

# INITIAL TITLE V AIR PERMIT APPLICATION REVIEW

Revised 7/12/99

<b>APPLICANT:</b>	<b>SITE LOCATION:</b>	<b>COUNTY:</b>	
International Paper	Roanoke Rapids	Halifax	
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<b>APPLICATION NUMBER:</b>	<b>EXISTING PERMIT NUMBER:</b>	<b>NEW PERMIT NUMBER:</b>	
420007A5.A	01649R33	016949T34	

## I. Introduction

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

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

## II. Background Information

The DRAFT Title V operating permit replaces an existing Air Quality Construction and Operation Permit No. 01649T33 which was issued on and is currently scheduled to expire on November 30, 2003.

Pursuant to 15A NCAC 2Q .0506 International Paper -Roanoke Rapids submitted its initial Title V application to the Division of Air Quality on December 10, 1996. The application was considered complete for processing on May 13, 1997. The DRAFT permit is required to go to public notice pursuant to 15A NCAC 2Q .0521.

## III. Facility Description

The International Paper Roanoke Rapids pulp and paper facility is an integrated unbleached kraft pulp and paper mill producing unbleached kraft softwood and hardwood pulp and linerboard. Existing sources include two uncontrolled No. 6 fuel oil-fired boilers (185 million Btu per hour maximum permitted heat input rate each, Nos. 2 and 3), one coal/ woodwaste/ No. 6 fuel oil-fired boiler (550 million Btu per hour maximum permitted heat input rate, No. 1) with TRS combustion and equipped with two venturi wet scrubbers, a pulp production system including thirteen batch digesters, one No. 6 fuel oil-fired lime kiln (85 million Btu per hour maximum permitted heat input rate) with TRS combustion and equipped with a venturi wet scrubber, two recovery furnaces (Nos. 6 and 7) equipped with dry electrostatic precipitators, a steam stripper, two smelt dissolving tanks (Nos. 6 and 7) equipped with oriface-type wet scrubbers, a total reduced sulfur (TRS) gas collection system installed on the, the salt cake storage system, the Tall Oil collection plant and two paper machines (Nos. 3 and 4).

This facility is subject to the Pulp and Paper MACT. Foul gases and stripper offgases (SOG) from pulp production and chemical recovery are collected in a closed system and burned in either the Lime Kiln or the No. 1 Power Boiler. Foul condensates from pulp production and chemical recovery are collected in a closed system and introduced into the biological wastewater treatment system.

Existing Air Quality Permit No.1649R33 was issued on February 15, 2001 and expires on November 30, 2003.

#### IV. Statement of Compliance

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

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

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

<b>Emission Source ID No.</b>	<b>Emission Source Description</b>	<b>Control Device ID No.</b>	<b>Control Device Description</b>
G0102	ERJO rechipper and associated transfer cyclone	NA	NA
G0103	Murray rechipper and associated transfer cyclone	NA	NA

G0104	sawdust silo and associated transfer cyclone	NA	NA
G0208 <b>MACT</b>	digester system (including 13 batch digesters)	<u>foul gases</u> G0936 (primary) or G1149 (backup)  <u>foul condensates</u> G0210  G1669	Lime Kiln via closed NCG collection system  No. 1 Power Boiler via closed NCG collection system  steam stripper system  wastewater treatment via closed pipe
G0210 <b>NSPS</b>	foul condensate steam stripper system (NSPS, Subpart BB)	<u>foul gases</u> G0936 (primary) or G1149 (backup)  <u>foul condensates</u> G1669	Lime Kiln via closed NCG collection system  No. 1 Power Boiler via closed NCG collection system  biological wastewater treatment facility via closed collection systems
G0314 <b>MACT</b>	brown stock washing		MACT required by October 16, 2006
G0719 <b>NESHAPS, Subpart S</b>	multiple effect evaporators	<u>foul gases</u> G0936 (primary) or G1149 (backup)  <u>foul condensates</u> G1669	Lime Kiln via closed NCG collection system  No. 1 Power Boiler via closed NCG collection system  biological wastewater treatment facility via closed collection systems
G07__	black liquor storage tanks	NA	NA
G0821	black liquor oxidation	NA	NA

G0825 <b>MACT</b>	black liquor solids/ No. 6 fuel oil/ used No. 4 fuel oil-fired recovery furnace No. 6	08-CD-004- 001	one electrostatic precipitator (nominal 61,200 square feet of plate area) MACT required by October 16, 2006
G0826 <b>MACT</b>	No. 6 smelt dissolving tank	08-CD-005- 001	one orifice - type wet scrubber (pressure drop of 8 inches of water and 14 gallons per minute minimum liquid injection rate) MACT required by October 16, 2006
G0827 <b>PSD</b> <b>NSPS</b> <b>MACT</b>	black liquor solids/ No. 6 fuel oil/ used No. 4 fuel oil-fired recovery furnace No. 7 (NSPS, Subpart BB)	08-CD-012- 001	one single stage, cold-side dry bottom electrostatic precipitator (140,000 square feet of plate area) MACT required by October 16, 2006
G0828 <b>PSD</b> <b>MACT</b>	No. 7 smelt dissolving tank	08-CD-013- 001	one orifice - type wet scrubber (pressure drop of 8 inches of water and 14 gallons per minute minimum liquid injection rate) MACT required by October 16, 2006
G0831	main saltcake storage silo	08-CD-003- 001	a bagfilter (578 square feet of filter surface area)
G0832	No. 7 recovery saltcake storage silo	08-CD-014- 001	a bin vent bagfilter (17 square feet of filter area)
G0936 <b>MACT</b>	No. 6 fuel oil/ used No. 4 fuel oil-fired Lime Kiln (85.0 million Btu per hour maximum permitted heat input rate), primary incinerating of noncondensable foul gases and stripper offgas	09-CD-004- 001	a variable throat venturi-type wet scrubber (pressure drop of 20 inches of water and 620 gallons per minute minimum water injection rate)
G1144 G1145 G1146 G1147 <b>NSPS</b>	four (4) No. 2 fuel oil-fired temporary boilers (96 million Btu per hour maximum heat input rate each) (NSPS, Subpart Dc)	NA	NA
G1149 <b>MACT</b>	No. 1 coal/ woodwaste/ No. 6 fuel oil/ used No. 4 fuel oil-fired power boiler (550 million Btu per hour maximum permitted heat input rate), with standby incinerating of collected noncondensable foul gases and stripper offgas	11-CD-001- 001 and 11-CD- 001-002	two _ throat venturi-type wet scrubbers (minimum pressure drop of 10 inches of water and 1500 gallons per minute minimum injection rate each)
G1150 G1151	bark feed transfer cyclone sawdust feed transfer cyclone	NA	NA

G1152 G1153	Two (2) No. 2/ No. 6 fuel oil-fired boilers Nos. 2 and 3 (185 million Btu per hour maximum permitted heat input rate each	NA	NA
G1264 G1265	Paper Machine #3 Paper Machine #4	NA	NA
G1669 <b>MACT</b>	biological wastewater treatment facility	NA	NA
G2073 <b>MACT</b>	Turpentine recovery	<u>foul gases</u> G0936 (primary) or G1149 (backup)  <u>foul condensates</u> G1669	Lime Kiln via closed NCG collection system  No. 1 Power Boiler via closed NCG collection system  biological wastewater treatment facility via closed collection systems
G2177	Tall Oil Production Units	21-CD-004-001	packed tower-type wet scrubber (minimum pressure drop of 10 inches of water and ___ gallons per minute minimum caustic injection rate)

## VI. Emission Source-by-Source Evaluation

### A. One (1) ENJO rechipper (18.0 tons per hour capacity, ID No. G0102), one (1) Murray rechipper (12.0 tons per hour capacity, ID No. G0103), and the sawdust silo (ID No. G0104) and associated transfer cyclones.

Screen reject oversize wood chips and sawdust are transported to the rechippers and sawdust silo by transfer cyclones.

#### 1. Applicable Regulatory Requirements

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 Regulation
particulate	$E = 4.10 P^{0.67}$	15A NCAC 2D .0515

visible emissions (ID Nos. G0102 and G0103)	20 percent opacity	15A NCAC 2D .0521
visible emissions (ID No. G0104)	40 percent opacity	15A NCAC 2D .0521

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

- (1) The allowable particulate emission limit is calculated by the following equation:

$$E = 4.10P^{0.75}$$

where E = allowable emission rate for particulate matter in pounds per hour, and  
P = process weight in tons per hour

The maximum process input rates into these units (18.0 tons per hour, 12.0 tons per hour, and 20.0 tons per hour) given in the application, is used to calculate the respective allowable emission rates of 28.4 pounds per hour, 21.7 pounds per hour, and 35.4 pounds per hour. Based on source test data, the applicant estimates PM emissions to be 0.04 pounds per hour, 0.02 pounds per hour, and 2.2 pounds per hour, respectively. Compliance with the allowable emission limit for the maximum process rates is indicated. Stack testing is not required to ensure compliance with this regulation. However the test method condition will be put in the permit in the event that DAQ or EPA finds that due to improper operation violations, etc, source testing is required.

