

**NORTH CAROLINA DIVISION OF
AIR QUALITY**

Air Permit Review

Permit Issue Date: **DRAFT**

Region: Asheville Regional Office
County: Haywood
NC Facility ID: 4400159
Inspector's Name: Brendan Davey
Date of Last Inspection: 09/26/2006
Compliance Code: C/In Compliance With
 Procedural Reqr

Facility Data			Permit Applicability (this application only)		
Applicant (Facility's Name): Blue Ridge Paper Products - Canton Mill Facility Address: Blue Ridge Paper Products - Canton Mill 175 Main Street Canton, NC 28716 SIC: 2621 / Paper Mills Exc Building Paper NAICS: 322121 / Paper (except Newsprint) Mills Facility Classification: Before: Title V After: Title V Fee Classification: Before: Title V After: Title V			SIP: NSPS: NESHAP: PSD: PSD Avoidance: NC Toxics: 112(r): Other:		
Contact Data			Application Data		
Facility Contact	Authorized Contact	Technical Contact	Application Number: 4400159.06A Date Received: 02/13/2006 Application Type: Appeal Application Schedule: Appeal Existing Permit Data Existing Permit Number: 08961/R07 Existing Permit Issue Date: 04/13/2006 Existing Permit Expiration Date: 03/31/2011		
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Review Engineer: Jay Evans Review Engineer's Signature: _____ Date: _____			Comments / Recommendations: Issue 08961/T08 Permit Issue Date: Permit Expiration Date:		

I. Purpose of Application

The purpose of this permitting action is three-fold. First, the drafting and issuance of this permit is the final resolving settlement action of the facility's administrative appeal of their initial Title V permit. Second, this permit incorporates permit changes made to the facility's state air permit during the appeal process and formally includes these changes pursuant to Part 70 and state permitting requirements into the Title V permit. Third, this permit formally includes the pre-draft, EPA-approved Equivalency by Permit (EBP) language for 40 CFR 63 Subpart S into the Title V permit pursuant to 40 CFR §63.94.

II. 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 40 CFR 63, Subpart S.

III. History/Background/Application Chronology

June 15, 2005 - Permit **08961T05** issued as an initial Title V.

July 22, 2005 - Petition of initial Title V permit **08961T05** filed.

November 8, 2005 - Initial meeting with facility and counsel regarding appeal.

November 14, 2005 - State permit **08961R06** issued per application 4400159.05B.

February 13, 2006 - Settlement Agreement signed regarding appeal of initial Title V.

April 13, 2006 - State permit **08961R07** issued per application 4400159.06B.

August 7, 2006 - Withdrawal of the petition for appeal of the initial Title V permit pending DRAFT permit.

December 8, 2006 – Final version of DRAFT permit sent to Permittee and Regional Office for comment prior to public notice and EPA review.

XXXXX, 2006 – DRAFT permit sent to 30-day public notice and 45-day EPA review. The 30-day period ended on **XXXXX, 2006**. The 45-day review period ended on **XXXXX, 2006**.

IV. Permit Modifications/Changes

The following table describes the modifications to the initial Title V permit as part of the appeal process as well as changes made pursuant to the state permitting actions and incorporation of the EBP language. Additionally, changes were made to incorporate newly-effective regulations as detailed further in this review.

Table IV:

Permit Section	Change
Throughout	Minor typographical and updated reference changes were made throughout the permit.
Cover letter, Attachment A	This table was changed to reflect 1) the urea solution storage system was installed in 2005 as part of NOx SIP Call compliance and 2) the removal of sources as detailed below.
Attachment A, Section 1 Table of Permitted Sources, Condition 2.1.W	<p><u>Utility Boiler Flyash Handling System</u></p> <p>The Utility Boiler Flyash Handling System was incorrectly designated as an insignificant source in the initial Title V permit. These sources were added to the Section 1 permitted emission source table and to condition 2.1.W:</p> <p>G11045 – Main Flyash Silo and bagfilter (11-CD-021-01) and pneumatic flyash collection system (11-CD-021-02).</p> <p>G11025 – No. 4 Power Boiler flyash transfer silo and bagfilter (11-CD-021-03).</p>

Permit Section	Change
Section 1 Table of Permitted Sources	<p><u>Sources Covered by Boiler MACT</u> Revised the descriptions of boilers G11037, G11038, G11039, G11040, and G11042 to reflect current operation and to identify these sources as subject to the Boiler MACT (40 CFR 63, Subpart DDDDD) in accordance with Item 5 of the 2/13/06 Settlement Agreement.</p> <p><u>Additional Sources Removed from Attachment A</u> The following sources were added to the Permitted Equipment list based on HAP emissions greater than 100 pounds. NOTE: These sources have no otherwise applicable requirements. G10090 - Green liquor stabilization tank (1008 lbs MeOH) G05073 - Metals removal process (4332 lbs MeOH) G03007 - Reject Knots (1998 lb MeOH)</p>
Section 1 Table of Permitted Sources, Condition 2.1.M.1.	<p><u>Additional Source Per State Permitting Actions</u> Added Black Liquor Oxidation System controls (CD-BLOXRTO and CD-RTOSCR) included in state permit 08961R06 per application 4400159.05B.</p>
Section 1 Table of Permitted Sources, Condition 2.1.EE.	<p><u>Additional Source Per State Permitting Actions</u> Added emergency generator (16-CU-001) included in state permit 08961R07 per application 4400159.06B.</p>
2.1.D.1.c, 2.1.F.1.b, 2.1.P.1.c, 2.1.Q.1.c, 2.1.V.2.d, 2.1.Y.1.c	<p><u>Inspection and Maintenance</u> Updated the requirement to conduct inspections and maintenance to clarify that the mill can use its established inspection and maintenance program. This change was made for all units where inspection and maintenance is required. This change was discussed with DAQ and agreed to during the 11/08/2005 meeting concerning the T05 permit contested case.</p>
2.1.D.1.c, 2.1.F.1.b, 2.1.P.1.c, 2.1.Q.1.c, 2.1.V.2.d, 2.1.W.1.c, 2.1.Y.1.c	<p><u>Clarification of Monthly and Annual Inspection Frequencies</u> To allow clarification and consistency with other NC pulp and paper mills, the expected timeframe for monthly and annual inspections were amended. The monthly inspections are required per calendar month, not to exceed six weeks from the prior inspection. The annual inspections are required per calendar year not to exceed 14 months from the previous inspection.</p>
2.1.D.2.d, 2.1.N.2.d, 2.1.O.3.d, 2.1.P.2.d, 2.1.Q.2.d, 2.1.S.2.d, 2.1.W.2.d, 2.1.Y.2.d, 2.1.AA.2.d	<p><u>2D .0521 Visible Emissions MRR</u> Modified the VE monitoring condition to reflect the current standard condition language that was developed during the time the appeal was ongoing. The new standard condition reflects clarifying language made to the previous language.</p>
2.1.K.1.c, 2.1.L.1.c, 2.1.N.3.c, 2.1.O.1.c, 2.1.T.1.c, 2.1.U.2.d, 2.1.V.2.c	<p><u>First Year Stack Testing for PM and TRS</u> The testing requirements were updated. The source testing language for Recovery Boiler PM emission sources requires source testing within the first <u>calendar year</u> of issuance. Calendar year source testing is also required for TRS from the Smelt Dissolving Tanks. Power Boiler testing is required within 180 days of issuance. ESP parameter monitoring deviations from normal range also trigger PM testing requirements.</p>

