

**NORTH CAROLINA DIVISION OF
AIR QUALITY**

Initial TV Air Permit Review

Permit Issue Date:

Region: Washington Regional Office
County: Craven
NC Facility ID: 2500104
Inspector's Name: Bernie Pittman
Date of Last Inspection: 09/30/2003
Compliance Code: C/In Compliance With
 Procedural Reqr

Facility Data			Permit Applicability (this application only)
Applicant (Facility's Name): Weyerhaeuser Company - Vanceboro Facility Address: Weyerhaeuser Company - Vanceboro 1785 Weyerhaeuser Road Vanceboro, NC 28586 SIC: 2611 / Pulp Mills NAICS: 32211 / Pulp 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: Initial TV
Contact Data			Application Data
Facility Contact	Authorized Contact	Technical Contact	Application Number: 250104A5.A Date Received: 08/08/1996 Application Type: Modification Application Schedule: Title V - Initial Existing Permit Data Existing Permit Number: 02590/R29 Existing Permit Issue Date: 04/25/2003 Existing Permit Expiration Date: 03/31/2008
David Gardner Environmental Manager P O Box 1391 New Bern NC, 28560	Robert Green (252) 793-8111 1785 Weyerhaeuser Road Vanceboro NC, 28586	Brad Chesson Environmental Engineer P O Box 1391 New Bern NC, 28560	
Review Engineer: Jay Evans Review Engineer's Signature: _____ Date: _____		Comments / Recommendations: Issue 02590T30 Permit Issue Date: Permit Expiration Date:	

I. Introduction

The U.S. Environmental Protection Agency (EPA) has given final approval to North Carolina's Title V operating permits program effective on October 1, 2001. This EPA approval triggered the requirements for Title V facilities to submit permit applications to the Division of Air Quality. Title V facilities are required to obtain an operating permit which addresses all applicable regulations under the State Implementation Plan, Federal Implementation Plan, and other provisions of the Clean Air Act (CAA). The Title V Operating Permit will define all of the facility's obligations under the CAA.

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

II. Background Information

The DRAFT Title V operating permit replaces an existing Air Quality Construction and Operation Permit No. 02590R29 which was issued on April 25, 2003 and is currently scheduled to expire on March 31, 2008.

Pursuant to 15A NCAC 2Q .0506, Weyerhaeuser Company submitted its initial Title V application for the Vanceboro Plant to the Division of Air Quality on February 26, 1996. The application was considered complete for processing on April 24, 1996. **The draft permit was noticed to the public pursuant to 15A NCAC 2Q .0521 on XX, XX, 2003.** Based on all of the submitted information in the Title V application, a DRAFT permit was completed. The DRAFT permit is required to go to public notice pursuant to 15A NCAC 2Q .0521. The Weyerhaeuser Company – Vanceboro/New Bern facility is subject to the Title V program due to emissions exceeding the major source thresholds as summarized below:

- particulate matter - 1153 tons/year
- sulfur dioxide - 6082 tons/year
- volatile organic compounds - 1013 tons/year
- nitrogen oxides - 1574 tons/year
- carbon monoxide - 985 tons/year.

In addition, total potential emissions of hazardous air pollutants, notably methanol (2553 tons/year), hydrogen chloride (115 tons/year), and formaldehyde (108 tons/year), exceed 25 tons per year

III. Facility Description

The Weyerhaeuser New Bern Mill is a bleached kraft pulp facility. The facility, which is located adjacent to the Neuse River, currently operates as a single-line mill. Wood is delivered to the mill as both logs and chips. The pulp is initially processed through a single continuous digester prior to the washing/screening stages. Pulp from the washing and screening process goes to the oxygen delignification process where oxygen is used to help brighten the pulp. Bleaching is accomplished by a multi-stage process. The pulp is subsequently dried and finished for shipment in roll form. Weak black liquor produced in the digestion process is collected from the brownstock washers and concentrated prior to firing into the recovery boiler. Steam is provided by; a power boiler that fires No. 6 fuel oil and a second power boiler that fires fuel oil and gasifier gas and burns NCGs. A lime kiln is used to convert lime mud to lime as well as to destroy LVHC NCGs collected from the digester and evaporator areas.

IV. Statement of Compliance

The DAQ has reviewed the compliance status of this facility. During the last inspection performed in September 2003, the facility appeared to be operating in compliance with all permit conditions. The applicant has certified compliance with all applicable requirements. The facility is subject to two NESHAP requirements: Subpart S (National Emission Standards for Hazardous Air Pollutants from the Pulp and Paper) and Subpart MM (National Emission Standards for Hazardous Air Pollutants for Chemical Recovery Combustion Sources at Kraft, Soda, Sulfite, and Stand-Alone Semichemical Pulp Mills). The applicant is not fully in compliance with either requirement but has indicated that the units will meet the requirements by the specified compliance dates. The applicant has also certified that the facility will be in compliance with any applicable requirements taking effect during the term of the permit and will meet such requirements on a timely basis.

V. Summary of Emission Sources and Control Devices

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

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
Power Area			
ES 150-001	No. 1 Power Boiler - No. 4/No. 6 Fuel Oil-Fired (579 million Btu/hour nominal maximum heat input)	NA	NA

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
ES 160-000	Package Boiler - No. 2/No. 4/No. 6 Fuel Oil-Fired (180 million Btu/hour nominal maximum heat input)	NA	NA
ES 161-001 NSPS Subpart Db	No. 2 Power Boiler - No. 4 and No. 6 Fuel Oil/Black Liquor Gasifier gases/LVHC gases/HVLC gases/SOGs-Fired (287 million Btu/hour nominal maximum heat input)	CD 161-018 CD 161-024	Caustic scrubber (600 gallons per minute nominal liquid injection rate) Chevron-type mist eliminator
ES 160-TMP NSPS Subpart Dc	Temporary Boiler - No. 2 Fuel Oil-Fired (greater than 30 million Btu/hour and less than 100 million Btu hour nominal maximum heat input)	NA	NA
ES 155-999*	Power Area Fugitive Sources*	NA	NA
Foul Condensate Handling System			
ES 161-078 NSPS Subpart BB MACT Subpart S	Steam Stripper	ES 161-001	No. 2 Power Boiler via LVHC NCG Collection System
ES 401-007 MACT Subpart S	Stripper Feed Tank No. 1		
ES 401-013 MACT Subpart S	Stripper Feed Tank No. 2		
ES 161-484 MACT Subpart S	LVHC Foul Gas Collection System Cooler		
ES 402-722 MACT Subpart S	Digester HVLC Cooler		
Waste Water Treatment			
ES-185-000*	Wastewater Treatment System*	NA	NA
ES 185-125	River Oxygen Diesel Motor No. 1	NA	NA
ES 185-127	River Oxygen Diesel Motor No. 2	NA	NA
Wood Yard			
ES-350-035*	Log Sawing*	NA	NA
ES 354-044*	Log Debarking*	NA	NA
ES 356-999*	Pine Wood Chip Piles*	NA	NA
Turpentine Recovery			
ES 401-704 MACT Subpart S	Turpentine Decanter	ES 161-001 or	No. 2 Power Boiler via LVHC NCG Collection System or
ES 401-709 MACT Subpart S	Underflow Decanter	ES 455-061	Lime Kiln via LVHC NCG Collection System
ES 402-211 NSPS Subpart BB MACT Subpart S	Primary Vapor STM Vessel		
ES 402-220 NSPS Subpart BB MACT Subpart S	Secondary Condenser		
ES 401-071-02 MACT Subpart S	Turpentine Storage Tank		
ES 401-076*	Turpentine Sump*	NA	NA

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
Digester Area			
ES 402-119 NSPS Subpart BB MACT Subpart S	Chip Bin (HVLC source)	ES 161-001	No. 2 Power Boiler via HVLC/LVHC NCG Collection System
ES 402-141 NSPS Subpart BB MACT Subpart S	Continuous Digester (LVHC source)		
ES 402-179 NSPS Subpart BB MACT Subpart S	Blow Tank (HVLC source)		
ES-402-190 NSPS Subpart BB MACT Subpart S	Filtrate Wash Liquor Tank	ES 161-001	No. 2 Power Boiler via HVLC NCG Collection System
ES-402-150 NSPS Subpart BB MACT Subpart S	Primary Flash Tank		
ES-402-151 NSPS Subpart BB MACT Subpart S	Secondary Flash Tank		
Washing and Screening			
ES-420-004 ES-420-134 MACT Subpart S	Knotter/Rejects Vibrating Screens	NA	HVLC - MACT Required by April 17, 2006
ES-420-006 NSPS Subpart BB MACT Subpart S	Filtrate Storage Tank No. 1	ES 161-001	No. 2 Power Boiler via HVLC NCG Collection System
ES-420-008 NSPS Subpart BB MACT Subpart S	Filtrate Storage Tank No. 2		
ES 420-025 MACT Subpart S	Foam Tank		
ES-420-010 MACT Subpart S	Brownstock Washer System	NA	HVLC - MACT Required by April 17, 2006
ES-420-044 MACT Subpart S	Brown Stock Decker		
ES-420-123 MACT Subpart S	Primary Rejects Tank (190)		
ES-420-140 MACT Subpart S	Secondary Rejects Tank (192)		
ES-420-332 MACT Subpart S	Brown Decker Filtrate Tank (189)		
ES 420-029*	Washed Stock Chest* (9)	NA	NA
ES-420-325*	Brown Stock Washed HD Chest* (3)	NA	NA
Oxygen Delignification Area			
ES-420-052*	200 Ton Brownstock HD Chest* (38)	NA	NA
ES-420-056 MACT Subpart S	Screened Stock Chest	NA	HVLC - MACT Required by April 17, 2006
ES-420-229 MACT Subpart S	Oxygen Blow Tank		

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
ES 420-235 MACT Subpart S	No. 1 Press Washer		
ES 420-259 MACT Subpart S	No. 1 Press Washer Level Tank		
ES 420-261 MACT Subpart S	No. 1 Press Washer Filtrate Tank (12)		
ES 420-274 MACT Subpart S	Oxygen Interstage Pulp Tank		
ES 420-280 MACT Subpart S	No. 2 Press Washer	NA	HVLC - MACT Required by April 17, 2006
ES 420-302 MACT Subpart S	No. 2 Press Washer Level Tank		
ES 420-306 MACT Subpart S	No. 2 Press Washer Filtrate Tank		
ES 420-202	Oxidation Tank	CD 420-207	Dual Chevron-type Mist Eliminators
Bleach Plant Area			
ES 425-005*	Acid Sewer Vent Tower* (46)	CD 425-101	Bleach Plant Fluidized Bed Wet Scrubber (600 gallons per minute nominal white liquor recirculation rate)
ES 425-008 MACT Subpart S	No. 1 Stage Tower		
ES 425-013 MACT Subpart S	No. 1 Stage ClO ₂ Seal Box		
ES 425-011 MACT Subpart S	No. 1 Bleach Hood and Washer		
ES 425-047 MACT Subpart S	No. 4 Stage Tower	CD 425-101	Bleach Plant Fluidized Bed Wet Scrubber (600 gallons per minute nominal white liquor recirculation rate)
ES 425-054 MACT Subpart S	No. 4 Stage ClO ₂ Seal Box		
ES 425-052 MACT Subpart S	No. 4 Bleach Washer		
ES 425-076 MACT Subpart S	No. 6 Bleach/Peroxide Tower		
ES 425-083 MACT Subpart S	No. 6 Bleach/Peroxide Seal Box		
ES 425-081 MACT Subpart S	No. 6 Bleach/Peroxide Washer		
ES 425-020	No. 2 Stage Tower	NA	NA
ES 425-026	No. 2 Stage Extraction Seal Box		
ES 425-134	First Caustic Bleach Washer		
ES 425-032	No. 3 Bleach Tower		
ES 425-036	No. 3 Bleach Washer		
ES 425-038	No. 3 Bleach Washer Seal Tank		
ES 425-060	Second Caustic Tower		
ES 425-067	Second Caustic Seal Box		
ES 425-137	Second Caustic Bleach Washer		
ES 425-090	No. 1 Bleached Stock HD Chest		
ES 425-093	No. 2 Bleached Stock HD Chest		
ES 425-117, 118	Nos. 1 and 2 Bleached Deckers		
ES 425-714	No. 3 Bleached Decker		
Bleached Chemical Preparation Area			
ES 430-047	East Chlorine Dioxide Storage Tank (22,000 gallons)	CD 430-531	Packed Tower Type Wet Scrubber (100 gallon per

