. G09028) equipped with a flooded-disc type wet scrubber (ID No. 09-CD-010-01) and a cyclonic mist eliminator (10 feet in diameter, ID No. \_\_\_\_\_) in series. No. 4 Lime Kiln is the primary incinerator and No. 5 Lime Kiln is backup incinerator for collected NCG foul gases; No. 5 Lime Kiln is the primary incinerator and No. 4 Lime Kiln is backup incinerator for Stripper Off Gases (SOC) 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
visble emissions	40 per cent opacity	15A NCAC 2D .0521
total reduced sulfur	20 ppm measured as hydrogen sulfide on a dry gas basis, corrected to 10% oxygen by volume. Limitation is an average of contiguous 12 hour periods	15A NCAC 2D .0528
HAP	40CFR63, Subpart MM (See MACT)	15A NCAC 2D .1111

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

- a. Emissions of particulate matter from these sources shall not exceed an allowable emission rate of 0.5 lbs. per equivalent ton of air dried pulp [15A NCAC 2D .0508.a.1.]

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

- b. Particulate matter emissions from the No. 4 Lime Kiln (**ID No. G09028**) shall be controlled by the flooded disc-typewet scrubber (ID No.09-CD-009-01) with a water scrubbing medium and a cyclonic mist eliminator (ID No. \_\_\_\_\_) in series. Particulate matter emissions from the No. 5 Lime Kiln (**ID No. G09029**) shall be controlled by the flooded disc-type wet scrubber (ID No.09-CD-010-01) with a water scrubbing medium and a cyclonic mist eliminator (ID No. \_\_\_\_\_) in series. To assure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there is no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement must include the following:
- i. a monthly external visual inspection of the system ductwork and material collection units for leaks; and
  - ii. an annual (for each 12 month period from initial inspection) internal inspection of the wet scrubbers' and mist eliminators' 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.
- The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0508 if the ductwork, wet scrubbers and mist eliminators are not inspected and maintained.

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

- d. 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 .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)(4) ]

- b. Under the provisions of NCGS 143-215.108, the Permittee shall demonstrate compliance with the emission limit(s) above by testing the No. 4 Lime Kiln (ID No(s). G09028) for sulfur dioxide emissions when burning NCG gases and SOC 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. 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 is above the limit given in Section 2.1.R. 2. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516. If the results of this test are above the limit given in Section 2.1.R. 2. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516.

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

- c. The maximum sulfur content of any No. 6 fuel oil received and burned in the lime kilns shall not exceed 2.1 percent by weight. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516 if the sulfur content of the fuel oil exceeds this limit. [15A NCAC 2Q .0508(bb)]
- d. To assure compliance, the Permittee shall monitor the sulfur content of the No. 6 fuel oil by using fuel oil supplier certification per shipment received. 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 quarter;
  - iii. the method used to determine the maximum sulfur content of the fuel oil; and
  - iv. a certified statement signed by the responsible official that the records of fuel oil supplier certification submitted represent all of the No. 6 fuel oil fired during the period.

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

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

- e. 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 or 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 limit given in Section 2.1.R. 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 week the Permittee shall observe the emission points of this source for any visible emissions above normal. The Permittee shall establish "normal" for the source in the first 30 days following the effective date of the permit. If visible emissions from this source are observed to be above normal, the Permittee shall either: (a) be deemed to be in noncompliance with 15A NCAC 2D .0521 or (b)

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 R.3. a. above. If the demonstration in (b) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0521.

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

- d. 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.

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

- a. TRS emissions from the No. 4 Lime Kiln (**ID No. G09028**) and the No. 5 Lime Kiln (**ID No. G09029**) shall not be more than 20 ppm measured as hydrogen sulfide on a dry gas basis, corrected to 10% oxygen by volume. Limitation is an average of contiguous 12 hour periods.

**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 limit given in Section 2.1.R. 4. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0528.

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

- c. A continuous emissions monitor for TRS emissions for each lime kiln shall be installed, calibrated, maintained, tested, and operated in accordance with 40 CFR Part 60 Appendix B "Performance Specifications" and Appendix F "Quality Assurance Procedures."

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

- d. 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.

**4. 15A 2D .1100: CONTROL OF AIR TOXICS**

These sources were listed as specific sources of ToxicAir Pollutants for which a compliance modeling demonstration was made(see TOXICS).

<b>Regulated Pollutant</b>	<b>Limits/Standards</b>	<b>Applicable Regulations</b>
Toxic Air Pollutants	State Enforcable Only (See Section 2.3.A.)	15A NCAC 2D .1100
HAP	(See Section 2.2. C.)	15A NCAC 2D .1111 (40 CFR Part 63 Subpart S)

- S. 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 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 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. 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 lime dust collection system shall be controlled by the cartridge filter. To assure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer’s inspection and maintenance recommendations, or if there is no manufacturer’s inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:
  - i. a monthly visual inspection of the system ductwork and material collection unit for leaks; and
  - ii. an annual (for each 12 month period following the initial inspection) internal 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 variance from manufacturer’s recommendations, if any, and corrections made.