Permit Section	Change
2.1.K, 2.1.L, 2.1.N, 2.1.O	<p><u>40 CFR 63, Subpart MM (MACT II) Requirements for Recovery Sources</u> In accordance with item 3 of the 2/13/06 Settlement Agreement, the SIP 2D .0508 rule MRR requirements for recovery sources in T05 were streamlined with the newly-effective MACT II (40CFR 63, Subpart MM) monitoring, reporting, and recordkeeping requirements that were not in place when T05 was drafted. This affects the recovery furnaces, smelt dissolving tanks, and lime kilns.</p>
2.1.K.2, 2.1.L.2, 2.1.O.2, 2.1.T.2, 2.1.U.2, 2.1.V.3	<p><u>Correction to Fuel Certification Requirements</u> In accordance with Item 7 of the 2/13/06 Settlement Agreement, and based on the formal alternative monitoring request for fuel sampling and analysis made in accordance with 15A NCAC 2D.0612, the fuel sampling, analysis, and certification requirements in the initial Title V permit were modified to match current procedures followed by the Mill. This affects all units firing coal and oil.</p>
2.1.K.4, 2.1.L.3, 2.1.O.4	<p><u>TRS Excess Emissions Monitoring for Recovery Sources</u> In accordance with the 02/13/2006 Settlement Agreement, the language was modified to clarify the applicability of 40 CFR 60 Appendix F to the TRS emissions monitoring and the Mill submitted a formal TRS monitoring QA/QC plan.</p>
2.1.K, 2.1.T, 2.1.V	<p><u>State vs. Federal 2D .0521</u> In accordance with Item 1 of the 2/13/06 Settlement Agreement, the 2D .0521 language was updated to reflect the federally-approved COMS language under 2D .0521 which became effective after the drafting of T05.</p>
2.1.T, 2.1.U, 2.1.V, 2.2.E	<p><u>Boiler MACT Applicability</u> In accordance with Item 5 of the 2/13/06 Settlement Agreement, the revised Title V permit identifies those sources that are covered by the Boiler MACT (40 CFR 63, Subpart DDDDD) standard, which has a compliance date of September 2007.</p>
2.1.T.1, 2.1.U.2	<p><u>Power Boiler ESP Inspection and Maintenance</u> In accordance with Item 5 of the 2/13/06 Settlement Agreement, the permit retains ESP parameter monitoring for power boilers and removes inspection and maintenance requirements for these boilers. The PM emission tests were re-designated as monitoring requirements. Similar to NSPS, the ESP parameter monitoring was amended to reflect additional emission testing is required if the parameters exceed the allowable values.</p>
2.1.U.2.q-r., 2.2.B	<p><u>NOx Monitoring for the No. 4 Power Boiler</u> In accordance with Item 8 of the 2/13/06 Settlement Agreement, the NSPS condition was amended to clarify the mill has previously demonstrated that NOx emissions from No. 4 Power Boiler are less than 70 percent of the NSPS limit and that the NOx CEM is not required pursuant to NSPS. The condition was further clarified to reflect that while the CEM is not required by NSPS, when it is operated, the data will be used to evaluate compliance with the NSPS standard.</p>
2.1.V.5, 2.1.V.6	<p><u>Continuous Opacity Monitoring System (COMS) on Wet Stack</u> In accordance with Item 2 of the 2/13/06 Settlement Agreement, alternative monitoring procedures under 2D .0521 and 2D .0606 for opacity monitoring from the Riley Bark Boiler will be based on scrubber parameter monitoring during periods of COMS unreliability due to uncombined moisture in the stack.</p>

Permit Section	Change
2.2.C.1.	<p><u>MACT I, Subpart S</u> Updated the condition to reflect the EBP provisions covering the EBP-effected HVLC sources and identified the non-EBP HVLC sources. Included language identifying the basis for control exception(s) under MACT I, Phase II for the non-EPB HVLC sources. Removed ES 04-TK-013 from the list of MACT-affected HVLC sources per applicant representation of source definition. Clarified that the foul condensate steam stripper has a 10 percent downtime allowance under 40 CFR 63, Subpart S. This item was omitted from T05. Clarified that the monitoring parameters for the foul condensate steam stripper are calculated on a 15-day rolling average period for purposes of demonstrating compliance with Subpart S. The 15-day rolling average was approved pursuant to the Mill's April 2001 MACT I, Phase 1 notification of compliance status. Amended condensate collection requirements to require collection of the foul condensates from the Black Liquor Oxidizer gas collection system.</p>
2.2.C.2.	<p><u>Equivalency by Permit (EBP) for MACT I, Phase 2</u> In accordance with Item 4 of the 2/13/06 Settlement Agreement, the EPA-approved pre-draft equivalency by permit language for MACT I, Phase 2 compliance was incorporated into the permit.</p>
2.2.D	<p><u>MACT II, Subpart MM</u> In accordance with Item 3 of the 2/13/06 Settlement Agreement, compliance terms for 40 CFR 63, Subpart MM (MACT II) were added pursuant to the compliance information submitted to DAQ regarding compliance status and monitoring parameter ranges.</p>
2.3.A.2	<p><u>State Air Toxics</u> Modified state-only condition 2.3.A.2 to reflect the "Last MACT" air toxics demonstration requirements affecting pulp and paper mills in North Carolina. The final "Last MACT" air toxics demonstration for the Blue Ridge Paper Canton Mill is due April 17, 2007. An initial application has been submitted by Blue Ridge Paper which will be updated prior to this date.</p>
2.3.A.3	<p><u>State Air Toxics</u> Eliminated state-only condition regarding on-site generated waste oil sampling per Blue Ridge Paper letter dated 24 March 2006 and subsequent state air permit R07. Per DAQ policy, no fuel sampling is required for on-site generated waste oil combustion if use is less than 500 gallons per year.</p>
Section 3	Updated the General Conditions.

V. Regulatory Review

The facility is currently subject to the following regulations:

- 15A NCAC 2D .0503: PARTICULATES FROM FUEL BURNING INDIRECT HEAT EXCHANGERS
- 15A NCAC 2D .0504: PARTICULATES FROM WOOD BURNING INDIRECT HEAT EXCHANGERS
- 15A NCAC 2D .0508: PARTICULATES FROM PULP AND PAPER MILLS
- 15A NCAC 2D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES
- 15A NCAC 2D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES

15A NCAC 2D .0519: CONTROL OF NITROGEN DIOXIDE AND NITROGEN OXIDES
 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS
 15A NCAC 2D .0524: NEW SOURCE PERFORMANCE STANDARDS
 (40 CFR 60 SUBPARTS D and BB)
 15A NCAC 2D .0528: TOTAL REDUCED SULFUR FROM KRAFT PULP MILLS
 15A NCAC 2D .0530: PREVENTION OF SIGNIFICANT DETERIORATION
 15A NCAC 2D .0606: SOURCES COVERED BY APPENDIX P OF 40 CFR PART 51
 (CONTINUOUS OPACITY MONITORING AND EXCESS EMISSIONS)
 15A NCAC 2D .1100 CONTROL OF TOXIC AIR POLLUTANTS
 15A NCAC 2D .1111: MACT
 (40 CFR 63 SUBPARTS S, MM)
 15A NCAC 2D .1417 EMISSION ALLOCATIONS FOR LARGE COMBUSTION SOURCES
 15A NCAC 2Q. 0317: AVOIDANCE CONDITIONS for
 15A NCAC 2D. 0530: PREVENTION OF SIGNIFICANT DETERIORATION
 15A NCAC 2Q .0508(g): PREVENTION OF ACCIDENTAL RELEASES - SECTION 112 (r) OF THE
 CLEAN AIR ACT

A regulatory review for the existing requirements, pursuant to these regulations will not be included in this document.

However, as a result of this Part 70 permitting action, new conditions for the following regulations have been added and are discussed in further detail below:

15A NCAC 2Q .0705 EXISTING FACILITIES AND SIC CALLS
 15A NCAC 2Q. 0317: AVOIDANCE CONDITIONS for
 15A NCAC 2D. 0530: PREVENTION OF SIGNIFICANT DETERIORATION
 15A NCAC 2D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES
 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS
 15A NCAC 2D .1111: MACT (40 CFR 63 SUBPARTS S, MM, ZZZZ, and DDDDD)

VI. Review and Analysis of Permit Changes

A. Changes Made Pursuant to Settlement of Administrative Appeal

The following discussion focuses on the permit changes made based on the appeal of the initial Title V permit (T05). It is important to note that not all of these changes were made specifically based on the appeal. In some cases the changes simply reflect regulatory changes that occurred during the course of the appeal but are unrelated to the issues raised in the appeal. However, these changes are included in this section as they are not specifically related to either EBP or prior permitting action(s).

1. Utility Boiler Flyash Handling System

Section 1 Table of Permitted Sources, Condition 2.1.W

The Utility Boiler Flyash Handling System was designated as an insignificant source in the initial Title V permit. The particulate matter (PM) emissions exceed the lesser quantity cut off per 15A NCAC 2Q .0503(8). Therefore, these sources were added to the Section 1 permitted emission source table and to the existing permit condition 2.1.W: G11045 – Main Flyash Silo and bagfilter (11-CD-021-01) and pneumatic flyash collection system (11-CD-021-02); and G11025 – No. 4 Power Boiler flyash transfer silo and bagfilter (11-CD-021-03). These sources similar in design to the existing source(s) permitted under Condition 2.1.W., and are subject to the same regulations. The existing condition should provide sufficient monitoring, record keeping, and reporting requirements for compliance determination for these newly permitted sources. These sources are now permitted as follows:

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

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

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

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

This regulation limits the PM emissions from these sources based on actual process weight input. 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)]

$$E = 4.10 \times P^{0.67} \quad \text{Where} \quad \begin{array}{l} E = \text{allowable emission rate in pounds per hour} \\ P = \text{process weight in tons per hour} \end{array}$$

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

Particulate matter emissions from the Utility Boiler Flyash Handling System (**ID Nos. G11045 and G11025**) is required to be controlled by their respective bin vent bagfilters and the pneumatic system dust separator cyclone with bagfilters. To assure compliance, the Permittee shall perform inspections and maintenance on the control device(s) and ductwork. As a minimum, the inspection and maintenance requirement shall include the following:

- (1) a monthly visual inspection (for each calendar month, not to exceed 6 weeks from the previous inspection) of the system ductwork and material collection unit for leaks; and
- (2) an annual internal inspection (for each calendar year, not to exceed 14 months from the previous inspection) of the bagfilters' and cyclones' structural integrity.