- (2) Monitoring/Recordkeeping

A daily log book will be kept of the type and amount of materials introduced into these sources that could cause emissions of particulate matter. The Permittee shall inspect the systems for structural integrity annually and inspect the ductwork monthly for leaks. Results of the inspections and any maintenance performed will be recorded in the log book.

- (3) Reporting

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

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

- (1) Both rechippers were replaced in 1978 and therefore are subject to 2D .0521(d). Per this regulation, visible emissions shall not be more than 20 percent opacity when averaged over a six-minute period except that six-minute period averaging not more than 87 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period.

The sawdust silo existed as of July, 1971 and therefore is subject to 2D .0521(c). Per this regulation, visible emissions shall not be more than 40 percent opacity when averaged over a six-minute period except that six-minute period averaging not more than 90 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period.

Compliance is indicated with this regulation because the latest inspection report did not cite any opacity exceedances.

(2) Monitoring

Monitoring requirements include a weekly visual observation of the emission stacks.

(3) Recordkeeping Requirements

Recordkeeping requirements include a weekly log of the visual emission stack observation results.

(4) Reporting

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

**B. Digester System (ID No. G0208), including thirteen (13) batch digesters (ID Nos. 02-PU-003 thru 014); and associated blow tanks and cyclones; secondary condenser; hot water accumulator and associated overflow tank; and foul condensate tank. Foul gases are collected via the closed NCG Collection System (ID No. \_\_\_\_ ) for burning in the Lime Kiln (IDNo. G0936) or the No. 1 Power Boiler (IDNo. G1149). Foul condensates are collected via closed collection systems (ID Nos. \_\_\_\_ ) and sent to the Biological Wastewater Treatment Facility (IDNo. G1669).**

There are no PM emissions from these units directly to the atmosphere.

1. Applicable Regulatory Requirements

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 Regulation
total reduced sulfur (TRS)	5 ppm measured as hydrogen sulfide on a dry gas basis. Limitation is an average of contiguous twelve hour time periods.	15A NCAC 2D .0528
Toxic Air Pollutants	State Enforcable Only (See Toxics)	15A NCAC 2D .1100
HAP	(See MACT)	15A NCAC 2D .1111 (40 CFR Part 63 Subpart S)

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

TRS emissions shall not exceed 5 ppm from any digester system. TRS emissions are collected in a closed system and burned in either the Lime Kiln or No. 1 Power Boiler along with other HAP emissions per 40CFR63, Subpart S. There are no monitoring, recordkeeping or reporting requirements for this regulation. It is assumed that maintaining the closed collection system and HAP emission burning required by 40CFR63, Subpart S (See MACT) will result in compliance with 2D.0528 for these sources.

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

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

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

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

**C. Condensate Stripper System (ID No. G0210, 40CFR60, Subpart BB) consisting of the Condensate Stripper (ID No. 02-PU-028) and associated Stripper FeedTank (ID No. 07-TK-011).**

This system was installed in May, 1992 and is therefore subject to NSPS, Subpart BB. Stripper Offgases (SOG) are collected by the closed NCG Collection System (ID No. \_\_\_\_ ) for burning in the Lime Kiln (IDNo. G0936) or the No. 1 Power Boiler (ID No. G1149). Stripped condensates are collected via closed collection systems (ID Nos. \_\_\_\_ ) and sent to the Biological Wastewater Treatment Facility (ID No. G1669).

**1. Applicable Regulatory Requirements**

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.

<b>Regulated Pollutant</b>	<b>Limits/Standards</b>	<b>Applicable Regulation</b>
total reduced sulfur (TRS)	5 ppm measured as hydrogen sulfide on a dry gas basis.	15A 2D .0524 40CFR60, Subpart BB
Toxic Air Pollutants	State Enforcable Only (See Subsection 2.3.A.)	15A NCAC 2D .1100
HAP	(See Subsection 2.2.A.)	15A NCAC 2D .1111 (40 CFR Part 63 Subpart S)

**a. 15A 2D .0524, 40CFR60, Subpart BB: NEW SOURCE PERFORMANCE STANDARDS, STANDARDS OF PERFORMANCE FOR KRAFT PULP MILLS**

As the gaseous emissions from the condensate stripper system are not emitted directly to the atmosphere, but are sent via closed system to the Lime Kiln or No. 1 Power Boiler for burning as per 15A 2D .1111 (see MACT), a CEMS for opacity is not required. It is assumed that the burning required for the MACT will result in compliance with the NSPS, Subpart BB TRS emission limit.

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

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

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

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

**D. Brownstock Washing (ID No. G0314), including brownstock washers (ID No. \_\_\_\_ ) and**

**brownstock filtrate foam tower (ID No. \_\_\_\_)**

**1. Applicable Regulatory Requirements**

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.

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

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

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

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

HAP emissions from these sources are subject to the Pulp and Paper MACT(40CFR63, Subpart S) (See MACT). These sources are subject to Phase II of the Pulp and Paper MACT. They are considered High Volume, Low Concentration (HVLC) sources whose HAP emissions must be controlled by October 16, 2006.

**E. Evaporator Group (ID No. G0719) consisting of the B and C Line multiple effect black liquor evaporators (ID No. G0716) and associated condensers and hot wells. Foul gases are collected by the closed NCG Collection System (ID No.\_\_\_\_) for incineration in Lime Kiln (IDNo. G0936) or No. 1 Power Boiler (IDNo. G1149). Foul condensates are collected via closed collection systems (ID Nos. \_\_\_\_ ) and sent to the biological Wastewater Treatment Facility (IDNo. G1669).**

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

<b>Regulated Pollutant</b>	<b>Limits/Standards</b>	<b>Applicable Regulation</b>
TRS	5 ppm measured as hydrogen sulfide on a dry gas basis. Limitation is an average of contiguous twelve hour time periods.	15A NCAC 2D .0528
Toxic Air Pollutants	State Enforcable Only (See Subsection 2.3.A.)	15A NCAC 2D .1100
HAP	(See Subsection 2.2.A.)	15A NCAC 2D .1111 (40CFR63, Subpart S)

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

TRS emissions shall not exceed 5 ppm from any multiple effect evaporator system. TRS emissions are collected in a closed system and burned in either the Lime Kiln or No. 1 Power Boiler along with other HAP emissions per 40CFR63, Subpart S. There are no monitoring, recordkeeping or reporting requirements for this lation. It is assumed that maintaining the closed collection system and HAP emission burning required by 40CFR63, Subpart S (See MACT) will result in compliance with 2D.0528 for these sources.

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

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

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

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

**F. Evaporator Area, Other Units (ID No. G0720) including Heavy Black Liquor Storage Tanks (ID Nos. \_\_\_\_), 50% Black Liquor Storage Tanks (ID Nos. \_\_\_\_); and Weak Black Liquor Storage Tanks (ID Nos. \_\_\_\_)**

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

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

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

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

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

HAP emissions from weak black liquor tanks are HVLC sources and are subject to the Pulp and Paper MACT(40CFR63, Subpart S) (See MACT).

**G. Black liquor oxidation system ( \_ pounds per hour black liquor solids feed rate, ID No. G0821) equipped with a cyclone ( \_ inches in diameter, ID No. \_\_\_\_\_)**

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

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

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

This source was listed as a specific source of ToxicAir Pollutants for which a compliance modeling demonstration was made(see TOXICS).

**H. No. 6 recovery furnace (62,500 pounds per hour maximum black liquor solids firing rate and \_ million Btu per hour maximum heat input rate from No. 6 fuel oil; ID No. G0825) equipped with one 2-chamber, 6-field electrostatic precipitator (nominal \_\_ square feet of collection plate area; wet-bottom design; ID No. 08-CD-004-001)**

This unit was built in 1957. Recovery rating (from TV application) is 635 tons per day or 26.4 tons per hour ADP. As the unit was built before July 1, 1971, the 35 percent opacity limit in 2D

.0508 does not apply.