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

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

- a. Visible emissions from the lime dust collection system (**ID No. G09032**) 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. If the results of this test are above the limit given in Section 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 week the Permittee shall observe the emission points of this source for any visible emissions above normal. The Permittee shall establish “normal” for the source in the first 30 days following the effective date of the permit. If visible emissions from this source are observed to be above normal, the Permittee shall either: (a) be deemed to be in noncompliance with 15A NCAC 2D .0521 or (b) 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.R.2. a. above. If the demonstration in (b) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0521.

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

- d. 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.

**S. 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) and the lime conveyor (ID No. -----), equipped with a cartridge-type bagfilter (--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 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. 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. 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 recommended by the manufacturer. In addition to the manufacturer’s inspection and maintenance recommendations, or if there is no manufacturer’s inspection and maintenance recommendations, as a minimum,

the inspection and maintenance requirement shall include the following:

- i. a monthly visual inspection of the system ductwork and material collection unit for leaks; and
- ii. an annual (for each 12 month period following the initial inspection) internal 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 variance from manufacturer’s recommendations, if any, and corrections made.

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

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

- a. Visible emissions from this source (**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. If the results of this test are above the limit given in Section 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 week the Permittee shall observe the emission points of this source for any visible emissions above normal. The Permittee shall establish “normal” for the source in the first 30 days following the effective date of the permit. If visible emissions from this source are observed to be above normal, the Permittee shall either: (a) be deemed to be in noncompliance with 15A NCAC 2D .0521 or (b) 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. If the demonstration in (b) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0521.

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

- d. 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.

**T. 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) and the lime conveyor (ID No. -----), equipped with a cartridge-type bagfilter (--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
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- c. 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.

**U. 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 Enforcable Only (See Toxics)	15A NCAC 2D .1100

**1. 15A 2D .1100: CONTROL OF AIR TOXICS**

These sources were listed as specific sources of Toxic Air Pollutants for which a compliance modeling demonstration was made (see TOXICS).

**V. No. 5 Lime Slaker (ID No. G10035) controlled by a \_\_\_ wet scrubber (ID No. 10-CD-027-01) and No. 6 Lime Slaker (ID No. G10036) controlled by a \_\_\_ wet scrubber (ID No. 10-CD-036-01)**

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 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.

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

- b. Particulate matter emissions from the No. 5 Lime Slaker (ID No. G10035) shall be controlled by the flooded disc-wet scrubber (ID No. 10-CD-027-01) with a water scrubbing medium. Particulate matter emissions from the No. 6 Lime Slaker (ID No. G10036) shall be controlled by the wet scrubber (ID No. 10-CD-036-01) with a water scrubbing medium. To assure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance

recommendations, or if there is no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement must include the following:

- i. a monthly external visual inspection of the system ductwork and material collection units for leaks; and
- ii. an annual (for each 12 month period from initial inspection) internal inspection of the wet scrubbers' 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.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0508 if the ductwork and wet scrubbers are not inspected and maintained.

**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)]

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

- c. To assure compliance, once a week the Permittee shall observe the emission points of this source for any visible emissions above normal. The Permittee shall establish "normal" for the source in the first 30 days following the effective date of the permit. If visible emissions from this source are observed to be above normal, the Permittee shall either: (a) be deemed to be in noncompliance with 15A NCAC 2D .0521 or (b) 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 V.2. a. above. If the demonstration in (b) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0521.

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

- d. 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.

**W. Causticizing Processes (ID No. G10036), consisting of North Lime Mud Washer (ID No. 10-TK-019), South Lime Mud Washer (ID No. 10-TK-017), Lime Mud Storage Tank (ID No. 10-TK-005), Green Liquor Stabilization Tank (ID No. 10-TK-008), North Green Liquor Clarifier (ID No. 10-TK-006), South Green Liquor Clarifier (ID No. 10-TK-005), East Causticizer (ID No. 10-TK-009), Center Causticizer (ID No. 10-TK-010), and West Causticizer (ID No. 10-TK-011) More Sources listed in Equipment List of Applicant's draft permit!!!**

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 Enforcable Only (See Toxics)	15A NCAC 2D .1100

**1. 15A 2D .1100: CONTROL OF AIR TOXICS**

These sources were listed as specific sources of ToxicAir Pollutants for which a compliance modeling demonstration was made(see TOXICS).

