

**NORTH CAROLINA DIVISION OF
AIR QUALITY**

Air Permit Review

Permit Issue Date: **Date**, 2006

Region: Washington Regional Office
County: Hertford
NC Facility ID: 4600024
Inspector's Name: Robert Barker
Date of Last Inspection: 03/01/2005
Compliance Code: 4/In Compliance - Certification

Facility Data			Permit Applicability (this application only)		
Applicant (Facility's Name): Georgia - Pacific Corporation - Ahoskie Facility Address: Georgia - Pacific Corporation - Ahoskie 561 East Harrelsville Road Ahoskie, NC 27910 SIC: 2421 / Sawmills & Planing Mills General NAICS: 321113 / Sawmills Facility Classification: Before: Title V After: Title V Fee Classification: Before: Title V After: Title V			SIP: NSPS: NESHAP: 15A NCAC 2D .1111 (Subparts DDDD and DDDDD) PSD: PSD Avoidance: NC Toxics: 15A NCAC 2Q .0705 112(r): Other:		
Contact Data			Application Data		
Facility Contact	Authorized Contact	Technical Contact	Application Number: 4600024.05A Date Received: 05/26/2005 Application Type: Renewal Application Schedule: TV-Renewal Existing Permit Data Existing Permit Number: 01837/T12 Existing Permit Issue Date: 03/08/2001 Existing Permit Expiration Date: 02/28/2006		
Martha Stox Safety & Environmental Coordinator (252) 332-3197 142B NC 561 East Ahoskie NC, 27910	Lloyd Johnson Plant Manager (252) 332-3197 P.O. Box 907 Ahoskie NC, 27910	Arthur Johnson Environmental Manager (252) 332-3197 P O Box 907 Ahoskie NC, 27910			
Review Engineer: Mark Cuilla Review Engineer's Signature: Date:			Comments / Recommendations: Issue 01837/T13 Permit Issue Date: date , 2006 Permit Expiration Date: date , 2011		

I. Purpose of Application

Georgia-Pacific Corporation, Chip-N-Saw Plant is currently operating under permit 01837T12. This permit is set to expire on February 28, 2006. Per the requirements of the permit, an application for renewal was due by May 31, 2005. This application completes that requirement. The permit is deemed complete for processing. The Permittee did not request any modifications to the permit as part of this renewal process.

II. Facility Description

The facility is a lumber mill where logs are debarked, cut to size, and processed through the sawmill where logs are cut into lumber. The rough cut lumber is stacked and dried in steam heated lumber kilns. The dried lumber is processed through the planer mill where it is dressed to produce finished lumber. Bark from the debarker, other green end material from the log yard, and the green end saws are burned in the wood-fired boiler to produce steam for the lumber kilns.

III. History/Background/Application Chronology

May 26, 2005 – Permit application **4600024.05A** was received for the renewal of the Title V permit. The application was deemed complete for processing.

September 6, 2005 – WaRO received a letter from Permittee requesting that DAQ incorporate reduced monitoring activities associated with the visible emissions observation requirements pursuant to Condition 2.1 B.3.d and Condition 2.1 C.1.b.i. Robert Baker of WaRO commented on September 30, 2005 to me that the RO did not have a problem with this request.

December 13, 2005 – I sent the Permittee a letter requesting that a CAM demonstration be submitted for the control devices associated with the permitted boiler and rotary screen.

January 6, 2006 – I received a written response to my request for a CAM demonstration. The response indicates that the Permittee does not feel that it is subject to CAM because of the definition of control device with respect to being “inherent” equipment. DAQ does not agree with this argument for the control device associated with the boiler and will require its inclusion in the renewed permit. However, DAQ does agree that the control device associated with the rotary screen is for material collection purposes and not emissions control for CAM purposes.

February 21, 2006 – DAQ sent a letter to the facility approving its request to use site-specific fuel sampling and analysis for determination of mercury, total select metals, and hydrogen chloride emissions from its 91.8 million Btu per hour wood-fired boiler.

February 28, 2006 – The current permit **01837T12** has expired. However, the Permittee is still in compliance as having submitted a complete application nine months prior to the expiration. **01837T12** remains in effect until such time as the permit is renewed.

June 20, 2006 – DRAFT permit sent to Permittee, regional office and title V coordinator prior to public notice and EPA review.

July 2, 2006 – Received comments from Permittee via email on the DRAFT permit. See CAM discussion in Section VI of this Document.

Date, 2006 – DRAFT permit sent to public notice and EPA review.

IV. Permit Modifications/Changes

The following table describes the modifications to the current permit as part of the renewal process.