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
particulate	3.0 lbs. per ton of air dried pulp	15A NCAC 2D .0508
sulfur dioxide	2.3 lbs. per million Btu heat input	15A NCAC 2D .0516
visible emissions	40 per cent opacity	15A NCAC 2D .0521
total reduced sulfur	5 ppm measured as hydrogen sulfide on a dry gas basis, corrected to 8% oxygen by volume. Limitation is an average of contiguous twelve hour time periods	15A NCAC 2D .0528
Toxic Air Pollutants	State Enforcable Only (See Toxics)	15A NCAC 2D .1100
HAP	(See MACT)	15A NCAC 2D .1111 (40CFR63, Subpart MM)

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

1. Emissions of particulate matter from this source shall not exceed an allowable emission rate of 3.0 lbs. per equivalent ton of air dried pulp [15A NCAC 2D .0508.a.1.]
2. PM emissions are controlled by the electrostatic precipitator. Allowable PM emission rate = 79.4 lbs. per hr. PM emission rate determined by source test = 15.5 lbs. per hour. Unit should operate in compliance with 2D .0508. No monitoring required.

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

1. 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]
2. Heat input rate from black liquor solids = 62,500 lbs/hr x 6,200 Btu/lb BLS = 387.5 million Btu/hr  
 Allowable SO2 emission rate = 891.3 lbs. per hour (when firing BLS only)  
 Highest SO2 emission rate determined by source test (per TV application) = 101 lbs. per hour  
 Unit should operate in compliance with 2D.0516 while firing BLS. No monitoring required.  
 Monitoring of sulfur content of No. 6 fuel oil required to demonstrate compliance with 2D .0516 while firing No. 6 fuel oil.

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

1. Visible emissions from the No. 6 Recovery Furnace (**ID No. G0825**) shall not be more than 35 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 40 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 90 percent opacity. [15A NCAC 2D .0521(c)]

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

2. 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 sources 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 the source in the first 30 days following the effective date of the permit. If visible emissions from this source are observed to be above normal, the Permittee shall either: (a) be deemed to be in noncompliance with 15A NCAC 2D .0521 or (b) demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 2D .0501(c)(8) is below the limit given in Section 2.1. H.c. 1. above. If the demonstration in (b) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0521.

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

This unit is an old design recovery furnace (per TV application). The allowable TRS emission rate is therefore 20 ppm.

1. TRS emissions from the No. 6 Recovery Furnace (**ID No. G0825**) shall not be more than 20 ppm measured as hydrogen sulfide on a dry gas basis, corrected to 8% oxygen by volume. Limitation is an average of contiguous twelve hour time periods.(15A 2D .0528.c.1.)

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

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

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

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

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

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

**I. No. 6 smelt dissolving tank ( \_ lbs. per hour black liquor solids feed rate, ID No. G0826) equipped with an orifice-type wet scrubber (minimum 8.0 inches of water pressure drop and 14 gallons per minute minimum liquid injection rate, ID No. 08-CD-005-001).**

Unit was built in 1957. Maximum design capacity of associated No. 6 recovery furnace (ID No. G0825) is 62,500 lbs. BLS per hour.

**No. 7 smelt dissolving tank ( \_ lbs. per hour black liquor solids feed rate, ID No. G0828) equipped with an orifice-type wet scrubber (minimum 8.0 inches of water pressure drop and 14 gallons per minute minimum liquid injection rate, ID No. 08-CD-013-001).**

Unit was built in 1975. BACT limit of 0.2 lbs./ton BLS fired in No. 7 Recovery Furnace (ID No. G0827) [BACT operational firing limit of PSD modified No. 7 recovery furnace is 115,400 lbs. BLS/hr or 57.7 tons.] Allowable PM emission rate = 11.54 lbs./hr . Unit was source tested for PM and found to be in compliance with BACT limit (actual = 4.8 lb/hr).

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
particulate (ID No. G0826)	0.6 lbs. per ton of air dried pulp	15A NCAC 2D .0508
visible emissions (ID No. G0826)	40 percent opacity	15A NCAC 2D .0521
visible emissions (ID No. G0828)	20 percent opacity	15A NCAC 2D .0521
total reduced sulfur	0.032 lbs. per ton black liquor solids (dry weight)	15A NCAC 2D .0528
particulate (ID No. G0828)	0.2 lb/ton of BLS fired in No. 7 Recovery Furnace (ID No. G0827)	15A NCAC 2D .0530
Toxic Air Pollutants	State Enforcable Only (See Toxics)	15A NCAC 2D .1100
HAP	(See MACT)	15A NCAC 2D .1111 (40CFR63,Subpart MM)

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

1. Emissions of particulate matter from the No. 6 smelt dissolving tank (ID No. G0826) shall not exceed an allowable emission rate of 0.6 lbs. per equivalent ton of air dried pulp [15A NCAC 2D .0508.a.1.]

**Monitoring**

2. PM emissions are controlled by the orifice-type wet scrubber. Allowable PM emission rate = 15.9 lbs.per hr. Unit should operate in compliance with 2D .0508.
3. The Permittee shall install, operate, and maintain a pressure drop indicator and a liquid flowmeter on the scrubber. The pressure drop across the scrubber shall be maintained at no less than 8 inches of water. The liquid flow rate into the scrubber shall be maintained at no less than 14 gallons per minute. The Permittee shall observe and record the pressure drop and liquid flow at least once daily in a logbook (written or electronic format) maintained on-site and made available to an authorized representative upon request.

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

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

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

- a.i. Visible emissions from the No. 6 smelt dissolving tank (**ID Nos. G0826**) shall not be more than 40percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 40 percent of more than once in any hour and not more than four times in any 24-hour period. In no event shall the six- minute average exceed 90 percent opacity. [15A NCAC 2D .0521(c)]
- ii. Visible emissions from the No. 7 smelt dissolving tank (**ID Nos. G0828**) shall not be more than 20percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent of more than once in any hour and not more than four times in any 24-hour period. In no event shall the six- minute average exceed 87 percent opacity. [15A NCAC 2D .0521(d)]

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

b. To assure compliance, once a week the Permittee shall observe the emission points of this source for any visible emissions above normal. The Permittee shall establish “normal” for the source in the first 30 days following the effective date of the permit. If visible emissions from this source are observed to be above normal, the Permittee shall either: (a) be deemed to be in noncompliance with 15A NCAC 2D .0521 or (b) demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 2D .0501(c)(8) is below the limit given in Section 2.1.I.2. a. above. If the demonstration in (b) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0521.

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

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

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

a. TRS emissions from the No. 6 smelt dissolving tank (**ID No. G0826**) or the No. 7 smelt dissolving tank (**ID No. G0828**) shall not be more than 0.032 lbs. per ton black liquor solids (dry weight).

**4. 15A NCAC 2D .0530: PREVENTION OF SIGNIFICANT DETERIORATION**

a. Emissions of particulate matter from the No. 7 smelt dissolving tank (**ID No. G0828**) shall not exceed 0.2 lbs. per ton of black liquor solids (BLS) fired in the No. 7 recovery furnace (**ID No. G0827**).

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

b. Particulate matter emissions from the No. 7 smelt dissolving tank (**ID No. G0828**) shall be controlled by an orifice- type wet scrubber (ID No. 08-CD-013-001). To assure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer’s inspection and maintenance recommendations, or if there is no manufacturer’s inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:

- i. a monthly external visual inspection of the system ductwork and material collection unit for leaks; and
- ii. an annual (for each 12 month period from initial inspection) internal inspection of the wet scrubber’s structural integrity.
- iii. inspection of the wet scrubber spray nozzles to detect clogging or corrosion damage of nozzles and perform maintenance and repair when necessary to assure proper operation of the scrubber;
- iv. inspection of packing material to assure proper packing depth and to check for clogging; and
- v. inspection, cleaning, and calibration of all instrumentation associated with the wet scrubber.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530 if the ductwork and wet scrubber are not inspected and maintained.

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

- i. the date and time of each recorded action;
- ii. the results of each inspection;
- iii. the results of any maintenance performed on the wet scrubber; and
- iv. any variance from manufacturer’s recommendations, if any, and corrections made.

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

maintained.

e. The Permittee shall install, operate, and maintain a pressure drop indicator and a liquid flowmeter on the scrubber. The pressure drop across the scrubber shall be maintained at no less than 8 inches of water. The liquid flow rate into the scrubber shall be maintained at no less than 14 gallons per minute. The Permittee shall observe and record the pressure drop and liquid flow at least once daily in a logbook (written or electronic format) maintained on-site and made available to an authorized representative upon request. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530 if the pressure drop and liquid flow rate is not maintained within the prescribed limits.