## POWER (Area 11)

### X. Power Boilers

- 1. 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);**
- 2. 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);**
- 3. 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:

Regulated Pollutant	Limits/Standards	Applicable Regulation
particulatematter	0.15 lb/million Btu heat input	15A NCAC 2D .0503
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 8,238 tons per consecutive 12 months	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 consecutive 12 months	15A NCAC 2D .0530
nitrogen oxides	NC SIP nitrogen oxides emissions allocations during ozone season	15A NCAC 2D .1416
visible emissions	40 per cent opacity	15A NCAC 2D .0521
visible emissions	continuous opacity monitoring system (COMS)	15A NCAC 2D .0606
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	15A 2D NCAC .0530

**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 these sources (**ID No(s) G11037, G11038, and G11039**) into the atmosphere shall not exceed 0.15 pounds per million Btu heat input. [15A NCAC 2D .0503(a)]

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

- c. To assure compliance, the Permittee shall conduct a stack test on each boiler in accordance with Method 5 or Method 17 of Appendix A of 40 CFR Part 60 once per calendar year. In the event that a Unit exceeds 80 percent of its particulate emission limit during the stack test, the Permittee shall schedule and conduct another stack test within 6 months. Upon demonstration that the source is operating under 80 percent of its particulate limit, as shown by three consecutive semiannual stack tests, the source may resume annual stack tests. If the result of any test is greater than the limit given in Section 2.1X.1.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0503.

**Reporting** [15A NCAC 2D .0536]

- d. The results of any stack test shall be reported within 30 days, and the test report shall be submitted within 60 days after the test.

**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]

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

- b. 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; and
  - 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 or D-1989;
    - (D) moisture content - ASTM Method D 3173; and
    - (E) sulfur content - ASTM Method D 3177 or ASTM Method D 4239.

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

- c. 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 taking into account any controls operated during the same period. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516 if these records are not kept or if the results show an exceedance of the limit given in Section 2.1 X. 2. a. above.

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

- e. The Permittee shall submit a summary report of the coal supplier certifications and calculations of the pounds of sulfur dioxide per million Btu heat content of the coal per total shipment 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.

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

- a. Emissions of nitrogen oxides from these sources shall not exceed 1.8 pounds per million Btu heat input.

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

- a. Visible emissions from the "Big Bill", "Peter G.", and Riley Coal Boilers (**ID No(s) G11037, G11038, and G11039**) 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)]

**5. 15A NCAC 2D .0606: SOURCES COVERED BY APPENDIX P OF 40 CFR PART 51**

- a. 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 and Recordkeeping**

- b.i. The Permittee shall use continuous opacity monitoring systems (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.
- ii. 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.

**Y. 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 burner components, a Separated Over Fire Air (SOFA) system, a urea-based Selective Non-Catalytic Reduction (SNCR) NO emission reduction system (ID No. 11-CD-006-02), and an electrostatic precipitator (115,236 sq.ft. 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
particulate	0.085 lb/million Btu heat input (all fuels)	15A NCAC 2D .0524 40 CFR 60, Subpart D

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 8,238 tons per consecutive 12 months (See Section 2.2.A.)	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 consecutive 12 months (See Section 2.2.B.)	15A NCAC 2D .0530
nitrogen oxides	NC SIP nitrogen oxides emissions allocations during ozone season (see Section 2.2.E.)	15A NCAC 2D .1416
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 consecutive 12 months (See Section 2.2.A.)	15A NCAC 2D .0530

**1. 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. The following emission limits shall not be exceeded [15A NCAC 2D .0524]:

Affected Facility	Pollutant	Emission Limit
No. 4 Power Boiler (ID No. G1140)	particulates	0.085 lb/million Btu heat input (all fuels)
	sulfur dioxide	0.8 lb (oil) to 1.2 lb (coal) / 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

	nitrogen oxides	0.3 lb (oil) to 0.7 lb (coal) / million Btu heat input or $N = [y (0.3) + z (1.2)] / y + z$ Where y = % total heat input from oil z = % total heat input from coal
	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

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

- 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 Y.1.b above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524.
- d. A stack test shall be conducted for particulates in accordance with Method 5 or Method 17 of Appendix A of 40CFR Part 60 once per calendar year. In the event that a boiler exceeds 80 percent of its particulate emission limit during the stack test, the Permittee shall schedule and conduct another stack test within 6 months. Upon demonstration that the source is operating under 80 percent of its particulate limit, as shown by three consecutive semiannual stack tests, the source may resume annual stack tests. If the result of any test is greater than the limit given in Section 2.1.X.1.b above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524.

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

- e. The Permittee shall install, maintain, and operate a continuous opacity monitoring system (COMS) for measuring the opacity of emissions and either oxygen or carbon dioxide, meeting the requirements of 40 CFR Part 75.
- f. Compliance with opacity limit of Section 2.1.Y.1.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.
- g. Compliance with the NSPS general provisions of good operation and maintenance for opacity shall be determined as follows:
  - i. excess emissions (EE) of opacity as defined in Section 2.1.Y.1.b above, using the COMs values, shall be less than 3% of the total operating time (for any calendar quarter), adjusted for monitor downtime (MD) as calculated below, **including** start-up, shutdown and malfunctions, and
  - ii. monitor downtime (MD) shall be less than 2% (in any quarter).  
If %EE or %MD in any given quarter exceeds the limits specified in this Section, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524.