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

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:

- (1) the date and time of each recorded action;
- (2) the results of each inspection;
- (3) the results of any maintenance performed on the bagfilters or cyclones; and
- (4) any corrections made.

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

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

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

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

This regulation limits visible emissions from these sources. Based on a manufacture date after July 1, 1971, the visible emissions from the Utility Boiler Flyash Handling System (**ID Nos. G11045 and G11025**) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 2D .0521 (d)]

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

To assure compliance, once a month the Permittee shall observe the emission points of the sources for any visible emissions above normal. The Permittee shall establish "normal" for the source in the first

30 days following the effective date of permit 08961T08. If visible emissions from any source are observed to be above normal, the Permittee shall either:

- (1) take appropriate action to correct the above-normal emissions within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
- (2) demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 2D .0501(c)(8) is below 20 percent.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521 if the abnormal emissions are not either corrected or demonstrated below the applicable limit.

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

The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:

- (1) the date and time of each recorded action;
- (2) the results of each observation and/or test noting those sources with emissions that were observed to be above normal along with any corrective actions taken to reduce visible emissions; and
- (3) the results of any corrective actions performed.

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

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

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. Additional Sources Removed from Insignificant Activity classification.

Section 1 Table of Permitted Sources

The following sources were added to the Permitted Equipment list based on HAP emissions greater than 1000 pounds which exceed the lesser quantity cut off per 15A NCAC 2Q .0503(8):

G10090 - Green liquor stabilization tank (1008 lbs MeOH)

G05073 - Metals removal process (4332 lbs MeOH)

G03007 - Reject Knots (1998 lb MeOH)

While these sources were added to Specific List of permitted equipment, these sources are not subject to any applicable regulations and are therefore not included in any specific permit condition.

Sources which are insignificant per 15A NCAC 2Q .0503(8) are permitted under General Condition T which provides that because an emission source or activity is insignificant does not mean that the emission source or activity is exempted from any applicable requirement or that the owner or operator of the source is exempted from demonstrating compliance with any applicable requirement. The Permittee is required to have available at the facility at all times and make available to an authorized representative upon request, documentation, including calculations, if necessary, to demonstrate that an emission source or activity is insignificant.

3. Inspection and Maintenance

Conditions 2.1.D.1.c, 2.1.F.1.b, 2.1.P.1.c, 2.1.Q.1.c, 2.1.V.2.d, 2.1.Y.1.c

15A NCAC 2Q .0508(f) provides the permit shall contain monitoring and related recordkeeping and reporting requirements as specified in 40 CFR 70.6(a)(3) and 70.6(c)(1) including periodic monitoring where none is specified by rule. At the Permittee's request and with DAQ approval, the previous conditions were updated to clarify that the mill can use its established inspection and maintenance program. This update was made for all units where inspection and maintenance is required. The minimum inspection and maintenance requirements were not changed from the original Title V permit. This change was discussed with DAQ and agreed to during the 11/08/2005 meeting concerning the T05 permit contested case.

4. Clarification of Monthly and Annual Inspection Frequencies

Conditions 2.1.D.1.c, 2.1.F.1.b, 2.1.P.1.c, 2.1.Q.1.c, 2.1.V.2.d, 2.1.W.1.c, 2.1.Y.1.c

For consistency with other NC pulp and paper mills, the expected timeframe for monthly and annual inspections were clarified to indicate that the monthly inspections are required per calendar month, not to exceed six weeks from the prior inspection, and the annual inspections are required per calendar year not to exceed 14 months from the previous inspection. This change is considered minor, but clarifies the maximum time allowed between inspections, due to the nature of the industry, specifically considering annual mill shutdowns.

5. 15A NCAC 2D .0521 Visible Emissions Monitoring

Conditions 2.1.D.2.d, 2.1.N.2.d, 2.1.O.3.d, 2.1.P.2.d, 2.1.Q.2.d, 2.1.S.2.d, 2.1.W.2.d, 2.1.Y.2.d, 2.1.AA.2.d

The existing VE conditions were modified to reflect the current standard condition language that was developed during the time the appeal was ongoing. The new standard condition reflects clarifying language made to the previous language which is meant to make clear that when abnormal emission are observed the Permittee has the option of either (1) correcting the abnormal emissions, returning them to normal or (2) performing a Method 9 test on the abnormal emissions to demonstrate that the opacity is below the standard. The prior condition language was challenged during an unrelated petition as being unclear and contradictory.

6. First Year Stack Testing for PM and TRS

Conditions 2.1.K.1.c, 2.1.L.1.c, 2.1.N.3.c, 2.1.O.1.c, 2.1.T.1.c, 2.1.U.2.d, 2.1.V.2.c

The testing requirements were updated to reflect the newly draft permit timeframe. The Recovery Boiler PM emission sources are required to test within the first calendar year of issuance. The previous permit required testing within the first year of issuance. Given the draft permit timing and the duration of the appeal process, this initial timing was modified to within the calendar year of issuance. Calendar year source testing is also required for TRS from the Smelt Dissolving Tanks. Power Boiler testing is required within 180 days of issuance. Additionally, ESP parameter monitoring deviations from normal range also trigger PM testing requirements for the Power Boilers.

7. 40 CFR 63, Subpart MM (MACT II) Requirements for Recovery Sources

Conditions 2.1.K, 2.1.L, 2.1.N, 2.1.O

As provided in 40 CFR 70.6(a)(3)(A), if more than one monitoring or testing requirement applies, the permit may specify a streamlined set of monitoring or testing provisions provided the specified monitoring or testing is adequate to assure compliance at least to the same extent as the monitoring or testing applicable requirements that are not included in the permit as a result of such streamlining. Further, an evaluation of the exemption of the CAM requirements per 40 CFR 64 provides that sources subject to emission limitations or standards proposed by the EPA after November 15, 1990 pursuant to section 111 or 112 of the Act are exempt from CAM based on the continuous compliance determinations methods incorporated in these rules. The sources covered by the state (SIP) PM regulation for pulp mills, 15A NCAC 2D. 0508, are also covered by surrogate PM limits for HAPs under 40 CFR 63, (MACT) Subpart MM. Although the actual units of the PM limits differ, the base PM limits are equivalent when taking into account standardized unit conversion. Additionally, each rule is founded in 40 CFR 60, Subpart BB. At the time the initial permit was drafted, the MACT Subpart MM compliance date was not yet in effect. MACT Subpart MM has become effective and the facility is complying with the monitoring provision therein. Subpart MM was proposed after November 1990. Given the overlapping regulatory limits and the superior monitoring provided in Subpart MM, and in accordance with item 3 of the 2/13/06 Settlement Agreement, the SIP rule MRR requirements for recovery sources in T05 were streamlined with the newly-effective MACT II (40CFR 63, Subpart MM) monitoring, reporting, and recordkeeping requirements that were not in place when T05 was drafted. This affects the recovery furnaces, smelt dissolving tanks, and lime kilns. However, under 15A NCAC 2D .0508, these sources remain subject to the requirements of 15A NCAC 2D .0535 for excess emissions reporting for this regulation.

8. Amendments to Fuel Certification Requirements

Conditions 2.1.K.2, 2.1.L.2, 2.1.O.2, 2.1.T.2, 2.1.U.2, 2.1.V.3

For sources subject to 15A NCAC .0516, monitoring for compliance with the sulfur dioxide limit is required per 15A NCAC 2Q .0508(f) and for certain sources 15A NCAC 2D .0608. In accordance with Item 7 of the 2/13/06 Settlement Agreement, and based on the formal alternative monitoring request for fuel sampling and analysis made in accordance with 15A NCAC 2D .0612, the fuel sampling, analysis, and

certification requirements in the initial Title V permit were modified to match current procedures followed by the Mill. This affects all units firing coal and oil. In summary, the amended conditions: update the ASTM methods; allow the use EPA Method 19 sulfur retentions credit; and allow for a monthly summary emissions calculation for the fuel oil shipments. In balancing the monthly calculation summary request, the Permittee agreed to make the compliance calculation determination conservatively based on the highest sulfur content in the month's shipment(s).