Page(s)	Section	Description of Change(s)
Attachment	Insignificant Activities	-amended equipment ID numbers to match electronic database
Cover	-	-amended all dates and permit revision numbers
TOC	-	-updated shell titles
All	Header	-amended permit revision number
3	-	-updated shell titles
	Equipment Table	-added MACT Subpart designations
4	2.1 A (table)	-added MACT citation and toxic air pollutant demonstration requirements
	2.1 B (table)	-corrected rule citations
		-added MACT citation
	2.1 B.1.a-d	-added equipment ID numbers and updated shell language where needed

Page(s)	Section	Description of Change(s)
5	2.1 B.1.e 2.1 B.1.f 2.1 B.1.g 2.1 B.2.a 2.1 B.2.c 2.1 B.3.c	-updated shell language -added equipment ID numbers where needed -amended semi-annual reporting date -added equipment ID numbers where needed -added equipment ID numbers where needed -updated shell language and ID numbers -amended monitoring schedule per permit condition
6	2.1 B.3.d 2.1 B.3.e 2.1 B.4 2.1 C 2.1 C (table)	-updated shell language -amended semi-annual reporting date -added MACT requirements -removed deleted equipment (ID No. ES-RSC and CD-C6) -corrected rule citation
7	2.1 C.1.b 2.1 C.1.c 2.1 C.1.e 2.1 C.2.c	-removed deleted equipment (ID No. ES-RSC and CD-C6) -amended monitoring schedule per permit condition -updated shell language and added ID numbers where needed -amended semi-annual reporting date -updated shell language and added ID numbers where needed
8	2.1 C.2.d 2.1 C.2.e 2.2 A.1.a	-updated shell language -amended semi-annual reporting date -corrected rule citation and updated shell language
8-9	2.2 B	-added last MACT/air toxics demonstration requirement
9-17	General Conditions	-updated shell conditions

The following table describes the modifications to ESM as a result of this renewal process.

Current permit description(s)	Description(s) as a result of this renewal
One rotary screen chip conveying system (for transfer to the chip bin; ID No. ES-RSC) controlled by one simple cyclone (96 inches in diameter; ID No. CD-C6)	Source and control equipment to be end-dated .
One wood-fired boiler (91.8 million Btu per hour maximum heat input) which may burn wood with No. 2 fuel oil at startup, No. 2 equivalent hydraulic oil and associated absorbent from on-site spills, and the facility's confidential papers	One watertube design wood-fired boiler (91.8 million Btu per hour maximum heat input) which may burn wood with No. 2 fuel oil at startup, No. 2 equivalent hydraulic oil and associated absorbent from on-site spills, and the facility's confidential papers

V. Regulatory Review

The facility is currently subject to the following regulations:

- 15A NCAC 2D .0504, Particulates from Woodburning Indirect Heat Exchangers
- 15A NCAC 2D .0512, Particulates from Miscellaneous Wood Products Finishing Plants
- 15A NCAC 2D .0516, Sulfur Dioxide Emissions from Combustion Sources
- 15A NCAC 2D .0521, Control of Visible Emissions
- 15A NCAC 2D .1806, Control and Prohibition of Odorous Emissions

No regulatory review is required for these existing permit conditions as part of the renewal process.

As a result of this permit renewal the following regulations have been added to the permit:

- 15A NCAC 2D .0614, Compliance Assurance Monitoring
- 15A NCAC 2D .1111, Maximum Achievable Control Technology (40 CFR 63, Subparts DDDD and DDDDD)
- 15A NCAC 2Q .0705, Existing Sources and SIC Calls

VI. NSPS, NESHAPS/MACT, PSD, 112(r), CAM

NSPS – The facility is not subject to any applicable NSPS requirements. This renewal action does not change this status.

NESHAPS/MACT – The facility is not currently subject to 40 CFR 63, National Emission Standards for Hazardous Air Pollutants.

As part of this renewal, the facility's sources were evaluated for MACT Subpart requirements. It was determined that boiler (**ID No. ES-B1**) is subject to 40 CFR 63, Subpart DDDDD, National Emission Standards for Industrial, Commercial, and Institutional Boilers and Process Heaters. This existing, large, solid fuel-fired, watertube designed boiler will be required to comply with applicable sections of this Subpart by September 13, 2007. The following placeholder language has been added to the permit to indicate this requirement:

4. 15A NCAC 2D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY

- a. *The Permittee shall comply with all applicable provisions contained in Environmental Management Commission Standard 15A NCAC 2D .1111, "Maximum Achievable Control Technology (MACT)" as promulgated in 40 CFR 63, "National Emission Standards for Hazardous Air Pollutants from Industrial, Commercial, Institutional Boilers and Process Heaters" by September 13, 2007, for the existing, large, solid fuel-fired boiler (ID No. ES-B1).*

In addition to this boiler, the facility's two steam heated lumber kilns (**ID Nos. ES-LK1 and ES-LK2**) are subject to 40 CFR 63, Subpart DDDD, Plywood and Composite Wood Products Manufacturing MACT. These kilns, while being subject to the rule, have no applicable requirements other than initial notification. This permit application completes that requirement and the facility is in compliance with Subpart DDDD. This has been noted in the permit.