Calculations for %EE and %MD

Percent Excess Opacity Emission (%EE) Calculation:

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

Percent Monitor Downtime (%MD) Calculation for COM:

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

- \* Total Excess Emission Time contains any six-minute period during which the average opacity of emissions exceeds 20 percent opacity (except during periods of startup, shutdown and malfunction) except that one six-minute average per hour of up to 27 percent opacity.
- \*\* 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.

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

- i. 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.
- j. Monitoring / Recordkeeping - 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; and
  - 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 or D-1989;
    - (D) moisture content - ASTM Method D 3173; and
    - (E) sulfur content - ASTM Method D 3177 or ASTM Method D 4239.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.
- k. 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 taking into account any controls operated during the same period. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516 if these records are not kept or if the results show an exceedance of the limit given in Section 2.1.X.
  - 1.b. above.

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

- l. The Permittee shall submit a summary report of the coal supplier certifications and calculations of the pounds of sulfur dioxide per million Btu heat content of the coal per total shipment 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.
  
- m. The maximum sulfur content of any No. 6 fuel oil received and burned in the boiler shall not exceed 2.1 percent by weight. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516 if the sulfur content of the fuel oil exceeds this limit. [15A NCAC 2Q .0508(bb)]
  
- n. To assure compliance, the Permittee shall monitor the sulfur content of the No. 6 fuel oil by using fuel oil supplier certification per shipment received. 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 quarter;
  - iii. the method used to determine the maximum sulfur content of the fuel oil; and
  - iv. a certified statement signed by the responsible official that the records of fuel oil supplier certification submitted represent all of the No. 6 fuel oil fired during the period.The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516 if the sulfur content of the oil is not monitored and recorded.
  
- p. All instances of deviations from the requirements of this permit must be clearly identified.

**Z. Woodwaste, bark, “depoly” waste, on-site generated waste oil, and coal-fired Riley Bark Boiler (364 million Btu per hour maximum heat input rate, ID No. G11042) with flyash reinjection, equipped with a multicyclone (160 nine inches in diameter tubes, ID No. 11-CD- 016-01) exhausting to a venturi-type wet scrubber (water with sodium hydroxide scrubbing agent, ID No. 11-CD-016-02);**

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	0.15 lb/million Btu heat input	15A NCAC 2D .0504
sulfur dioxide	2.3 lb/million Btu heat input	15A NCAC 2D .0516
nitrogen oxides	(when firing coal) 1.8 lb/million Btu heat input	15A NCAC 2D .0519
nitrogen oxides	NC SIP nitrogen oxides emissions allocations during ozone season and CEMS monitoring system (See Section 2.2.E.)	15A NCAC 2D .1416
visible emissions	40 per cent opacity	15A NCAC 2D .0521
visible emissions	continuous opacity monitoring system (COMS)	15A NCAC 2D .0607

**1. 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]

$$E_c = [(E_w)(Q_w) + (E_o)(Q_o)]/Q_t$$

where:  $E_c$  = the emission limit for combined fuels in lbs /million Btu;  $E_w$  = emission limit for wood (2D .0504) in lbs/million Btu;  $E_o$  = emission limit for non-wood fuels (2D .0503) in lbs/million Btu;  $Q_w$  = actual wood heat input in million Btu per hour;  $Q_o$  = actual non-wood fuels heat input in million Btu per hour;  $Q_t = Q_w + Q_o$

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

- b. To assure compliance, the Permittee shall conduct a stack test on this boiler in accordance with Method 5 or Method 17 of Appendix A of 40 CFR Part 60 once per calendar year. In the event that the boiler exceeds 80 percent of its particulate emission limit during the stack test, the Permittee shall schedule and conduct another stack test within 6 months. Upon demonstration that the source is operating under 80 percent of its particulate limit, as shown by three consecutive semiannual stack tests, the source may resume annual stack tests. If the result of any test is greater than the limit given in Section 2.1.Z.1.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0504.

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

- c. Particulate matter emissions from the boiler shall be controlled by the multicyclone and venturi-type wet scrubber. To assure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there is no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement must include the following:
- i. a monthly external visual inspection of the system ductwork and material collection unit for leaks; and
  - ii. an annual (for each 12 month period from initial inspection) internal inspection of the multicyclone'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.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0504 if the multicyclone and wet scrubber are not inspected and maintained.

- d. The Permittee shall install, operate, and maintain a pressure drop indicator and a liquid flowmeter on the scrubber. The pressure drop across the scrubber shall be maintained between \_\_\_\_\_ and \_\_\_\_\_ inches of water. The liquid flow rate into the scrubber shall be between \_\_\_\_\_ and \_\_\_\_\_ gallons per minute.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0504 if the pressure drop and liquid flow rate is not maintained within the prescribed limits.

## 2. 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]

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

- b. To assure compliance, the Permittee shall monitor when burning coal 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; and
- 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 or D-1989;
  - (D) moisture content - ASTM Method D 3173; and
  - (E) sulfur content - ASTM Method D 3177 or ASTM Method D 4239.