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
ES 430-542*	Chlorine Dioxide Generator System*		minute nominal chilled water injection rate)
ES 430-543	West Chloride Dioxide Storage Tank (21,100 gallons)		
Evaporator Area			
ES 440-001*	No. 1 Weak Black Liquor Storage Tank*	NA	NA
ES 440-004*	No. 2 Weak Black Liquor Storage Tank*	NA	NA
ES 440-008 NSPS Subpart BB MACT Subpart S	Evaporator/Concentrator Hotwell System	ES 161-001 or ES 455-061	No. 2 Power Boiler via LVHC NCG Collection System or Lime Kiln via LVHC NCG Collection System
ES 440-713 NSPS Subpart BB MACT Subpart S	No. 1 Pre-Evaporator	ES 161-001 or	No. 2 Power Boiler via LVHC NCG Collection System or Lime Kiln via LVHC NCG Collection System
ES 440-719 NSPS Subpart BB MACT Subpart S	No. 2 Pre-Evaporator	ES 455-061	
ES 440-720 NSPS Subpart BB MACT Subpart S	No. 3 Pre-Evaporator		
ES 440-016 NSPS Subpart BB MACT Subpart S	1A Effect Evaporator	ES 161-001 or	No. 2 Power Boiler via LVHC NCG Collection System or Lime Kiln via LVHC NCG Collection System
ES 440-015 NSPS Subpart BB MACT Subpart S	1B Effect Evaporator	ES 455-061	
ES 440-014 NSPS Subpart BB MACT Subpart S	Second Effect Evaporator		
ES 440-013 NSPS Subpart BB MACT Subpart S	Third Effect Evaporator		
ES 440-012 NSPS Subpart BB MACT Subpart S	Fourth Effect Evaporator		
ES 440-011 NSPS Subpart BB MACT Subpart S	Fifth Effect Evaporator		
ES 440-009 NSPS Subpart BB MACT Subpart S	Sixth Effect Evaporator		
ES 440-400 NSPS Subpart BB MACT Subpart S	C-1 Black Liquor Concentrator		
ES 440-401 NSPS Subpart BB MACT Subpart S	C-2 Black Liquor Concentrator		
ES 440-781*	69% Black Liquor Storage Tank (127)*	NA	NA
ES 440-027*	50% Black Liquor Storage Tank*	NA	NA

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
Chemical Recovery			
ES 445-001 MACT Subpart MM	Recovery Boiler - Black Liquor Solids/No. 4 and No. 6 Fuel Oil-Fired (920 million Btu/hour nominal maximum firing rate)	CD 445-073	Wet Bottom two chamber electrostatic precipitator - 172,800 square feet of collection plate area
ES 445-116 MACT Subpart MM	North Smelt Dissolving Tank	CD 445-203	Wire Mesh Mist Eliminator No. 1 – 10 inches thick
ES 445-122 MACT Subpart MM	South Smelt Dissolving Tank	CD 445-204	Wire Mesh Mist Eliminator No. 2– 10 inches thick
ES 446-011 NSPS Subpart Dc	Black Liquor Gasifier Air Pre-Heater – No. 2 Fuel Oil-fired (15 million Btu per hour nominal maximum heat input rate)	NA	NA
ES 446-014	Black Liquor Gasifier	NA	NA
ES 445-101*	Saltcake Mix Tank*	NA	NA
Causticizing Area			
ES 455-061 NSPS Subpart BB MACT Subpart S and Subpart MM	Lime Kiln – Residual Fuel Oil/LVHC gases-Fired (118 million Btu per hour nominal maximum heat input rate)	CD 455-433	Single-chamber, three-field, high-voltage, negative-corona electrostatic precipitator (30,222 square feet of collection plate area)
ES 455-036*	Mud Washer/Weak Wash Tank*	NA	NA
ES 455-058*	Lime Mud Filter Vacuum Pump*	NA	NA
ES 455-050 ES 455-053	Lime Conveyor Transfer Points (Hot Lime Pan Conveyor)	CD 455-751-00	Bagfilter (1,885 square feet of filter area) in series with a simple cyclone (39.6 inches in diameter)
ES 455-073-08 ES 455-072-00	Hot Lime Pan Conveyor Hot Lime Crusher	CD 455-754-00	
ES 455-074-08	Hot Lime Bucket Elevator		
ES 455-075-02	Hot Lime Bin		
ES 455-749-02	Fresh Lime Bin		
ES 455-079*	Lime Mud Filter*	NA	
ES 455-406	Lime Slaker	CD 455-408	Spray chamber wet scrubber (75 gallons per minute nominal injection rate)
ES 455-999*	Bucket Conveyor Fugitive Sources*	NA	NA
Pulp Machine Area			
ES 730-205	No. 1 & 2 Rewinder and Cutter Pulp Trim Handling System	CD 730-067	Simple cyclone (112 inches in diameter)
ES 465-001* ES 465-019* ES 465-056*	Pulp Dryer Operation*	NA	NA
High Bulk Additive (HBA) Plant			
ES 755-106	Flash Dryer, Drying Stage	CD 755-106	Simple cyclone (142 inches in diameter)
ES 755-100	HBA Primary Burner		
ES 755-101	HBA Secondary Burner		
ES 755-508	HBA Tertiary Burner		

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
ES 755-509	Flash Dryer, Cooling Stage	CD 755-515 CD 755-517	Simple cyclone [East] (51 inches in diameter) and Simple cyclone [West] (51 inches in diameter)
ES 755-150 ES 755-550	East & West Balers	CD 755-157 CD 755-163	Fabric filter (424 square feet of filter area) in series with a simple cyclone (36 inches in diameter)

* These emission sources have no applicable requirements under the North Carolina SIP, but their emissions are greater than the thresholds under 15A NCAC 2Q .0503(8); these sources are permitted pursuant to 15A NCAC 2Q .0508(z).

VI. Emission Source-by-Source Evaluation

A. No. 1 Power Boiler (ID No. ES-150-001) – No. 4/No. 6 fuel oil-fired (579 mmBtu per hour nominal maximum heat input)

1. Regulatory Analysis

The following provides a summary of limits and/or standards for the emission source(s) described above. A review of the information in the application was performed to ensure the appropriate limits and associated calculations used to show compliance were correct.

Regulated Pollutant	Limits/Standards	Applicable Regulations
Particulate Matter	0.195 pounds per million Btu heat input	15A NCAC 2D .0503(c)
Sulfur Dioxide	2.3 pounds per million Btu heat input.	15A NCAC 2D .0516
Nitrogen Oxides	0.8 pounds per million Btu heat input while firing oil.	15A NCAC 2D .0519
Visible Emissions	40 percent opacity	15A NCAC 2D .0521
Particulate Matter (TSP)	Less than 98 tons per consecutive twelve month period	15A NCAC 2Q .0317 (15A NCAC 2D .0530 Avoidance)
Particulate Matter (PM10)	Less than 82 tons per consecutive twelve month period.	15A NCAC 2Q .0317 (15A NCAC 2D .0530 Avoidance)
Sulfur Dioxide	Less than 1,440 tons per consecutive twelve month period.	15A NCAC 2Q .0317 (15A NCAC 2D .0530 Avoidance)
Nitrogen Oxides	Less than 240 tons per consecutive twelve month period.	15A NCAC 2Q .0317 (15A NCAC 2D .0530 Avoidance)
TSP, PM10, SO ₂ , NO _x	The Permittee shall not burn more than 208,000 barrels (8,736,000 gallons) of No.4/No.6 fuel oil blend in the No. 1 Power Boiler.	15A NCAC 2Q .0317 (15A NCAC 2D .0530 Avoidance)
Nitrogen Oxides	Ozone season emissions allocations. See Section VII. C	15A NCAC 2D .1417

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

- i. Emissions of particulate matter from the combustion of fuel oil that are discharged from this source into the atmosphere shall not exceed 0.195 pounds per million Btu heat input.

Testing

- ii. If emissions testing is required, the testing shall be performed in accordance General Condition JJ utilizing EPA Methods 1 through 5 or other test methods per a DAQ-approved test protocol. If the results of this test are above the limit given in Section VI A. 1. a. i. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0503.

Monitoring

- iii. Under the provisions of NCGS 143-215.108, the Permittee shall demonstrate compliance with the emission limit(s) above by testing the No 1 Power Boiler (**ID No(s). ES-150-001**) for particulate matter in accordance with a testing protocol approved by the DAQ. Details of the emissions testing and reporting requirements can be found in Section 3 – General Condition JJ. Testing shall be completed and the results submitted by **December 31, 2004 [one year from issuance]** unless an alternate date is approved by the DAQ. The testing shall be performed annually thereafter. If the results of the testing demonstrate results at less than 80 percent of the limit above, the testing frequency may be reduced to once per five years. If the results of this or any test is above the limit given in Section VI A. 1. a. i.. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0503.

Recordkeeping/Reporting [15A NCAC 2D .0508]

- iv. No Recordkeeping/reporting is required from the firing of No. 4 or No. 6 fuel oil in this source for this regulation.

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

- i. Emissions of sulfur dioxide from this source shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard.

Monitoring/Recordkeeping

- ii. The maximum sulfur content of any No. 4 or 6 fuel oil received and burned in the boiler shall not exceed 2.1 percent by weight (as SO₂).
- iii. To assure compliance, the Permittee shall monitor the sulfur and heat content of the fuel oil by using fuel oil supplier certification per month. The results of the fuel oil supplier certifications shall be recorded in a logbook (written or electronic format) on a quarterly basis and include the following information:
 - (a) the name of the fuel oil supplier;
 - (b) the maximum sulfur content of the fuel oil received during the quarter;
 - (c) the method used to determine the maximum sulfur content of the fuel oil; and
 - (d) a certified statement signed by the responsible official that the records of fuel oil supplier certification submitted represent all of the fuel oil fired during the period.

Reporting

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

c. 15A NCAC 2D .0519: CONTROL OF NITROGEN DIOXIDE AND NITROGEN OXIDES EMISSIONS

- i. Emissions of nitrogen oxides shall not exceed 0.8 pounds per million Btu of heat input from any oil or gas-fired boiler with a capacity of 250 million Btu per hour or more.

Monitoring/Recordkeeping/Reporting

- ii. No monitoring/recordkeeping/reporting is required from the firing of No. 4 or No. 6 fuel oil in this source for this regulation.

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

- i. Visible emissions from the boiler (**ID No. ES-150-001**) shall not be more than 40 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 40 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 90 percent opacity.

Monitoring

- ii. To assure compliance, once a day the Permittee shall observe the emission points of this source for any visible emissions above normal. The daily observation must be made for each day of the calendar year period to ensure compliance with this requirement. The Permittee shall be allowed three (3) days of absent observations per semi-annual period. If the emission source(s) is not operating, a record of this fact along with the corresponding date and time shall substitute for the daily observation. The Permittee shall establish a normal for the source in the first 30 days following the effective date of the permit. If visible emissions from this source are observed to be above normal, the Permittee shall either:
 - (a) 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
 - (b) demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 2D .0501(c)(8) is below the limit given in Section VI A. 1. d. i. above.
 If the above-normal emissions are not corrected per (a) above or if the demonstration in (b) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0521.

Recordkeeping

- iii. 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:
 - (a) the date and time of each recorded action;
 - (b) the results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
 - (c) the results of any corrective actions performed.

Reporting

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

e. 115A NCAC 2Q. 0317: AVOIDANCE CONDITIONS for 15A NCAC 2D. 0530: PREVENTION OF SIGNIFICANT DETERIORATION

- i. In order to avoid applicability of 15A NCAC 2D .0530 (g) for major sources and major modifications, the boiler (**ID Nos. ES-150-001**) shall discharge into the atmosphere less than the following per consecutive twelve month period:

Pollutant	Emission Limit
Particulate Matter (TSP)	98 tons per consecutive twelve month period.
Particulate Matter (PM10)	82 tons per consecutive twelve month period.
Sulfur Dioxide	1,440 tons per consecutive twelve month period.
Nitrogen Oxides	240 tons per consecutive twelve month period.

Monitoring/ Recordkeeping

- ii. To ensure that emissions are less than the above-specified limits, the Permittee shall not burn more than 208,000 barrels of equivalent No. 4/No. 6 fuel oil blend in the No. 1 Power Boiler (**ID No. ES 150-001**) per consecutive twelve (12) month period.
- iii. To ensure compliance, the Permittee shall maintain records as follows
 - (a) the Permittee shall record and maintain records of the amounts (in barrels) of equivalent No. 4/No. 6 fuel oil blend burned in the No. 1 Power Boiler (**ID No. ES 150-001**) during each month and; The record of the amounts of fuel (in barrels) burned during each month shall be made available to an authorized representative of DAQ upon request.

Reporting

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

June, and October 30 for the calendar year for the preceding three-month period between July and September.. The report shall contain the following:

- (a) the monthly quantities of equivalent No. 4/No. 6 fuel oil blend burned in the No. 1 Power Boiler (**ID No. ES 150-001**) for the previous 14 months. The total quantities burned must be calculated for each of the 12-month periods over the previous 14 months; and
- (b) All instances of deviations from the requirements of this permit must be clearly identified.

B. Package Boiler (ID No. ES-160-000) – No. 2/No. 4/No. 6 fuel oil-fired (180 mmBtu per hour nominal maximum heat input), Uncontrolled

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

Regulated Pollutant	Limits/Standards	Applicable Regulations
Particulate Matter	0.195 pounds per million Btu heat input	15A NCAC 2D .0503(c)
Sulfur Dioxide	2.3 pounds per million Btu heat input.	15A NCAC 2D .0516
Visible Emissions	40 percent opacity	15A NCAC 2D .0521

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

- i. Emissions of particulate matter from the combustion of fuel oil that are discharged from this source into the atmosphere shall not exceed 0.159 pounds per million Btu heat input.

Monitoring/Recordkeeping/Reporting

- ii. No monitoring/recordkeeping/reporting is required from the firing of No. 2, No. 4, or No. 6 fuel oil in this source for this regulation.

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

- i. Emissions of sulfur dioxide from this source shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard.