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

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

**J. Black liquor / No. 6 fuel oil/ used No. 4 fuel oil - fired No. 7 recovery furnace (115,400 pounds per hour maximum black liquor solids firing rate and 504 million Btu per hour maximum heat input rate from fuel oil; ID No. G0827) equipped with a single chamber, 6-field electrostatic precipitator (nominal 141, 912 square feet of collection plate area; dry-bottom design; ID No. 08-CD-004-001). [PSD; NSPS (Subpart BB)]**

Unit was constructed in 1975 and was modified in 1998, receiving a PSD permit. As a result of the PSD modification, it became subject to NSPS, Subpart BB when firing black liquor solids (BLS) only for particulate emissions, opacity and TRS emissions. BACT limits when firing black liquor solids (BLS) only were placed on particulate, sulfur dioxide, nitrogen oxides, carbon monoxide, VOC, and TRS emissions. Installation of CEMS for sulfur dioxide, nitrogen oxides, opacity, oxygen, and TRS were required. PSD operational limits of 2.77 million lbs. BLS per 24 hours and 744,000 gallons of No. 6/ used No. 4 fuel oil-fired per consecutive 12 month period were also added, as were annual test requirements when firing black liquor solids (BLS) only for particulate, carbon monoxide, and VOC.

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
particulate	(see BACT limit - 15A NCAC 2D .0530)	15A NCAC 2D .0524 (40 CFR 60, Subpart BB)
Total Reduced Sulfur (TRS)	(see BACT limit - 15A NCAC 2D .0530)	15A NCAC 2D .0524 (40 CFR Part 60, Subpart BB)
visible emissions	35 percent opacity	15A NCAC 2D .0524 (40 CFR Part 60, Subpart BB)
particulate (including PM <sub>10</sub> )	0.021gr / dscf , corrected to 8 percent oxygen.	15A NCAC 2D .0530

sulfur dioxide	75 ppm, , corrected to 8 percent oxygen (annual rolling average) 110 ppm, , corrected to 8 percent oxygen (3-hour average) 571tons per consecutive 12 month period	15A NCAC 2D .0530
nitrogen oxides	110 ppm, , corrected to 8 percent oxygen (30 day rolling average) 626 tons per consecutive 12 month period	15A NCAC 2D .0530
carbon monoxide	300 ppm, corrected to 8 percent oxygen (8-hour rolling average) 1042 tons per consecutive 12 month period	15A NCAC 2D .0530
volatile organic compounds (VOC)	50 ppm, corrected to 8 percent oxygen (24-hour rolling average) 95 tons per consecutive 12 month period	15A NCAC 2D .0530
total reduced sulfur (TRS)	5 ppm, corrected to 8 percent oxygen (12-hour average) 21 tons per consecutive 12 month period	15A NCAC 2D .0530
Toxic Air Pollutants	State Enforcable Only (SeeToxics)	15A NCAC 2D .1100
HAP	(See MACT)	15A NCAC 2D .1111 (40CFR63,Subpart MM)

**1. 15A NCAC 2D .0524: NSPS 40 CFR 60 SUBPART BB**

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

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

- b.i. Particulate emissions (see 15A NCAC 2D .0530)
- ii. Visible emissions from this source shall not be more than 35 percent opacity when averaged over a six-minute period.
- iii. TRS emissions (see 15A NCAC 2D .0530).

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

a. For compliance with 15A NCAC 2D .0530 "PREVENTION OF SIGNIFICANT DETERIORATION", the following BEST AVAILABLE CONTROL TECHNOLOGY (BACT) limits apply:

PSD Affected Unit	Pollutant	BACT Limit (when firing BLS only)
No. 7 Recovery Furnace	Particulate (including PM <sub>10</sub> )	0.021 gr / dscf@8%O <sub>2</sub> 144 t/yr

	Sulfur Dioxide	75 ppm@8%O <sub>2</sub> annual rolling average 110 ppm@8%O <sub>2</sub> 3-hour average 571 t/yr
	Nitrogen Oxides	110 ppm@8%O <sub>2</sub> 30-day rolling average 626 t/yr
	Carbon Monoxide	300 ppm@8%O <sub>2</sub> 8-hour rolling average 1042 t/yr
	Volatile Organic Compounds	50 ppm@8%O <sub>2</sub> 24-hour rolling average 95 t/yr
	Total Reduced Sulfur	5 ppm@8%O <sub>2</sub> 12-hour average 21 t/yr

b. **CONTINUOUS MONITORING REQUIREMENT** - For the No. 7 Recovery Furnace, continuous emissions monitors for sulfur dioxide, nitrogen oxides, opacity, oxygen, and total reduced sulfur emissions shall be installed, calibrated, maintained, tested, and operated in accordance with 40 CFR Part 60, Appendix B, Performance Specifications and Appendix F, Quality Assurance Procedures. This includes submittal to and prior approval by the DAQ Technical Services Branch of the respective CEMS monitoring protocol.

c. The CEMS shall be maintained to ensure data availability in accordance with the EPA Region IV CEM Enforcement Plan (CEP) or any guidelines succeeding the Region IV CEP. During periods when the certified monitor is down or "out-of-control," as defined in 40 CFR Part 60, Appendix F, the owner or operator shall substitute emission data using the monthly average emission rate for the period in which the monitor is not collecting quality assured data.

d. **OPERATIONAL LIMITATIONS** - In order to comply with the BACT limits above, the facility is limited to the following operational conditions:

- i. The amount of black liquor solids fired in the No. 7 Recovery Furnace shall not exceed 2.77 million pounds as fired BLS per 24 hours.
- ii. The amount of No. 6/used No. 4 fuel oil fired in the No. 7 Recovery Furnace shall not exceed 744,000 gallons per consecutive 12 month period.

e. **REPORTING REQUIREMENTS** - To ensure compliance with the BACT limits above, within thirty (30) days after each calendar year quarter, the following shall be reported to the Regional Supervisor, Division of Air Quality:

- i. the maximum monthly SO<sub>2</sub>, NO<sub>x</sub>, and TRS concentrations (ppm) at each applicable averaging time for each month of the preceding twelve month period.
- ii. Calculation of the consecutive twelve (12) month periods shall begin upon start-up of the PSD upgraded No. 7 Recovery Furnace.

f. **PERFORMANCE TESTING** - To ensure the enforceability of the BACT limits above, the following performance tests shall be conducted:

The Permittee shall demonstrate compliance with the emission limit(s) by testing the PSD upgraded No. 7 Recovery Furnace when firing BLS only annually for particulate, carbon monoxide and VOC emissions using EPA Methods 5, 10/10B and 25/25A/25B, respectively (or Division approved method) at a rate of operation representative of normal operation of the unit. The test results and documentation of records showing what constitutes normal operation must be submitted to the Regional Supervisor, Division of Air Quality, in accordance with the approved procedures of the Environmental Management Commission by no later than thirty (30) days after each calendar year. This Permit may be revoked, with proper notice to the Permittee, if the results of the test(s) indicate that the facility does not meet applicable emission limitations. The Method 1 requirements of 40 CFR 60, Appendix A, "Sample and Velocity Traverses for Stationary Sources," should be considered during any construction and be met for emissions testing purposes. All associated testing costs are the responsibility of the Permittee.

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

This source was listed as a specific source of ToxicAir Pollutants for which a compliance modeling demonstration was made(see TOXICS).

**4. 15A 2D .1111: 40CFR63, Subpart MM**

HAP emissions from the No. 7 recovery furnace are subject to the Pulp and Paper MACT(40CFR63, Subpart MM) (See MACT).

**K. Main Saltcake Silo (12.0 tons per hour capacity, ID No. G0831) and associated transfer cyclone controlled by a bagfilter (578 square feet of filter area, ID No. 08-CD-003-001) and No. 7 Recovery Saltcake Silo (12.0 tons per hour capacity, ID No. G0832) controlled by a bagfilter (17 square feet of filter area, ID No. 08-CD-014-001).**

Main saltcake silo was replaced in 1988. No. 7 Saltcake silo was replaced in 1988. Therefore, 20 percent opacity limit applies.

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

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

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

- (1) The allowable particulate emission limit is calculated by the following equation:

$$E = 4.10P^{0.67}$$

where E = allowable emission rate for particulate matter in pounds per hour, and

P = process weight in tons per hour

The maximum process input rates into these units (12.0 tons per hour, each) given in the application, is used to calculate the respective allowable emission rates of 21.7 pounds per hour. Based on source test data, the applicant estimates PM emissions to be 0.71 pounds per hour, respectively. Compliance with the allowable emission limit for the maximum process rates is indicated. Stack testing is not required to ensure compliance

with this regulation. However the test method condition will be put in the permit in the event that DAQ or EPA finds that due to improper operation violations, etc, source testing is required.