9. TRS Excess Emissions Monitoring for Recovery Sources

Conditions 2.1.K.4, 2.1.L.3, 2.1.O.4

In accordance with the 02/13/2006 Settlement Agreement, the language was modified to clarify the applicability of 40 CFR 60 Appendix F to the TRS emissions monitoring and the Mill submitted a formal TRS monitoring QA/QC plan. The clarification regarding Appendix F is made in part based on the applicability of 15A NCAC 2D .0528, which is the SIP version of 40 CFR 60 Subpart BB for TRS emissions from pulp mills. Historically, under EPA guidance, Appendix F is not applicable for Subpart BB sources TRS monitors. This guidance was codified in Federal Register / Vol. 71, No. 183 / Thursday, September 21, 2006 / Rules and Regulations. Although the TRS monitoring requirements for these sources are required pursuant to 15A NCAC 2Q .0508(f) and not NSPS, the DAQ agreed to implement QA/QC requirements similar to NSPS for these monitors.

10. State vs. Federal 2D .0521

Conditions 2.1.K, 2.1.T, 2.1.V

When the initial Title V permit was issued, the facility was subject to dual opacity standards for sources that use COMs for compliance. The dual standards were a result of a modified state-only 15A NCAC 2D .0521 condition that had not yet been adopted into the SIP by EPA, and the federal-only version incorporated pursuant to 40 CFR 52 which represented the earlier state-and-federal version. In accordance with Item 1 of the 2/13/06 Settlement Agreement, the 2D .0521 language was updated to reflect the now federally-approved COMs language under 2D .0521(g) which became effective after the drafting of T05.

11. Boiler MACT Applicability

Section 1 Table of Permitted Sources

Conditions 2.1.T, 2.1.U, 2.1.V, 2.2.E

In accordance with Item 5 of the 2/13/06 Settlement Agreement, the revised Title V permit identifies those sources that are covered by the Boiler MACT (40 CFR 63, Subpart DDDDD) standard, which has a compliance date of September 13, 2007. These sources are permitted as follows:

Subpart DDDDD Source

Source ID No.	Source Description	Control ID No	Control Description
G11037	coal -fired Big Bill utility boiler (364 million Btu per hour maximum heat input rate) equipped with low NOx burners and natural gas igniters to be installed	11-CD-003-01	2-Chamber, 3-Field electrostatic precipitator (51,840 square feet of plate area)
G11038	coal-fired Peter G. utility boiler (364 million Btu per hour maximum heat input rate) equipped with low NOx burners and natural gas igniters	11-CD-004-01	2-Chamber, 3-Field electrostatic precipitator (51,840 square feet of plate area)
G11039	coal-fired Riley Coal utility boiler (399 million Btu per hour maximum heat input rate) equipped with low NOx burners and natural gas igniters	11-CD-005-01	2-Chamber, 3-Field electrostatic precipitator (67,392 square feet of plate area)

G11040	coal / No. 6 fuel oil-fired No. 4 utility boiler (535 million Btu per hour maximum heat input rate) equipped with low NOx burner components and Separated Over fire Air (SOFA) system	11-CD-006-01	2-Chamber, 4-Field electrostatic precipitator (115,000 square feet of plate area)
		11-CD-006-02	urea-based Selective Non-Catalytic Reduction (SNCR) NOx emission reduction system
G11042	woodwaste/ bark/ depoly waste/ fiber-based roll cores/coal-fired Riley bark boiler (380 million Btu per hour maximum heat input rate) with partial flyash reinjection, equipped with a multicyclone and a venturi-type wet scrubber in series	11-CD-016-01	multicyclone (approximately 160 tubes, 9 inches in diameter each)
		11-CD-016-02	venturi-type wet scrubber

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

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

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

The Permittee is required to comply with all applicable provisions, including the notification, testing, reporting, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 2D .1111 "Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR Part 63 Subpart DDDDD, including Subpart A "General Provisions." The Permittee must comply with the requirements in this Subpart no later than September 13, 2007.

12. Power Boiler ESP Inspection and Maintenance

Conditions 2.1.T.1, 2.1.U.2

In accordance with Item 5 of the 2/13/06 Settlement Agreement, the permit retains the existing ESP parameter monitoring for the power boilers and removes the specific inspection and maintenance requirements for these boilers. This change is made for consistency with similar NC sources and reflects the regulatory scheme found in both NSPS and MACT. In NSPS and MACT, where specific control device parameter monitoring is required, the inspection and maintenance requirements are implicit rather than explicitly required. Therefore, pursuant to 15A NCAC 2Q .0508(f) the explicit inspection and maintenance required were removed. Compliance under 15A NCAC 2Q .0508(f) will be determined based on a combination of source testing and control device parameter monitoring. The PM emission tests were re-designated as monitoring requirements rather than testing requirements. Also, similar to the updated compliance provisions of NSPS Subpart Da, 40 CFR § 60.48Da, the ESP parameter monitoring was amended to that reflect additional emission testing is required if the parameters exceed the allowable values. The current testing frequency is expected to be sufficient for compliance monitoring, however the frequency can be increased in the future if needed as a minor permit change. The Permittee is required to establish normal operating parameter values for the ESP within 30 days of permit issuance and submit the values for incorporation into the permit within 60 days. Additionally, the Permittee is required to test the boilers within 180 days of permit issuance. This testing will insure that the normal ESP parameter values are indicative of compliance. Additional testing is required if the normal parameter values are not maintained.

13. NOx Monitoring for the No. 4 Power Boiler

Conditions 2.1.U.2.g, 2.2.B

In accordance with Item 8 of the 2/13/06 Settlement Agreement, the NSPS condition was amended to clarify the mill has previously demonstrated that NO_x emissions from No. 4 Power Boiler are less than 70 percent of the NSPS limit and that the NO_x CEM is not required pursuant to NSPS. As included in the permit and provided pursuant to 40 CFR § 60.45(b)(3), if the Permittee demonstrates during the performance test that emissions of nitrogen oxides are less than 70 percent of the applicable standards in §60.44, a continuous monitoring system for measuring nitrogen oxides emissions is not required. Based on the information provided, the Permittee has demonstrated during the performance test, which was performed during normal operation, that the NO_x emissions are below the 70 percent value. As allowed per 40 CFR 60.45(b)(3) the Permittee has demonstrated that emissions of nitrogen oxides are less than 70 percent of the applicable standards in 40 CFR 60.44, and a continuous monitoring system for measuring nitrogen oxides emissions is not required pursuant to NSPS Subpart D.

However, the Permittee is also required to install and operate a continuous emission monitoring system (CEM) for nitrogen oxides during ozone season pursuant to the requirements of 15A NCAC 2D .1417; Therefore, whenever the Permittee operates the nitrogen oxide CEM system (regardless of the time of year), the Permittee will be required use the CEM data to determine compliance with the NSPS Subpart D nitrogen oxides standard. The NSPS standard is based on a three-hour average. The 15A NCAC 2D .1417 monitoring is performed using a one-hour average. Therefore, to reduce the data reduction burden on the Permittee, and at their request, the Permittee may evaluate the hourly emissions data produced by the nitrogen oxide CEM system for comparison against the NSPS nitrogen oxides. If any hourly value(s) exceeds the limit, the Permittee shall calculate the nitrogen oxide emissions for the relevant time period pursuant to Subpart D. Ultimately, compliance with the NSPS Subpart D nitrogen oxides standard shall be determined based on any three-hour period during which the average emissions (arithmetic average of three contiguous one-hour periods) exceed the standard. If the hourly values are below the NSPS standard, mathematically a three hour average will necessarily be below the standard.

The Permittee indicated during the drafting of the permit that the CEMs will continue to be operated outside of the timeframe required under 15A NCAC 2D .1417. During ozone season, the CEMs are operated under the QA/QC requirements of Part 75 as provided in 15A NCAC 2D .1417. If operated outside of ozone season, the continuous monitoring system is required to be operated in accordance with the applicable performance specifications in 40 CFR 60 Appendix B and quality assurance procedures in Appendix F, unless an alternative monitoring and quality assurance program is approved by the DAQ.