Monitoring/Recordkeeping

- ii. The maximum sulfur content of any No 2, No. 4, or 6 fuel oil received and burned in the boiler shall not exceed 2.1 percent by weight (as SO₂).
- iii. To assure compliance, the Permittee shall monitor the sulfur and heat content of the No. 4 and No. 6 fuel oil by using fuel oil supplier certification per month. The results of the fuel oil supplier certifications shall be recorded in a logbook (written or electronic format) on a quarterly basis and include the following information:
 - (a) the name of the fuel oil supplier;
 - (b) the maximum sulfur content of the fuel oil received during the quarter;
 - (c) the method used to determine the maximum sulfur content of the fuel oil; and
 - (d) a certified statement signed by the responsible official that the records of fuel oil supplier certification submitted represent all of the fuel oil fired during the period.

Reporting

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

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

- i. Visible emissions from the boiler (ID No. ES-160-000) 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.

Monitoring

- ii. To assure compliance, once a day the Permittee shall observe the emission points of this source for any visible emissions above normal. The daily observation must be made for each day of the calendar year period to ensure compliance with this requirement. The Permittee shall be allowed three (3) days of absent observations per semi-annual period. If the emission source(s) is not operating, a record of this fact along with the corresponding date and time shall substitute for the daily observation. The Permittee shall establish a normal for the source in the first 30 days following the effective date of the permit. If visible emissions from this source are observed to be above normal, the Permittee shall either:
 - (a) 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
 - (b) demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 2D .0501(c)(8) is below the limit given in Section VI B. 1. c. i. above.
 If the above-normal emissions are not corrected per (a) above or if the demonstration in (b) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0521.
- iii. No Monitoring is required from the sole firing of No. 2 fuel oil in this source for this regulation.

Recordkeeping

- iv. 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:
 - (a) the date and time of each recorded action;
 - (b) the results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
 - (c) the results of any corrective actions performed.

Reporting

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

C. No. 2 Power Boiler (ID No. ES-161-001) – No. 4/No. 6 fuel oil/Black Liquor Gasifier (ID No. ES-446-014) gases/LVHC gases/HVLC gases/SOGs-fired (287 million Btu/hour nominal maximum heat input), Controlled by a Caustic Scrubber (ID No. CD-161-018) and a Chevron-type Mist Eliminator (ID No. CD-161-024)

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

Regulated Pollutant	Limits/Standards	Applicable Regulations
Nitrogen Oxides	0.8 pounds per million Btu heat input while firing oil.	15A NCAC 2D .0519
Particulate Matter	0.10 pounds per million Btu heat input	15A NCAC 2D .0524 (40 CFR Part 60 Subpart Db)
Sulfur Dioxide	0.8 pounds per million Btu heat input and 90 percent minimum sulfur dioxide removal efficiency	15A NCAC 2D .0524 (40 CFR Part 60 Subpart Db)
Nitrogen Oxides	$E_n = (0.1H_{go} + 0.3H_{ro} + 0.3H_g) / (H_{go} + H_{ro} + H_g)$ Where: E_n = nitrogen oxide emission limit (lb/million Btu) H_{go} = heat input from the combustion of distillate oil (million Btu) H_{ro} = heat input from the combustion of residual oil (million Btu)	15A NCAC 2D .0524 (40 CFR 60, Subpart Db)

Regulated Pollutant	Limits/Standards	Applicable Regulations
	H _g = heat input from the combustion of byproduct gas (million Btu)	See Section VIII. SOC requirements
Visible Emissions	20 percent opacity	15A NCAC 2D .0524 (40 CFR 60, Subpart Db)
Nitrogen Oxides	Ozone season emissions allocations. See Section VII. C	15A NCAC 2D .1417

a. 15A NCAC 2D .0519: CONTROL OF NITROGEN DIOXIDE AND NITROGEN OXIDES EMISSIONS

- i. Emissions of nitrogen oxides shall not exceed 0.8 pounds per million Btu of heat input from any oil or gas-fired boiler with a capacity of 250 million Btu per hour or more.

Monitoring/Recordkeeping/Reporting

- ii. No monitoring/recordkeeping/reporting is required from the firing of No. 4 or No. 6 fuel oil in this source for this regulation.

b. 15A NCAC 2D .0524: NSPS 40 CFR 60 SUBPART Db

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

Emission Limitations

- ii. **Particulate matter** - Particulate emissions from these boilers shall not exceed 0.10 pounds per million Btu heat input. [40 CFR Part 60, Subpart 60.44b]
- iii. **Sulfur dioxide** – Sulfur dioxide emissions from these boilers shall not exceed 0.8 pounds per million Btu heat input and the potential SO₂ emissions shall be reduced by minimum of 90 percent by the scrubber. [40 CFR Part 60, Subpart 60.44b]
- iv. **Nitrogen oxides** -
- (a) Nitrogen oxide emissions when solely firing distillate oil shall not exceed 0.10 pounds per million Btu heat input. [40 CFR Part 60, Subpart 60.44b]
- (b) Nitrogen oxide emissions when solely firing residual oil shall not exceed 0.30 pounds per million Btu heat input. [40 CFR Part 60, Subpart 60.44b]
- (c) Nitrogen oxide emissions from the **simultaneous combustion of a mixture of distillate fuel oil, residual fuel oil, and/or byproduct gas** shall not be in excess of the rate calculated by the following formula [40 CFR Part 60, Subpart 60.44b]:

$$E_n = (0.1H_{go} + 0.3H_{ro} + 0.3H_{pg}) / (H_{go} + H_{ro} + H_{pg})$$

Where: E_n = nitrogen oxide emission limit (lb/million Btu)

H_{go} = heat input from the combustion of distillate oil (million Btu)

H_{ro} = heat input from the combustion of residual oil (million Btu)

H_{pg} = heat input from the combustion of byproduct gas (million Btu)

- (d) Compliance with the nitrogen oxide emission limits are determined on a 30-day rolling average basis [40 CFR Part 60, Subpart 60.44b(i)].
- (e) Per Section VIII, the No. 2 Power Boiler is operating under a SOC for the combustion of SOGs.
- v. **Opacity** - Each boiler shall not cause to be discharged into the atmosphere any gases that exhibit greater than 20 percent opacity (six-minute average), except for one six-minute period per hour of not more than 27 percent opacity.

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

- vi. 40 CFR § 60.47b(a) - The Permittee shall calibrate, maintain, and operate a continuous monitoring system for measuring sulfur dioxide concentrations and either oxygen or carbon dioxide concentrations at the inlet and outlet of the scrubber.
- vii. 40 CFR § 60.47b(c) – sulfur dioxide minimum emission data requirements
- viii. 40 CFR § 60.47b(d) – measurement of sulfur dioxide 1-hour averages
- ix. 40 CFR § 60.47b(e) – installation, evaluation, and operation of continuous monitoring systems
- x. 40 CFR § 60.48b(a) - The Permittee shall calibrate, maintain, and operate a continuous monitoring system for measuring the opacity of emissions discharged to the atmosphere and record the output of the system. Due to the presence of uncombined water vapor, the opacity shall be monitored using the following surrogate parameters:
 - (a) stack gas temperature after the scrubber (degrees F); and
 - (b) flowrate of recirculating scrubber reagent (gallons per minute).
 The stack gas temperature shall be maintained below 150 degrees F (3 hour average). The recirculating scrubber reagent flowrate shall be maintained above 400 gpm (3 hour average). If the Permittee fails to maintain the parameters as specified above, the Permittee shall be deemed in noncompliance with 2D .0524.
- xi. 40 CFR § 60.48b(b) - The Permittee shall calibrate, maintain, and operate a continuous monitoring system for measuring nitrogen oxide emissions discharged to the atmosphere and record the output of the system.
- xii. 40 CFR § 60.48b(c) - operation of nitrogen oxide continuous monitoring systems and data recording.
- xiii. 40 CFR § 60.48b(d) - measurement of nitrogen oxide 1-hour averages.
- xiv. 40 CFR § 60.48b(e) - installation, evaluation, and operation of continuous monitoring systems.
- xv. 40 CFR § 60.48b(f) - continuous monitoring systems breakdowns, repairs, calibration checks and zero and span adjustments.
The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524 if the emissions are not monitored as described above.

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

- xvi. 40 CFR § 60.49b(d) - recordkeeping of the amounts of each fuel fired each day.
- xvii. 40 CFR § 60.49b(e) - quarterly recordkeeping of the nitrogen content of the residual oil.
- xviii. 40 CFR § 60.49b(f) - recordkeeping of the opacity
- xix. 40 CFR § 60.49b(g) and (i) - daily recordkeeping and quarterly reporting of the nitrogen oxide emission rates and supporting data.
- xx. 40 CFR § 60.49b(h) - reporting of excess emissions.
- xxi. 40 CFR § 60.49b(j), (k), and (m) - daily recordkeeping and quarterly reporting of the sulfur dioxide emission rates and supporting data.
- xxii. 40 CFR § 60.49b(o) – records retention.
- xxiii. The Permittee shall submit a summary report of the monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.
The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524 if these records are not maintained as described above.

D. Temporary Boiler (ID No. ES-160-TMP) – No. 2 fuel oil-fired (greater than 30 mmBtu per hour and less than 100 mmBtu per hour heat input), Uncontrolled

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

Regulated Pollutant	Limits/Standards	Applicable Regulations
Particulate Matter	To be determined by the specific heat input rating added to the total facility 2D .0503-subject heat input in million Btu per hour and the equation: $E = 1.090(Q)^{-.2594}$	15A NCAC 2D .0503(c)

Regulated Pollutant	Limits/Standards	Applicable Regulations
	Where E = allowable emission rate in pounds per million Btu Q = Facility total 2D .0503-subject maximum heat input in million Btu per hour	
Sulfur Dioxide	0.5 percent sulfur content fuel	15A NCAC 2D .0524 NSPS (40 CFR 60, Subpart Dc)
Visible Emissions	20 percent opacity	15A NCAC 2D .0524 NSPS (40 CFR 60, Subpart Dc)
Sulfur Dioxide	Less than 40 tons per consecutive twelve month period.	15A NCAC 2Q .0317 (15A NCAC 2D .0530 Avoidance)

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

- i. Emissions of particulate matter from the combustion of fuel oil that are discharged from this source into the atmosphere shall not exceed the allowable limit pursuant to 15A NCAC 2D .0503. The actual emission limit shall be determined by the specific heat input rating added to the total facility 2D .0503-subject heat input in million Btu per hour and the equation:

$$E = 1.090(Q)^{-.2594}$$

Where E = allowable emission rate in pounds per million Btu

Q = Facility total 2D .0503-subject maximum heat input in million Btu per hour

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

- ii. No monitoring/recordkeeping/reporting is required for particulate emissions from the firing of No. 2 fuel oil in this source for this regulation.

b. 15A NCAC 2D .0524: NSPS 40 CFR PART 60 SUBPART Dc

- i. 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."

Emission Limitations

- ii. The maximum sulfur content of any fuel oil received and burned in the boiler shall not exceed 0.5 percent by weight.
- iii. 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 when firing fuel oil.

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

- iv. Sulfur dioxide emissions shall be monitored as follows:

- (a) Distillate Oil - Fuel supplier certification shall be used to demonstrate compliance as described under 40 CFR § 60.46c(e).

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524 if sulfur dioxide emissions are not monitored as described above.

Recordkeeping

- v. In addition to any other recordkeeping required by 40 CFR § 60.48c or recordkeeping requirements of the EPA, the Permittee shall record and maintain records of the amounts of each fuel fired during each month. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524 if these records are not maintained.

Reporting

- vi. In addition to any other reporting required by 40 CFR § 60.48c or notification requirements to the EPA, the Permittee is required to **NOTIFY** the DAQ in **writing** of the following:

- (a) a summary report , acceptable to the Regional Air Quality Supervisor, of the sulfur content of the distillate or residual fuel oil fired, by 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 as follows:

- (1) Distillate Oil - Fuel supplier certification shall include the following information:

- (A) the name of the oil supplier;
- (B) a statement from the oil supplier that the oil complies with the specification under the definition of distillate oil in 40 CFR § 60.41c; and
- (C) a certified statement signed by the owner or operator of an affected facility that the records of fuel supplier certification submitted represents all of the fuel fired during the semi annual period.

**c. 115A NCAC 2Q. 0317: AVOIDANCE CONDITIONS for
15A NCAC 2D. 0530: PREVENTION OF SIGNIFICANT DETERIORATION**

- i. In order to avoid applicability of 15A NCAC 2D .0530 (g) for major sources and major modifications, the temporary boiler (**ID Nos. ES-160-TMP**) shall discharge into the atmosphere less 40 tons of sulfur dioxide per consecutive twelve month period:

Monitoring/ Recordkeeping

- ii. To ensure that emissions are less than the above-specified limits, the Permittee shall not burn more than **1,125,000** gallons of No. 2 fuel oil in the boiler (**ID Nos. ES-160-TMP**) per consecutive twelve (12) month period.). The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530 if the amount of fuel burned exceeds this limit.
- iii. To ensure compliance, the Permittee shall maintain records as follows
 - (a) the Permittee shall record and maintain records of the amounts (in gallons) of No. 2 fuel oil burned in the boiler (**ID Nos. ES-160-TMP**) during each month and;
The record of the amounts of fuel (in gallons) burned during each month shall be made available to an authorized representative of DAQ upon request.