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

- c. Particulate matter emissions from the saltcake silos (**ID Nos. G0831 and G0832**) shall be controlled by the bagfilters. To assure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there is no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:
  - i. a monthly visual inspection of the system ductwork and material collection unit for leaks; and
  - ii. an annual (for each 12 month period following the initial inspection) internal inspection of the bagfilters' structural integrity.The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if the ductwork and bagfilters are not inspected and maintained.
- d. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
  - i. the date and time of each recorded action;
  - ii. the results of each inspection;
  - iii. the results of any maintenance performed on the bagfilters; and
  - iv. any variance from manufacturer's recommendations, if any, and corrections made.The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if these records are not maintained.

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

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

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

- a. Visible emissions from these sources (**ID No(s). G0831 and G0832**) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 2D .0521 (d)]

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

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

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

- c. To assure compliance, once a week the Permittee shall observe the emission points of this source for any visible emissions above normal. The Permittee shall establish "normal" for the source in the first 30 days following the effective date of the permit. If visible emissions from this source are observed to be above normal, the Permittee shall either: (a) be deemed to be in noncompliance with 15A NCAC 2D .0521 or (b) demonstrate that the percent opacity from the emission points of the emission source

in accordance with 15A NCAC 2D .0501(c)(8) is below the limit given in Section 2.1.K.2. a. above. If the demonstration in (b) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0521.

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

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

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

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

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

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

**L. No. 6 fuel oil / used No. 4 fuel oil - fired Lime Kiln (85.0 million Btu per hour maximum heat input, ID No. G0936) equipped with a variable throat venturi -type wet scrubber (minimum 20.0 inches of water pressure drop and 620 gallons of water per minute minimum liquid injection rate, ID No. 09-CD-004-001). Lime kiln is the primary burner for collected NCG foul gases and SOG.**

Unit was built in 1961. The kiln capacity (per the TV application) is 240 tons per day of CaO or 65 equivalent tons per hour of air dried pulp.

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
particulate	0.5 lbs. per ton of air-dried pulp	15A NCAC 2D .0508
sulfur dioxide	2.3 lbs. per million Btu heat input	15A NCAC 2D .0516
visible emissions	40 per cent	15A NCAC 2D .0521
total reduced sulfur	20 ppm measured as hydrogen sulfide on a dry gas basis, corrected to 10% oxygen by volume. Limitation is an average of contiguous 12 hour periods	15A NCAC 2D .0528
Toxic Air Pollutants	State Enforcable Only (See Toxics)	15A NCAC 2D .1100
HAP	(See MACT)	15A NCAC 2D .1111 (40CFR63, Subpart MM)

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

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

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

b. Particulate matter emissions from the Lime Kiln (**ID No. G0936**) shall be controlled by the variable throat venturi -type wet scrubber (ID No.09-CD-004-001) with a water scrubbing medium To assure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there is no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement must include the following:

- i. a monthly external visual inspection of the system ductwork and material collection units for leaks; and
- ii. an annual (for each 12 month period from initial inspection) internal inspection of the wet scrubber's ' structural integrity.
- iii. inspection of the wet scrubber spray nozzles to detect clogging or corrosion damage of nozzles and perform maintenance and repair when necessary to assure proper operation of the scrubber;
- iv. inspection of packing material to assure proper packing depth and to check for clogging; and
- v. inspection, cleaning, and calibration of all instrumentation associated with the wet scrubber.

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

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

- i. the date and time of each recorded action;
- ii. the results of each inspection;
- iii. the results of any maintenance performed on the wet scrubber; and
- iv. any variance from manufacturer's recommendations, if any, and corrections made.

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

d. The Permittee shall install, operate, and maintain a pressure drop indicator and a liquid flowmeter on the scrubber. The pressure drop across the scrubber shall be maintained at no less than 20.0 inches of water. The liquid flow rate into the scrubber shall be maintained at no less than 620 gallons per minute. The Permittee shall observe and record the pressure drop and liquid flow at least once daily in a logbook (written or electronic format) maintained on-site and made available to an authorized representative upon request.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0508 if the pressure drop and liquid flow rate is not maintained within the prescribed limits.

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

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

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

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

**Testing** [15A NCAC 2D .0501(c)(4) ]

- b. Under the provisions of NCGS 143-215.108, the Permittee shall demonstrate compliance with the emission limit(s) above by testing the Lime Kiln (ID No. **G0936**) for sulfur dioxide emissions when burning NCG gases and SOG in accordance with a testing protocol approved by the DAQ. Details of the emissions testing and reporting requirements can be found in Section 3 - General Condition JJ. The testing shall be performed annually thereafter. If the results of the testing demonstrate results at less than 80 percent of the limit above, the testing frequency may be reduced to once per five years. If the results of this or any test is above the limit given in Section 2.1.M.2. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516. If the results of this test are above the limit given in Section 2.1.L. 2. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516.

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

- c. The maximum sulfur content of any No. 6 fuel oil received and burned in the Lime Kiln shall not exceed 2.1 percent by weight. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516 if the sulfur content of the fuel oil exceeds this limit. [15A NCAC 2Q .0508(bb)]
- d. To assure compliance, the Permittee shall monitor the sulfur content of the No. 6 fuel oil by using fuel oil supplier certification per shipment received. The results of the fuel oil supplier certifications shall be recorded in a logbook (written or electronic format) on a quarterly basis and include the following information:
- i. the name of the fuel oil supplier;
  - ii. the maximum sulfur content of the fuel oil received during the quarter;
  - iii. the method used to determine the maximum sulfur content of the fuel oil; and
  - iv. a certified statement signed by the responsible official that the records of fuel oil supplier certification submitted represent all of the No. 6 fuel oil fired during the period.

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

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

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

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

- a. Visible emissions from the Lime Kiln (**ID No. G0936**) shall not be more than 40percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 40 percent or more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 90 percent opacity. [15A NCAC 2D .0521(c)]

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

- b. To assure compliance, once a week the Permittee shall observe the emission points of this source for any visible emissions above normal. The Permittee shall establish "normal" for the source in the first 30 days following the effective date of the permit. If visible emissions from this source are observed to be above normal, the Permittee shall either: (a) be deemed to be in noncompliance with 15A NCAC 2D .0521 or (b) demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 2D .0501(c)(8) is below the limit given in Section 2.1.L.3. a. above. If the demonstration in (b) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D

.0521.

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

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

**M. Lime Kiln Area, Other Units (ID No. G0937) including Lime Kiln Pre-coat Filter (ID No. \_\_) and associated vacuum pump, Lime MudWasher (ID No. \_\_\_\_), and Lime Mud Storage (ID No. \_\_\_\_)**

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

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

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

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

**N. Reausticizing Units, including Primary Causticizer (ID No. \_\_), Dregs Mixer Tank (ID No. \_\_), Green Liquor Clarifiers (ID Nos. \_\_\_\_), and Green Liquor Storage (ID No. \_\_)**

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

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

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

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

**O. Four (4) No. 2 fuel oil-fired temporary boilers (96.0 million Btu per hour maximum heat input rate each, ID Nos. G1144, G1145, G1146, and G1147)(NSPS, Subpart Dc)**

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
particulate	0.17 lbs. per million Btu heat input rate	15A NCAC 2D .0503
sulfur dioxide	0.5 percent Sulfur by weight in fuel oil	15A NCAC 2D .0524 40CFR60, Subpart Dc
visible emissions	20 percent opacity	15A NCAC 2D .0524 40CFR60, Subpart Dc

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

- a. Emissions of particulate matter from the combustion of No. 2 fuel oil, that are discharged from this source into the atmosphere shall not exceed pounds per million Btu heat input. [15A NCAC 2D .0503(a)]
- b. No monitoring/recordkeeping/reporting is required for particulate emissions from the firing of No. 2 fuel oil in this source.

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

- a. 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." [15A NCAC 2D .0524]

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

- b. The maximum sulfur content of any fuel oil received and burned in the boiler shall not exceed 0.5 percent by weight.
- c. Visible emissions from this source shall not be more than 20 percent opacity when averaged over a six-minute period, except for one six-minute period per hour of not more than 27 percent opacity.

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

- d. Sulfur dioxide emissions shall be monitored as follows:
  - i. 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** [15A NCAC 2Q .0508(f)]

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

- f. 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:
  - i. a summary report , acceptable to the Regional Air Quality Supervisor, of the sulfur content of the distillate 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:
    - (A) Distillate Oil - Fuel supplier certification shall include the following information:
      - (1) the name of the oil supplier;
      - (2) 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
      - (3) 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.

- ii. All instances of deviations from the requirements of this permit must be clearly identified.