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

- d. 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 taking into account any controls operated during the same period. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516 if these records are not kept or if the results show an exceedance of the limit given in Section 2.1.Y.
- 2.a. above.

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

- e. The Permittee shall submit a summary report of the coal supplier certifications and calculations of the pounds of sulfur dioxide per million Btu heat content of the coal per total shipment 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.

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

- a. Emissions of nitrogen oxides from this source (**ID No. G1142**) while burning coal shall not exceed 1.8 pounds per million Btu heat input.

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

- a. Visible emissions from this source (**ID No. G1142**) shall not be more than 40 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 40 percent or 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)]

**5. 15A NCAC 2D .0606: SOURCES COVERED BY APPENDIX P OF 40 CFR PART 51**

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

**Monitoring and Recordkeeping Requirements**

- i. The Permittee shall use continuous opacity monitoring systems (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.
- ii. 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 Requirements**

b. 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.

**BB. 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 Regulation
Toxic Air Pollutants	State Enforcable Only (see Toxics)	15A NCAC 2D .1100

**1. 15A 2D .1100: CONTROL OF AIR TOXICS**

These sources were listed as specific sources of Toxic Air Pollutants for which a compliance modeling demonstration was made (see TOXICS).

**CC. 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 155 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. If the results of this test are above the limit given in Section 2.1.CC. 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 recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there is no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:
  - i. a monthly visual inspection of the system ductwork and material collection unit for leaks; and
  - ii. an annual (for each 12 month period following the initial inspection) internal 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 variance from manufacturer’s recommendations, if any, and corrections made.
- The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if these records are not maintained.

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

- a. Visible emissions from the starch silos (**ID Nos. G13054, G13055, and G13056**) 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)]

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

- b. To assure compliance, once a week the Permittee shall observe the emission points of this source for any visible emissions above normal. The Permittee shall establish “normal” for the source in the first 30 days following the effective date of the permit. If visible emissions from this source are observed to be above normal, the Permittee shall either: (a) be deemed to be in noncompliance with 15A NCAC 2D .0521 or (b) 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 CC.2. a. above. If the demonstration in (b) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0521.

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

- c. 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)**

**DD. No. 1 Turpentine Recovery System (ID No. G200060) and No. 2 Turpentine Recovery System (ID No. G200062) 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.**

There are no direct emissions from these sources to the atmosphere. Gaseous emissions are collected in a closed collection system for burning in Lime Kiln Nos. 4 or 5. Foul condensates are collected via the closed Foul Condensate Collection System (ID No. G07018) and steam stripped, the stripper offgases (SOG) being burned in the Lime Kilns.

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
HAP	40CFR63, Subpart S(See MACT)	15A NCAC 2D .1111

**1. 15A 2D .1111: 40CFR63, Subpart S**

HAP emissions from these sources are subject to the Pulp and Paper MACT(40CFR63, Subpart S) (See MACT).

**EE. Tall Oil Reactor (ID No. G21072) controlled by a packed tower-type wet scrubber**

( \_\_\_ 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 Regulations
Toxic Air Pollutants	State Enforcable Only (See MACT)	15A NCAC 2D .1100
HAP	40CFR63, Subpart S(See MACT)	15A NCAC 2D .1111

**1. 15A 2D .1100: CONTROL OF AIR TOXICS**

These sources were listed as specific sources of ToxicAir Pollutants for which a compliance modeling demonstration was made(see TOXICS).

**2. 15A 2D .1111: 40CFR63, Subpart S**

HAP emissions from these sources are subject to the Pulp and Paper MACT(40CFR63, Subpart S) (See MACT).

**VII. Multiple Emission Source Limits**

**A. 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]
- 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. G1140) shall be met:

**Operations Restrictions**

- 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 particulate, sulfur dioxide, and nitrogen oxides shall apply;
- iv. boilers Big Bill (ID No. G1137), Peter G (ID No. G1138), and Riley Coal (ID No. G1139) 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;
- v. sulfur dioxide emissions from boilers Big Bill, Peter G, Riley Coal, and No. 4 Power Boiler shall be limited to 8,238 tons per 12-month rolling total;
- vi. 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

vii. 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.

c. **Reporting Requirements**

For compliance purposes, within thirty (30) days after each calendar year quarter, the following shall be reported to the Regional Supervisor, Division of Air Quality:

- 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; and
- ii. the total monthly sulfur dioxide, nitrogen oxide, and carbon monoxide 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 month periods over the previous fourteen months.

d.. **Recordkeeping Requirements**

The Permittee shall keep each monthly record on file for a minimum of three years.

