



North Carolina Department of Environment and Natural Resources  
Division of Air Quality

Beverly Eaves Perdue  
Governor

Shelia C. Holman  
Director

Dee Freeman  
Secretary

MM/DD, 2010

Mr. Floyd Whitmire  
Mill Manager  
International Paper  
895 John L. Riegel Road  
Riegelwood, North Carolina 28456

Dear Mr. Whitmire:

**SUBJECT: Air Permit No. 03138R35**  
**International Paper**  
**Riegelwood, Columbus County, North Carolina**  
**Fee Class: Title V**  
**Site Number: 2400036**

In accordance with your complete application **2400036.09B** for an air permit modification received **September 10, 2009**, we are forwarding herewith Permit No. **03138R35** to International Paper, Riegelwood, North Carolina. If any parts, requirements, or limitations contained in this Permit are unacceptable to you, you have the right to request a formal adjudicatory hearing within 30 days following receipt of this Permit, identifying the specific issues to be contested. This hearing request must be in the form of a written petition, conforming to G.S. 150B-23 of the North Carolina General Statutes, and filed with the Office of Administrative Hearings, Post Office Drawer 27447, Raleigh, North Carolina 27611-7447. The form for requesting a formal adjudicatory hearing may be obtained upon request from the Office of Administrative Hearings. Unless a request for a hearing is made pursuant to G.S. 150B-23, this Air Permit shall be final and binding.

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

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Unless exempted by a condition of this Permit or the regulations, construction of new air pollution

**Permitting Section**

1641 Mail Service Center, Raleigh, North Carolina 27699-1641  
2728 Capital Blvd., Raleigh, North Carolina 27604  
Phone: 919-715-6235 / FAX 919-733-5317 / Internet: [www.ncair.org](http://www.ncair.org)

One  
North Carolina  
*Naturally*

Mr. Floyd Whitmire  
MM DD, 2010  
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sources or air cleaning devices, or modifications to the sources or air cleaning devices described in this Permit must be covered under a Permit issued by this Division prior to construction. Failure to do so is a violation of G.S. 143-215.108 and may subject the Permittee to civil or criminal penalties as described in G.S. 143-215.114A and 143-215.114B.

This Permit shall be effective from MM DD, 2010 until November 30, 2012, is nontransferable to future owners and operators, and shall be subject to the conditions and limitations as specified therein. Should you have any questions concerning this matter, please contact Mr. Joseph Voelker, P.E. at (919) 715-7218.

Sincerely,

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

Enclosure

cc: Brad Newland  
Central Files

**ATTACHMENT to cover letter to Air Quality Permit Number 03138R35**

**Table of Changes To Permit No. 03138R34**

<b>Existing Condition No.</b>	<b>New Condition No.</b>	<b>Changes</b>
Cover Letter	Same	<ul style="list-style-type: none"><li>• Revised dates, revision number, etc.</li></ul>
Permit cover	Same	<ul style="list-style-type: none"><li>• Revised dates, revision number, etc.</li></ul>
Equipment list		<ul style="list-style-type: none"><li>• For boilers No. PB1, PB2 and PB5 indicated "Case-by-Case MACT"</li></ul>
A.1.	Same	<ul style="list-style-type: none"><li>• Added reference to 2D .1109</li></ul>
NA	A.1(k)	<ul style="list-style-type: none"><li>• Added 2D .1109 condition (112(j))</li></ul>

NORTH CAROLINA ENVIRONMENTAL MANAGEMENT COMMISSION

DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES

DIVISION OF AIR QUALITY

**AIR PERMIT NO. 03138R35**

Issue Date: MM DD, 2010

Effective Date: MM DD, 2010

Expiration Date: November 30, 2012

Replaces Permit: 03138R33

To construct and operate air emission source(s) or air cleaning device(s), and for the discharge of the associated air contaminants into the atmosphere. In accordance with the provisions of Article 21B of Chapter 143, General Statutes of North Carolina as amended, and other applicable Laws, Rules and Regulations,

**International Paper**  
Riegelwood Mill  
895 John L. Riegel Road  
Riegelwood, Columbus County, North Carolina  
Fee Class: Title V  
**Site Number:** 2400036

is hereby authorized to construct and operate air emission sources or air cleaning devices and appurtenances consisting of:

I. **Power Operations**

1. one natural gas/No. 6 fuel oil /Noble Oil Services No. 4 equivalent used oil-fired power boiler (280.5 million Btu per hour maximum permitted heat input rate when firing natural gas / 259 million Btu per hour maximum permitted heat input rate when firing No. 6 fuel oil, ID No. PB3) equipped with a compressed air spray nozzle-type wet scrubber (177 gallons per minute minimum caustic solution injection rate, ID No. PB3 - SCRB),

**Case-by-Case MACT**

2. one bark/coal/wood fiber sludge/No. 6 fuel oil/woodwaste absorbed oil residue/natural gas /Noble Oil Services No. 4 equivalent used oil-fired power boiler with TRS gas injection (425 million Btu per hour maximum permitted heat input rate for bark/wood fiber sludge/oil/waste oil/coal/natural gas/hydrogen and combination firing, ID No. PB2) equipped with Over Fired Air combustion (OFA), a multicyclone (240 nine inches in diameter tubes) and a variable throat venturi-type wet scrubber/separator (1,500 gallons per minute minimum caustic solution injection rate),

**Case-by-Case MACT**

PSD 3. one bark/coal/wood fiber sludge/oil/woodwaste absorbed oil residue/No. 6 fuel oil /Noble Oil Services No. 4 equivalent used oil-fired power boiler with TRS gas injection (249 million Btu per hour maximum permitted heat input rate for oil/coal firing and 600 million Btu per hour maximum permitted heat input rate for bark/wood fiber sludge/fossil fuel combination firing, ID No. PB5) equipped with Over Fired Air combustion (OFA), a multicyclone (304 nine inches in diameter tubes), and a variable throat venturi-type wet scrubber (1,300 gallons per minute minimum caustic solution injection rate),

**Case-by-Case MACT**

4. one natural gas/No. 6 fuel oil/Noble Oil Services No. 4 equivalent used oil -fired power boiler (250 million Btu per hour maximum permitted firing rate, ID No. PB1) equipped with a compressed air spray nozzle-type wet scrubber (129 gallons per minute minimum caustic solution injection rate, ID No. PB1 - SCRB) installed in series, and
5. temporary, portable diesel fuel fired generators and engines equipped with non-resetting hour meters (ID No. TPGEN).

NSPS 6. Two temporary natural gas/No. 2 fuel oil-fired package boilers (100 mmBtu/hr maximum permitted firing rate per boiler, ID Nos. PKB-1 and PKB-2) equipped with low-NOx burners.

**II. Wood Yard**

1. the KMW screens equipped with one cyclone (95 inches in diameter, ID No. CW-1-1),
2. the J-line chipper equipped with one cyclone (140 inches in diameter, ID No. CW-3-1),
3. the truck dump and rail car roll-over dump equipped with one cyclone (72 inches in diameter, ID No. CW-4-1),
4. the Nos. 3 and 4 chip silos equipped with one cyclone (132 inches in diameter, ID No. CW-5-1),
5. the Nos. 1 and 2 chip silos equipped with one cyclone (132 inches in diameter, ID No. CW-6-1),

**III. Pulping Operations**

1. three fiber production lines
  - (a) eleven (11) small batch digesters (SBD) with associated blow tanks and turpentine condenser,
  - (b) five (5) large batch digesters (LBD) with associated blow tanks and turpentine condenser,

- NSPS/PSD (c) the K1 fiberline, consisting of a modified Kamyr continuous digester (ID No. K1) with associated blow tank and turpentine condenser (NSPS, Subpart BB) and a PSD modified steaming vessel,
2. associated fiber line production equipment, including softwood brownstock washer line 1 (ID No. BSW-1) consisting of one single stage vacuum drum washer followed by a twin roll press washer (existing brown stock washer line shall continue to operate until replaced with the single stage vacuum drum washer followed by the twin roll press wash), a hardwood brownstock washer line (ID No. BSW-4), a two reactor softwood oxygen delignification system (ID No. O2D1) including a post oxygen washer, screens (including reworked No. 1 screen room), knotters, and deckers,
- NSPS 3. condensate stripper No. 1 (NSPS, Subpart BB),
- NSPS 4. condensate stripper No. 2 (NSPS, Subpart BB), and
5. one 20,000 gallons capacity turpentine storage tank (ID No. TURP),