**P. Coal / woodwaste/ No. 6 fuel oil / used No. 4 fuel oil-fired No. 1 Power Boiler (550.0 million Btu per hour maximum permitted heat input rate ID No. G1149) equipped with two (2) \_\_-throat venturi-type wet scrubbers (1500 gallons of water minimum injection rate each, ID Nos. 11-CD-001-001 and 11-CD-001-002). No. 1 Power Boiler is the backup combustor for collected NCG foul gases and SOG gases.**

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
particulate	0.19 lbs. per million Btu heat input (when firing coal/fuel oil only)	15A NCAC 2D .0503
particulate	0.29 lbs. per million Btu heat input (when firing woodwaste)	15A NCAC 2D .0504
sulfur dioxide	2.3 lbs. per million Btu heat input	15A NCAC 2D .0516
nitrogen oxides	0.8 lbs. per million Btu heat input (when firing fuel oil only)	15A NCAC 2D .0519
nitrogen oxides	1.8 lbs. per million Btu heat input (when firing coal only)	15A NCAC 2D .0519
visible emissions	40 percent opacity	15A NCAC 2D .0521
Toxic Air Pollutants	(See Subsection 2.3.A.)	15A NCAC 2D .1100
HAP	(See Subsection 2.2.A.)	15A NCAC 2D .1111
sulfur dioxide	less than 35 tons per consecutive 12 month period while burning NCG and SOG foul gases	15A NCAC 2Q.0317 Avoidance of 2D .0530
nitrogen oxides	(See Subsection 2.1.Q.5)	15A NCAC 2Q .1417

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

- a. Emissions of particulate matter from the combustion of coal or fuel oil, that are discharged from this source into the atmosphere, shall not exceed 0.19 pounds per million Btu heat input. [15A NCAC 2D .0503(a)]

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

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

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

- a. Emissions of particulate matter from this source shall not exceed an allowable emission rate as

calculated by the following equation: [15A NCAC 2D .0504]

$$E = \frac{(\text{XX})(Q_w) + (\text{XX})(Q_f)}{(Q_w + Q_f)} \text{ pounds per million Btu}$$

where:  $Q_w$  = actual wood heat input rate in Btu/hr

$Q_f$  = actual coal/fuel oil heat input rate in Btu/hr

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

- b. If emissions testing is required, the testing shall be performed in accordance with and General Condition JJ. If the results of this test are above the limit given in Section 2.1 P. 2. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0504.
- c. Under the provisions of NCGS 143-215.108, the Permittee shall demonstrate compliance with the emission limit(s) above by testing the boiler (**ID No. G1149**) for particulate matter while firing woodwaste and coal with a testing protocol approved by the DAQ. Details of the emissions testing and reporting requirements can be found in Section 3 - General Condition JJ. Testing shall be completed and the results submitted within one year of issuance of permit unless an alternate date is approved by the DAQ. If the results of this test are above the limit given in Section 2.1 Q. 2. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0504.

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

- d. Particulate matter emissions from the boiler shall be controlled by the \_ throat venturi-type scrubbers with a water scrubbing medium. To assure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there is no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include:
  - i. inspection of spray nozzles to detect clogging or corrosion damage of nozzles and perform maintenance and repair when necessary to assure proper operation of the scrubbers;
  - ii. inspection of packing material to assure proper packing depth and to check for clogging; and
  - iii. inspection, cleaning, and calibration of all associated instrumentation.The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0504 if the venturi-type wet scrubbers are not inspected and maintained.
- e. The Permittee shall install, operate, and maintain a pressure drop indicators and liquid flowmeter on the scrubbers. The pressure drop across each scrubber shall be maintained at no less than 8.0 inches of water. The liquid flow rate into each scrubber shall be no less than 1,500 gallons per minute. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0504 if the pressure drops and liquid flow rates are not maintained within the prescribed limits.

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

- f. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
  - i. the date and time of each recorded action;
  - ii. the pressure drop and the liquid flow rate of each scrubber once daily at a minimum;
  - iii. the results of each inspection;
  - iv. the results of any maintenance performed on the scrubber; and
  - v. any variance from manufacturer's recommendations, if any, and corrections made.The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0504 if these records are not maintained.

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

- g. Within 30 days of a request from the DAQ, the Permittee shall submit a report of any maintenance

performed on the scrubber system.

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

**3. 15A NCAC 2D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES**

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

**Testing** [15A NCAC 2D .0501(c)(4) ]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .0501(c)(4) and General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1.P. 3. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516.

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

- c. No monitoring/recordkeeping is required for sulfur dioxide emissions from wood for this source.
- d. To assure compliance, the Permittee shall monitor the sulfur and heat content of all the coal burned during the period by using coal supplier certification per total shipment received. The coal supplier certification shall be recorded in a logbook (written or electronic format) per total shipment and include the following information:
  - i. the name of the coal supplier; and
  - ii. a statement verifying that the methods used to determine the maximum sulfur content of the coal was in accordance with the following:
    - (A) sampling - ASTM Method D 2234;
    - (B) preparation - ASTM Method D 2013;
    - (C) gross calorific value (Btu) - ASTM Method D 5865;
    - (D) moisture content - ASTM Method D 3173; and
    - (E) sulfur content - ASTM Method D 3177 or ASTM Method D 4239.

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

- e. The Permittee is required to calculate and record in a logbook (written or electronic format) the pounds of sulfur dioxide per million Btu heat content of the coal per total shipment taking into account any controls operated during the same period. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516 if these records are not kept or if the results show an exceedance of the limit given in Section 2.1.P. 3. a. above.
- f. The maximum sulfur content of any No. 4 or No. 6 fuel oil received and burned in the boiler shall not exceed 2.1 percent by weight. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516 if the sulfur content of the fuel oil exceeds this limit.
- g. To assure compliance, the Permittee shall monitor the sulfur content of the No. 6 fuel oil by using fuel oil supplier certification per shipment received. The results of the fuel oil supplier certifications shall be recorded in a logbook (written or electronic format) on a quarterly basis and include the following information:
  - i. the name of the fuel oil supplier;
  - ii. the maximum sulfur content of the fuel oil received during the quarter;
  - iii. the method used to determine the maximum sulfur content of the fuel oil; and
  - iv. a certified statement signed by the responsible official that the records of fuel oil supplier certification

submitted represent all of the No. 6 fuel oil fired during the period.  
The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516 if the sulfur content of the oil is not monitored and recorded.

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

- h. The Permittee shall submit a summary report of the coal supplier certifications and calculations of the pounds of sulfur dioxide per million Btu heat content of the coal per total shipment post marked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.
- i. The Permittee shall submit a summary report of the fuel oil supplier certifications postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

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

- a. Emissions of nitrogen oxides from this source when burning No. 4 equivalent used oil, No. 6 fuel oil and coal and shall be calculated by the following equation [15A NCAC 2D .0519]:

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

where: E = emission limit for combined burning of oil and coal in pounds per million Btu heat input

Ec = 1.8 pounds per million Btu heat input for coal only

Eo = 0.8 pounds per million Btu heat input for oil

Qc = coal heat input in Btu per hour

Qo = oil and natural gas heat input in Btu per hour

Qt = Qc + Qo

**Testing** [15A NCAC 2D .0501(c)(7) ]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .0501(c)(7) and General Condition JJ. If the results of this test are above the limit given in Section 2.1 B. 4.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0519.

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

- c. No monitoring/recordkeeping/reporting is required from the firing of natural gas, No. 4 equivalent used oil, No. 6 fuel oil or coal in this source for this regulation.

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

- a. Visible emissions from this boiler (**ID No. G1149**) shall not be more than 40 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 40 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 90 percent opacity. [15A NCAC 2D .0521(c)]

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

- b. To assure compliance, once a 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 sources 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 the source in the first 30 days following the effective date of the permit. If visible emissions from this source are observed to be above normal, the Permittee shall either: (a) be deemed to be in noncompliance with 15A NCAC 2D .0521 or (b) demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 2D .0501(c)(8) is below the limit given in Section 2.1. P.4. a. above. If the demonstration in (b) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0521.

**5. 15A NCAC 2Q. 0317: AVOIDANCE CONDITIONS for 15A NCAC 2D. 0530: PREVENTION OF SIGNIFICANT DETERIORATION**

- a. In order to avoid applicability of 15A NCAC 2D .0530 (g) for sulfur dioxide emissions from the Power Boiler (ID No. PB1) while burning TRS gases shall be less than 35 tons per consecutive twelve (12) month period.