PSD – The facility is not subject to any applicable PSD requirements. This renewal action does not change this status.

112(r) – The facility is not subject to 112(r) requirements because it does not store any of the covered chemicals. This renewal action does not affect this status.

CAM – 40 CFR 64 requires that a continuous assurance monitoring plan be developed for all equipment located at a major facility, that have pre-controlled emissions above the major source threshold, and use a control device to meet an applicable standard.

1. The two permitted lumber kilns (**ID Nos. ES-LK1 and ES-LK2**) are subject to the facility-wide odorous emissions condition, the Plywood MACT, and state air toxics. These sources are not controlled; therefore CAM is not applicable.
2. The boiler (**ID No. ES-B1**) is subject to particulate, sulfur dioxide, visible emissions, odorous emissions, and the boiler MACT. Particulate matter is controlled by one associated multicyclone (**ID No. CD-MC**). Therefore, a CAM demonstration would only be applicable for particulate matter. This boiler is subject to a particulate standard of 0.43 pounds per million Btu heat input as determined by 15A NCAC 2D .0504. The Permittee has estimated potential PM₁₀ emissions from the boiler while combusting wood fuel at 123.44 tons per year. In addition, the Permittee argues that they consider the multicyclone to be inherent process equipment since it is required to ensure proper functioning of the process. Without the multicyclone to protect the fan, proper boiler operation could not be achieved over extended periods. During negotiations about CAM, the Permittee had the following comments to a DRAFT permit which included CAM requirements:

"We continue to disagree with the application of CAM requirements to the multicyclone on the Ahoskie boiler. The multicyclone is "inherent process equipment" which provides control of particulate emissions but it was not installed primarily for emissions control reasons. For wood-fired

boilers and other combustion devices, you typically find that these units are almost invariably equipped with multicyclone collectors regardless of the applicable emission limit or final pollution control device. This arises from two primary engineering necessities. First is the safety-related issue of discharge of burning fuel particles. A wood-fired boiler without a multicyclone collector would shower the plant site with burning char and ash material. Second, the boiler's induced draft fan would be destroyed in a few weeks (if not days) if it were not protected by a multicyclone collector which disengaged the abrasive ash which would otherwise be passed through the fan. In some cases, at least a portion of the recovered ash is recycled back through the combustion process for its fuel value.”

DAQ agrees with this statement and agrees that CAM is not required at this time due in part to the following reasons:

1. the pollutant of concern for Part 64 applicability is PM₁₀. As designed and operated, the multicyclone associated with this boiler provides little or no effective PM₁₀ control;
2. the Permittee is able to meet the particulate matter emission limit of 0.43 pounds per million Btu heat input described in 15A NCAC 2D .0504 with its current configuration. However, an existing, watertube design, large, solid fuel fired boiler will also be subject to a particulate standard of 0.07 pounds per million Btu heat input. DAQ feels that the Permittee will not be able to meet this emission limit with only a multicyclone and will be required to add additional particulate control prior to the compliance date of the boiler MACT; and
3. Part 64 does allow for exemption of CAM requirements for sources that can demonstrate that a control device is inherent or installed for material collection. The Permittee adequately argues that this is the case.

No modifications are needed as a result of this permit renewal to include CAM.

3. The woodworking operations including:
 - One rotary screen sawdust conveying system (**ID No. ES-RSS**) and associated cyclone (**ID No. CD-C5**);
 - One planer mill conveying system (**ID No. ES-PM**) and associated bagfilter (**ID No. CD-BF1**) and cyclone (**ID No. CD-C3**);
 - One wood chipper (**ID No. ES-BC**) and associated cyclone (**ID No. CD-C1**);
 - One debarker (**ID No. F-BD**); and
 - One chip bin (**ID No. F-FG3**)

are all subject to the particulate, visibility, and odorous emission standards. The debarker and chip bin are not controlled; therefore CAM is not applicable. The remaining equipment is only controlled for particulate; therefore a CAM demonstration would only be applicable for particulate matter.

The Permittee estimates pre-controlled particulate matter emissions from the rotary screen (**ID No. ES-RSS**) feeding the control device (**ID No. CD-C5**) at 11,000 tons per year. Applying the DAQ spreadsheet emission factor for rough sawing (1.89% PM₁₀/PM waste) to these emissions, it is estimated that the cyclone sees 207.9 tons per year. This amount would require the Permittee to apply CAM to this control device. However, the Permittee argues that the cyclone associated with this system is considered process equipment since it is intrinsic to the process for collecting the generated material and is not used as a control device. 40 CFR 64.1 defines “inherent process equipment” as “...material recovery equipment that the owner or operator documents is installed and operated primarily for purposes other than compliance with air pollution regulations” and that “for the purposes of this part, inherent process equipment is not considered a control device”. DAQ agrees that this control device meets the definition of inherent equipment as its sole purpose is material recovery for boiler fuel; therefore, CAM is not applicable to this control device.