#### IV. Chemical Recovery

1. (a) black liquor/ultra low sulfur No. 2 fuel oil blended with black liquor/No. 6 fuel oil /Noble Oil Services No. 4 equivalent used oil-fired recovery boiler No. 4 (2.4 million pounds of black liquor solids per day average/236 million Btu per hour maximum permitted heat input rate when firing No. 6 fuel oil, ID No. RB4) equipped with an electrostatic precipitator (92,000 square feet square feet of collecting plate area pre upgrade, and 81,648 square feet collecting plate area post upgrade, ID No. RB4-ESP) [to be modified as per Specific Condition A.4.3, in accordance with the completed application (2400036.05A) received December 20, 2004, and as amended April 01 and April 04, 2005, including all plans, specifications, previous applications, and other supporting data, all of which are filed with the Department of Environment and Natural Resources and are incorporated as part of this Permit].
- (b) No. 4 smelt dissolving tank (ID No. ST4) equipped with a fan impingement-type wet scrubber (135 gallons per minute minimum caustic solution injection rate, ID No. 4ST-1),
- PSD 2. (a) black liquor/ultra low sulfur No. 2 fuel oil blended with black liquor/No. 6 fuel oil /Noble  
NSPS Oil Services No. 4 equivalent used oil-fired recovery boiler No. 5 (modified, 7.39 million pounds of black liquor solids per day, maximum/557 million Btu per hour maximum permitted heat input rate while firing fuel oil, ID No. RB5) equipped with an electrostatic precipitator (328,248 square feet of collecting plate area, ID No. RB5-ESP) (NSPS Subpart BB),

- PSD  
NSPS
- (b) No. 5 smelt dissolving tanks (ID Nos. ST5a and ST5b) equipped one each a fan impingement-type wet scrubber (135 gallons per minute minimum caustic solution injection rate each, ID Nos. 5aST-1 and 5bST-1, respectively) (NSPS, Subpart BB),
3. two black liquor oxidation tanks (ID Nos. RX-010 and RX-011) installed on the black liquor discharges from the multiple effect evaporators of recovery boiler Nos. 3 and 4,
4. Nos. 1, 2, 3 and 4 evaporator sets (ID Nos. EVAP1, EVAP2, EVAP3 and EVAP4) exhausting to the NCG gas collection system,
- NSPS 5. Nos. 5 and 6 evaporator sets (ID Nos. EVAP5 and EVAP6) exhausting to the NCG gas collection system (NSPS, Subpart BB),
6. Two weak black liquor storage tanks (ID Nos. ST001 and ST002, 2,167,900 gallons each), [These tanks will replace the function of the existing black liquor storage ponds under the proposed Equivalency By Permit (EBP) Project. These tanks are permitted to allow replacement of the ponds pursuant to PSD Application 2400036.05D, which evaluated the collateral increases in sulfur dioxide emissions associated with the combustion of formerly fugitive TRS emissions in the existing NCG system(s).] and
7. One strong black liquor storage tank (ID no. ST003, 272,140 gallons) serving Evaporator Set 6 (ID No. EVAP6).

V. **Causticizing and Lime Recovery**

1. lime slaker No. 3 (ID No. SLK3) equipped with an open spray-type wet scrubber (35 gallons per minute minimum water injection rate, ID No. H-317),
2. lime slaker No. 6 (ID No. SLK6) equipped with an open spray-type wet scrubber (35 gallons per minute total water injection rate, ID No. H-259),
3. No. 6 fuel oil /Noble Oil Services No. 4 equivalent used oil-fired lime kiln No. 2 (70 million Btu per hour maximum permitted heat input rate, ID No. LK2) equipped with a venturi-type wet scrubber (574 gallons per minute minimum liquid injection rate, ID No. 2LK-1),
4. No. 6 fuel oil /Noble Oil Services No. 4 equivalent used oil-fired lime kiln No. 3 (87 million Btu per hour maximum permitted heat input rate, ID No. LK3) equipped with a cyclone (8 feet in diameter, ID No. KK-213) in series with a venturi-type wet scrubber (850 gallons per minute minimum liquid injection rate, ID No. 3LK-1),

- NSPS 5. No. 6 fuel oil /Noble Oil Services No. 4 equivalent used oil / natural gas-fired lime kiln No. 4 (212 million Btu per hour maximum permitted heat input rate, ID No. K4001) equipped with an electrostatic precipitator (36,975 square feet of collecting plate area, ID No. K4021) and a fixed throat spray venturi-type wet scrubber (900 gallons per minute minimum liquid injection rate, ID No. K4006) (NSPS, Subpart BB),
6. reburnt lime handling system, including two (2) burnt lime storage silos (ID Nos. RLS1 and RLS2), enclosed belt conveyor and bucket elevator, equipped with a bagfilter (1005 square feet of filter area, ID No. H-367), and
7. one bagfilter (25 square feet of filter area) equipped causticizing area fresh lime silo (ID No. H-85),

VI. **Bleaching Operations**

- 1a. Process equipment located in the Nos. 1, 2, and 3 Bleach Plants (ID Nos. BP1, BP2 and BP3) **affected** by *40 CFR Part 63 Subpart S*, equipped with a wet scrubber (130 gallons per minute minimum caustic solution injection rate, ID No. BP-SCRB),
- 1b. Process equipment located in the Nos. 1, 2, and 3 Bleach Plants (ID Nos. BP1, BP2 and BP3) **not affected** by *40 CFR Part 63 Subpart S*, equipped with a wet scrubber (200 gallons per minute minimum caustic solution injection rate, ID No. BP-325),
- NSPS 2. one methanol storage tank (18,275 gallons capacity, ID No. LL-140) equipped with a vent conservation valve (NSPS, Subpart Kb),
3. two (2) chlorine dioxide generators SVP No. 2 (ID No. LL-062) and SVP-SCW No. 3 (Saltcake Wash, ID No. LL 155) equipped with one dual packed tower-type wet scrubber (50 gallons per minute minimum caustic solution injection rate, ID No. LL-283), and
4. five (5) chlorine dioxide solution storage tanks equipped with one two stage, packed tower-type wet scrubber (450 gallons per minute minimum caustic solution and chilled water injection rate, ID No. LL-093), and
5. one sulfur dioxide mix tank (ID No. L-567) equipped with a packed tower-type wet scrubber (50 gallons per minute minimum caustic solution injection rate, ID No. L-646). Wet scrubber also acts as backup control for two chlorine dioxide generators (Item No. VI.3) and five chlorine dioxide solution storage tanks (Item No. VI.4) above in addition to sulfur dioxide mix tank.

VII. **Paper Making**

1. one (1) starch silo (ID No. JA301) equipped with a bagfilter (216 square feet of filter area, ID No. DF-1),
2. one (1) starch silo (ID No. JA306) equipped with a bagfilter (216 square feet of filter area, ID No. DF-2),

3. one (1) starch silo (ID No. JA307) equipped with a bagfilter (216 square feet of filter area, ID No. DF-3),
4. one (1) starch silo (ID No. JA322) equipped with a bagfilter (216 square feet of filter area, ID No. DF-4),
5. one pulp dryer (ID No. PD), modified under Permit Application 2400036.06A to allow for the production of fluff pulp,
6. two paper machines (ID Nos. J-009 and JJ-030) [also known as Nos. 15 and 18 paper machines], and
7. one (1) 8,000 gallons capacity ammonia storage tank (ID No. JA-037),

**VIII. Odorous Gas Collection Systems**

1. three (3) noncondensable gas (NCG) collection systems:

- NSPS (a) NCG collection system No. 1 installed on the K1 blow tank, K1 turpentine condensing system, K1 filtrate flash tank and No. 5 evaporator hotwell (NSPS, Subpart BB), batch digester blow gas condensing systems and turpentine condensing systems and multiple effect evaporators combined hotwell,
- NSPS (b) NCG collection system No. 2 installed on the No. 1 condensate stripper (NSPS, Subpart BB) and the Dirty Condensate collection tank, and
- NSPS (c) NCG collection system No. 3 installed on the No. 6 evaporation system and associated dirty condensate collection tank and the No. 2 condensate stripper (NSPS, Subpart BB),

exhausting the collected gases into power boiler Nos. 2 or 5 for combustion,

**IX. Water Treatment**

1. Filter Plant Lime storage silo (ID No. V-139) equipped with a bagfilter (25 square feet of filter area, ID No. V-142),

in accordance with completed applications, including all plans, specifications, previous applications, and other supporting data, all of which are filed with the Department of Environment and Natural Resources and are incorporated as part of this Permit.