14. Continuous Opacity Monitoring System (COMS) on Wet Stack

Conditions 2.1.V.5, 2.1.V.6

The Riley Bark Boiler operates a wet scrubber for PM control. Historically, and as addressed in the initial Title V permit, the wet scrubber creates periods of uncombined water vapor in the stack resulting in high opacity readings from the COMs. As detailed in the initial permit, and according to 15A NCAC 2D .0521(e) these periods are not considered where the presence of uncombined water is the only reason for failure. These periods occur mostly during the colder parts of the year and are expected to increase based on the upcoming compliance requirements under the Boiler MACT (Subpart DDDDD). The Permittee requested that these periods be addressed by using the scrubber monitoring parameters to demonstrate compliance during these times.

In accordance with Item 2 of the 2/13/06 Settlement Agreement and the 15A NCAC 2D .0612 alternative monitoring procedures request for 15A NCAC 2D .0521 and 2D .0606 the opacity monitoring conditions for the Riley Bark Boiler have been modified to use scrubber parameter monitoring during periods of COMS unreliability due to uncombined moisture in the stack. This approach is similar to wet scrubber-controlled sources for both SIP as well as NSPS-affected sources. The COMs will continue to be operated outside of the periods of uncombined water.

15. MACT I, Subpart S

Condition 2.2.C.1.

Updates were made to the existing 40 CFR 63, Subpart S MACT condition to reflect the incorporation of the Equivalency by Permit (EBP) provisions in Condition 2.2.C.2 (discussed below). The non-EBP HVLC

sources were identified and language outlining the basis for control exception(s) under MACT I, Phase II for the non-EPB HVLC sources was included.

Except as provided under EBP, the Permittee is required to meet the control requirements for the HAP emissions from the HVLC system unless otherwise exempt per 40 CFR 63.443.

Pursuant to 40 CFR 63.443(a)(1)(ii)(C), each knotter and screen system with total emissions of less than 0.3 pounds of total HAP per ton of ODTP are exempt from the HVLC control requirements of Subpart S. Based on the June 2004 exemption analysis, the HVLC sources ES-04-TK-008, G04025, and G04026 are exempt:

Pursuant to 40 CFR 63.443(a)(1)(iv)(B), each decker system that does not use any process water with a total HAP concentration greater than 400 parts per million by weight are exempt from the HVLC control requirements of Subpart S. Based on the June 2004 exemption analysis, the HVLC sources ES-04-PU-009, ES-04-PU-004, ES-04-TK-007, ES-04-PU-015, and ES-04-TK-017 are exempt.

Source ES 04-TK-013 was removed altogether from the list of MACT-affected HVLC sources per the applicant's representation that the pulp washing system does not include pulp storage tanks following the last stage of washing and this tank is not an interstage storage tank within the oxygen delignification system, therefore this tank is not included in the HVLC system.

The condition was amended to specify that the foul condensate steam stripper has a 10 percent downtime allowance under 40 CFR 63, Subpart S. This item was omitted from T05.

The condition was clarified to include that the monitoring parameters for the foul condensate steam stripper are calculated on a 15-day rolling average period for purposes of demonstrating compliance with Subpart S. The 15-day rolling average was approved pursuant to the Mill's April 2001 MACT I, Phase 1 notification of compliance status.

The condition was amended to require the collection of the foul condensates from the Black Liquor Oxidizer gas collection system under condensate collection requirements.

16. MACT II, Subpart MM

Condition 2.2.D

In accordance with Item 3 of the 2/13/06 Settlement Agreement, compliance terms for 40 CFR 63, Subpart MM (MACT II) were added pursuant to the compliance information submitted 11/30/2005 to DAQ regarding compliance status and monitoring parameter ranges for this Subpart. The initial Title V permit included placeholder language for Subpart MM. Specific Condition 2.2.D. was amended to include the specific emissions limits for the affected units as well as the compliance monitoring parameters as determined during the performance testing. The Subpart MM-affected sources were permitted as follows:

40 CFR 63, Subpart MM Affected Sources:

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

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

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

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

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

Emission Limitations [15A NCAC 2D .1111]

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

Table MACT MM-1

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

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

[63.862(a)(1)(ii)(D)]

Monitoring [15A NCAC 2D .1111]

The Permittee is in violation of MACT Subpart MM if the following monitoring exceedances occur [63.864(k)(2)]:

- a. For Nos. 10 and 11 Recovery Furnaces, when opacity is greater than 35 percent for 6 percent or more of the operating time within any quarterly period;
- b. For Nos. 4 and 5 Lime Kilns and Nos. 10 and 11 Smelt Dissolving Tanks, when six or more 3-hour average parameter values within any 6-month reporting period are outside the range of values established during performance testing as indicated in Table MACT MM-2 below:

Table MACT MM-2

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

Recordkeeping [15A NCAC 2D .1111]

The Permittee must develop and implement a written plan as described in 63.6(e)(3) that contains specific procedures to be followed for operating and maintaining the source during periods of startup, shutdown, and malfunction, and a program of corrective action for malfunctioning process and control systems used to comply with Subpart MM. In addition to the information required in 63.6(e), the plan must include the requirements given in 63.866(a)(1) and (2). [63.866(a)] The Permittee must maintain records of any occurrence when corrective action is required and when a violation is noted.[63.866(b)]

In addition to the general records required by 63.10(b)(2), the Permittee must maintain records of the following information [63.864 (c)]:

- a. Records of black liquor solids firing rates in units of ton/d for Nos. 10 and 11 Recovery Furnaces;
- b. Records of CaO production rates in units of ton/d for Nos. 4 and 5 Lime Kilns;
- c. Records of parameter monitoring data required under condition 2.2.D.1.f, including any period when the operating parameter levels were inconsistent with the levels established during the initial performance test or subsequent testing, with a brief explanation of the cause of the deviation, the time the deviation occurred, the time corrective action was initiated and completed, and the corrective action taken;
- d. Records and documentation of supporting calculations for the chemical recovery system emissions limit;
- e. Records of monitoring parameter ranges established under condition 2.2.D.1.g; and
- f. Records of the hours of operation for Nos. 4 and 5 Lime Kilns, Nos. 10 and 11 Recovery Furnaces, and Nos. 10 and 11 Smelt Dissolving Tanks.

Reporting [15A NCAC 2D .1111]

The Permittee must notify the DAQ before any of the following actions are taken [63.867(b)]:

- a. The air pollution control system for any process unit subject to Subpart MM is modified or replaced;
- b. The No. 4 or 5 Lime Kiln, No. 10 or 11 Recovery Furnace, or No. 10 or 11 Smelt Dissolving Tank is shut down for more than 60 consecutive days;
- c. A continuous monitoring parameter or the value or range of values of a continuous monitoring parameter for any process unit subject to Subpart MM is changed; or
- d. The black liquor solids firing rate for No. 10 or No. 11 Recovery Furnace during any 24-hour

averaging period is increased by more than 10 percent above the level measured during the most recent performance test.

If the Permittee (1) modifies the air pollution control device for the No. 4 or 5 Lime Kiln, No. 10 or 11 Recovery Furnace, or No. 10 or 11 Smelt Dissolving Tank or (2) shuts down the No. 4 or 5 Lime Kiln, No. 10 or 11 Recovery Furnace, or No. 10 or 11 Smelt Dissolving Tank for more than 60 consecutive days, or (3) increases the black liquor solids firing rate for the No. 10 or No. 11 Recovery Furnace during any 24-hour averaging period by more than 10 percent above the level measured during the most recent performance test, the Permittee must recalculate the overall PM emissions limit for the Nos. 4 and 5 Lime Kilns, Nos. 10 and 11 Recovery Furnaces, and Nos. 10 and 11 Smelt Dissolving Tanks and resubmit the documentation required in 63.865 to the Director. All modified PM emissions limits are subject to approval by the Director. [63.867(b)]

The Permittee must report quarterly if measured parameters meet any of the conditions specified in condition 2.2.D.1.i. This report must contain the information specified in 40 CFR 63.10(c) as well as the number and duration of occurrences when the source met or exceeded the conditions in condition 2.2.D.1.h, and the number and duration of occurrences when the source met or exceeded the conditions in condition 2.2.D.1.i. All instances of deviations from the requirements of this permit must be clearly identified in the report. Reporting excess emissions below the violation thresholds of conditions 2.2.D.1.h and i does not constitute a violation of the applicable standard. [63.867(c)]

17. North Carolina State Air Toxics

Condition 2.3.A.2

The State-only condition 2.3.A.2 was modified to reflect the “Last MACT” air toxics demonstration requirement pursuant to 15A NCAC 2Q .0705. The final “Last MACT” air toxics demonstration for the Blue Ridge Paper Canton Mill is due April 17, 2007. An initial “Last MACT” application was been submitted by Blue Ridge Paper, but is considered incomplete for processing. The purpose of the application timing is to accurately represent the facility emissions profile once all MACT controls are in place. The Permittee has indicated Blue Ridge expects to update this application prior to the April 17, 2007 EBP. This EBP-MACT II compliance date for MACT Subpart S represents the final non-combustion MACT for the facility and triggers a facility-wide evaluation of NC toxics.