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

To comply with 15A NCAC 2D .1417, the Permittee shall not exceed 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:

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

a. To achieve compliance with 15A NCAC 2D .1403, the Permittee shall make modifications to the affected units per the following construction schedule:

Boiler(s)	Modification	Date
No. 4 Power Boiler	Low NOX burner components, Separated Over Fire Air (SOFA) system installation	(completed)
Riley Coal Boiler	Low NOX burners installation	May 1, 2004

Peter G. Boiler	Low NOX burners installation	October 31, 2005
No. 4 Power Boiler	Selective Non-Catalytic Reduction (SNCR) system installation	May 1, 2005
Big Bill Boiler	Low NOX burners installation	May 1, 2006

- b. **CONTINUOUS MONITORING REQUIREMENT** - For the Big Bill Boiler, Peter G. Boiler, Riley Coal Boiler, No. 4 Power Boiler and Riley Bark Boiler, continuous emissions monitors for NOx shall be installed, calibrated, maintained, tested, and operated in accordance with 40 CFR Part 75, Subpart H, with such exceptions as may be allowed under 40CFR75, Subpart H or 40CFR96.
- c. **NOTIFICATION REQUIREMENT** - This permit may be revoked unless the modifications listed above are constructed in accordance with the approved plans, specifications, and other supporting data. Within 15 days start-up of the new or modified facilities, the Permittee shall provide written notice of the start-up to the Regional Supervisor, DAQ. If the proposed operational date is not met, a revised permit is not needed. However, within 15 days after the proposed operational date is not met, the Permittee shall **NOTIFY**, in **WRITING**, the Regional Supervisor, DAQ, of the new proposed operational date. Any existing equipment being replaced is permitted to operate in compliance until the replacement equipment is operational.
- d. To achieve compliance with the PCP determination, the following CO emission rates shall be obtained:

Boiler(s)	Modification	Date	CO Emission Limit	CO Emission Changes
No. 4 Power Boiler	Low NOX burner components, Separated Over Fire Air (SOFA) system installation	October 31, 2002	150 ppm @ 3% O2	+ 248 t/yr
Riley Coal Boiler	Low NOX burners installation	October 31, 2003	100 ppm @ 3% O2	+ 136 t/yr
Peter G. Boiler	Low NOX burners installation	October 31, 2004	100 ppm @ 3% O2	- 231 t/yr
Big Bill Boiler	Low NOX burners installation	October 31, 2005	100 ppm @ 3% O2	-243 t/yr

## VIII. MACT Applicability and Requirements

- c. **Affected Source - All facilities subject to 40 CFR Part 63 Subpart S: NATIONAL EMISSIONS STANDARD FOR HAZARDOUS AIR POLLUTANTS FROM THE PULP AND PAPER INDUSTRY**

Source ID No.	Source Description	Control ID No	Control Description
<b>Bleaching System Sources</b>			

<b>G05012</b>	<b>No. 1 Fiberline Bleaching System</b>	05-CD-002-01	No.1 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-007	EO (Caustic Extraction) Tower		
ES 05-PU-008	EO (Caustic Extraction) Washer		
ES 05-TK-009	EO (Caustic Extraction) 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 Fiberline Bleaching System</b>	05-CD-017-01	No.2 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-019	EO (Caustic Extraction) Tower		
ES 05-TK-020	EO (Caustic Extraction) 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		

<b>LVHC System Sources</b>			
<b>G7018</b>	<b>Foul Condensate System</b>	ES G09031  ES G09032	No. 5 Lime Kiln (primary) (via closed-vent Collection System)  or No. 4 Lime Kiln (backup) (via closed-vent Collection System)
ES 07-PU-015	Condensate Stripper		
ES 07-TK-011	Stripper Feed Tank		
ES 07-TK-014	Reflux Tank LVHC Foul Gas Collection System Cooler		
	HVLC Foul Gas Collection System Cooler		
<b>G02004</b>	<b>Digester Area</b>	ES G09031 ES G09032  ES G07018	Nos. 4 or 5 Lime Kilns (via closed-vent Collection System)  Foul condensate collection system
ES 02-PU-001 thru ES 02-PU-0018	18 batch digesters		
ES 02-PU-005	No. 1 Blow Tank		
ES 02-PU-006	No. 1 Fiberline Accumulator		
ES 02-PU-008	No. 1 Secondary Condenser		
ES 02-PU-003	No. 2 Blow Tank		
ES 02-PU-007	No. 2 Fiberline Accumulator		
ES 02-PU-009	No. 2 Secondary Condenser		
<b>G20060</b>	<b>No. 1 Turpentine System</b>	ES G09031 ES G09032  ES G07018	Nos. 4 or 5 Lime Kiln (via closed-vent Collection System)  Foul condensate collection system
ES 20-PU-001	Turpentine Entrainment System		
ES 20-PU-002	Turpentine Condenser		
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 Turpentine System</b>	ES G09031 ES G09032  ES G07018	Nos. 4 or 5 Lime Kiln (via closed-vent Collection System)  Foul condensate collection system
ES 20-PU-006	Turpentine Entrainment System		
ES 20-PU-007	Turpentine Condenser		
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 G09031 ES G09032  G07018	Nos. 4 or 5 Lime Kilns (via closed-vent Collection System)  Foul condensate collection system
ES 07-PU-002	Swenson Evaporators		
ES 07-TK-006	Swenson Evaporator Hotwell		
ES 07-PU-003	West GB Evaporators		
ES 07-TK-006	West GB Evaporator Hotwell		
<b>HVLC System Sources</b>			
<b>G03005</b>	<b>No. 1 Fiberline Brownstock Washing</b>	NA	MACT Required by April 17, 2006
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 Fiberline Brownstock Washing</b>	NA	MACT Required by April 17, 2006
ES 03-PU-032	Washers / Filtrate Tanks		
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 Fiberline Oxygen Delignification</b>	NA	MACT Required by April 17, 2006
ES 04-PU-001	Oxygen Reactor		
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-010	Brownstock High Density Storage		
ES 04-TK-013	Bleach Plant Blend Chest		
ES 04-TK-011	Pre-Bleach Washer		
ES 04-TK-007	Decker Filtrate Tank		
ES 04-TK-012	Pre-Bleach Washer Filtrate Chest		
<b>G04010</b>	<b>No. 2 Fiberline Oxygen Delignification</b>	NA	MACT Required by April 17, 2006
ES 04-PU-014	Oxygen Reactor		
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		