This Permit is subject to the following specified conditions and limitations including any TESTING, REPORTING, OR MONITORING REQUIREMENTS:

**A. SPECIFIC CONDITIONS AND LIMITATIONS**

1. Any air emission sources or control devices authorized above must be operated and maintained in accordance with the provisions contained herein. The Permittee shall comply with applicable Environmental Management Commission Regulations, including 15A North Carolina Administrative Code (NCAC) 2D .0503, .0508, .0515, .0516, .0519, .0521, .0524, .0528, .0530, .0535, .1100, .1109, .1111 (40 CFR Part 63 Subparts S and MM), .1806 and 2Q .0317 and .0507.

2. **Power Boilers**

(a) As required by 15A NCAC 2D .0516 "Sulfur Dioxide Emissions From Combustion Sources," sulfur dioxide emissions from power boiler Nos. 1 and 3 shall not exceed 2.3 pounds per million Btu heat input.

(b) Power boiler No. 2 shall be limited to the following emission rates:

<u>Pollutants</u>	<u>Emission Limitations</u> <u>Pounds Per Million Btu Heat Input</u>	
Particulate Matter	(No. 6 fuel oil)	0.16
	(coal)	0.16
	(bark/wood fiber sludge)	0.25

<u>Pollutants</u>	<u>Emission Limitations</u> <u>Pounds Per Million Btu Heat Input</u>	
Sulfur Dioxide	(all fuels)	1.6

(c) The bark/coal No. 6 fuel oil-fired power boiler No. 5 shall be limited to the following "Best Available Control Technology (BACT)" emission rates per 15A NCAC 2D .0530 "Prevention of Significant Deterioration":

<u>Pollutants</u>	<u>Emission Limitations</u> <u>Pounds Per Million Btu Heat Input</u>	
Particulate Matter	(coal)	0.16
	(oil)	0.0562
	(bark/wood fiber sludge)	0.25
Sulfur Dioxide	(coal)	0.80
	(oil)	0.80
	(bark/wood fiber sludge)	0.024

Nitrogen Oxides	(coal)	0.4
	(oil)	0.367
	(bark/wood fiber sludge)	0.35
Carbon Monoxide	(coal)	0.208
	(oil)	0.033
	(bark/wood fiber sludge)	0.50
Volatile Organic Compounds	PSD(coal)	0.00292
	(oil)	0.00187
	(bark/wood fiber sludge)	0.213

- (d) The maximum permitted heat input rate of power boiler No. 5 from fossil fuel firing shall not exceed 249 million Btu per hour.
- (e) Collected NCG gases may be incinerated in power boiler Nos. 2 or 5.
- (f) Power boilers Nos. 1 and 3 may be operated without their respective wet scrubber when firing natural gas.
- (g) Spilled oil cleanup residue from this site absorbed onto woodwaste may be burned in Power Boiler Nos. 2 and 5, provided that the absorbed waste oil does not exceed the ASTM specifications of unadulterated No. 6 fuel oil. Records shall be kept of the type and amount of woodwaste absorbed oil residue burned.
- (h) The Permittee shall determine the particulate emissions (both PM and PM10) from Power Boiler No. 2 under representative process conditions prior to the replacement of the multiclones, OFA system, and installation of the combustion air control system. This initial testing shall be conducted in accordance with a test Protocol submitted to, and approved by the DAQ Stationary Source Compliance Department. These tests shall be repeated annually using a test protocol agreed to by DAQ SSCD Technical Services Department. A report containing the results of this test(s) shall be submitted to DAQ SSCD Technical Services Department within 30 days after the completion of the test(s).

- (i) The Permittee shall determine the particulate emissions (both PM and PM10) from Power Boiler Nos. 2 and 5 under representative process conditions. This initial testing shall be conducted in accordance with a test Protocol submitted to, and approved by the DAQ Stationary Source Compliance Department. This test shall be conducted within three (3) months of the issuance of Air Permit 03138R32. This test shall be repeated annually using a test protocol agreed to by DAQ SSCD Technical Services Department. A report containing the results of this test(s) shall be submitted to DAQ SSCD Technical Services Department within 30 days after the completion of the test(s).
- (j) The Permittee shall determine, for power boilers 1, 2, 3, and 5, the emissions of NO<sub>x</sub>, SO<sub>2</sub>, and CO. The emissions of NO<sub>x</sub>, SO<sub>2</sub>, and CO shall be determined simultaneously with the particulate matter tests for the each power boiler as specified in Specific Condition A.2(i) above. The testing shall be conducted in accordance with a test Protocol submitted to, and approved by the DAQ Stationary Source Compliance Department. These tests shall be repeated annually using a test protocol agreed to by DAQ SSCD Technical Services Department. A report containing the results of the test(s) shall be submitted to DAQ SSCD Technical Services Department within 30 days after the completion of the test(s).

(k) **15A NCAC 2D .1109 “MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY”**

**Initial Compliance Date**

- a. The initial compliance date for these emission limitations and associated monitoring, recordkeeping, and reporting requirements is [3 years from permit issuance].

**Emission Limitations**

- b. Emissions from the power boilers (ID Nos. **PB1, PB2 and PB5**) shall not exceed the emissions limits listed below:

**Table A.  
Emission Limitations**

<b>Pollutant</b>	<b>PB 1 (lbs/hour)</b>	<b>PB2 (lbs/hour)</b>	<b>PB5 (lbs/hour)</b>	<b>Fuel combusted</b>
Mercury (Hg)	1.11E-04	0.574	0.538	Any***
Hydrogen Chloride (HCL)	0.595	4.77E+02	4.46E+02	
Beryllium	4.63E-05	1.13E-02	1.36E-02	
Cadmium	7.58E-04	1.21E-02	3.10E-02	
Lead	2.71E-03	0.682	2.56	
Manganese	5.00E-06	0.426	0.351	
Nickel	0.155	1.96	1.13	
Selenium	1.14E-03	0.139	0.169	
hydrogen fluoride (HF)	6.54E-02	2.49	1.46	
hydrogen cyanide (HCN)	8.02E-02	0.252	0.147	
TSM (Arsenic and Chromium)*	2E-03 lb/MMBtu			Residual fuel oils
	NA	3E-04 lb/MMBtu		Bark/woodfiber sludge/woodwaste absorbed oil residue
	NA	4E-04 lb/MMBtu		coal

Pollutant	PB 1 (lbs/hour)	PB2 (lbs/hour)	PB5 (lbs/hour)	Fuel combusted
Carbon Monoxide*,**	28ppmvd @ 7% O <sub>2</sub>			No. 4 equivalent used oil, No. 6 fuel oil
	NA	834 ppmvd@7%O <sub>2</sub>		Bark/woodfiber sludge/woodwaste absorbed oil residue
	NA	133 ppmvd@7%O <sub>2</sub>		coal

\*Emission Limitation is proportional to the heat input of the particular fuels combusted

\*\* 30-day rolling average

\*\*\* No emission limitations associated with natural gas or distillate fuel combustion

- c. The Permittee did not include the following HAPs in the HBCA site specific compliance demonstration: Arsenic and Chromium. Compliance with the TSM emission limitation in condition b. will be based on the summation of the emissions of Arsenic and Chromium.
- d. For TSM and CO, the emission limitation is proportional to the heat input of the particular fuels combusted during the relevant averaging period.