Reporting

- iv. The Permittee shall submit a summary report, acceptable to the Regional Air Quality Supervisor, of monitoring and recordkeeping activities within 30 days after each calendar year quarter, due and postmarked on or before January 30 of each calendar year for the preceding three-month period between October and December, April 30 of each calendar year for the preceding three-month period between January and March, July 30 of each calendar year for the preceding three-month period between April and June, and October 30 for the calendar year for the preceding three-month period between July and September.. The report shall contain the following:
 - (a) the monthly quantities of fuel oil burned in the boiler (**ID Nos. ES 160-TMP**) for the previous 14 months. The total quantities burned must be calculated for each of the 12-month periods over the previous 14 months; and
 - (b) All instances of deviations from the requirements of this permit must be clearly identified.

E. Foul Condensate Handling System consisting of:

**Foul Condensate Steam Stripper (ID No. ES-161-078) generating stripper off gases (SOGs);
Stripper Feed Tanks No 1. and No 2. (ID Nos. ES-401-007 and 401-013);
LVHC Foul Gas Collection System Cooler (ID No. ES-161-484); and
HVLC Foul Gas Collection System Cooler (ID No. ES-402-722);
Controlled by the No. 2 Power Boiler (ID No. ES-161-001):**

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

Regulated Pollutant	Limits/Standards	Applicable Regulations
Total Reduced Sulfur (TRS)	<u>Affect Source:</u> ID No. ES-161-078 5 ppm by volume on a dry basis, corrected to 10 percent oxygen	15A NCAC 2D .0524 (40 CFR Part 60 Subpart BB)
HAP Emissions	See Section VII. A	15A NCAC 2D .1111 (40 CFR Part 63 Subpart S)

a. 15A NCAC 2D .0524: NSPS 40 CFR 60 SUBPART BB

- i. For the emission source (ID No ES-161-078), the Permittee shall comply with all applicable provisions, including the notification, testing, reporting, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 2D .0524 "New Source Performance Standards (NSPS) as promulgated in 40 CFR Part 60 Subpart BB, including Subpart A "General Provisions."

Emissions Limitations

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

Monitoring

- iii. The Permittee shall follow the closed vent inspection procedures per Specific Condition VII A to insure that the stripper (ID No. ES-161-078) emissions are routed to the No. 2 Power Boiler (ID No. ES-161-001) as specified above.

Reporting/ Recordkeeping

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

F. River Oxygen Diesel Motors (ID Nos. ES-185-125 and 185-127), Uncontrolled

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

Regulated Pollutant	Limits/Standards	Applicable Regulations
Visible Emissions	20 percent opacity	15A NCAC 2D .0521
Nitrogen Oxides	Less than 40 tons per consecutive twelve month period total for both motors.	15A NCAC 2Q .0317 (15A NCAC 2D .0530 Avoidance)

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

- i. Visible emissions from the River Oxygen Motors (ID No. ES-185-125 and 185-127) 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.

Monitoring

- ii. To assure compliance, once a month the Permittee shall observe the emission points of this source for any visible emissions above normal. If the emission source(s) are not operating, a record of this fact along with the corresponding date and time shall substitute for the monthly observation. The Permittee shall establish Anormal@for the source in the first 30 days following the effective date of the permit. If visible emissions from this source are observed to be above normal, the Permittee shall either:
 - (a) 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
 - (b) demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 2D .0501(c)(8) is below the limit given in Section VI F. 1. a. i. above.If the above-normal emissions are not corrected per (a) above or if the demonstration in (b) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0521.

Recordkeeping

- iii. 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:
 - (a) the date and time of each recorded action;
 - (b) the results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
 - (c) 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)]

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

b. 115A NCAC 2Q. 0317: AVOIDANCE CONDITIONS for 15A NCAC 2D. 0530: PREVENTION OF SIGNIFICANT DETERIORATION

- i. In order to avoid applicability of 15A NCAC 2D .0530 (g) for major sources and major modifications, the river oxygen motors (**ID Nos. ES-185-125 and 185-127**) combined, shall discharge into the atmosphere less 40 tons of nitrogen dioxide per consecutive twelve month period:

Monitoring/ Recordkeeping

- ii. To ensure that emissions are less than the above-specified limits, the Permittee shall not burn more than 170,000 gallons of diesel fuel in the motors (**ID Nos. ES-185-125 and 185-127**) combined, per consecutive twelve (12) month period.). The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530 if the amount of fuel burned exceeds this limit.
- iii. To ensure compliance, the Permittee shall maintain records as follows
 - (a) the Permittee shall record and maintain records of the amounts (in gallons) of diesel fuel oil burned in the motors (**ID Nos. ES-185-125 and 185-127**) during each month and; The record of the amounts of fuel (in gallons) burned during each month shall be made available to an authorized representative of DAQ upon request. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530 if the amounts of fuel burned during each month are not recorded.

Reporting

- iv. The Permittee shall submit a summary report, acceptable to the Regional Air Quality Supervisor, of monitoring and recordkeeping activities within 30 days after each calendar year quarter, due and postmarked on or before January 30 of each calendar year for the preceding three-month period between October and December, April 30 of each calendar year for the preceding three-month period between January and March, July 30 of each calendar year for the preceding three-month period between April and June, and October 30 for the calendar year for the preceding three-month period between July and September.. The report shall contain the following:
 - (a) the monthly quantities of diesel fuel oil burned in the motors (**ID Nos. ES 187-124 and 187-127**) for the previous 14 months. The total quantities burned must be calculated for each of the 12-month periods over the previous 14 months; and
 - (b) All instances of deviations from the requirements of this permit must be clearly identified.

G. Turpentine Recovery System components - the Primary Vapor STM Vessel (ID No. ES-402-211) and Secondary Condenser (ID No. ES-402-220); controlled by the LVHC NCG Collection System routed to either the No. 2 Power Boiler (ID No. ES-161-001) or the Lime Kiln: (ID No. ES-455-061):

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

Regulated Pollutant	Limits/Standards	Applicable Regulations
Total Reduced Sulfur (TRS)	5 ppm by volume on a dry basis, corrected to 10 percent oxygen	15A NCAC 2D .0524 (40 CFR Part 60 Subpart BB)
HAP Emissions	See Section VII. A	15A NCAC 2D .1111 (40 CFR Part 63 Subpart S)

a. 15A NCAC 2D .0524: NSPS 40 CFR 60 SUBPART BB

- i. The Permittee shall comply with all applicable provisions, including the notification, testing, reporting,

recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 2D .0524 "New Source Performance Standards (NSPS) as promulgated in 40 CFR Part 60 Subpart BB, including Subpart A "General Provisions."

Emissions Limitations

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

Monitoring

- iii. The Permittee shall follow the closed vent inspection procedures per Specific Condition VII. A to insure that the emissions are routed to either the Lime Kiln (ID No. ES455-061) or No. 2 Power Boiler (ID No. ES-161-001) as specified above. The Permittee shall be deemed in noncompliance with 2D .0524 if these procedures are not followed or if the records are not maintained.

Reporting/ Recordkeeping

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

H. The Digester System consisting of:

**Chip Bin (ID No. ES 402-119),
 Continuous Digester¹ (ID No. ES 402-141),
 Blow Tank (ID No. ES 402-179),
 Primary Flash Tank (ID No. ES 402-150),
 Secondary Flash Tank (ID No. ES 402-151), and
 Filtrate Wash Liquor Tank (ID No. ES 402-190), and;
 The Filtrate Storage Tanks No. 1² and No 2² (ID Nos. ES 420-006² and 420-008²);
 Controlled by the HVLC¹ NCG Collection System routed to the No. 2 Power Boiler (ID No. ES-161-001):**

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

Regulated Pollutant	Limits/Standards	Applicable Regulations
Total Reduced Sulfur (TRS)	5 ppm by volume on a dry basis, corrected to 10 percent oxygen	15A NCAC 2D .0524 (40 CFR Part 60 Subpart BB)
HAP Emissions	See Section VII. A	15A NCAC 2D .1111 (40 CFR Part 63 Subpart S)

1 Per 40 CFR 63.441 the Continuous Digester is defined as part of the LVHC system.

2 These sources are part of the Washing and Screening Area but are included with the Digester System grouping due to shared NSPS control requirements.

a. 15A NCAC 2D .0524: NSPS 40 CFR 60 SUBPART BB

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

Emissions Limitations

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

Monitoring

- iii. The Permittee shall follow the closed vent inspection procedures per Specific Condition VII. A to insure that the emissions are routed to the No. 2 Power Boiler (ID No. ES-161-001) as specified above. The Permittee shall be deemed in noncompliance with 2D .0524 if these procedures are not followed or if the records are not maintained

Reporting/ Recordkeeping

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

I. The Evaporator Area consisting of:

- No. 1 Pre-Evaporator (ID No. ES 440-713),**
- No. 2 Pre-Evaporator (ID No. ES 440-719),**
- No. 3 Pre-Evaporator (ID No. ES 440-720),**
- 1A Effect Evaporator (ID No. ES 440-016),**
- 1B Effect Evaporator (ID No. ES 440-015),**
- Second Effect Evaporator (ID No. ES 440-014),**
- Third Effect Evaporator (ID No. ES 440-013),**
- Fourth Effect Evaporator (ID No. ES 440-012),**
- Fifth Effect Evaporator (ID No. ES 440-011),**
- Sixth Effect Evaporator (ID No. ES 440-009),**
- C-1 Black Liquor Concentrator (ID No. ES 440-400),**
- C-2 Black Liquor Concentrator (ID No. ES 440-401), and**
- Evaporator/Concentrator Hotwell System (ID No ES 440-008);**

Controlled by the LVHC NCG Collection System routed to the No. 2 Power Boiler (ID No. ES-161-001) or the Lime Kiln: (ID No. ES-455-061):

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

Regulated Pollutant	Limits/Standards	Applicable Regulations
Total Reduced Sulfur (TRS)	<u>Affected Sources:</u> ID Nos. ES-440-400, 440-401, and 440-008 5 ppm by volume on a dry basis, corrected to 10 percent oxygen	15A NCAC 2D .0524 (40 CFR Part 60 Subpart BB)
Total Reduced Sulfur (TRS)	5 ppm by volume on a dry basis, corrected to 10 percent oxygen	15A NCAC 2D .0528
HAP Emissions	See Section VII. A	15A NCAC 2D .1111 (40 CFR Part 63 Subpart S)

a. 15A NCAC 2D .0524: NSPS 40 CFR 60 SUBPART BB

- i. For the emission sources, (**ID Nos. ES-440-400, 440-401, and 440-008**), the Permittee shall comply with all applicable provisions, including the notification, testing, reporting, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 2D .0524 "New Source Performance Standards (NSPS) as promulgated in 40 CFR Part 60 Subpart BB, including Subpart A

"General Provisions."

Emissions Limitations

- ii. For the emission sources, (ID Nos. ES-440-400, 440-401, and 440-008), no owner or operator shall cause to be discharged into the atmosphere any gases which contain TRS in excess of 5 ppm by volume on a dry basis, corrected to 10 percent oxygen, unless the following conditions are met [40 CFR Part 60, Subpart 60.283(a)(1)]:
 - (a) The gases are combusted in a lime kiln subject to the provisions of 60.283(a)(5); or
 - (b) The gases are combusted with other waste gases in an incinerator or other device, and are subjected to a minimum temperature of 650 °C (1200 °F) for at least 0.5 second

Monitoring

- iii. The Permittee shall follow the closed vent inspection procedures per Specific Condition VII. A to insure that the emissions are routed to either the Lime Kiln (ID No. ES455-061) or No. 2 Power Boiler (ID No. ES-161-001) as specified above. The Permittee shall be deemed in noncompliance with 2D .0524 if these procedures are not followed or if the records are not maintained

Reporting/ Recordkeeping

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

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

- i. Except for the sources specified per Specific Condition VI. I. 1. a. above, the emissions of total reduced sulfur shall not exceed five parts per million corrected to 10 percent oxygen from any Evaporator Area multiple-effect evaporator system.