ES 04-TK-006	Brownstock High Density Storage		
ES 04-TK-020	Pre-Bleach Blend Chest		
ES 04-PU-019	Pre-Bleach Washer and Filtrate Tank		
<b>G07086</b>	<b>Evaporators, Other Units</b>	NA	MACT Required by April 17, 2006
ES 07-TK-004	Weak Black Liquor Storage Tanks		
ES 07-TK-013			
ES 07-TK-016 thru 021			

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 system vents to No. 4 Lime Kiln or No. 5 Lime Kiln (Compliance date, April 17, 2006)</p> <p><b><u>Pulping Condensate Collection</u></b> Collect a minimum 11.1 pounds per ton ODP followed by treatment in the Steam Stripper, meeting: 92 percent HAP removal, or 10.2 pounds per ton ODP removal</p>	15 A NCAC 2D .1111 (40 CFR 63 Subpart S)

**1. 15A NCAC 2D . 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]:
  1. 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 introduce into the respective Bleach Plant Scrubbers (ID Nos. 05-CD-002-01 and 05-CD-017-01).
  2. 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

3. 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]:
  1. 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. **No later than April 17, 2006**, the Permittee shall meet the following control requirements for the total HAP emissions from the HVLC system [40 CFR 63, Subpart 63.443]
  1. 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:
    - i. The Lime Kiln (ID Nos. ES G09028 and G09029) by introducing the HAP emission stream with the primary fuel or into the flame zone:
- 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:
  1. One percent for the No. 4 and No. 5 Lime Kilns.

**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
  1. 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;
  2. Closed vent systems shall be designed and operated in accordance with 40 CFR 63.450;
  3. The process condensate streams collected in total shall contain a minimum of 11.1 pounds per ton of oven dried pulp produced (based on a 30-day rolling average);
  4. The Stripper Feed Tanks (ID Nos. ES 07-TK-011 and ES 07-TK-014) shall meet the requirements per 40 CFR 63.446(d)(2); and
  5. The pulping process condensates collected shall be treated by the Foul Condensate Steam Stripper (ID No. ES 07-PU-015) which shall:
    - i. Reduce or destroy the total HAPs by at least 92 percent or more by weight; or
    - ii. Remove a minimum of 10.2 pounds per ton of oven dried pulp (ODP);
- g. **Testing** [15A NCAC 2D .0501(c)(3)]

If emissions testing is required, the testing shall be performed in accordance General Condition JJ. If the results of this test are above the limits given in Section 2.2 A.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 Bleach Plant Wet Scrubbers (**ID No. CD 425-101**). 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]:
  - a. The minimum pH of each scrubber's effluent shall be\_\_\_;
  - b. Each scrubber's inlet vent gas fan operating status of Aon@ (on or off based on motor load) ; and

c. The minimum scrubber liquid recirculation rate for the respective scrubber shall be \_ 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 and HVLC pulping systems Control Devices** [15A NCAC 2Q .0508(f)]

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

**Condensate Collection:**

- 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. [40 CFR 60, Subpart 63.453]:

- a. [ID streams, monitored parameters, parameter values/limits, specify annual stream factor measurement/verification], etc. XXXXX;
- b. XXXXX; and
- c. XXXXX.

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

**Steam Stripper (ID No ES 07-PU-015):**

- 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. [40 CFR 60, Subpart 63.453]:

- a. \*\*\*Process water values\*\*\*;
- b. \*\*\*Steam feed values\*\*\*; and
- c. \*\*\*column feed temperature values\*\*\*.

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 2Q .0508(f)]

- 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 2Q .0508(f)]

- 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 2Q .0508(f)]

- 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.