TSM

$$E_{TSM} = [(3E-04)(B) + (4E-04)(C) + (2E-03)(FO)]/(B + C + FO)$$

Where:

E<sub>TSM</sub> = TSM emission limitation in pounds per million Btu

B = heat input of bark/sludge in million Btus per hour;

C = heat input of coal in million Btu per hour, and

FO = heat input of No. 4/6 fuel oil in million Btu per hour

Carbon monoxide

$$E_{CO} = [(555)(B) + (133)(C) + (28)(FO)]/(B + C + FO)$$

Where:

E<sub>TSM</sub> = CO emission limitation in ppmvd

B = heat input of bark/sludge in million Btus per hour;

C = heat input of coal in million Btu per hour, and

FO = heat input of No. 4/6 fuel oil in million Btu per hour

- e. The emissions limitations for a specific fuel type in Table A shall only apply when the Permittee fires at least 10% of that fuel in a boiler on a **12-month rolling average heat input basis**. If the Permittee fires less than 10% of a specific fuel in a boiler on a 12-month rolling average heat input basis, the respective emissions limitations and the associated testing, monitoring, and recordkeeping shall not apply, except the Permittee must maintain records of the amounts of each fuel fired according to condition bb.

**Control Device and Continuous System Monitoring Requirements**

- f. The Permittee shall install operate and maintain control devices and continuous monitoring systems (CMS) for the boiler (ID No. PB1) as follows:
  - i. The Permittee shall operate the wet scrubber (ID No. PB1-SCRB). The wet scrubber is not required while the boiler is solely burning natural gas.
  - ii. For the scrubber the Permittee shall perform a monthly external inspection and an internal inspection when the boiler is shut down during a major inspection interval (at least once every 18 months) and perform maintenance as recommended by the manufacturer.
  - iii. The Permittee shall install, operate, and maintain a scrubber atomizing nozzle flowmeter (CMS) on the wet

scrubber.

- iv. The Permittee shall maintain a 12-hour block average liquid flow-rate at or above the operating levels established during the performance test that demonstrated compliance with the applicable emission limits.
- g. The Permittee shall install operate and maintain control devices and continuous monitoring systems (CMS) for each boiler (**ID Nos. PB2 and 5**) as follows:
  - i. The Permittee shall operate a multicyclone (ID Nos. PB2-M and PB5-M) and wet scrubber (ID Nos. PB2-SCRB and PB5-SCRB) on each boiler. The wet scrubber is not required while the boiler is solely burning natural gas.
  - ii. For the scrubber the Permittee shall perform a monthly external inspection and an internal inspection when the boiler is shut down during a major inspection interval (at least once every 18 months) and perform maintenance as recommended by the manufacturer.
  - iii. The Permittee shall install, operate, and maintain a scrubbing liquid flowmeter (CMS) and a gas pressure drop indicator (CMS) on the wet scrubber.
  - iv. In lieu of the scrubbing liquid flowmeter, the Permittee may use motor amperage and corresponding pump curve to monitor the flow to the scrubber.
  - v. The Permittee shall maintain a 12-hour block average liquid flow-rate at or above the operating levels established during the performance test that demonstrated compliance with the applicable emission limits.

#### **Carbon Monoxide CEMS**

- h. The Permittee must install, operate, and maintain a continuous emission monitoring system (CEMS) for carbon monoxide and oxygen according to the procedures listed in i. through viii. below. The carbon monoxide and oxygen shall be monitored at the same location at the outlet of each boiler (**ID Nos. PB1, PB2 and PB5**).
  - i. Each CEMS must be installed, operated, and maintained according to the applicable procedures under Performance Specification (PS) 3 or 4A of 40 CFR 60, Appendix B, and according to the site-specific monitoring plan (See condition i.).
  - ii. Conduct a performance evaluation of each CEMS according to the requirements in 40 CFR 63.8 and according to PS 4A of 40 CFR 60, Appendix B.
  - iii. Each CEMS must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.
  - iv. The CEMS data must be reduced as specified in 40 CFR 63.8(g)(2).
  - v. The Permittee must calculate and record a 30-day rolling average emission rate on a daily basis. A new 30-day rolling average emission rate is calculated as the average of all of the hourly CO emission data for the preceding 30 operating days.
  - vi. Except for monitor malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), monitor continuously (or collect data at all required intervals) at all times that the affected source is operating.
  - vii. For purposes of calculating data averages, the Permittee may not use data recorded during periods of monitoring malfunctions, associated repairs, out-of-control periods, required quality assurance or control activities, or when the boiler or process heater is operating at less than 50 percent of its rated capacity. The Permittee must use all the data collected during all other periods in assessing compliance.
  - viii. A 30-day rolling average emission rate above the applicable emission limitation shall constitute a violation of the standard.
  - ix. Where a source is firing only gaseous fuel and/or distillate fuel oil, no CEMS is required to monitor carbon monoxide and oxygen.

#### **Site Specific Monitoring Plan**

- i. The Permittee must develop a site-specific monitoring plan for each required continuous monitoring system (CMS). The plan shall be submitted to the NC DAQ Stationary Source Compliance Branch (SSCB) at least 60 days before the initial performance evaluation of the CMS.

**Boiler Inspection and Maintenance**

- j. For each boiler (**ID Nos. PB1 PB2 and PB5**), the Permittee shall perform an annual boiler inspection and maintenance as recommended by the manufacturer, or as a minimum, the inspection and maintenance requirement shall include the following:
  - i. Inspect the burners, and clean or replace any components of the burners as necessary;
  - ii. Inspect the flame pattern and make any adjustments to the burners necessary to optimize the flame pattern; and,
  - iii. Inspect the system controlling the air-to-fuel ratio and ensure that it is correctly calibrated and functioning properly.
  - iv. The Permittee shall conduct at least one tune-up per calendar year to demonstrate compliance with this requirement.

**Performance Testing**

- k. Performance testing shall be conducted in accordance with condition cc.
- l. No performance testing is required if:
  - i. The facility can demonstrate compliance with any applicable emission limit using fuel analysis according to the procedures in the DAQ approved site-specific fuel analysis plan.
  - ii. The affected boiler only fires gaseous fuel and/or virgin or recycled distillate fuel oil, and complies with the following requirements:
    - A. The initial compliance demonstration requirement in condition q.iii.;
    - B. The monitoring/recordkeeping requirements in condition z.i.; and
    - C. The notification requirement in condition dd. vii..
  - iii. The facility demonstrates compliance with the CO limit using CO CEMS.
- m. No performance testing or fuel analysis is required for HF and HCN.
- n. Performance testing for HCL, if necessary, must be conducted prior to the wet scrubbers.

**Fuel Analyses Plan**

- o. If the Permittee chooses to demonstrate compliance with this standard using one or more fuel analyses, the analyses shall be conducted according to a DAQ approved site-specific fuel analysis plan.
- p. The Permittee shall develop and submit a site-specific fuel analysis plan to the NC DAQ – SSCB for review and approval no later than 60 days before the date that the Permittee plans to demonstrate compliance.

**Initial Compliance Requirements**

- q. The Permittee must demonstrate initial compliance with each emission limit and work practice standard that applies by either:
  - i. Conducting initial performance tests and establishing required operating limits within 180 days of the initial compliance date;
  - ii. Conducting initial fuel analyses to determine emission rates and establishing required operating limits within 180 days of the initial compliance date; or,
  - iii. Where a source is firing only gaseous fuel and/or distillate fuel oil retain records demonstrating that the source only fires these fuels. An acceptable record may include a fuel oil certification from the vendor or receipts for fuel oil, natural gas, propane, and/or liquefied petroleum gas purchased by the facility.

**Periodic Testing/Fuel Analysis Requirements**

- r. If the Permittee uses performance testing to demonstrate compliance with the standard, the Permittee must conduct all applicable performance tests on an annual basis, unless it meets the requirements listed in i. through iii. below. Annual performance tests, if required, must be completed between 11 and 13 months after the previous performance test.
  - i. The Permittee may conduct performance tests less often for a given pollutant if the performance tests for at least 3

consecutive years show compliance with the emission limit. In this case, the Permittee need not conduct a performance test for that pollutant for the next 2 years, but must conduct a performance test during the third year and no more than 36 months after the previous performance test.