Monitoring/Recordkeeping

- ii. Except for the sources specified per Specific Condition VI. I. 1. b. i. above, the Evaporator Area emission sources, shall comply with the limitation above by ensuring the following:
 - (a) The gases are combusted in the lime kiln (ID No. ES-455-061); or
 - (b) The gases are combusted in the No. 2 Power Boiler and are subjected to a minimum temperature of 650 °C (1200 °F) for at least 0.5 second.
- iii. The Permittee shall follow the closed vent inspection procedures per Specific Condition VII. A to insure that the emissions are routed to either the Lime Kiln (ID No. ES455-061) or No. 2 Power Boiler (ID No. ES-161-001) as specified above. The Permittee shall be deemed in noncompliance with 2D .0528 if these procedures are not followed or if the records are not maintained

Reporting

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

J. Recovery Boiler (ID No. ES-445-001) – Black Liquor Solids/No. 4/No. 6 fuel oil-fired (920 mmBtu per hour nominal maximum heat input), Controlled by the Wet Bottom ESP (ID No. CD-455-073)

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

Regulated Pollutant	Limits/Standards	Applicable Regulations
Particulate Matter	3.0 pounds per equivalent tons of air dried pulp	15A NCAC 2D .0508
Visible Emissions	Visible emissions shall not be more than 35 percent opacity when averaged over a six-minute period except that six-minute periods	15A NCAC 2D .0508

Regulated Pollutant	Limits/Standards	Applicable Regulations
	averaging not more than 89 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period.	
Sulfur Dioxide	2.3 pounds per million Btu heat input.	15A NCAC 2D .0516
Total Reduced Sulfur (TRS)	5 ppm by volume on a dry basis, corrected to 8 percent oxygen	15A NCAC 2D .0528
HAP Emissions	See Section VII. B	15A NCAC 2D .1111 (40 CFR Part 63 Subpart MM)

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

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

Testing

- ii. If emissions testing is required, the testing shall be performed in accordance General Condition JJ utilizing EPA Methods 1 through 5 or other test methods per a DAQ-approved test protocol. If the results of this test are above the limit given in Section VI J. 1. a. i. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0508.
- iii. Under the provisions of NCGS 143-215.108, the Permittee shall demonstrate compliance with the emission limit(s) above by testing the Recovery Power Boiler (**ID No(s). ES-445-001**) for particulate matter in accordance with a testing protocol approved by the DAQ. Details of the emissions testing and reporting requirements can be found in Section 3 - General Condition JJ. Testing shall be completed once per calendar year and the results submitted to the DAQ. If the results of the testing demonstrate results at less than 80 percent of the limit above, the testing frequency may be reduced to every two years. If the results of this or any test is above the limit given in Section VI. J. 1. a. i. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0508.

Monitoring

- iv. Particulate matter emissions from the Recovery Boiler shall be controlled by the Wet Bottom Electrostatic Precipitator (ID No. CD-445-073). To ensure that optimum control efficiency is maintained, the Permittee shall monitor the following parameters daily for values outside the normal operating range in each field or section:
 - (a) primary voltage,
 - (b) secondary voltage,
 - (c) primary current,
 - (d) secondary current, and
 - (e) spark rate.

The Permittee shall be allowed three (3) days of absent observations per semi-annual period. If the emission source(s) is not operating, a record of this fact along with the corresponding date and time shall substitute for the daily observation. The Permittee shall establish “normal” for these parameters in the first 30 days following the effective date of the permit.
- v. To assure compliance with the opacity limitation, once a day the Permittee shall observe the emission points of this source for any visible emissions above normal. The daily observation must be made for each day of the calendar year period to ensure compliance with this requirement. The Permittee shall be allowed three (3) days of absent observations per semi-annual period. If the emission source(s) is not operating, a record of this fact along with the corresponding date and time shall substitute for the daily observation. The

Permittee shall establish a normal level for the source in the first 30 days following the effective date of the permit. If visible emissions from this source are observed to be above normal, the Permittee shall either:

- (a) 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
- (b) demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 2D .0501(c)(8) is below the limit given in Section VI. J. 1. a. i. above.

If the above-normal emissions are not corrected per (a) above or if the demonstration in (b) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0508.

Recordkeeping

- vi. The results of the visible emissions 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:
 - (a) the date and time of each recorded action;
 - (b) the results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
 - (c) the results of any corrective actions performed.
- vii. The results of the electrostatic precipitator monitoring shall be maintained in a logbook (written or electronic form) on site and made available to an authorized representative upon request. The logbook shall record the following:
 - (a) the date and time of actions recorded,
 - (b) the normal range of values for each parameter, and
 - (c) the values of each parameter.

Reporting

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

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

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

Monitoring/Recordkeeping

- ii. The maximum sulfur content of any No. 4 or 6 fuel oil received and burned in the boiler shall not exceed 2.1 percent by weight (as SO₂). The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516 if the sulfur content of the fuel oil exceeds this limit.
- iii. To assure compliance, the Permittee shall monitor the sulfur and heat content of the fuel oil by using fuel oil supplier certification per month. The results of the fuel oil supplier certifications shall be recorded in a logbook (written or electronic format) on a quarterly basis and include the following information:
 - (a) the name of the fuel oil supplier;
 - (b) the maximum sulfur content of the fuel oil received during the quarter;
 - (c) the method used to determine the maximum sulfur content of the fuel oil; and
 - (d) a certified statement signed by the responsible official that the records of fuel oil supplier certification submitted represent all of the fuel oil fired during the period.

Reporting

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

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

- i. The emissions of total reduced sulfur shall not exceed five parts per million corrected to 8 percent oxygen from any new design recovery furnace. [15A NCAC 2D .0528]

Monitoring/Recordkeeping

- ii. To ensure compliance, the Permittee shall calibrate, maintain, and operate a continuous monitoring system meeting the requirements of 40 CFR 60 Appendix A and F for determining the total reduced sulfur (as hydrogen sulfide, dry basis, corrected to 8 percent oxygen) emissions discharged to the atmosphere and record the output of the system. The monitoring system downtime shall not exceed 5 percent. If any 12-hour block average exceeds the limit above or the records are not maintained, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0528, except that two percent of all 12-hour total reduced sulfur averages per quarter year in excess of the limitation given above, in the absence of start-ups, shutdowns, and malfunctions, shall not be considered in violation.

Reporting

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

K. North Smelt Dissolving Tank (ID No. ES-445-116), Controlled by the Wire Mesh Mist Eliminator (ID No. CD-445-203) and South Smelt Dissolving Tank (ID No. ES-445-122), Controlled by the Wire Mesh Mist Eliminator (ID No. CD-445-204)

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

Regulated Pollutant	Limits/Standards	Applicable Regulations
Particulate Matter	0.6 pounds per equivalent tons of air dried pulp	15A NCAC 2D .0508
Visible Emissions	40 percent opacity	15A NCAC 2D .0521
Total Reduced Sulfur (TRS)	0.032 pounds per ton of black liquor solids (BLS).	15A NCAC 2D .0528
HAP Emissions	See Section VII. B	15A NCAC 2D .1111 (40 CFR Part 63 Subpart MM)

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

- i. Emissions from the production of pulp and paper that are discharged from these sources into the atmosphere shall not exceed 0.6 pounds of particulate matter per equivalent tons of air dried pulp.

Monitoring/Recordkeeping

- ii. Particulate matter emissions from the Dissolving Tanks (ID Nos. ES 445-116 and 446-122) shall be controlled by the mist eliminators (ID Nos. CD-445-203 and 445-204). To ensure compliance and the effective operation of the mist eliminators, the Permittee shall monitor and record, once per day, field pressure gauge readings of mist eliminators shower water pressure and weak wash shower pressure. The Permittee shall be allowed three (3) days of absent observations per semi-annual period. If the emission source(s) is not operating, a record of this fact along with the corresponding date and time shall substitute for the daily observation. The readings shall be recorded in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. To ensure quality, the pressure gauges or devices shall be calibrated annually.
- iii. The Permittee shall establish a “normal range” for field pressure gauge readings for the shower water pressure and weak wash shower pressure in the first 30 days following the effective date of the permit. If the pressure gauge readings recorded as required in Section VI. K.1.a. ii., above, are observed to be outside the normal range, the Permittee shall inspect the mist eliminator(s) for malfunctions and clean or repair, as

necessary.

- iv. The results of inspection and maintenance activities, discussed above for the mist eliminators, shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative of DAQ upon request. The logbook shall record the following:
 - (a) the date and time of each recorded action
 - (b) the results of each inspection;
 - (c) the causes for any variance from the normal operating range for the mist eliminator(s); and
 - (d) corrective actions taken.

Reporting

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

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

- i. Visible emissions from the tanks (ID Nos. ES-445-116 and 445-122) shall not be more than 40 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 40 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 90 percent opacity.

Monitoring

- ii. To assure compliance, once a month the Permittee shall observe the emission points of this source for any visible emissions above normal. The Permittee shall establish a normal for the source in the first 30 days following the effective date of the permit. If visible emissions from this source are observed to be above normal, the Permittee shall either:
 - (a) 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
 - (b) demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 2D .0501(c)(8) is below the limit given in Section VI. K. 1. b. a. above.If the above-normal emissions are not corrected per (a) above or if the demonstration in (b) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0521.

Recordkeeping

- iii. 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:
 - (a) the date and time of each recorded action;
 - (b) the results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
 - (c) the results of any corrective actions performed.

Reporting

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

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

- i. The emissions of total reduced sulfur shall not exceed 0.032 pounds per ton of black liquor solids (dry weight) from any smelt dissolving tank.

Monitoring/Recordkeeping/Reporting

- ii. To assure compliance, the Permittee shall follow the monitoring, recordkeeping, and reporting requirements per Specific Conditions VI. K. 1. a. ii-v. The Permittee shall be deemed in noncompliance with 2D .0528 if the monitoring and recordkeeping is not maintained.

L. Black Liquor Gasifier Pre-heater (ID No. ES-446-011) – No. 2 fuel oil-fired (15 mmBtu per hour nominal maximum heat input), Uncontrolled

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

Regulated Pollutant	Limits/Standards	Applicable Regulations
Visible Emissions	20 percent opacity	15A NCAC 2D .0521
Sulfur Dioxide	Fuel oil firing: 0.5 percent sulfur content fuel oil	15A NCAC 2D .0524 (40 CFR 60 Subpart Dc)

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

- i. Visible emissions from the pre-heater (**ID No. ES-446-011**) 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 (b)]

Monitoring/Recordkeeping/Recording

- ii. No monitoring/recordkeeping/reporting is required for the visible emissions from the firing of No. 2 fuel oil in this source.

b. 15A NCAC 2D .0524: TOTAL NSPS 40 CFR 60 SUBPART Dc

- i. 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."

Emission Limitations [15A NCAC 2D .0524]

- ii. The maximum sulfur content of any fuel oil received and burned in the boiler shall not exceed 0.5 percent by weight.

Monitoring

- iii. Sulfur dioxide emissions shall be monitored as follows:
 - (a) Distillate Oil - Fuel supplier certification shall be used to demonstrate compliance as described under 40 CFR § 60.46c(e).

Recordkeeping

- iv. In addition to any other recordkeeping required by 40 CFR § 60.48c or recordkeeping requirements of the EPA, the Permittee shall record and maintain records of the amounts of each fuel fired during each month.

Reporting

- v. In addition to any other reporting required by 40 CFR § 60.48c or notification requirements to the EPA, the Permittee is required to **NOTIFY** the DAQ in **writing** of the following:
 - (a) a summary report , acceptable to the Regional Air Quality Supervisor, of the sulfur content of the distillate or residual fuel oil fired, by 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 as follows:
 - (I) Distillate Oil - Fuel supplier certification shall include the following information:
 - (A) the name of the oil supplier;

- (B) a statement from the oil supplier that the oil complies with the specification under the definition of distillate oil in 40 CFR § 60.41c; and
 - (C) a certified statement signed by the owner or operator of an affected facility that the records of fuel supplier certification submitted represents all of the fuel fired during the semi annual period.
- (b) All instances of deviations from the requirements of this permit must be clearly identified.

M. Lime Kiln (ID No. ES-455-061), Controlled by the Electrostatic Precipitator (ID No. CD-455-433)

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

Regulated Pollutant	Limits/Standards	Applicable Regulations
Sulfur Dioxide	02.3 pound per million Btu heat input	15A NCAC 2D .0516
Visible Emissions	20 percent opacity	15A NCAC 2D .0521
Particulate Matter	0.30 g/dscm (0.13gr/dscf) corrected 10 percent oxygen	15A NCAC 2D .0524 (40 CFR 60 Subpart BB)
Total Reduced Sulfur (TRS)	8 ppm by volume on a dry basis, corrected to 10 percent oxygen	15A NCAC 2D .0524 (40 CFR 60 Subpart BB)
HAP Emissions	See Section VII. B	15A NCAC 2D .1111 (40 CFR Part 63 Subpart MM)

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

- i. Emissions of sulfur dioxide from this source shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard.

Monitoring/Recordkeeping

- ii. The maximum sulfur content of any No. 4 or 6 fuel oil received and burned in the boiler shall not exceed 2.1 percent by weight (as SO₂).
- iii. To assure compliance, the Permittee shall monitor the sulfur and heat content of the fuel oil by using fuel oil supplier certification per month. The results of the fuel oil supplier certifications shall be recorded in a logbook (written or electronic format) on a quarterly basis and include the following information:
 - (a) the name of the fuel oil supplier;
 - (b) the maximum sulfur content of the fuel oil received during the quarter;
 - (c) the method used to determine the maximum sulfur content of the fuel oil; and
 - (d) a certified statement signed by the responsible official that the records of fuel oil supplier certification submitted represent all of the fuel oil fired during the period.

Reporting

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

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

- i. Visible emissions from the lime kiln (**ID Nos. ES-455-061**) 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.

Monitoring

- ii. To assure compliance, once a day the Permittee shall observe the emission points of this source for any visible emissions above normal. The daily observation must be made for each day of the calendar year

period to ensure compliance with this requirement. The Permittee shall be allowed three (3) days of absent observations per semi-annual period. If the emission source(s) is not operating, a record of this fact along with the corresponding date and time shall substitute for the daily observation. The Permittee shall establish a normal for the source in the first 30 days following the effective date of the permit. If visible emissions from this source are observed to be above normal, the Permittee shall either:

- (a) 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
- (b) demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 2D .0501(c)(8) is below the limit given in Section VI. M. 1. b. i. above.