The Permittee estimates pre-controlled particulate matter emissions from the planer mill (**ID No. ES-PM**) feeding the control device (**ID No. CD-BF1**) at 28,000 tons per year. Applying the DAQ spreadsheet emission factor for planing (0% PM₁₀/PM waste) to these emissions, it is estimated that the bagfilter will see no PM₁₀ emissions. Therefore, CAM is not applicable to this control device.

The Permittee estimates pre-controlled particulate matter emissions from the wood chipper (**ID No. ES-BC**) feeding the control device (**ID No. CD-C1**) at 147,000 tons per year. Applying the DAQ spreadsheet emission factor for chipping (0% PM₁₀/PM waste) to these emissions, it is estimated that the cyclone will see no PM₁₀ emissions. Therefore, CAM is not applicable to this control device.

The debarker (**ID No. F-BD**) and chip bin (**ID No. F-FG3**) are both uncontrolled sources. Therefore, CAM is not applicable.

VII. Facility Wide Air Toxics

The facility is not currently subject to any air toxics permit conditions. However, as a result of being subject to a maximum achievable control technology standard for plywood and wood composite manufacturing operations (Subpart DDDD), the facility is required to comply with 15A NCAC 2Q .0705. This regulation required that the Permittee submit a permit application demonstrating compliance with 15A NCAC 2D .1100 by the same deadline that the facility is required to comply with the last MACT applicable to the facility, excluding the combustion MACT. The following placeholder language has been added to the permit:

State-enforceable only
B. Facility-wide affected sources

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
Toxic air pollutants	<i>State-enforceable only</i> <i>Last MACT/air toxics demonstration</i>	15A NCAC 2Q .0705

1. 15A NCAC 2D .0705: EXISTING SOURCES AND SIC CALLS

- a. *Air Permit Application Submittal Requirements - In accordance with 15A NCAC 2Q .0705(b), for sources at a facility subject to a MACT standard, excluding the MACT for combustion sources, an air permit application shall be required demonstrating compliance with 15A NCAC 2D .1100 "Control of Toxic Air Pollutants":*
 - i. *at the same time the facility submits an air permit application to comply with the last MACT; or*
 - ii. *at least six months prior to the same deadline date that the facility is required to be in compliance with the last MACT standard if an application is not required to comply with the last MACT. This will allow the Division time to process the application before the compliance deadline date. More than six month may be necessary to process an application if control devices are required to comply with either 2D .1100 or the last MACT.*
- b. *The permit application demonstrating compliance with 15A NCAC 2D .1100 shall include an evaluation for all toxic air pollutants covered under rule 15A NCAC 2D .1104 for all sources at the facility, excluding those sources exempt from evaluation under 15A NCAC 2Q .0702. If the facility has already demonstrated facility-wide compliance with 2D .1100 the application should include the date of compliance demonstration, air permit number, and a list of applicable toxic pollutants.*
- c. *Compliance Deadline Date Requirement - The facility shall be in compliance with the 15A NCAC 2D .1100 Toxic Air Pollutants rule by the same deadline date that it is required to be in compliance with the last MACT standard.*

VIII. Facility Emissions Review

The following table represents the latest years emission inventory from the facility:

Pollutant(s)	2004 Actual Emissions (tpy)
CO	85.48
NO _x	31.34
PM ₁₀	55.63
SO ₂	3.59
VOC	137.58
HAPs	18.67

IX. Stipulation Review

There are no necessary permit stipulation modifications as a result of this permit renewal action.

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

Pursuant to 15A NCAC 2Q .0521, a notice of the DRAFT Title V Permit shall be placed in a newspaper of general circulation in the area where the facility is located. The notice will provide for a 30-day comment period, with an opportunity for a public hearing. Copies of the public notice shall be sent to persons on the Title V mailing list and EPA. Pursuant to 15A NCAC 2Q .0522, a copy of each permit application, each proposed permit and each final permit pursuant shall be provided to EPA. Also pursuant to 2Q .0522, a notice of the DRAFT Title V Permit shall be provided to each affected State at or before the time notice provided to the public under 2Q .0521 above. There are no affected States or local programs.

XI. Conclusions, Comments, and Recommendations

No local zoning determination was needed for this permit renewal.

A Professional Engineer's Certification was not needed for this renewal.

WARO recommends issuance of renewed permit and was presented with a DRAFT permit prior to public notice and EPA review.

RCO concurs with this recommendation.