- ii. If the affected boiler or process heater continues to meet the emission limit, the Permittee may conduct performance tests every third year, but each such performance test must be conducted no more than 36 months after the previous performance test.
- iii. If a performance test shows noncompliance with an emission limit, the Permittee must conduct annual performance tests for that pollutant until all performance tests over a consecutive 3-year period show compliance.
- s. If the Permittee uses fuel analysis to demonstrate compliance with the standard, the Permittee must conduct a fuel analysis **on an annual basis**. Each fuel analysis shall be conducted between 11 and 13 months after the previous analysis. If a fuel analysis shows a potential exceedance of an emission limitation in condition b. above, the Permittee shall conduct a follow-up stack test of the affected source within 90 days. If the Permittee cannot conduct a follow-up test within 90 days or the follow-up test shows an exceedance of the emission limitation in condition b. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .1109.
- t. If all fuel samples show a compound is below the detection limit, emissions of that compound can be considered zero. If some samples show the compound is detected, any non-detect values shall be considered at half the detection limit.
- u. The Permittee must report the results of performance tests within 60 days after the completion of the performance tests and fuel analyses within a time frame approved in the site DAQ approved site-specific fuel analysis plan after the completion of the fuel analyses. This report should also verify that the operating limits for your affected source have not changed or provide documentation of revised operating parameters.

#### **Recordkeeping Requirements**

- v. Maintain copy of each notification and report required by this standard, including all documentation supporting any Notification of Compliance Status.
- w. Maintain records of performance tests, fuel analyses, or other compliance demonstrations, and CMS performance evaluations.
- x. For each required CEMS and CMS, maintain the following records:
  - i. All required measurements needed to demonstrate compliance with a relevant standard (including, but not limited to, 15-minute averages of CMS data, raw performance testing measurements, and raw performance evaluation measurements, that support data that the source is required to report);
  - ii. A record of each period during which a CMS is malfunctioning or inoperative (including out-of-control periods);
  - iii. All CMS calibration checks; and,
  - iv. All adjustments and maintenance performed on CMS;
- y. Maintain records of all monitoring data and calculated averages for applicable operating limits such as pressure drop, flow rate, and carbon monoxide used to demonstrate compliance with the standard.
- z. For each affected source, maintain the following records:
  - i. Records of monthly fuel use by each affected source, including the type(s) of fuel and amount(s) used.
  - ii. For each performance test used to demonstrate compliance, a copy of all calculations and supporting documentation.
  - iii. For each fuel analysis used to demonstrate compliance, a copy of all calculations and supporting documentation.
- aa. The results of any required annual burner 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 of each recorded action;
  - ii. The results of each inspection; and,
  - iii. The results of any maintenance performed on the boilers.
- bb. If the Permittee limits the firing of a specific fuel to less than 10% on 12-month average heat input basis, it shall create and retain the following records at least once per calendar month:

- i. Record the fuel use by each affected source, including the type(s) of fuel and amount(s) used, during the previous calendar month; and,
- ii. Calculate the 12-month average heat input from each fuel for each affected source during the previous 12-month period.

After the initial compliance date, if the annual average heat input of a fuel not accounted for during the initial compliance demonstration is equal to or greater than 10% for any 12-month period, the Permittee shall conduct an initial compliance test within **90 days** following the end of the 12-month period (unless such date is *earlier than* 180 days following the initial compliance date, in which case the test shall be performed 180 days following the initial compliance date). Monitoring and recordkeeping requirements associated with the specific fuel firing shall be implemented as soon as practicable, and in no case later than **90 days** following the end of the 12-month period. Until the completion of the initial compliance test, operating parameters for the scrubbers (if applicable) shall be based on the best engineering information available to the Permittee.

### **Performance Testing Notification and Reporting Requirements**

- cc. If emissions testing is required by this permit or the DAQ or if the Permittee submits emissions testing to the DAQ in support of a permit application or to demonstrate compliance, the Permittee shall perform such testing in accordance with 15A NCAC 2D .2600 and follow the procedures outlined below:
  1. The Permittee shall submit a completed Protocol Submittal Form to the DAQ Regional Supervisor at least 45 days prior to the scheduled test date. A copy of the Protocol Submittal Form may be obtained from the Regional Supervisor.
  2. The Permittee shall notify the Regional Supervisor of the specific test dates at least 15 days prior to testing in order to afford the DAQ the opportunity to have an observer on-site during the sampling program.
  3. During all sampling periods, the Permittee shall operate the emission source(s) under maximum normal operating conditions or alternative operating conditions as deemed appropriate by the Regional Supervisor or his delegate.
  4. The Permittee shall submit **two** copies of the test report to the DAQ. The test report shall contain at a minimum the following information:
    - a. a description of the training and air testing experience of the person directing the test;
    - b. a certification of the test results by sampling team leader and facility representative;
    - c. a summary of emissions results and text detailing the objectives of the testing program, the applicable state and federal regulations, and conclusions about the testing and compliance status of the emission source(s);
    - d. a detailed description of the tested emission source(s) and sampling location(s) process flow diagrams, engineering drawings, and sampling location schematics should be included as necessary;
    - e. all field, analytical, and calibration data necessary to verify that the testing was performed as specified in the applicable test methods;
    - f. example calculations for at least one test run using equations in the applicable test methods and all test results including intermediate parameter calculations; and
    - g. documentation of facility operating conditions during all testing periods and an explanation relating these operating conditions to maximum normal operation. If necessary, provide historical process data to verify maximum normal operation.
  5. The testing requirement(s) shall be considered satisfied only upon written approval of the test results by the DAQ.
  6. The DAQ will review emission test results with respect exclusively to the specified testing objectives as proposed by the Permittee and approved by the DAQ.

### **Reporting Requirements**

#### **Notification of Compliance Status**

- dd. The Permittee must submit a Notification of Compliance Status that meets the requirements of §63.9(h)(2)(ii) before the close of business on the 60th day following the completion of the final required performance test and/or other initial compliance demonstration. The Notification of Compliance Status report must contain the following information, as applicable:
  - i. A description of the affected source(s) including identification of which subcategory the source is in, the capacity of the source, a description of the add-on controls used on the source description of the fuel(s) burned, and justification for the fuel(s) burned during the performance test.

- ii. Summary of the results of all performance tests, fuel analyses, and calculations conducted to demonstrate initial compliance including all established operating limits.
- iii. Identification of whether the facility demonstrated compliance with each applicable emission limit through performance testing or fuel analysis.
- iv. Identification of whether the facility plans to demonstrate compliance by emissions averaging.
- v. A certification signed by the Responsible Official that the facility has met all applicable emission limits and work practice standards.
- vi. A summary of the CO emissions monitoring data to show that the facility has met any applicable work practice standard or emission limitation in condition b.
- vii. If the affected source fires only gaseous fuel and/or distillate fuel oil, include a certification of such that is signed by the Responsible Official.

**Startup, Shutdown, and Malfunction Report**

- ee. The facility shall comply with the startup, shutdown, and malfunction requirements at 15A NCAC 2D .0535.

**3. Pulping Operations**

- (a) 15A NCAC 2D .0524 "NEW SOURCE PERFORMANCE STANDARDS" - For the No. 6 evaporator system and condensate stripper No. 2, the Permittee shall comply with all applicable provisions, including the notification, testing, reporting, record keeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 2D .0524, "New Source Performance Standards" (NSPS) as promulgated in 40 CFR 60, Subpart BB, including Subpart A "General Provisions."
- (b) TRS emissions from the No. 6 evaporator system and condensate stripper No. 2 shall be controlled using the No. 3 NCG gas collection system and shall be incinerated in the power boiler Nos. 2 or 5,

**4. Chemical Recovery**

- (a) NSPS EMISSIONS LIMITATIONS - As required by 15A NCAC 2D .0524, the following Permit limits shall not be exceeded:

<u>AFFECTED FACILITY</u>	<u>POLLUTANT</u>	<u>EMISSION LIMIT</u>
Recovery boiler No. 5	Particulate matter	0.044 grains per dscf (corrected to 8% O <sub>2</sub> )
Recovery boiler No. 5	TRS	5 ppm by volume on a dry basis (corrected to 8% O <sub>2</sub> )
Recovery boiler No. 5	Opacity	less than 35 percent opacity
No. 5 smelt tanks Nos. ST5a/ST5b	Particulate matter	0.20 pounds per ton of black liquor solids (dry weight)

No. 5 smelt tanks Nos. ST5a/ST5b	TRS	0.033 pounds per ton of black liquor solids (dry weight)
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**NSPS TESTING REQUIREMENT** - Within 60 days of achieving the maximum production rate, but no later than 180 after making the PSD modifications (**2004 No. 5 Recovery Boiler Upgrade Project**), the Permittee shall demonstrate compliance with the emission limit(s) above by testing the Recovery Boiler (**ID No. ES-RB5**) for particulate matter and the No. 5 Smelt Tanks (**ID Nos. ST5a and ST5b**) for particulate matter and TRS accordance with a testing protocol approved by the DAQ.