18. North Carolina State Air Toxics

Condition 2.3.A.3 (removed from permit)

The State-only condition regarding on-site generated waste oil sampling was removed per the Blue Ridge Paper letter dated 24 March 2006 and subsequent state air permit 08961R07 which eliminated the condition. Pursuant to DAQ policy, fuel sampling is not required for on-site generated waste oil combustion if less than 500 gallons per year is burned.

19. General Conditions.

Section 3

The General Conditions were updated. The most relevant changes include the March 1 annual compliance certification deadline and the federally-approved 15A NCAC 2D .0535(g) language.

B. Changes Made Pursuant to 40 CFR §63.94 – Equivalency by Permit (EBP) for 40 CFR 63 Subpart S

As discussed above, this permit also incorporates the Equivalency by Permit (EBP) provisions for 40 CFR 63 Subpart S made pursuant to 40 CFR §63.94. On Monday, April 12, 2004, the State of North Carolina was granted “Approval of Section 112(l) Authority for Hazardous Air Pollutants; Equivalency by Permit Provisions; National Emissions Standards for Hazardous Air Pollutants from the Pulp and Paper Industry” for these subparts [FR Vol. 69, No. 70/Monday, April 12, 2004 pages 19106-19110]. On June 17, 2004 the Blue Ridge Paper Canton mill requested the EBP option for the pulp washing systems and O2 delignification systems that are subject to MACT Subpart S and otherwise would be subject to emission control requirements pursuant to that Subpart. The facility requested that it be allowed to control the emissions of methanol and other hazardous air pollutants from the Black Liquor Oxidation Process (BLOX) in lieu of controlling emissions from the pulp washing and O2 delignification systems. In addition, BRP requested, and has been granted under authority of 40 CFR 63.6(i), a one year compliance extension (from April 17, 2006 to April 16, 2007) for meeting the Subpart S requirements for the EBP option.

The North Carolina Division of Air Quality (DAQ) reviewed the information contained in the facility's permit application and determined that it demonstrated that the EBP alternative proposed by BRP will result in hazardous air pollutant emissions reductions in excess of those that would otherwise be obtained by complying with Subpart S.

Table EBP-1 below compares the HAP emissions for the baseline (control of the pulp washing and O2 delignification system emissions) and EBP (control of BLOX emissions) option. Comparing the emissions under the baseline case (compliance with the MACT as written) with the emissions under the EBP (parity) case, the BRP Canton mill will experience a net reduction of 27 tons per year of methanol, and 34 tons per year of total HAPs. This is based on source testing performed by the facility and reviewed by DAQ.

Table EBP-1: Comparison of Air Emissions Reductions for EBP Project vs. MACT I, Phase 2

Compound	MACT I, Phase 2 Emissions Reductions	EBP Project Emissions Reductions	EBP Improvement Over MACT
Methanol	191.5 tons/yr	218.8 tons/yr	27.3 tons/yr
Total HAPs	210.3 tons/yr	244.8 tons/yr	34.5 tons/yr

The regulatory requirements that must be satisfied before a permit can be issued under the EBP option are set forth in 40 CFR 63.94(d). The major requirements are that the (1) pre-draft language must be pre-approved by EPA, (2) the submittal for the request for EBP must contain a side-by-side comparison of the specific Subpart S requirements and the equivalent language for the permit, (3) the alternative requirements are at least as stringent as would otherwise be required if the EBP option was not implemented, and (4) the EPA-approved language must be incorporated into a Title V operating permit under Part 70 procedures.

Based on the review of the submittal, the DAQ believes that BRP has provided sufficient information to demonstrate that the HAP emissions reductions are greater than would have been obtained if the EBP option was not followed, and that the proposed pre-draft permit language and side by side comparison of the specific Subpart S requirements and the equivalent language for the permit (Table EBP-2) meets all of the requirements required by 40 CFR 63.94(d).

The pre-draft language was submitted for EPA approval on November 18, 2004. Based on EPA comment, the language was updated on February 24, 2005 to incorporate continuous parity monitoring. This monitoring is represented in Subsection g. of the pre-draft language. The Permittee is required to both monitor and limit the hardwood pulp production in order to ensure that the emission factors developed during the parity source testing remain valid. The pre-draft Permit terms and conditions were approved by EPA on March 10, 2005 and are incorporated into the current permit as Specific Condition 2.2.C.2.

Table EBP-2:**Direct Comparison of MACT I, Phase 2 Regulatory Requirements and The Regulatory Approach Required for the Blue Ridge Paper Canton Mill MACT I, Phase 2 Equivalency By Permit Project**

MACT I, Phase 2 Requirements	Regulatory Approach Required for EBP Project
<p data-bbox="212 323 363 352">§63.443(a)(1)</p> <p data-bbox="212 354 867 499">The owner or operator of each pulping system using the Kraft process subject to the requirements of this subpart shall control the total HAP emissions from the following equipment systems, as specified in paragraphs (c) and (d) of this section.</p> <ul style="list-style-type: none"> <li data-bbox="261 506 521 535">(i) Each LVHC system <li data-bbox="261 543 854 632">(ii) Each knotter or screen system with total HAP mass emission rates greater than or equal to the rates specified in... <li data-bbox="261 642 618 672">(iii) Each pulp washing system <li data-bbox="261 680 545 709">(iv) Each decker system <li data-bbox="261 718 721 747">(v) Each oxygen delignification system. 	<p data-bbox="889 323 1453 384"><u>Standards for the affected HVLC pulping system processes</u>[40 CFR Part 63.443 and 63.94]</p> <p data-bbox="889 415 1453 1234">a. No later than April 16, 2007, in lieu of controlling the 40 CFR 63, Subpart S-affected HAP emissions from: <u>The Brownstock Washers Areas (G03005 and G03006) Sources:</u> <i>Vacuum Drum Brown Stock Washers (ID No. ES-03-PU-001); Foam Tank No.1 (ID No. ES-03-TK-003); Foam Tank No. 2 (ID No. ES-03-TK-004); Pre-O₂ Washer Feed Tank No. 1 (ID No. ES-03-TK-015); Pre-O₂ Washer Feed Tank No. 2 (ID No. ES-03-TL-016); Pre-O₂ Washer Feed Tank No. 3 (ID No. ES-03-TL-017); and</i> <u>The Oxygen Delignification Systems (G04009 and G04010) Sources:</u> <i>HW O₂ Blow Tank (ID No. ES-04-TK-005); HW Post O₂ Washer (ID No. ES-04-PU-002); and HW Post O₂ Filtrate Chest (ID No. ES-04-TK-008); Pine O₂ Blow Tank (ID No. ES-04-TK-018); and Pine Post O₂ Washer (ID No. ES-04-PU-016);</i> the Permittee shall control HAP emissions from the Black Liquor Oxidation (BLOX) System (G08022) sources as required below.</p> <p data-bbox="889 1266 1425 1327"><i>See Specific Condition 2.2.C.2.a in the pre-draft permit language</i></p>