The following restrictions shall apply:

- (i) the Permittee shall monitor and record total pulp production and scrubber water pH while burning TRS gases,
- (ii) the scrubber water pH shall be maintained between a pH level of 4 and 7,
- (iii) the following emission factors shall be used to calculate the uncontrolled SO<sub>2</sub> emission rate while burning TRS gases:
  - (A) 2.02 pounds of TRS per ton of pulp from the foul condensate stripper, and
  - (B) 3.19 pounds of TRS per ton of pulp from the NCG stream reduced to 1.12 pounds per ton of pulp when passing through the white liquor scrubber,
- (iv) the scrubber water pH measured during TRS burning shall be used to determine scrubber efficiency. Specifically, the following scrubber efficiencies shall be used for a pH range of 4 to 7, and efficiencies shall be interpolated in between the following values:

<u>Scrubber Water pH Level</u>	<u>Scrubber Removal Efficiency (%)</u>
pH = 4	54% removal
pH = 5	66% removal
pH = 6	80% removal
pH = 7	98% removal

- b. For compliance purposes, within thirty (30) days after each calendar year quarter, the following shall be reported to the Regional Supervisor, Division of Air Quality:
  - (i) the total pulp production per month, the scrubber water pH, and scrubber efficiency while burning TRS shall be calculated and reported each month. The total pulp production and the average scrubber water pH and average scrubber efficiency while burning TRS gases must be calculated for each of the twelve month periods over the previous fourteen (14) months,
  - (ii) the monthly sulfur dioxide emissions for the previous fourteen (14) months while burning TRS gases in the power boiler. The emissions must be calculated for each of the three twelve month periods over the previous fourteen months. The sulfur dioxide emissions shall be calculated using the emission factors in 12.(a)(iii), the scrubber efficiencies in 12.(a)(iv), and the pulp production while burning TRS gases in the

No. 1 power boiler,

- c. The Permittee shall keep each monthly record on file for a minimum of three (3) years.

**6. 15A NCAC 2Q .1417: EMISSION ALLOCATIONS FOR LARGE COMBUSTION SOURCES**

- a. To comply with 15A NCAC 2D .1417, the Permittee shall not exceed the following allocations of nitrogen oxide emissions during the May 31, 2004 through September 30, 2004 ozone season and the May 1st through September 30th ozone seasons thereafter, from the affected source:

Source	NO <sub>x</sub> Emission Allocations (tons/ozone season) 2004	NO <sub>x</sub> Emission Allocations (tons/ozone season) 2005	NO <sub>x</sub> Emission Allocations (tons/ozone season) 2006 and later
No. 1 Power Boiler	518	648	346

- b. For the No. 1 Power Boiler, a continuous emissions monitor for NO<sub>x</sub> shall be installed, calibrated, maintained, tested, and operated in accordance with 40 CFR Part 75, Subpart H, with such exceptions as may be allowed under 40CFR75, Subpart H or 40CFR96.

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

- c. 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..

**Q. Two (2) No. 2 fuel oil / No. 6 fuel oil-fired package boilers (185.0 Million Btu maximum heat input rate each, ID Nos. G1152 and G1153)**

Units were built in 1974. Allowable PM emission rate = 35.2 lb/hr each. Actual PM emission rate determined by source test = 28.1 lb/hr. Unit should operate in compliance with 2D .0503.

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
particulate	0.19 lbs. per million Btu heat input	15A NCAC 2D .0503
sulfur dioxide	2.3 lbs. per million Btu heat input	15A NCAC 2D .0516
visible emissions	20 percent opacity	15A NCAC 2D .0521
Toxic Air Pollutants	State Enforcable Only (See Toxics)	15A NCAC 2D .1100

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

- a. Emissions of particulate matter from the combustion of No.2 or No. 6 fuel oil, that are discharged from this source into the atmosphere, shall not exceed 0.19 pounds per million Btu heat input. [15A NCAC 2D .0503(a)]

**Monitoring/Recordkeeping/Reporting**

- b. No monitoring/recordkeeping/reporting is required for particulate emissions from the firing of No. 2 or No. 6 fuel oil in this source.

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

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

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

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

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

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

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

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

- a. Visible emissions from these sources (**ID No(s). G1135 and G1136**) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 2D .0521 (d)]

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

- b. To assure compliance, once a day the Permittee shall observe the emission points of these sources 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 sources 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 the source in the first 30 days following the effective date of the permit. If visible emissions from this source are observed to be above normal, the Permittee shall either: (a) be deemed to be in noncompliance with 15A NCAC 2D .0521 or (b) demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 2D .0501(c)(8) is below the limit given in Section 2.1 R.3. a. above. If the demonstration in (b) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0521.

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

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

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

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

**R. Paper Machine No. 3 (ID No. G1264) and Paper Machine No. 4 (ID No. G1265)**

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

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

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

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

**BIOLOGICAL WASTEWATER TREATMENT (Area 16)**

**S. \_\_\_\_\_**

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

Regulated Pollutant	Limits/Standards	Applicable Regulations
Toxic Air Pollutants	State Enforcable Only (See Toxics)	15A NCAC 2D .1100
HAP	(See MACT)	15A NCAC 2D .1111 (40 CFR Part 63 Subpart S)

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

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

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

HAP emissions from weak black liquor tanks are HVLC sources and are subject to the Pulp and Paper MACT (40CFR63, Subpart S) (See MACT).

**T. Turpentine Recovery System (ID No. G2073), including Turpentine Condensers, Heaters, Decanters, and Turpentine Storage.**

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

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

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

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

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

HAP emissions from weak black liquor tanks are HVLC sources and are subject to the Pulp and Paper MACT(40CFR63, Subpart S) (See MACT).

**W. Tall Oil Production Units (ID No. G2177), including Tall Oil Reactor (ID No. 21-PU-004), Nos. 1, 2, and 3 Decanters (ID Nos. 21-TK-005 thru 007), Lignin Layer Tank (ID No. 21-TK-008) and Resaponification Tank (ID No. 21-PU-009) controlled by packed tower-type wet scrubber ( \_\_\_ gallons per minute minimum caustic injection rate, ID No. 21-CD-004-001)**

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

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

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

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

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

HAP emissions from weak black liquor tanks are HVLC sources and are subject to the Pulp and Paper MACT(40CFR63, Subpart S) (See MACT).

**VIII. MACT Applicability and Requirements**

**A. 40CFR63, Subpart S - NATIONAL EMISSIONS STANDARD FOR HAZARDOUS AIR POLLUTANTS FROM THE PULP AND PAPER INDUSTRY**

**1. Low Volume, High Concentration Sources**

**G0208**

02-PU-003 thru 02-PU-014  
02-PU-015

**Digester System**

batch digesters Nos. 7 thru 19  
A Blow Tank

02-PU-016	B Blow Tank
02-PU-017	C Blow Tank
02-PU-018	A Cyclone
02-PU-019	B Cyclone
02-PU-020	C Cyclone
02-PU-024	Hot Water Accumulator
02-PU-025	Secondary Condenser
02-PU-026	Accumulator overflow tank

**G0719**

**Evaporators**

07-PU-004	B-Line Evaporators
07-PU-026	B-Surface Condenser
07-PU-007	Condenser Seal Tank
07-PU-008	B-Hot Well
07-PU-009	C-Line Evaporators
07-PU-024	C-Line Concentrators
07-PU-027	C Surface Condenser
07-PU-013	C Hot Well

**G0936**

**Lime Kiln System**

09-PU-004	Lime Kiln
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**G2073**

**Turpentine Recovery**

20-PU-001	North Cyclone
20-PU-002	South Cyclone
20-TK-003	Sample Tank
20-PU-004	North Turpentine Condenser
20-PU-005	South Turpentine Condenser
20-PU-006	Secondary Turpentine Condenser
20-PU-007	Turpentine Heater
20-TK-008	Old Turpentine Decanter
20-PU-009	Turpentine Decanter
20-TK-010	Turpentine Storage
20-TK-011	Decanter Underflow Tank

**G0210**

**Foul Condensate Stripper System**

02-PU-028	Stripper Column
02-TK-027	Foul Condensate Tank

**2. HIGH VOLUME LOW CONCENTRATION SOURCES (HVLC)**

High volume, low concentration or HVLC system means the collection of equipment including the pulp washing, knotter, screen, decker, and oxygen delignification systems, weak liquor storage tanks, and any other equipment serving the same function as those previously listed.

Pulp washing means all equipment used to wash pulp and separate spent cooking chemicals following the digester system and prior to the bleaching system, oxygen delignification system. The pulp washing system equipment includes vacuum drum washers, diffusion washers, rotary pressure washers, horizontal belt filters, intermediate stock chests, and their associated vacuum pumps, filtrate tanks, foam breakers or tanks, and any other equipment serving the same function as those previously listed. The pulp washing system does not include deckers, screens, knotters, stock chests, or pulp storage tanks following the last stage of pulp washing.