- (b) **PSD EMISSIONS LIMITATIONS** - As required by 15A NCAC 2D .0530, the following Best Available Control Technology (BACT) emission limits shall not be exceeded:

<u>AFFECTED FACILITY</u>	<u>POLLUTANT</u>	<u>EMISSION LIMIT</u>
Recovery boiler No. 5	Sulfur dioxide	979.2 pounds per hour
Recovery boiler No. 5	Nitrogen dioxide	100 ppmv corrected to 8 percent oxygen (24-hour average)
Recovery boiler No. 5	Carbon monoxide	300 ppmv corrected to 8 percent oxygen (24-hour average)
Recovery boiler No. 5	Volatile organic compounds	37 pounds per hour

<u>AFFECTED FACILITY</u>	<u>POLLUTANT</u>	<u>EMISSION LIMIT</u>
No. 5 smelt tanks Nos. ST5a/ST5b	Sulfur dioxide	6.2 pounds per hour

**TESTING REQUIREMENT** - Within 60 days of achieving the maximum production rate, but no later than 180 after making the PSD modification (**2004 No. 5 Recovery Boiler Upgrade Project**), the Permittee shall demonstrate compliance with the NOx and CO emission limit(s) above by testing the Recovery Boiler (**ID No(s). ES-RB5**) for NOx and CO accordance with a testing protocol approved by the DAQ. Testing shall be completed once per calendar quarter for the first operating year and once per calendar year thereafter. If the results of the initial annual testing (fourth, quarterly test) demonstrate results at less than 80 percent of the limit above, the testing frequency may be reduced to every five years.

- (c) **AVOIDANCE CONDITION** - Per 15A NCAC 2Q .0317, in order to avoid applicability of 15A NCAC 2D .0524, NSPS Subpart D, the No. 5 Recovery Furnace shall not exceed a 10 percent annual capacity factor for fuel oil. The Recovery Furnace is limited to a maximum annual fuel usage limit of 3,000,000 gallons per year for fuel oil in order to maintain a fossil fuel capacity factor below 10 percent.
- (d) **Recovery Boiler No. 4 ESP upgrade project.**

Pursuant to Permit Application 2400036.05A, the electrostatic precipitator will be upgraded

as a Pollution Control Project (PCP). At the completion of the project the total collection area for the ESP will have been reduced from 92,000 square feet to 81,648 square feet. The project will be conducted in three phases as given below:

Phase 1. Inlet field, to be completed during spring and summer 2005:

- Replace rigid discharge electrodes
- Replace collector plates (spacing changed from 10 inch center to 11.5 inch centers)
- Add center space rapping to inlet cells along with new rapper controls and inlet locks
- ESP collection area for this field will be 27,216 sq. feet.

Phase 2. Intermediate field, to be completed during a 2007 or later outage:

- Replace rigid discharge electrodes
- Replace collector plates (spacing changed from 10inch center to 11.5 inch centers)
- Add center space rapping to inlet cells along with new rapper controls and inlet locks
- ESP collection area for this field will be 27,216 sq. feet.

Phase 3. Outlet field, to be completed during a 2007 or later outage:

- Replace rigid discharge electrodes
- Replace collector plates (spacing changed from 10 inch center to 11.5 inch centers)
- Add center space rapping to inlet cells along with new rapper controls and inlet locks
- ESP collection area for this field will be 27,216 sq. feet.

5. **Causticizing and Lime Recovery**

(a) The permittee shall not exceed the following emissions limitations:

<u>SOURCE</u>	<u>POLLUTANT</u>	<u>EMISSION LIMIT(S)</u>	<u>REGULATION</u>
Nos. 1, 2, and 3 lime kilns	Particulate matter	0.5 pounds per equivalent ton of dried pulp	2D .0508
	TRS	20 parts per million	2D .0528

(b) **NOTIFICATION REQUIREMENT** - This permit may be revoked unless the lime slaker No. 3 wet scrubber (ID No. H-317) and appurtenances are constructed in accordance with the approved plans, specifications, and other supporting data. Within fifteen (15) days after start-up of the new or modified facilities, the Permittee shall provide written notice of the start-up to the Regional Supervisor, Division of Air Quality. If the proposed operational date of May 15, 1998 is not met, a revised permit is not needed. However, within fifteen (15) days after the proposed operational date is not met, the Permittee shall notify, in writing, the Regional Supervisor of the new proposed

operational date. Any existing equipment being replaced is permitted to operate in compliance until the replacement equipment is operational.

(c) 15A NCAC 2D .0524 "NEW SOURCE PERFORMANCE STANDARDS" - For the lime kiln No. 4 (ID No. K4001), the Permittee shall comply with all applicable provisions, including the notification, testing, reporting, record keeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 2D .0524, "New Source Performance Standards" (NSPS) as promulgated in 40 CFR 60, Subpart BB, including Subpart A "General Provisions."

(i) NSPS REPORTING REQUIREMENTS - In addition to any other notification requirements to the Environmental Protection Agency (EPA), the Permittee is required to NOTIFY the Regional Supervisor, Division of Air Quality, in WRITING, of the following:

- (A) the date construction (40 CFR 60.7) or reconstruction (40 CFR 60.15) of an affected facility is commenced, postmarked no later than thirty (30) days after such date;
- (B) the anticipated date of initial start-up of an affected facility, postmarked not more than sixty (60) days nor less than thirty (30) days prior to such date; and
- (C) the actual date of initial start-up of an affected facility, postmarked within fifteen (15) days after such date;

(ii) NSPS EMISSIONS LIMITATIONS - As required by 15A NCAC 2D .0524, the following Permit limits shall not be exceeded:

<u>AFFECTED FACILITY</u>	<u>POLLUTANT</u>	<u>EMISSION LIMIT</u>
Lime kiln No. 4	Particulate matter	0.13 grains per dscf (corrected to 10% O <sub>2</sub> ) when liquid fossil fuel is fired, and 0.066 grains/dscf (corrected to 10% oxygen) when gaseous fossil fuel is fired
Lime kiln No. 4	TRS	8 ppm by volume on a dry basis (corrected to 10% O <sub>2</sub> )

The permittee shall demonstrate compliance with the particulate emission limit when firing natural gas. This test shall be conducted within 180 days after the permittee begins firing natural gas in the No. 4 Lime Kiln, concurrent with the testing required under condition A.17.

6. **Air Toxics**

TOXIC AIR POLLUTANT EMISSIONS LIMITATION AND REPORTING REQUIREMENT - Pursuant to 15A NCAC 2D .1100 and in accordance with the approved application for an air toxic compliance demonstration, the following permit limits shall not be exceeded:

<u>AIR TOXICS POLLUTANT(S)</u>	<u>EMISSION LIMIT(S)</u>
acetaldehyde	817.9 lb/hr
acrylonitrile	436.3 lb/yr
benzene	3,285.6 lb/yr
carbon disulfide	2,629.3 lb/day
carbon tetrachloride	23,125.5 lb/yr
chlorine	274.9 lb/day
	36.2 lb/hr
chloroform	37,733.7 lb/yr
chromium VI	81.5 lb/yr
cresol	86.3 lb/hr
fluorides	202.4 lb/day
	8.4 lb/hr
formaldehyde	7.9 lb/hr
hexachlorocyclopentadiene	4.3 lb/day
	0.3 lb/hr
mercury and compounds	387.6 lb/day
methylene chloride	18,016,807.5 lb/yr
	2,060.9 lb/hr
pentachlorophenol	6.3 lb/day
phenol	13.9 lb/hr
sulfuric acid	3,604.5 lb/day
	150.2 lb/hr

- (a) To ensure compliance with the above limits, the following restrictions shall apply:
  - (i) Following start-up of the No. 4 lime kiln, the compressed air spray nozzle-type wet scrubbers installed on the power boiler Nos. 1 and 3 shall be operated during the firing of No. 6 fuel oil.
- (b) 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 maximum and monthly daily average aggregate No. 6 fuel oil firing rates for lime kiln No. 4, recovery boiler Nos. 3, 4, and 5, and power boiler Nos. 1 and 3 (ID Nos. K4001, RB3, RB4, RB5, PB1, and PB3 respectively),

7. LIMITATION TO AVOID 15A NCAC 2D .0530 "PREVENTION OF SIGNIFICANT

DETERIORATION" - To comply with this permit and avoid the applicability of 15A NCAC 2D .0530, "Prevention of Significant Deterioration," as requested by the Permittee, the total nitrogen oxides emissions from the Nos. 2, 3, and 4 lime kilns shall not exceed 402.75 tons per consecutive twelve (12) month period.