If the above-normal emissions are not corrected per (a) above or if the demonstration in (b) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0521.

Recordkeeping

- iii. 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:
 - (a) the date and time of each recorded action;
 - (b) the results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
 - (c) the results of any corrective actions performed.

Reporting

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

c. 15A NCAC 2D .0524: NSPS 40 CFR SUBPART BB

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

Emissions Limitations [15A NCAC 2D .0524]

- ii. Per 40 CFR Part 60, Subpart BB, emissions from the Lime Kiln shall not exceed:
 - (a) 0.30 g/dscm (0.13 gr/dscf) of particulate matter corrected to 10 percent oxygen. [40 CFR Part 60, Subpart 60.282(a)(3)(i)]. or
 - (b) 8 ppm of TRS by volume on a dry basis, corrected to 10 percent oxygen based on a 12-hour average [40 CFR Part 60, Subpart 60.283(a)(5) and 60.284(c)].

Monitoring

- iii. Particulate matter emissions from the Lime Kiln shall be controlled by the Electrostatic Precipitator (ID No. CD-455-433). To ensure that optimum control efficiency is maintained, the Permittee shall monitor the following parameters daily for values outside the normal operating range in each field or section:
 - (a) primary voltage,
 - (b) secondary voltage,
 - (c) primary current,
 - (d) secondary current, and
 - (e) spark rate.

The Permittee shall be allowed three (3) days of absent observations per semi-annual period. If the emission source(s) is not operating, a record of this fact along with the corresponding date and time shall substitute for the daily observation. The Permittee shall establish "normal" for these parameters in the first 30 days following the effective date of the permit.

- iv. 40 CFR § 60.284(a)(2) - The Permittee shall calibrate, maintain, and operate a continuous monitoring system to monitor and record the concentration of TRS emissions on a dry basis and the percent of oxygen

by volume on a dry basis in the gases discharged into the atmosphere. These systems shall be located downstream of the control device(s) and the spans of these continuous monitoring system(s) shall be set:

- (a) At a TRS concentration of 30 ppm for the TRS continuous monitoring system.
- (b) At 25 percent oxygen for the continuous oxygen monitoring system.

Recordkeeping

- v. The results of the electrostatic precipitator monitoring shall be maintained in a logbook (written or electronic form) on site and made available to an authorized representative upon request. The logbook shall record the following:
 - (a) the date and time of actions recorded,
 - (b) the normal range of values for each parameter, and
 - (c) the values of each parameter.

Reporting

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

N. Lime Slaker (ID No. ES-455-406), Controlled by a Spray Chamber Wet Scrubber (ID No. CD 455-408):

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

Regulated Pollutant	Limits/Standards	Applicable Regulations
Particulate Matter	$E = 4.10 \times P^{0.67}$ Where: E = allowable emission rate in pound per hour P = process weight rate in tons per hour	15A NCAC 2D .0515
Visible Emissions	20 percent opacity	15A NCAC 2D .0521

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

- i. Emissions of particulate matter from this source shall not exceed an allowable emission rate as calculated by the following equation:

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

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

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

Monitoring/Recordkeeping

- ii. Particulate matter emissions from the Lime Slaker shall be controlled by the wet scrubber (ID Nos. CD-455-408). To ensure compliance and the effective operation of the scrubber, the Permittee shall monitor and record, once per day, the scrubber solution flowrate. The Permittee shall be allowed three (3) days of absent observations per semi-annual period. If the emission source(s) is not operating, a record of this fact along with the corresponding date and time shall substitute for the daily observation. The readings shall be recorded in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. To ensure quality, the flowrate gauges or devices shall be calibrated annually.
- iii. The Permittee shall establish a “normal range” for flowrate readings in the first 30 days following the effective date of the permit. If the flowrate readings recorded as required in Section VI. N.1. a. ii., above, are observed to be outside the normal range, the Permittee shall inspect the scrubber for malfunctions and clean or repair, as necessary.
- iv. The results of inspection and maintenance activities, discussed above for the scrubber, shall be maintained

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

- (a) the date and time of each recorded action
- (b) the results of each inspection;
- (c) the causes for any variance from the normal operating range for the scrubber; and
- (d) corrective actions taken.

Reporting

- v. The Permittee shall submit the results of any maintenance performed on the scrubber within 30 days of a written request by the DAQ.
- vi. 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

- i. Visible emissions from the Lime Slaker (**ID No. ES-455-406**) 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.

Monitoring

- ii. To assure compliance, once a month the Permittee shall observe the emission points of this source for any visible emissions above normal. If the emission source(s) are not operating, a record of this fact along with the corresponding date and time shall substitute for the monthly observation. The Permittee shall establish **Anormal** for the source in the first 30 days following the effective date of the permit. If visible emissions from this source are observed to be above normal, the Permittee shall either:
 - (a) 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
 - (b) demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 2D .0501(c)(8) is below the limit given in Section VI. N. 1. b. 2. i. above.If the above-normal emissions are not corrected per (a) above or if the demonstration in (b) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0521.

Recordkeeping

- iii. 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:
 - (a) the date and time of each recorded action;
 - (b) the results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
 - (c) the results of any corrective actions performed.

Reporting

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

- O. Lime Conveyor Transfer Points (ID Nos. ES-455-050 and 455-053), Hot Lime Pan Conveyor (ID No. ES-455-073-08), Hot Lime Crusher (ID No. ES-455-072-00), Hot Lime Bucket Elevator (ID No. ES-455-074-08), Hot Lime Bin (ID No. ES-455-075-02), and Fresh Lime Bin (ID No. ES-455-749-02) controlled by a bagfilter (ID No. CD-455-751-00) installed in series with a simple cyclone (ID No. CD 455-754-00):**

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

Regulated Pollutant	Limits/Standards	Applicable Regulations
Particulate Matter	$E = 4.10 \times P^{0.67}$ Where: E = allowable emission rate in pound per hour P = process weight rate in tons per hour	15A NCAC 2D .0515
Visible Emissions	40 percent opacity	15A NCAC 2D .0521

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

- i. Emissions of particulate matter from these sources shall not exceed an allowable emission rate as calculated by the following equation:

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

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

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

Monitoring/Recordkeeping

- ii. Particulate matter emissions from these sources shall be controlled by the bagfilter and cyclone. To assure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there is no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:
- (a) a monthly visual inspection of the system ductwork and material collection unit for leaks; and
 - (b) an annual (for each 12 month period following the initial inspection) internal inspection of the bagfilter's and cyclone's structural integrity.
- iii. 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:
- (a) the date and time of each recorded action;
 - (b) the results of each inspection;
 - (c) the results of any maintenance performed on the bagfilter or cyclone; and
 - (d) any variance from manufacturer's recommendations, if any, and corrections made.

Reporting

- iv. The Permittee shall submit the results of any maintenance performed on the bagfilters within 30 days of a written request by the DAQ.
- v. 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

- i. Visible emissions from these sources shall not be more than 40 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 40 percent not more than once in any

hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 90 percent opacity.

Monitoring

- ii. To assure compliance, once a month the Permittee shall observe the emission points of this source for any visible emissions above normal. If the emission source(s) are not operating, a record of this fact along with the corresponding date and time shall substitute for the monthly observation. The Permittee shall establish a normal for the source in the first 30 days following the effective date of the permit. If visible emissions from this source are observed to be above normal, the Permittee shall either:
 - (a) 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
 - (b) demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 2D .0501(c)(8) is below the limit given in Section VI. O. 1. b. i. above.
 If the above-normal emissions are not corrected per (a) above or if the demonstration in (b) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0521.

Recordkeeping

- iii. 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:
 - (a) the date and time of each recorded action;
 - (b) the results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
 - (c) the results of any corrective actions performed.

Reporting

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

P. No. 1 & 2 Rewinder and Cutter Pulp Trim Handling System (ID No. ES-730-205), Controlled by a simple cyclone (ID No. CD 730-067):

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

Regulated Pollutant	Limits/Standards	Applicable Regulations
Particulate Matter	$E = 4.10 \times P^{0.67}$ Where: E = allowable emission rate in pound per hour P = process weight rate in tons per hour	15A NCAC 2D .0515
Visible Emissions	20 percent opacity	15A NCAC 2D .0521

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

- i. Emissions of particulate matter from this source shall not exceed an allowable emission rate as calculated by the following equation:

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

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

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

Monitoring/Recordkeeping

- ii. Particulate matter emissions from this source shall be controlled by the cyclone. To assure compliance, the Permittee shall perform inspections and maintenance, as a minimum, the inspection and maintenance requirement shall include the following:
 - (a) a monthly visual inspection of the system ductwork and material collection unit for leaks; and
 - (b) an annual (for each 12 month period following the initial inspection) internal inspection of the cyclone's structural integrity.
- iii. 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:
 - (a) the date and time of each recorded action;
 - (b) the results of each inspection;
 - (c) the results of any maintenance performed on the cyclone; and
 - (d) any variance from manufacturer's recommendations, if any, and corrections made.

Reporting

- iv. The Permittee shall submit the results of any maintenance performed on the cyclone within 30 days of a written request by the DAQ.
- v. 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

- i. Visible emissions from this source (**ID No. ES-730-205**) 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.

Monitoring

- ii. To assure compliance, once a month the Permittee shall observe the emission points of this source for any visible emissions above normal. If the emission source(s) are not operating, a record of this fact along with the corresponding date and time shall substitute for the monthly observation. The Permittee shall establish a normal for the source in the first 30 days following the effective date of the permit. If visible emissions from this source are observed to be above normal, the Permittee shall either:
 - (a) 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
 - (b) demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 2D .0501(c)(8) is below the limit given in Section VI. P. 1. b. i. above.

If the above-normal emissions are not corrected per (a) above or if the demonstration in (b) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0521.

Recordkeeping

- iii. 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:
 - (a) the date and time of each recorded action;
 - (b) the results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
 - (c) the results of any corrective actions performed.

Reporting

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

**Q. High Bulk Additive (HBA) Plant consisting of:
Flash Dryer, Drying Stage (ID No. ES 755-106),
HBA Primary Burner (ID No. ES 755-100),
HBA Secondary Burner (ID No. ES 755-101), and
HBA Tertiary Burner (ID No. ES 755-508),
Controlled by simple cyclone (ID No. CD 755-106);**

**Flash Dryer, Cooling Stage (ID No. ES 755-509),
Controlled by either simple cyclone (ID No. CD 755-515) and
simple cyclone (ID No. CD 755-517)**

**East & West Balers (ID Nos. ES 755-150 and 755-550),
Controlled by simple cyclone (ID No. 755-163) and
bagfilter (ID No. CD 755-157_**

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

Regulated Pollutant	Limits/Standards	Applicable Regulations
Particulate Matter	$E = 4.10 \times P^{0.67}$ Where: E = allowable emission rate in pound per hour P = process weight rate in tons per hour	15A NCAC 2D .0515
Visible Emissions	20 percent opacity	15A NCAC 2D .0521

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

- i. Emissions of particulate matter from these sources shall not exceed an allowable emission rate as calculated by the following equation:

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

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

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

Monitoring/Recordkeeping

- ii. Particulate matter emissions from these sources shall be controlled by the cyclones and bagfilter. To assure compliance, the Permittee shall perform inspections and maintenance, as a minimum, the inspection and maintenance requirement shall include the following:
 - (a) a monthly visual inspection of the system ductwork and material collection unit for leaks; and
 - (b) an annual (for each 12 month period following the initial inspection) internal inspection of the bagfilter's and cyclone's structural integrity.
- iii. 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:
 - (a) the date and time of each recorded action;
 - (b) the results of each inspection;
 - (c) the results of any maintenance performed on the cyclone; and
 - (d) any variance from manufacturer's recommendations, if any, and corrections made.

Reporting

- iv. The Permittee shall submit the results of any maintenance performed on the bagfilter or cyclone within 30 days of a written request by the DAQ.

- v. 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

- i. Visible emissions from these sources (**ID Nos. ES-755-106, 755-100, 755-101, 755-508, 755-509, 755-150, 755-550**) 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.

Monitoring

- ii. To assure compliance, once a month the Permittee shall observe the emission points of this source for any visible emissions above normal. If the emission source(s) are not operating, a record of this fact along with the corresponding date and time shall substitute for the monthly observation. The Permittee shall establish a normal for the source in the first 30 days following the effective date of the permit. If visible emissions from this source are observed to be above normal, the Permittee shall either:
 - (a) 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
 - (b) demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 2D .0501(c)(8) is below the limit given in Section VI. Q. 1. b. i. above.
 If the above-normal emissions are not corrected per (a) above or if the demonstration in (b) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0521.

Recordkeeping

- iii. 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:
 - (a) the date and time of each recorded action;
 - (b) the results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
 - (c) the results of any corrective actions performed.