Knotted system means equipment where knots, oversized material, or pieces of uncooked wood are removed from the pulp slurry after the digester system and prior to the pulp washing system. The knotted system equipment includes the knotter, knot drainer tanks, ancillary tanks, and any other equipment serving the same function as those previously listed.

Screen system means equipment in which oversized particles are removed from the pulp slurry prior to the bleaching or papermaking system washed stock storage.

Decker system means all equipment used to thicken the pulp slurry or reduce its liquid content after the pulp washing system and prior to high-density pulp storage. The decker system includes decker vents, filtrate tanks, associated vacuum pumps, and any other equipment serving the same function as those previously listed.

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
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Hazardous Air Pollutants	<p><b><u>LVHC System</u></b> Route system vents to Lime Kiln or No. 1 Power Boiler (Compliance date, )</p> <p><b><u>HVLC System</u></b> Route system vents to Lime Kiln or No. 1 Power Boiler (Compliance date, October 16, 2003)</p> <p><b><u>Pulping Condensate Collection</u></b> Collect a minimum 7.2 pounds per ton ODP followed by treatment in the Biological Wastewater Treatment Facility, meeting: 92 percent HAP removal, or 6.6 pounds per ton ODP removal (compliance date,</p>	15 A NCAC 2D .1111 (40 CFR 63 Subpart S)
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**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 LVHC and HVLC pulping systems at kraft processes** (40 CFR 63.443(a)).

- b. The Permittee shall meet the following control requirements for the total HAP emissions from the LVHC system [40 CFR 63, Subpart 63.443]:
1. Each LVHC system component shall be enclosed and vented into a closed vent system meeting the requirements of 40 CFR 63.450, and routed to:
    - a. The Lime Kiln (ID No. G0936) and No. 1 Power Boiler (ID No. G1149) by introducing the HAP emission stream with the primary fuel or into the flame zone:
- c. No later than April 17, 2006, the Permittee shall meet the following control requirements for the total HAP emissions from the HVLC system [40 CFR 63, Subpart 63.443]
1. Each HVLC system component shall be enclosed and vented into a closed vent system meeting the requirements of 40 CFR 63.450, and routed to:
    - i. The Lime Kiln (ID No. G0936) and No. 1 Power Boiler (ID No. G1149) by introducing the HAP emission stream with the primary fuel or into the flame zone:
- d. Periods of excess emissions reported under Sec. 63.455 shall not be a violation of Sec. 63.443 (c) and (d) provided that the time of excess emissions (excluding periods of startup, shutdown, or malfunction) divided by the total process operating time in a semi-annual reporting period does not exceed the following levels:
1. One percent for the Lime Kiln.

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

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

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

1. Each closed collection system shall meet the individual drain system requirements specified in 40 CFR 63.960, 63.961, and 63.962, except for closed vent systems;
2. Closed vent systems shall be designed and operated in accordance with 40 CFR 63.450;
3. The process condensate streams collected in total shall contain a minimum of 7.2 pounds per ton of oven dried pulp produced (based on a 30-day rolling average); and
4. The pulping process condensates collected shall be treated by the Biological Wastewater Treatment Facility (ID No. G1669) which shall:
  - I. Reduce or destroy the total HAPs by at least 92 percent or more by weight; or
  - ii. Remove a minimum of 6.6 pounds per ton of oven dried pulp (ODP);

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

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

**Monitoring for the 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. G0936) or the No. 1 Power Boiler (ID No.G1149). [40 CFR 60, Subpart 63.453]

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

**Condensate Collection:**

- j. The Permittee shall install, calibrate, certify, operate, and maintain according to the manufacturer's specifications, a continuous monitoring system (CMS) to monitor condensate collection. The CMS shall include a continuous recorder. The CMS shall be operated to ensure the following operational parameters are maintained. [40 CFR 60, Subpart 63.453]:
  - a. [ID streams, monitored parameters, parameter values/limits, specify annual stream factor measurement/verification], etc. XXXXXX;
  - b. XXXXXX; and
  - c. XXXXXX.

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

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

**BiologicalWastewater Treatment Facility**

- k. The Permittee shall install, calibrate, certify, operate, and maintain according to the manufacturer's specifications, a continuous monitoring system (CMS) on the Biological Wastewater Treatment Facility's aeration pond aerators (ID No.\_\_\_\_\_). 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]:  
Total Organic Compound (TOC) /aerator horsepower (HP) ≤ 21.5

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	Source Description	Control ID No	Control Description
G0825	No. 6 Recovery Furnace		electrostatic precipitator
G0826	No. 6 Smelt Dissolving Tank		wet scrubber
G0827	No. 7 Recovery Furnace		electrostatic precipitator
G0828	No. 7 Smelt Dissolving Tank		wet scrubber
G0936	Lime Kiln		wet scrubber

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
Hazardous Air Pollutants	Compliance with the requirements per 40 CFR 63, Subpart MM by 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 MM**

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

**X. Other Applicable Requirements**

**A. Affected Sources - All facilities subject to 15A NCAC 2D .1100: Control of Air Toxics**

- 1. Pursuant to 15A NCAC 2D .1100 and in accordance with the approved application for an air

toxic compliance demonstration, the following facility-wide permit limits apply:

EMISSION SOURCE(S)	TOXIC AIR POLLUTANT(S)	EMISSION LIMIT(S)
No. 6 Recovery Furnace	acetaldehyde	898 pounds per hour
No. 6 Smelt Dissolving Tank		
Black Liquor Oxidizer	acrolein	2.4 pounds per hour
No. 7 Recovery Furnace		
No. 7 Smelt Dissolving Tank	benzene	5,249 pounds per year
Batch Digesters (13)		
Nos. 3 & 4 Paper Machines	cadmium	723 pounds per year
Weak Black Liquor Storage Tanks	formaldehyde	20.2 pounds per hour
50% Black Liquor Storage Tanks	hydrogen chloride	1,065 pounds per hour
Heavy Black Liquor Storage Tanks	hydrogen sulfide	172 pounds per hour
Brown Stock Washers		
Filtrate Tank Foam Tower	manganese	1009 pounds per day
High Density Storage		
Pre-Coat Filters	mercury	98 pounds per day
Primary Causticizer		
Dregs Mixer Tank	methyl mercaptan	2.7 pounds per hour
Green Liquor Clarifier		
Green Liquor Storage	nickel	807 pounds per day
Lime Mud Washer		
Lime Mud Storage	sodium chromate	29 pounds per day
Lime Kiln Vacuum Pump		
Tall Oil Plant	sodium dichromate	29 pounds per day
No. 1 Power Boiler		
Nos. 2 and 3 Package Boilers	methylene chloride	275,901 pounds per year
Wastewater Treatment	xylene	7,345 pounds per day
		2,328 pounds per hour

2. The sources listed above shall be operated and maintained in such a manner that emissions of any listed toxic air pollutant(s) from the facility, including fugitive emissions, will not exceed the modeling exemption emission rate(s) (MEERs) specified in 15A NCAC 2Q.0711.

EMISSION SOURCE(S)	TOXIC AIR POLLUTANT(S)	MEER(S)
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(See above)	chlorobenzene	46 pounds per day
	methyl ethyl ketone	22.4 pounds per hour 78 pounds per day
	methyl isobutyl ketone	7.6 pounds per hour 52 pounds per day
	n-hexane	23 pounds per day
	styrene	2.7 pounds per hour
	toluene	14.4 pounds per hour 98 pounds per day

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**B. All emission sources**

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

<b>Regulated Pollutant</b>	<b>Limits/Standards</b>	<b>Applicable Regulation</b>
odors	odorous emissions must be controlled; <b>State-enforceable only</b>	15A NCAC 2D .1806

**STATE-ONLY REQUIREMENT: ODOR REQUIREMENTS**

**1. 15A NCAC 2D .1806: CONTROL AND PROHIBITION OF ODOROUS EMISSIONS**

- a. the Permittee shall not operate the facility without implementing management practices or installing and operating odor control equipment sufficient to prevent odorous emissions from the facility from causing or contributing to objectionable odors beyond the facility's boundary.

**XI. General Conditions**

The “General Conditions” section of the Title V Operating Permits lists additional applicable rule requirements that the permittee must adhere to, as with any other permit condition. These requirements in general are common to all Title V facilities. The general conditions include provisions such as annual fee payment, permit

renewal and expiration, transfer of ownership or operation, property rights, submission of documents, inspections and entry procedures, reopen for cause, and severability.

**XII. Insignificant Activities**

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

**XIII. Public Notice**

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

**XIV. Recommendations**

The initial Title V application for \_\_\_\_\_ 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.