MACT I, Phase 2 Requirements	Regulatory Approach Required for EBP Project
<p><u>§63.443(d)</u> The control device used to reduce total HAP emissions from each equipment system listed in paragraphs (a) and (b) of this section shall:</p> <ol style="list-style-type: none"> (1) Reduce total HAP emissions by 98 percent or more by weight; or (2) Reduce the total HAP concentration at the outlet of the thermal oxidizer to 20 parts per million or less by volume, corrected to 10 percent oxygen on a dry basis; or (3) Reduce total HAP emissions using a thermal oxidizer designed and operated at a minimum temperature of 871°C (1600°F) and a minimum residence time of 0.75 seconds; or (4) Reduce total HAP emission using a boiler, lime kiln, or recovery furnace by introducing the HAP emission stream with the primary fuel or into the flame zone. 	<p><u>Standards for the BLOX system</u>[40 CFR Part 63.443 and 63.94]</p> <ol style="list-style-type: none"> b. No later than April 16, 2007, the Permittee shall meet the following control requirements for the total HAP emissions from the BLOX System (G08022) sources [40 CFR 63.94, Subpart 63.443]: <ol style="list-style-type: none"> i. Each BLOX system component shall be enclosed and vented into a closed vent system meeting the requirements of 40 CFR 63.450 and controlled per the following requirements: <ol style="list-style-type: none"> A. Reduce total HAP emissions by 98 percent or more by weight; or B. Reduce total HAP emissions using a thermal oxidizer designed and operated at a minimum temperature of 871°C (1600°F) and a minimum residence time of 0.75 seconds. <p><i>See Specific Condition 2.2.C.2.b in the pre-draft permit language</i></p>
<p><u>§63.443(e)</u> Periods of excess emissions reported under §63.455 shall not be a violation of §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:</p> <ol style="list-style-type: none"> (1) One percent for the control devices used to reduce the total HAP emissions from the LVHC system; and (2) Four percent for control devices used to reduce the total HAP emissions from the HVLC system; and (3) Four percent for the control devices used to reduce the total HAP emissions from both the LVHC and HVLC systems. 	<p><u>Standards for the BLOX system</u>[40 CFR Part 63.443 and 63.94]</p> <ol style="list-style-type: none"> c. Periods of excess emissions reported under Sec. 63.455 shall not be a violation of the above requirements provided that the time of excess emissions (excluding periods of startup, shutdown, or malfunction) divided by the total process operating time in a semi-annual reporting period does not exceed the following levels: <ol style="list-style-type: none"> i. Four percent for control devices used to reduce the total HAP emissions from the BLOX system. <p>When excess emissions exceed the level set forth in Section 2.1 C.1.c.i, the facility shall be deemed in non-compliance with 15A NCAC 2D .1111 via 40 CFR 63.94.</p> <p><i>See Specific Condition 2.2.C.2.c in the pre-draft permit language</i></p>
<p><u>§63.450</u> Each enclosure and closed vent system used for capturing and transporting vent streams that contain HAP shall: ...</p>	<p><u>Standards for Enclosures and Closed Vent Systems</u> [40 CFR 63.450, 40 CFR 63.94]</p> <ol style="list-style-type: none"> i. The Black Liquor Oxidation System enclosure and closed vent system shall meet the requirements of 40 CFR 63.450. <p><i>See Specific Condition 2.2.C.2.i in the pre-draft permit language</i></p>

MACT I, Phase 2 Requirements	Regulatory Approach Required for EBP Project
<p><u>§63.453 (a), (b), (n), (o)</u> A CMS shall be operated to measure the temperature in the firebox...</p>	<p><u>Monitoring for BLOX System Control Device</u> [40 CFR 63.453(a),(b),(n),(o), 40 CFR 63.94]</p> <p>h. The Permittee shall install, calibrate, operate, and maintain according to the manufacturer's specifications, a continuous monitoring system (CMS) to measure the temperature in the thermal oxidizer firebox or in the ductwork immediately downstream of the firebox and before any substantial heat exchange occurs. The CMS shall include a continuous recorder. The CMS shall be operated to ensure the following operational parameters are maintained [40 CFR 63, Subpart 63.453 and 40 CFR 63.94]:</p> <p>i. If the Permittee elects to comply with paragraph 2.1 C.1.b.i.A, the minimum operating temperature established during testing conducted per 2.1 C.1.f. shall be recorded and maintained.</p> <p>The permit shall be administratively amended prior to April 16, 2007 to incorporate the operational range(s) of the parameter(s) determined during the initial performance testing.</p> <p>An alternate minimum operating temperature may be established per additional approved testing performed per 2.1 C.1.f. The permit shall be administratively amended to incorporate the operational ranges of the parameters determined during this additional performance testing prior to using the parameters as a measurement of compliance.</p> <p>ii. If the Permittee elects to comply with paragraph 2.1 C.1.b.i.B , then a minimum operating temperature of 871°C (1600°F) shall be recorded and maintained.</p> <p>Operation of the black liquor oxidation system control device (ID. No. CD-BLOXRTO) below established minimum operating temperatures (as set forth in Section 2.1 C.1.g.i or ii, as appropriate), or failure to perform the required monitoring shall be reported as a period of excess emissions.</p> <p><i>See Specific Condition 2.2.C.2.h in the pre-draft permit language</i></p>

MACT I, Phase 2 Requirements	Regulatory Approach Required for EBP Project
<p><u>§63.453(k)</u> Each enclosure and closed vent system used to comply with §63.450 shall: ...</p>	<p><u>Monitoring for Enclosures and Closed Vent Systems</u> [40 CFR 63.453, 40 CFR 63.94]</p> <p>j. The Black Liquor Oxidation System enclosure and closed vent system shall meet the monitoring requirements of 40 CFR 63.453. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 via 40 CFR 63.94 if the monitoring is not performed.</p> <p><i>See Specific Condition 2.2.C.2.j in the pre-draft permit language</i></p>
<p><u>§63.454</u> (a) The owner or operator of each affected source subject to the requirements of this subpart shall comply with the recordkeeping requirements of §63.10 of Subpart A of this part, as shown in table 1 of Subpart S (i.e., §63.10(b) and §63.10(c), and (b) For each applicable enclosure opening, closed-vent system, and closed collection system, the owner or operator shall prepare a site specific inspection plan containing the elements listed in §63.454(b)(1) through (b)(12). (d) The owner or operator shall record the CMS parameters specified in §64.453...</p>	<p><u>Recordkeeping/Reporting</u> [40 CFR 63.454; 63.455, 40 CFR 63.94]</p> <p>k. The results of the CMS monitoring, Enclosure System monitoring, and Closed-Vent System monitoring shall be maintained (in written or electronic format) per the requirements of 40 CFR 63.454 and 63.455.</p> <p>l. 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.</p> <p>m. 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.</p> <p><i>See Specific Condition 2.2.C.2.k-m in the pre-draft permit language</i></p>

MACT I, Phase 2 Requirements	Regulatory Approach Required for EBP Project Reporting [40 CFR 63.454; 63.455, 40 CFR 63.94]
<p><u>§63.455</u> (a) Each owner or operator of a source subject to this subpart shall comply with the reporting requirements of Subpart A of this part as specified in table 1 of Subpart S (i.e., §63.10(d) through §63.10(f), except §63.10(d)(3), §63.10(e)(2)(ii), and §63.10(e)(4)), and (b) Each owner or operator of a Kraft pulping system specified in 63.440(d)(1) shall submit, initially and update every two years thereafter, a non-binding control strategy report containing the information specified in paragraphs (b)(1) through (b)(3) of this section.</p>	<p>o. The Permittee shall submit a summary report of excess emissions postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified. When no exceedances of an operating parameter have occurred, such information shall be included in the report. p. The Permittee shall comply with the reporting requirements of 40 CFR 63, Subpart A as specified in Table 1 of 40 CFR 63.440. q. As required in 63.455(b), the Permittee shall submit, with the initial notification report and update every two years thereafter, a non-binding control strategy report containing, at a minimum, the information specified in 63.455(b)(1)-(3) in addition to the information required in 63.9(b)(2) of 40 CFR 63 Subpart A.</p> <p><i>See Specific Condition 2.2.C.2.o-q in the pre-draft permit language</i></p>

1 Equivalency by Permit (EBP) for MACT I, Phase 2

Condition 2.2.C.2

In accordance with Item 4 of the 2/13/06 Settlement Agreement, the EPA-approved pre-draft equivalency by permit language for MACT I, Phase 2 compliance was incorporated into the permit. The pre-draft permit terms and conditions are incorporated into the current permit as Specific Condition 2.2.C.2. as detailed above.

C. Changes Made Pursuant to State Permitting Actions

During the appeal process, changes were made to the existing state air permit for the facility as detailed below. These changes were incorporated into the Title V permit as provided in the attached permit reviews and as summarized below.

1. Additional Source Per State Permitting Actions

Section 1 Table of Permitted Sources, Condition 2.1.M.1.

Per application 4400159.05B, state air permit 08961R06 was issued on November 14, 2005, which authorized the construction and operation of the Black Liquor Oxidation System controls (CD-BLOXRTO and CD-RTOSCR) that would ultimately be required under EBP. A complete regulatory analysis is provided in the permit review for this application.

In summary, the initial EBP application the facility proposed controlling the BLOX System using a regenerative thermal oxidizer (RTO) followed by a caustic scrubber. The RTO acts to control the MACT-affected HAP emissions. The caustic scrubber acts to control the sulfur dioxide and sulfuric acid emissions that result from the combustion of the TRS-containing BLOX gases in the RTO. Absent EBP, in order to construct these control devices, the facility was required to obtain a construction permit pursuant to the 15A NCAC 2Q .0300 rules.