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

Source ID	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 G08022	Black Liquor Oxidizer	NA	NA
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 Btype wet scrubber
ES G09029	No. 5 Lime Kiln	09-CD-010-01	Flooded Disk Btype wet scrubber

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	Compliance with the requirements per 40 CFR 63, Subpart MM by <b>January 12, 2005</b> , meeting the emission standards per 40 CFR 63.862	15 A NCAC 2D .1111 (40 CFR 63 Subpart MM)

**1. 15A NCAC 2D . 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."
- b. Per 40 CFR 63.863 The owner or operator of an existing affected source or process unit must comply with the requirements in this subpart no later than **January 12, 2005**.

**2.3 STATE ONLY ENFORCEABLE REQUIREMENTS**

**A. Air Toxics**

- 1. a. 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:

<b>Emission Source(s)</b>	<b>Toxic Air Pollutant(s)</b>	<b>Emission Limit(s)</b>
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

b. In accordance with the approved application for the Bleached Filtrate Recycle Process dated April 24, 2000, the Permittee shall maintain records of operational information demonstrating that the TAP emissions do not exceed the TPERs as listed below:

Pollutant (CAS Number)	<b>TPERs Limitations</b>			
	Carcinogens (lb/yr)	Chronic Toxicants (lb/day)	Acute Systemic Toxicants (lb/hr)	Acute Irritants (lb/hr)
methyl isobutyl ketone (108-10-1)		52		7.6
perchloroethylene (tetrachloro- ethylene) (127- 18-4)	13000			
chlorobenzene(10 8-90-7)		46		
styrene (100-42- 5)			2.7	
toluene (108-88- 3)		98		14.4
xylenes (1330-20- 7)		57		16.4
nickel		0.013		

**On site Generated Waste Oil Requirements**

2. The Permittee is allowed to use on-site generated waste oil (from spills) in Boiler ID No. G11042 (Riley Bark) if the following specifications are met and analyses demonstrate compliance with the definition of unadulterated fossil fuel oil as follows:
  - a. **Specifications** - The on-site generated waste oil shall be equivalent to unadulterated fossil fuel by meeting the following criteria:

<b>Constituent/Property</b>	<b>Allowable Level</b>
Arsenic	1 ppm maximum
Cadmium	2 ppm maximum
Chromium	5 ppm maximum
Lead	100 ppm maximum
Total Halogens	1000 ppm maximum
Flash Point	100F minimum
Sulfur	1.0 % maximum (by weight)
Ash	1.0 % maximum

The Permittee is responsible for ensuring that the on-site generated waste oil meets the approved criteria for unadulterated fuel. The Permittee is held responsible for any discrepancies discovered by DAQ as a result of any sampling and analysis of the fuel oil.

- b. Only waste oil **generated** on-site may be used as fuel, and no more than 1000 gallons per calendar year and 25 gallons per occurrence may be burned in this boiler.
- c. **Testing and Reporting Requirements** - Annually, due by December 31st of each year, the facility shall test a representative sample of the on-site generated oil for properties required in Section a. of this condition. The results of this test shall be submitted within 30 days of the end of each calendar year.
- d. **Recordkeeping Requirements** - The Permittee shall maintain at the facility for a minimum of three years, and shall make available to representatives of the DAQ upon request, the results of any analytical testing of the waste oil as it is sampled and tested by the Permittee.
- e. The DAQ reserves the right to require additional testing and/or monitoring of the waste oil.

## **X. Other Applicable Requirements**

- A. Short term or temporary emission unit(s)
- B. Other

## **XI. General Conditions**

The “General Conditions” section of the Title V Operating Permits lists additional applicable rule requirements that the permittee must adhere to, as with any other permit condition. These requirements in general are common to all Title V facilities. The general conditions include provisions such as annual fee payment, permit renewal and expiration, transfer of ownership or operation, property rights, submission of documents, inspections and entry procedures, reopen for cause, and severability.

## **XII. Insignificant Activities**

The insignificant activities listed in the application have been reviewed and verified. 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.

## **XIII. Public Notice**

Pursuant to 15A NCAC 2Q .0521, a notice of the draft Title V Operating Permit shall be placed in a newspaper of general circulation in the area where the facility is located. The notice will provide for a 30 day comment period, with an opportunity for a public hearing. Copies of the public notice shall be sent to persons on the Title V mailing list, the following affected states \_\_\_\_\_, \_\_\_\_\_, and EPA.

## **XIV. Recommendations**

The initial Title V application for Blue Ridge Paper Products, Inc. has been reviewed by the DAQ to determine compliance with all procedures and requirements under 15A NCAC 2Q .0500 and 40 CFR Part 70. The DAQ has made a preliminary determination that the facility is complying or will achieve compliance as specified in the draft permit with all applicable requirements. Therefore, the DAQ is proposing to issue the Title V Operating Permit upon completion of the public comment period and the EPA review.