(a) To ensure federal enforceability of this limit, the following restrictions shall apply:

(i) The maximum aggregate firing rate of No. 6 fuel oil for the Nos. 2, 3, and 4 lime kilns shall not exceed 14,581,052 gallons per consecutive 12 month period.

(b) 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 nitrogen oxides emissions, calculated for the previous fourteen (14) months. The emissions must be calculated for each of the three twelve month periods over the previous fourteen months.

(c) Calculation of the consecutive twelve (12) month periods shall begin upon issuance of this Permit. The Permittee shall keep each monthly record on file for a minimum of three (3) years.

8. Pursuant to 2Q. 0507, the Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the Title V application, shall promptly submit such supplementary facts or corrected information to:

Division of Air Quality  
Post Office Box 29580  
Raleigh, North Carolina 27626-0580.

9. 15A NCAC 2D .1111 "Maximum Achievable Control Technology" -the Permittee shall comply with all applicable provisions, including the notification, testing, reporting, record keeping, 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 and MM*, including Subpart A "General Provisions."

10. 15A NCAC 2D .0530 "Prevention of Significant Deterioration" The Permittee shall keep monthly records of the total quantity of pulp dried in the pulp drying system in a logbook (written or electronic format). The recordkeeping shall begin upon issuance of Permit **03138R27** and shall be kept for a period of five years after the production of fluff pulp commences. [15A NCAC 2D .0530(v)]

11. Limitation To Avoid 15A NCAC 2D .0530 "Prevention Of Significant Deterioration" - The Permittee shall fire only diesel fuel in temporary, portable generators and engines operated by the Mill. The permittee shall keep the following records on a monthly basis to document emissions from temporary, portable generators and engines operated by the Mill remain below 39.9 tpy NO<sub>x</sub>: generator/engine type, generator/engine size, type of fuel fired, hours of operation, and calculated emissions. The emission calculations shall be based on the manufacturers NO<sub>x</sub> emission factors and hours of operation.
12. The temporary generators (ID No. TPGEN) shall burn diesel fuel with a maximum sulfur content of 500 ppm sulfur (0.05 percent sulfur) beginning in 2007 and a maximum sulfur content of 15 ppm sulfur (0.0015 percent sulfur) beginning June 1, 2010.
13. Temporary Package Boilers  
15A NCAC 2D .0524, NEW SOURCE PERFORMANCE STANDARDS – The Permittee shall comply with all applicable provisions, including the notification, testing, 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 Dc, including Subpart A “General Provisions. The temporary package boilers shall fire only No. 2 fuel oil/natural gas. The Permittee shall record and maintain records of the amounts of each fuel fired daily. The maximum sulfur content of any fuel oil received and burned in the temporary package boilers shall not exceed 0.5 percent by weight. Fuel supplier certification shall be used to demonstrate compliance with the fuel oil sulfur content requirement. Visible emissions shall not exceed 20 percent opacity (6 minute average) except for one six minute period per hour but not more than 27 percent opacity for boiler with a heat input rating of 30 million Btu per hour or greater when firing fuel oil.
14. (a) Limitation to Avoid 15A NCAC 2D .0530, Prevention of Significant Deterioration – The Permittee shall keep monthly records of the emissions from No. 3 Power Boiler (ID No. PB3) and the temporary package boilers (ID Nos. PKB-1 and PKB-2). Vendor-provided or AP-42 emission factors and PB3 NO<sub>x</sub> CEMS data shall be used to calculate emissions from the boilers. The combined emissions of PSD compounds from the three boilers shall be less than the following per consecutive 12-month period:

Pollutant	Emission Limit (tons)
particulate (TSP)	33.34
PM10	23.34
sulfur dioxide	134.11
volatile organic compounds	40.85
carbon monoxide	115.07
nitrogen oxides	201.22
Fluorides	3.11
Sulfuric acid mist	21.68
Lead	0.61

- (b) The Permittee shall submit a semi-annual summary report, acceptable to the Regional Air Quality Supervisor, of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December, and July 30 of each calendar year for the preceding six-month period between January and June. The report shall contain the following:
  - i. The monthly PSD compound emissions for the previous 17 months from No. 3 Power Boiler (ID No. PB3) and the temporary package boilers (ID Nos. PKB-1 and PKB-2). The total emissions must be calculated for each of the 12-month periods over the previous 17 months;
  - ii. The monthly quantities of natural gas and No. 2 fuel oil consumed in these units for the previous 17 months; and
  - iii. The average sulfur content of the No. 2 fuel oil.

- 15. (a) 15A NCAC 2D .0530(u) Use Of Projected Actual Emissions – Pursuant to 15A NCAC 2D .0530(u) because the Permittee relied on projected actual emissions for the purposes of demonstrating that the proposed project described in permit Application 2400036.08A (revised) for modifications to the Kamyr continuous digester (ID No. K1), Recovery Boiler 5 (ID No. RB5), and the mill hot water system, did not result in a significant emissions increase, the owner or operator shall submit a report to the Regional Office within 60 days after the end of each calendar year during which these records must be generated. In addition to the items listed in below, the report shall contain the items listed in 40 CFR 51.166(r)(6)(v)(a) through (c). These records and reports shall be maintained for five years following regular operations after the change.

In addition to the items listed in 40 CFR 51.166(r)(6)(v)(a) through (c), the Permittee shall report the following parameters:

<b>Parameter</b>	<b>Projection (annual unless otherwise provided) *</b>
Annualized Pulp Production in ODTP (unbleached)	876,000 tons
Heat Input in mmBtu from No. 6 Fuel Oil to #1 and #3 Power Boilers, combined	424,305
Heat Input in mmBtu to #2 Power Boiler	3,462,181
Heat Input in mmBtu from natural gas to #1 and #3 Power Boilers, combined	438,000
Heat Input in mmBtu to #5 Power Boiler	3,462,181
No. 6 Fuel Oil in Recovery Boiler #4	1,014,839 gallons
No. 6 Fuel Oil in Recovery Boiler #5	1,767,150 gallons
Tons of black liquor processed in Recovery Boiler #4	328,416 TBLS
Tons of black liquor processed in Recovery Boiler #5	1,348,675 TBLS
No. 4 Lime Kiln	237,873 T CaO
VOC emissions from units included in 2008 mill moderization project	2,144 tons
PM/PM-10 emissions from units included in 2008 mill moderization project	626/475 tons
SO <sub>2</sub> emissions from units included in 2008 mill moderization project	1,941 tons
NO <sub>x</sub> emissions from units included in 2008 mill moderization project	2,365 tons

<b>Parameter</b>	<b>Projection (annual unless otherwise provided) *</b>
CO emissions from units included in 2008 mill moderization project	2,113 tons

\* These projections are not enforceable limitations. If parameter exceeds the projection, consistent with 15A NCAC 2D .0530, the permit shall include in its annual report an explanation as to why the actual rates exceeded the projection.

16. (a) 15A NCAC 2D .0530(u) Use Of Projected Actual Emissions – Pursuant to 15A NCAC 2D .0530(u) because the Permittee relied on projected actual emissions for the purposes of demonstrating that the proposed project described in permit Application 2400036.08C for modifications to the Recovery Boilers 4 and 5 (**ID Nos. RB4 and RB5**) did not result in a significant emissions increase, the owner or operator shall submit a report to the Regional Office within 60 days after the end of each calendar year during which these records must be generated. In addition to the items listed in below, the report shall contain the items listed in 40 CFR 51.166(r)(6)(v)(a) through (c). These records and reports shall be maintained for five years following regular operations after the change.