Reporting

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

VII. Multiple Emission Source(s) Specific Limitations and Conditions

A. 40 CFR 63, Subpart S Affected Sources:

Source ID No.	Source Description	Control ID No	Control Description
Bleaching System Sources			
ES 425-008	No. 1 Stage Tower	CD 425-101	Bleach Plant Fluidized Bed Wet Scrubber (via closed-vent collection system)
ES 425-013	No. 1 Stage ClO2 Seal Box		
ES 425-011	No. 1 Bleach Hood and Washer		
ES 425-047	No. 4 Stage Tower		
ES 425-054	No. 4 Stage ClO2 Seal Box		
ES 425-052	No. 4 Bleach Washer		
ES 425-076	No. 6 Bleach/Peroxide Tower		
ES 425-083	No. 6 Bleach/Peroxide Seal Box		
ES 425-081	No. 6 Bleach/Peroxide Washer		

Source ID No.	Source Description	Control ID No	Control Description
LVHC System Sources			
Foul Condensate Handling System			
ES 161-078	Steam Stripper	ES 161-001	No. 2 Power Boiler (via closed-vent Collection System)
ES 401-007	Stripper Feed Tank No. 1		
ES 401-013	Stripper Feed Tank No. 2		
ES 161-484	LVHC Foul Gas Collection System Cooler		
ES 402-722	Digester HVLC Cooler		
Turpentine System			
ES 401-704	Turpentine Decanter	ES 161-001	No. 2 Power Boiler (via closed-vent Collection System)
ES 401-709	Underflow Decanter		
ES 402-211	Primary Vapor STM Vessel	or	or
ES 402-220	Secondary Condenser		
ES 401-071-02	Turpentine Storage Tank		
Digester System			
ES 402-141*	Continuous Digester*	ES 161-001	No. 2 Power Boiler (via closed-vent Collection System)
Evaporator Area			
ES 430-537	Evaporator/Concentrator Hotwell System	ES 161-001 or ES 455-061	No. 2 Power Boiler (via closed-vent Collection System) or Lime Kiln (via closed-vent Collection System)
ES 440-713	No. 1 Pre-Evaporator	ES 161-001 or ES 455-061	No. 2 Power Boiler (via closed-vent Collection System) or Lime Kiln (via closed-vent Collection System)
ES 440-719	No. 2 Pre-Evaporator		
ES 440-720	No. 3 Pre-Evaporator		
ES 440-016	1A Effect Evaporator	ES 161-001 or ES 455-061	No. 2 Power Boiler (via closed-vent Collection System) or Lime Kiln (via closed-vent Collection System)
ES 440-015	1B Effect Evaporator		
ES 440-014	Second Effect Evaporator		
ES 440-013	Third Effect Evaporator		
ES 440-012	Fourth Effect Evaporator		
ES 440-011	Fifth Effect Evaporator		
ES 440-009	Sixth Effect Evaporator		
ES 440-400	C-1 Black Liquor Concentrator		
ES 440-401	C-2 Black Liquor Concentrator		

* The Digester (ID No. ES 402-150) is included with the closed-vent system for the Digester System as detailed in Specific Condition 2.1 G

A. 40 CFR 63, Subpart S Affected Sources (continued):

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
HVLC System Sources			
Digester Area			
ES 402-119*	Chip Bin	ES 161-001	No. 2 Power Boiler (via closed-vent Collection System)
ES 402-179*	Blow Tank		
ES-402-190*	Filtrate Wash Liquor Tank		
ES-402-150*	Primary Flash Tank		
ES-402-151*	Secondary Flash Tank		
Washing and Screening			
ES-420-004 ES-420-134	Knotter/Rejects Vibrating Screens	NA	MACT Required by April 17, 2006
ES 420-025 ES-420-006* ES-420-008*	Foam Tank Filtrate Storage Tank No. 1 Filtrate Storage Tank No. 2	ES 161-001	No. 2 Power Boiler (via closed-vent Collection System)
ES-420-010 ES-420-044 ES-420-123 ES-420-140 ES-420-332	Brownstock Washer System Brown Stock Decker Primary Rejects Tank (190) Secondary Rejects Tank (192) Brown Decker Filtrate Tank (189)	NA	MACT Required by April 17, 2006
Oxygen Delignification Area			
ES-420-056 ES-420-229 ES 420-235 ES 420-259 ES 420-261 ES 420-274	Screened Stock Chest Oxygen Blow Tank No. 1 Press Washer No. 1 Press Washer Level Tank No. 1 Press Washer Filtrate Tank (12) Oxygen Interstage Pulp Tank	NA	MACT Required by April 17, 2006
ES 420-280 ES 420-302 ES 420-306	No. 2 Press Washer No. 2 Press Washer Level Tank No. 2 Press Washer Filtrate Tank	NA	MACT Required by April 17, 2006

* The Digester (ID No. ES 402-150) is included with the closed-vent system for the Digester System as detailed in Specific Condition 2.1 G.

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
Hazardous Air Pollutants	<p><u>Bleaching System</u> 10 ppmv total chlorinated HAP or 99 percent reduction by weight</p> <p><u>LVHC System</u> Route system vents to Lime Kiln or No. 2 Power Boiler</p> <p><u>HVLC System</u> Route system vents to No. 2 Power Boiler or other treatment device listed in 40 CFR 64.443(d)</p>	15 A NCAC 2D .1111 (40 CFR 63 Subpart S)

	<p>(Compliance date, April 17, 2006)</p> <p><u>Pulping Condensate Collection</u></p> <p>Collect a minimum 11.1 pounds per ton ODP followed by treatment in the Steam Stripper meeting:</p> <p>92 percent HAP removal, or</p> <p>10.2 pounds per ton ODP removal</p>	
--	--	--

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

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

Emission Limitations [15A NCAC 2D .1111]

Standards for the Bleaching System (40 CFR 63.445)

- b. The Permittee shall meet the following control requirements for bleaching systems using chlorinated compounds [40 CFR 63, Subpart 63.445]:
- i. The equipment at each bleaching stage of the bleaching systems, where chlorinated compounds are introduced shall be enclosed and vented into a closed vent system meeting the requirements specified in 40 CFR 63.450 and introduce into the Bleach Plant Scrubber (ID No. CD-425-101).
 - ii. The scrubber (ID NO. CD 425-101) shall achieve a treatment device outlet concentration of 10 ppmv or less of total chlorinated HAP or achieve a 99 percent reduction by weight: and
 - iii. The Permittee shall not use hypochlorite or chlorine for bleaching in the bleaching systems listed above.

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

- c. The Permittee shall meet the following control requirements for the total HAP emissions from the LVHC system [40 CFR 63, Subpart 63.443]:
- i. Each LVHC system component shall be enclosed and vented into a closed vent system meeting the requirements of 40 CFR 63.450, and routed to:
 - (a) The Lime Kiln (ID No. ES 455-061) by introducing the HAP emission stream with the primary fuel or into the flame zone: or
 - (b) The No. 2 Power Boiler (ID No. ES 161-001) [heat input capacity greater than 150 mmBtu/hr] by introducing the HAP emission stream with the combustion air/primary fuel/into flame zone.
- d. No later than April 17, 2006, the Permittee shall meet the following control requirements for the total HAP emissions from the HVLC system [40 CFR 63, Subpart 63.443]
- i. Each HVLC system component shall be enclosed and vented into a closed vent system meeting the requirements of 40 CFR 63.450 and controlled per 64.443(d).
- e. Periods of excess emissions reported under Sec. 63.455 shall not be a violation of Sec. 63.443 (c) and (d) provided that the time of excess emissions (excluding periods of startup, shutdown, or malfunction) divided by the total process operating time in a semi-annual reporting period does not exceed the following levels:
- i. One percent for the LVHC sources; and
 - ii. Four percent for the HVLC sources.

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

- f. The pulping process condensates as identified per 40 CFR 63.446(b) shall be conveyed in a closed

collection system that is designed and operated to meet the following requirements:

- i. Each closed collection system shall meet the individual drain system requirements specified in 40 CFR 63.960, 63.961, and 63.962, except for closed vent systems;
 - ii. Closed vent systems shall be designed and operated in accordance with 40 CFR 63.450;
 - iii. The process condensate streams collected in total shall contain a minimum of 11.1 pounds of HAP per ton of oven dried pulp produced (based on a 30-day rolling average);
 - iv. The Stripper Feed Tanks (ID Nos. ES 401-007 and 401-013) shall meet the requirements per 40 CFR 63.446(d)(2); and
 - v. The pulping process condensates collected shall be treated by the Foul Condensate Steam Stripper (ID No. ES 161-078) which shall:
 - (a) Reduce or destroy the total HAPs by at least 92 percent or more by weight; or
 - (b) Remove a minimum of 10.2 pounds per ton of oven dried pulp (ODP); and
 - vi. For each steam stripper system used to comply with the requirements specified in paragraph 63.456(e)(3), periods of excess emissions reported under Sec. 63.455 shall not be a violation of paragraphs 63.446(d), (e), and (f) provided that the time of excess emissions (including periods of startup, shutdown, or malfunction) divided by the total process operating time in a semi-annual reporting period does not exceed 10 percent
- g. **Testing** [15A NCAC 2D .0501(c)(3)]
If emissions testing is required, the testing shall be performed in accordance General Condition JJ. If the results of this test are above the limits given in Section 2.2 A.1 b. through e. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111.

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

- h. The Permittee shall install, calibrate, certify, operate, and maintain according to the manufacturer's specifications, a continuous monitoring system (CMS), on the Bleach Plant Wet Scrubber (**ID No. CD 425-101**). The CMS shall include a continuous recorder. The CMS shall be operated to ensure the following operational parameters are maintained [40 CFR 60, Subpart 63.453]:
- i. The minimum pH of the scrubber effluent shall be 9.5 (3 hour average);
 - ii. The scrubber inlet vent gas fan operating status of "on" (on or off based on motor load) ; and
 - iii. The minimum scrubber liquid recirculation rate shall be 660 gallons per minute (3 hour average).
- If any monitoring parameter values are exceeded or if the monitoring procedures are not followed, the Permittee shall be deemed in noncompliance with 2D .1111.

Monitoring for the LVHC and HVLC pulping systems Control Devices [15A NCAC 2Q .0508(f)]

- i. No control device parameter monitoring is required for pulping vent systems routed to the Lime Kiln (ID No. ES 455-061) or the No. 2 Power Boiler (ID No. ES 161 061). [40 CFR 60, Subpart 63.453]

Monitoring for the pulping process condensates [15A NCAC 2Q .0508(f)]

Condensate Collection:

- j. The Permittee shall install, calibrate, certify, operate, and maintain according to the manufacturer's specifications, a continuous monitoring system (CMS) to monitor condensate stream collection. The CMS shall include a continuous recorder. The CMS shall be operated to ensure that the minimum of 11.1 pounds of HAP per ton of oven dried pulp produced (based on a 30-day rolling average) is collected. The HAP content for each stream shall be validated on an annual basis. [40 CFR 60, Subpart 63.453]:
If any monitoring parameter demonstrates collection less than 11.1 pounds per oven dried pulp or if the monitoring procedures are not followed, the Permittee shall be deemed in noncompliance with 2D .1111.

Monitoring for the pulping process condensates [15A NCAC 2Q .0508(f)]

Steam Stripper (ID No ES 161-078):

- k. The Permittee shall install, calibrate, certify, operate, and maintain according to the manufacturer's specifications, a continuous monitoring system (CMS) on the Steam Stripper (ID No ES 161-078). The CMS shall include a continuous recorder. The CMS shall be operated to ensure the following operational parameters are maintained. [40 CFR 60, Subpart 63.453]:
- i. The Steam to Feed Ratio (SFR) shall be maintained above 19.5 percent as defined by the following:

$$\text{SFR (\%)} = \left(\frac{((\text{FS (KPPH)} * 1000) - (\text{CF (GPM)} * 8.34 \text{ lb/gal} * (\text{T1}(\text{degrees F}) - \text{T2}(\text{degrees F})/1000))}{(\text{CF (GPM)} * 8.34 \text{ lb/gal} * 60)} \right) * 100$$

where:

- SFR = Steam to Feed Ratio (percent)
- FS = Feed Steam in KPPH (thousand pounds per hour)
- CF = Condensate Flow in GPM (gallons per minute)
- T1 = is the stripper bottom temperature in degrees F, and
- T2 = is the condensate feed temperature in degrees F

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

Monitoring for Enclosures and Closed Vent Systems [15A NCAC 2Q .0508(f)]

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

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

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

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

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

B. 40 CFR 63, Subpart MM Affected Sources:

Source ID No.	Source Description	Control ID No	Control Description
ES 445-001	Recovery Boiler - Black Liquor Solids/No. 4 and No. 6 Fuel Oil-Fired (920 million Btu/hour nominal maximum firing rate)	CD 445-073	Wet Bottom two chamber electrostatic precipitator - 172,800 square feet of collection plate area
ES 445-116	North Smelt Dissolving Tank	CD 445-203	Wire Mesh Mist Eliminator No. 1 – 10 inches thick
ES 445-122	South Smelt Dissolving Tank	CD 445-204	Wire Mesh Mist Eliminator No. 2– 10 inches thick

ES 455-061	Lime Kiln – Residual Fuel Oil/LVHC gases/SOGs-Fired (118 million Btu per hour nominal maximum heat input rate)	CD 455-433	Single-chamber, three-field, high-voltage, negative-corona electrostatic precipitator (30,222 square feet of collection plate area)
------------	--	------------	---

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
Hazardous Air Pollutants	Compliance with the requirements per 40 CFR 63, Subpart MM by March 13, 2005, meeting the emission standards per 40 CFR 63.862	15 A NCAC 2D .1111 (40 CFR 63 Subpart MM)

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

- a. The Permittee shall comply with all applicable provisions, including the notification, testing, reporting, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 2D .1111 "Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR Part 63 Subpart MM, including Subpart A "General Provisions."
- b. Per 40 CFR 63.863 The owner or operator of an existing affected source or process unit must comply with the requirements in this subpart no later than March 13, 2005.