Regulatory Analysis

Based on the BLOX TRS emissions data provided in the application, the addition of the RTO will result in potential emissions of SO₂ (and sulfuric acid) in excess of the PSD major modification threshold of 40 and 7 tpy, respectively. The combustion of TRS gases in the RTO will result in SO₂, and to a lesser extent sulfuric acid, emissions. In order to keep the emissions from the BLOX/RTO below the PSD thresholds, the modification includes a scrubber on the RTO. Based on the vendor performance guarantee, the potential after-control SO₂ emissions will be 22 tpy. Future performance testing once the unit is operational will validate the scrubber parameters established per the permit requirements summarized below.

The following outlines the Title V permit conditions as regulatory requirements for the BLOX System:

Black liquor oxidation system (228,000 pounds per hour black liquor solids feed rate, ID No. G08022) equipped with three cyclones, one on each oxidizer tank (60 inches in diameter, ID No CD-BLOXcyclone) followed by a natural gas-fired regenerative thermal oxidizer (ID No. CD-BLOXRTO) and a caustic scrubber (ID No. CD-RTOSCR)

Only two of the three oxidizers are required to operate if one of the recovery furnaces is down.

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

In order to avoid applicability of 15A NCAC 2D .0530 (g) for major sources and major modifications, the BLOX System (**G0822**) shall discharge into the atmosphere:

- (1) less than 40 tons per consecutive twelve month period of sulfur dioxide; and
- (2) less than 7 tons per consecutive twelve month period of sulfuric acid.

To ensure that emissions are less than the above-specified limits, the Black Liquor Oxidation System thermal oxidizer (ID No. CD-BLOXRTO) is permitted to burn only BLOX gases and natural gas as an auxiliary fuel.

As discussed above, the potential emissions due to the RTO are above the PSD thresholds. The PSD avoidance condition is required to insure the project does not trigger PSD review. No additional sulfur-containing fuels are allowed in the RTO.

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

If emissions testing is required, the testing shall be performed in accordance with DAQ-approved protocol. Testing of the RTO and scrubber system is required as part of the EBP application.

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

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

The Permittee shall establish a "normal range" for flow meter and pH readings in the first 30 days following the commencement of operation of the scrubber and submit the proposed ranges to the DAQ for incorporation into this permit within 60 days of establishing these values.

The scrubber parameter monitoring will insure the proper operation of the scrubber. The parameter values will be validated during future performance tests. As detailed below, when the scrubber is not operating or is operating outside of the appropriate ranges, calculation against the PSD avoidance limit(s) shall be made as if the source was uncontrolled.

The Permittee shall calculate the sulfur dioxide emissions from the BLOX System (**G0822**) on a monthly basis to ensure compliance with the limits given above. The RTO scrubber is required to be operated only

as necessary to achieve compliance with the limitations above. Sulfur dioxide emissions shall be determined by the following:

- (1) When the RTO Scrubber is operating within the monitoring parameter values established above, the sulfur dioxide emissions shall be calculated by multiplying the total amount of operating time by the maximum controlled emission factor of 5 pounds per hour;
- (2) When the RTO Scrubber is not in operation or is not operating within the monitoring parameter values established above, the sulfur dioxide emissions shall be calculated by multiplying the total amount of operating time by the maximum uncontrolled emission factor of 50 pounds per hour; and
- (3) When the thermal oxidizer (ID No. CD-BLOXRTO) is not in operation, operation of the RTO scrubber is not required and the sulfur dioxide emissions are zero.

Based on the emissions evaluation for the source, the monitoring of SO₂ should act to protect both the SO₂ and sulfuric acid avoidance limits. The combustion of TRS gases predominately form SO₂ rather than sulfuric acid on the magnitude of approximately 89-90% conversion to SO₂. When the RTO is not in operation, no SO₂ or sulfuric acid is generated from the BLOX system. The uncontrolled SO₂ emissions rate of 50 pounds per hour was provided by the facility as a maximum value at maximum production based on TRS testing performed in January 2004. The controlled value of 5 pounds per hour is based on vendor guarantee based on the sulfur loading and will be validated by future testing as discussed above. The condition uses operating time and the maximum hourly emissions factors as a conservative approach to monitoring against the avoidance limits as a means to simplify the monitoring and recordkeeping requirements in the permit. A second approach would be to allow for the same calculus based on a Black Liquor Solids process rate. The conservative approach, which over-estimate the emissions when the BLOX system is not operating at maximum capacity, was used for simplicity and at the request of the facility.

Calculations and the total amount of sulfur dioxide emissions from the BLOX System (**G0822**) shall be recorded monthly in a logbook (written or electronic format), maintained on-site and made available to officials of the Division of Air Quality, upon request. The Permittee must keep each entry in the log and all required records on file for a minimum of five years.

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

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

- (1) The monthly sulfur dioxide emissions shall be totaled for the previous seventeen months. The emissions shall be calculated for each of the twelve month periods over the previous seventeen months.

In summary, the construction timeline for the BLOX controls necessitated the issuance of the state construction permit for the devices prior to the issuance of the EBP permit. In order to construct the devices, the PSD avoidance described above condition was required. This avoidance condition is incorporated into the Title V permit per this application. The issuance of the prior state permit does not presume final approval or incorporation of the EBP application. The construction of the BLOX controls was undertaken at the Permittee's own risk. The Permittee may be denied the finalization of the draft EBP language in the permit under Part 70 without regard to the Permittee's financial investment or alteration or expansion of the facility.

2. Additional Source Per State Permitting Actions

Section 1 Table of Permitted Sources, Condition 2.1.EE.

Per application 4400159.06B, state air permit 08961R07 was issued on April 13, 2006 which added an emergency generator (16-CU-001) to state permit 08961R07. A complete regulatory analysis is provided in the permit review for this application.

Regulatory Analysis

In summary, the application requested the addition of an 1850 horsepower, 1250 kilowatt diesel-fired emergency generator (ID No. 16-CU-001). The permitted equipment is subject to the following regulations.

a. 15A NCAC 2D .0516: “Sulfur Dioxide Emissions from Combustion Sources”

By definition, sulfur dioxide emissions are limited to 2.3 pounds SO₂ per million Btu heat input. Estimated SO₂ emissions are obtained from the application. These estimates are based on DAQ-approved spreadsheets for diesel-fired emergency generators, and were originally derived from EPA Publication AP-42. Estimated SO₂ emissions are:

$$(7.5 \text{ lb/hr}) \times (1 \text{ hr}/12.222)^1 \text{ MBtu} = 0.61 \text{ lb/MBtu.}$$

$$^1\text{Calculated as } (87.3 \text{ gal/hr}) \times (140,000 \text{ Btu/gal}) = 12.222 \text{ MBtu/hr.}$$

Compliance with 2D .0516 is expected based on the combustion of diesel fuel in this source. No monitoring, recordkeeping, or reporting is required for compliance with this regulation for this source.

b. 15A NCAC 2D .0521: “Control of Visible Emissions”

The permitted emergency generator is limited to 20 percent visible opacity emissions.

The emergency generator is expected to be operated with five to ten percent visible emissions. This is based on past experience with this type of equipment as well as good engineering judgment. Compliance with 2D .0521 is expected based on the combustion of diesel fuel in this source. No monitoring, recordkeeping, or reporting is required for compliance with this regulation for this source.

c. 15A NCAC 2D .1111: “Maximum Achievable Control Technology” (MACT) – 40 CFR 63 Subpart ZZZZ

The proposed emergency generator is subject to Subpart ZZZZ, the “RICE” MACT. The only requirement to comply with this regulation is a notification requirement. A stipulation was included in the permit to this effect.

VII. 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.

VIII. Facility Emissions Review

There is no change in emissions for this application. No new equipment is added per this application.

The following table represents the latest year’s emission inventory from the facility:

Pollutant(s)	20045Actual Emissions (tpy)
CO	2,942.5
NO _x	3,837.3
PM ₁₀	679.3
SO ₂	9,014.4
VOC	1,524.8

X. Public Notice/EPA and Affected State(s) Review

Pursuant to 15A NCAC 2Q .0521, a notice of the DRAFT Title V 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 and EPA. Pursuant to 15A NCAC 2Q .0522, a copy of each permit application, each proposed permit and each final permit shall be provided to EPA. Also pursuant to 2Q .0522, a notice of the DRAFT Title V Permit shall be provided to each affected State at or before the time notice provided to the public under 2Q .0521 above.

XI. Conclusions, Comments, and Recommendations

A professional engineer's seal was not required for this application.

A consistency determination was not required for this application.

ARO recommends issuance of the permit and was presented with a DRAFT permit prior to notice and issuance.

RCO concurs with ARO's recommendation for issuance.