In addition to the items listed in 40 CFR 51.166(r)(6)(v)(a) through (c), the Permittee shall report the following parameters:

<b>Parameter</b>	<b>Projection (annual unless otherwise provided) *</b>
Ultra Low Sulfur No. 2 Fuel Oil in Recovery Boiler #4	183,960 gallons
Ultra Low Sulfur No. 2 Fuel Oil in Recovery Boiler #5	367,920 gallons
NOx emissions from Recovery Boilers #4 and #5 2008 ultra low sulfur No. 2 fuel oil blending with black liquor solids project	1,125 tons

\* These projections are not enforceable limitations. If parameter exceeds the projection, consistent with 15A NCAC 2D .0530, the permit shall include in its annual report an

explanation as to why the actual rates exceeded the projection.

17. (a) Limitation to Avoid 15A NCAC 2D .0530, Prevention of Significant Deterioration – The Permittee shall keep monthly records of the NOx emissions from No. 4 Lime Kiln (ID No. K4001). The NOx emissions shall be less than 159 tons per consecutive 12-month period.
- (b) Testing requirement to validate NOx emission factors when burning natural gas in the No. 4 lime kiln (ID No. K4001). The permittee shall determine the NOx emissions, expressed as pounds of NOx/ton CaO when burning 100% oil and either 100% natural gas or oil and natural gas where natural gas firing rate is at or near to the maximum natural gas firing to be used under normal kiln operation. These tests for NOx emissions shall be conducted within 180 days after the permittee begins combusting natural gas in the No. 4 Lime Kiln.
  - (i) To afford the Regional Supervisor, Division of Air Quality, the opportunity to have an observer present, the Permittee shall provide the Regional Office, in writing, at least thirty (30) days prior to the required tests.
  - (ii) The test results must be submitted to the Regional Supervisor, Division of Air Quality, in accordance with the approved procedures of the Environmental Management Commission within ninety (90) days after the required tests have been conducted.
  - (iii) The source shall be responsible for ensuring, within the limits of practicality, that the equipment or process being tested is operated at or near its normal production rate, or at a rate specified by the Director or his delegate, and under the general the combustion characteristics observed during these tests.
  - (iv) All associated testing costs are the responsibility of the Permittee.
- (c) The Permittee shall submit a semi-annual summary report, acceptable to the Regional Air Quality Supervisor, of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December, and July 30 of each calendar year for the preceding six-month period between January and June. The report shall contain the following:
  - i. The monthly NOx emissions for the previous 17 months from the No. 4 Lime Kiln (ID No. K4001) The total emissions must be calculated for each of the 12-month periods over the previous 17 months;

**B. GENERAL CONDITIONS AND LIMITATIONS**

1. REPORTS, TEST DATA, MONITORING DATA, NOTIFICATIONS, AND REQUESTS FOR RENEWAL shall be submitted to the:

Regional Supervisor  
North Carolina Division of Air Quality  
Wilmington Regional Office  
127 Cardinal Drive Extension  
Wilmington, NC 28405-3845  
910-796-7215

2. RECORDS RETENTION REQUIREMENT - Any records required by the conditions of this permit shall be kept on site and made available to DAQ personnel for inspection upon request. These records shall be maintained in a form suitable and readily available for expeditious inspection and review. These records must be kept on site for a minimum of 2 years, unless another time period is otherwise specified.
3. PERMIT RENEWAL REQUIREMENT - The Permittee, at least 90 days prior to the expiration date of this permit, shall request permit renewal by letter in accordance with 15A NCAC 2Q .0304 (d) and (f). Pursuant to 15A NCAC 2Q .0203(i), no permit application fee is required for renewal of an existing air permit. The renewal request should be submitted to the Regional Supervisor, DAQ.
4. ANNUAL FEE PAYMENT - Pursuant to 15A NCAC 2Q .0203 (a), the Permittee shall pay the annual permit fee within 30 days of being billed by the DAQ. Failure to pay the fee in a timely manner will cause the DAQ to initiate action to revoke the permit.
5. EQUIPMENT RELOCATION - A new air permit shall be obtained by the Permittee prior to establishing, building, erecting, using, or operating the emission sources or air cleaning equipment at a site or location not specified in this permit.
6. REPORTING REQUIREMENT - Any of the following that would result in previously unpermitted, new, or increased emissions must be reported to the Regional Supervisor, DAQ:
- a. changes in the information submitted in the application regarding facility emissions;
  - b. changes that modify equipment or processes of existing permitted facilities; or

- c. changes in the quantity or quality of materials processed.

If appropriate, modifications to the permit may then be made by the DAQ to reflect any necessary changes in the permit conditions. In no case are any new or increased emissions allowed that will cause a violation of the emission limitations specified herein.

7. This permit is subject to revocation or modification by the DAQ upon a determination that information contained in the application or presented in the support thereof is incorrect, conditions under which this permit was granted have changed, or violations of conditions contained in this permit have occurred. The facility shall be properly operated and maintained at all times in a manner that will effect an overall reduction in air pollution. Unless otherwise specified by this permit, no emission source may be operated without the concurrent operation of its associated air cleaning device(s) and appurtenances.
8. This permit is nontransferable by the Permittee. Future owners and operators must obtain a new air permit from the DAQ.
9. This issuance of this permit in no way absolves the Permittee of liability for any potential civil penalties which may be assessed for violations of State law which have occurred prior to the effective date of this permit.
10. This permit does not relieve the Permittee of the responsibility of complying with all applicable requirements of any Federal, State, or Local water quality or land quality control authority.
11. Reports on the operation and maintenance of the facility shall be submitted by the Permittee to the Regional Supervisor, DAQ at such intervals and in such form and detail as may be required by the DAQ. Information required in such reports may include, but is not limited to, process weight rates, firing rates, hours of operation, and preventive maintenance schedules.
12. A violation of any term or condition of this permit shall subject the Permittee to enforcement pursuant to G.S. 143-215.114A, 143-215.114B, and 143-215.114C, including assessment of civil and/or criminal penalties.
13. Pursuant to North Carolina General Statute 143-215.3 (a) (2), no person shall refuse entry or access to any authorized representative of the DAQ who requests entry or access for purposes of inspection, and who presents appropriate credentials, nor shall any person obstruct, hamper, or interfere with any such representative while in the process of carrying out his official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.
14. The Permittee must comply with any applicable Federal, State, or Local requirements governing the

handling, disposal, or incineration of hazardous, solid, or medical wastes, including the Resource Conservation and Recovery Act (RCRA) administered by the Division of Waste Management.

15. PERMIT RETENTION REQUIREMENT - The Permittee shall retain a current copy of the air permit at the site. The Permittee must make available to personnel of the DAQ, upon request, the current copy of the air permit for the site.
16. CLEAN AIR ACT SECTION 112(r) REQUIREMENTS - Pursuant to 40 CFR Part 68 "Accidental Release Prevention Requirements: Risk Management Programs Under the Clean Air Act, Section 112(r)," if the Permittee is required to develop and register a risk management plan pursuant to Section 112(r) of the Federal Clean Air Act, then the Permittee is required to register this plan in accordance with 40 CFR Part 68.
17. PREVENTION OF ACCIDENTAL RELEASES - GENERAL DUTY - Pursuant to Title I Part A Section 112(r)(1) of the Clean Air Act "Hazardous Air Pollutants - Prevention of Accidental Releases - Purpose and General Duty," although a risk management plan may not be required, if the Permittee produces, processes, handles, or stores any amount of a listed hazardous substance, the Permittee has a general duty to take such steps as are necessary to prevent the accidental release of such substance and to minimize the consequences of any release. **This condition is federally-enforceable only.**

Permit issued this the DD<sup>th</sup> day of MM, 2011.

NORTH CAROLINA ENVIRONMENTAL MANAGEMENT COMMISSION

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

Chief

Division of Air Quality

By Authority of the Environmental Management Commission

Insignificant / Exempt Activities

ID No(s).	Source Description	Exemption Regulation	Source of TAPs?	Source of Title V Pollutants?
I-2FT	Ultra low sulfur No. 2 fuel oil tank (10,000 gallon capacity)	2Q .0503(8)	No	Yes

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Because an activity is exempted from being required to have a permit or permit modification does not mean that the activity is exempted from an applicable requirement or that the owner or operator of the source is exempted from demonstrating compliance with any applicable requirement.

When applicable, emissions from stationary source activities identified above shall be included in determining compliance with the permit requirements for toxic air pollutants under 15A NCAC 2D .1100 "Control of Toxic Air Pollutants" or 2Q .0711 "Emission Rates Requiring a Permit."