**C. No 1. Power Boiler (ID No. ES 150-001); and
No 2. Power Boiler (ID No. ES 61-001):**

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
Nitrogen oxides	Ozone season emissions allocations	15A NCAC 2A .1417

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

- a. The No. 1 Power boiler (ID No. ES 150-001) shall not exceed a NOx allocation of 181 tons per ozone season (May 31 through September 30) in 2004, 226 tons per ozone season (May 1 through September 30) in 2005, and 121 tons per ozone season (May 1 through September 30) for 2006 and later.
- b. The No. 2 Power boiler (ID No. ES 161-001) shall not exceed a NOx allocation of 58 tons per ozone season in 2004, 72 tons per ozone season in 2005, and 72 tons per ozone season for 2006 and later.

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

- c. The Power Boilers (ID Nos. ES 150-001 and ES 161-001) shall comply with the requirements of 15 A NCAC 2D .1417 using the nitrogen oxide budget trading program set out in 15A NCAC 2D .1419 and as follows:
 - i. Sources shall using the procedures of and complying with the requirements of 40 CFR Part 96, Nitrogen Oxide Budget Trading Program for State Implementation Plans, with the following exceptions:
 - (a). Permit applications shall be submitted following the procedures and schedules in this Section and in Subchapter 2Q of this Title instead of the procedures and schedules in 40 CFR Part 96; and
 - (b) The dates and schedules for monitoring systems in 40 CFR Part 96 shall not apply; however, if a source operates during the ozone season, it shall have installed and begun operating by May 31, 2004, a continuous emissions monitoring system that complies with 40 CFR Part 96.
- d. The Permittee shall show compliance using continuous emissions monitors that meet the requirements of 40 CFR Part 75, Subpart H or 40 CFR Part 96 [15A NCAC 2D .1417(e)].

- e. All emission control devices and techniques installed to comply with 15A NCAC 2D .1417 shall be operated during the ozone season as defined above in the manner in which they are designed and permitted to be operated.
- f. The Permittee shall comply with the requirements of this section according to the following schedule:
 - i. The Permittee shall submit a description of how the source will comply with the requirements of this rule (15A NCAC 2D .1417) to the Division of Air Quality before October 1, 2003.
 - ii. The Permittee shall submit an application, to revise the permit in order to make a modification or to construct and begin operating a control device, before source modification(s) or control device installation(s).
 - iii. The Permittee shall install any required monitoring and implement record keeping, and reporting requirements before May 1, 2004.

Reporting [15A NCAC 2D .1404]

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

D. Facility-Wide

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
toxic air pollutants	State-enforceable only – fuel oil equivalency requirements	15A NCAC 2D .1100 AVOIDANCE

STATE-ONLY REQUIREMENT

1. 15A NCAC 2D .1100: TOXIC AIR POLLUTANT EMISSIONS – AVOIDANCE CONDITION

To avoid the requirements of 2D .1100, the Permittee may use a blend of on-specification used No. 4 fuel oil and unadulterated No. 6 fuel oil for all boilers and lime kiln. The on-specification No. 4 fuel oil must be supplied by a DAQ-approved vendor as follows.

- a. Specifications - The on-specification used No. 4 fuel oil shall be equivalent to unadulterated fossil fuel by meeting the following criteria:

Constituent/Property	Allowable Level
Arsenic	1 ppm maximum
Cadmium	2 ppm maximum
Chromium	5 ppm maximum
Lead	100 ppm maximum
Total Halogens	1000 ppm maximum
Flash Point	130 degrees F minimum
Sulfur	2.0% maximum (by weight)
Ash	1.0% maximum

The Permittee is responsible for ensuring that the on-specification used No. 4 fuel oil meets the approved criteria for unadulterated fuel. The Permittee is held responsible for any discrepancies discovered by DAQ as a result of any sampling and analysis of the fuel oil.

- b. Testing Requirement - The Permittee shall analyze the No. 4/No. 6 fuel oil blend for percent sulfur content and Btu heat rate per gallon on a quarterly basis. The Permittee shall analyze the No. 4 fuel oil for the Constituents listed in the table above annually.
- c. Recordkeeping Requirements - The Permittee shall maintain at the facility for a minimum of three years,

- and shall make available to representatives of the DAQ upon request, accurate records of the following:
- i. the actual amount of on-specification used No. 4 fuel oil delivered to, and combusted at the facility on an annual basis.
 - ii. the results of any analytical testing of the on-specification used No. 4 fuel oil or the oil blend as it is sampled and tested by the Permittee or vendor.
- d. **Reporting Requirements** - Within 30 days after each calendar year, the Permittee shall submit in writing to the Regional Supervisor, DAQ, the following:
- i. a summary of the results of the quarterly analytical testing of the No.4/No. 6 fuel oil blend for the previous 12 months.
 - ii. a summary of the results of the annual analytical testing of the constituents in the No. 4 fuel oil.
 - iii. the total gallons of on-specification used No. 4 fuel oil from each approved vendor combusted at the facility for the previous 12 months.
- e. The DAQ reserves the right to require additional testing and/or monitoring of the on-specification used No. 4 fuel oil without notice.

VIII. Schedule of Compliance

The **No. 2 Power Boiler (ID No. ES-161-001)** is subject to the compliance schedule described below. This compliance schedule is an enforceable sequence of actions with milestones leading to compliance with applicable requirements for which the source is in noncompliance at the time of permit issuance. Any judicial consent decree or an administrative order to which the source is subject shall be supplemental to and shall not sanction noncompliance with the applicable requirements on which it is based [15A NCAC 2Q .0508(s) and (bb)].

A. Actions to be Taken by the Permittee - The Permittee, desiring to comply with the legal requirements of this permit and with all pertinent provisions of the law and applicable requirements, is subject to the following activities:

1. On or before September 1, 2001, the Permittee shall submit a study plan to the Department of Environment and Natural Resources (DENR). The purpose of the study shall be to provide data over a long term operation (i.e., no less than 90 days of data) to indicate the range of NOx emission from the No. 2 Power Boiler while firing SOGs.;
2. Within thirty (30) days after completing acquisition of data on NOx emissions while firing SOGs, the Permittee shall submit a final report to DENR setting out all NOx data collected and proposing an interim NOx limit for the No. 2 Power Boiler while firing SOGs. The report shall be submitted to DENR for review;
3. Within sixty (60) days after DENR receives the study DENR shall report to the Commission whether the Permittee's proposed interim NOx limit is acceptable. If DENR reports that the proposed interim limit is not acceptable, DENR shall report to the Commission an alternate NOx limit to serve as an interim limit. Any alternative NOx limit shall be accompanied by a technical memorandum setting out the basis for the alternative. The Commission shall solicit comment from the Permittee on any alternative limit proposed by DENR.;
4. Upon the Commission's Order, either the Permittee's proposed interim NOx limit or DENR's alternative NOx emissions limit shall be established as the interim NOx limit for the No 2 Power Boiler while firing SOGs. The interim NOx emissions limit shall remain in effect until EPA amends NSPS Subpart Db (40 CFR 6044b(f)) and acts on the Permittee's petition for a site-specific NOx limit for the NO. 2 Power Boiler while firing SOGs. The interim limit may be terminated sooner as provided by the Order ; and
5. In the event that EPA elects to not amend NSPS, Subpart DB as noted, the emissions limits for NOx detailed in 40 CFR 60.44b will apply starting 90 days after EPA's announcement.

B. Termination – This Order shall terminate on the date EPA amends NSPS Subpart Db and acts on the Permittee's petition for a site-specific NOx limit for the NO. 2 Power Boiler while firing SOGs or on December 31, 2004, whichever first occurs

IX. MACT Applicability and Requirements

Based on a review of the facility's current operations and emission sources, as detailed above the facility is Subject to MACT Subparts S and MM. Possible future applicable MACTs include Subpart DDDDD - [Industrial, Commercial and Institutional Boilers and Process Heaters.](#)

X. Permit Shield (including non-applicable requirements)

In accordance with 2Q .0512 the permit will contain a provision stating that compliance with the terms, conditions, and limitations of the Title V permit shall be deemed in compliance with applicable requirements specifically identified in the permit, as of the date of permit issuance. If the permit does not expressly state that a permit shield exists then it shall be presumed not to provide such a shield.

XI. General Conditions

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

XII. Insignificant Activities

The insignificant activities listed in the application has been reviewed and verified. Because an emission source or activity is insignificant does not mean that the emission source or activity is exempted from any applicable requirement or that the owner or operator of the source is exempted from demonstrating compliance with any applicable requirement. The insignificant activities are as follows:

Emission Source I.D.	Emission Source Description	Regulatory Basis for Exemption
ES-140-003	Raw Water Clarifier No. 1	2Q .0503(8)
ES-140-008	Raw Water Clarifier No. 2	2Q .0503(8)
ES-140-400	Water Filtration Area Cooling Tower	2Q .0503(8)
ES 155-078	1 st No. 6 Fuel Oil Tank	2Q .0503(8)
ES 155-082	No. 6 Fuel Oil Day Tank	2Q .0503(8)
ES 155-087	No. 2 Fuel Oil Tank	2Q .0503(8)
ES 150-090	Waste Oil Tank	2Q .0503(8)
ES 155-702	2 nd No. 6 Fuel Oil Tank	2Q .0503(8)
ES 185-127-02	River Oxygen Diesel Tank	2Q.0503(8)
ES 354-052	Log Chipping/Screening	2Q .0503(8)
ES-356-070	Import Chip Truck Dump	2Q .0503(8)
ES-356-108	Woodyard Fines Hopper	2Q .0503(8)
ES 356-112	Woodyard Screens	2Q .0503(8)
ES 356-122	Chip Silo No. 1	2Q .0503(8)
ES 356-124	Chip Silo No. 2	2Q .0503(8)
ES 356-130	Chip Conveyor to Pulp Mill	2Q .0503(8)
ES 356-144	Hog Fuel Pile	2Q .0503(8)
ES 356-238	Chip Silo No. 3	2Q .0503(8)
ES 356-315	Woodyard Overthick Slicers	2Q .0503(8)
ES 401-705	Turpentine Loading	2Q .0503(8)
ES 430-022	Sulfuric Acid Tank	2Q .0503(8)
ES 430-026	Sodium Chlorate Tank	2Q .0503(8)
ES 430-217	Methanol Storage Tank No. 2 (North)	2Q .0503(8)
ES 430-224	Methanol Storage Tank No. 1 (South)	2Q .0503(8)
ES 440-016	Soap Skimmer Tank	2Q .0503(8)
ES 440-027	55% Black Liquor Storage Tank	2Q .0503(8)
ES 440-030	Soap Storage Tank No.1	2Q .0503(8)

	(soap concentrator)	
ES 440-032	Evaporator Boilout Tank (187)	2Q .0503(8)
ES 440-765	Soap Storage Tank No. 2 (soap storage)	2Q .0503(8)
ES 445-003	No. 1 Green Liquor Clarifier (134)	2Q .0503(8)
ES 445-403	No. 2 Green Liquor Clarifier (135)	2Q .0503(8)
ES 445-132	Black Liquor Dump Tank	2Q .0503(8)
ES 445-202	Demister Pad HCl Cleaning Chest 4 th Floor	2Q .0503(8)
ES 445-332	Black Liquor Precipitator Mix Tank	2Q .0503(8)
ES 455-006	Dregs Washer Tank	2Q .0503(8)
ES 455-015	No. 1 Causticizer	2Q .0503(8)
ES 455-017	No. 2 Causticizer	2Q .0503(8)
ES 455-019	No. 3 Causticizer	2Q .0503(8)
ES 455-020	No. 4 Causticizer	2Q .0503(8)
ES 455-410	No. 5 Causticizer	2Q .0503(8)
ES 455-021	Causticizer Sump	2Q .0503(8)
ES 455-028	No. 2 White Liquor Clarifier	2Q .0503(8)
ES 455-043	Lime Mud Storage Tank No. 1	2Q .0503(8)
ES 455-400	Green Liquor Stabilization Tank	2Q .0503(8)
ES 455-407	Slaker Classifier	2Q .0503(8)
ES 455-422	Lime Mud Mix Tank	2Q .0503(8)
ES 455-732	Lime Mud Storage Tank No. 2	2Q .0503(8)
ES 455-710	White Liquor Storage Tank	2Q .0503(8)
ES 455-711	White Liquor Standpipe	2Q .0503(8)
ES 755-067	Day Tank in HBA Plant	2Q .0503(8)
ES 755-470	Tank A in HBA Plant	2Q .0503(8)
ES 755-473	Mix Tank in HBA Plant	2Q .0503(8)
ES 755-475	Tank D in HBA Plant	2Q .0503(8)
ES 755-480	Tank B in HBA Plant	2Q .0503(8)
ES 755-483	Tank C in HBA Plant	2Q .0503(8)
ES 755-708	HBA Fugitive Sources	2Q .0503(8)

XIII. Public Notice

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

XIV. Recommendations

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