

Air Permit Review

Permit Issue Date: **date, 2011**

Region: Mooresville Regional Office
County: Stanly
NC Facility ID: 8400020
Inspector's Name: Carlotta Adams
Date of Last Inspection: 03/21/2011
Compliance Code: 3 / Compliance - inspection

Facility Data			Permit Applicability (this application only)
<p>Applicant (Facility's Name): H W Culp Lumber Co, Inc</p> <p>Facility Address: H W Culp Lumber Co, Inc 44091 Old US 52 Highway New London, NC 28127</p> <p>SIC: 2421 / Sawmills & Planing Mills General NAICS: 321113 / Sawmills</p> <p>Facility Classification: Before: Title V After: Title V Fee Classification: Before: Title V After: Title V</p>			<p>SIP: NSPS: NESHAP: PSD: PSD Avoidance: NC Toxics: 112(r): Other:</p>
Contact Data			Application Data
Facility Contact	Authorized Contact	Technical Contact	<p>Application Number: 8400020.11A Date Received: 03/29/2011 Application Type: Renewal Application Schedule: TV-Renewal</p> <p style="text-align: center;">Existing Permit Data</p> <p>Existing Permit Number: 04897/T17 Existing Permit Issue Date: 10/02/2008 Existing Permit Expiration Date: 12/31/2011</p>
<p>Mike Sasser Safety Coordinator (704) 463-7311 P O Box 235 New London, NC 28127</p>	<p>Henry Culp, III Vice President (704) 463-7311 P O Box 235 New London, NC 28127</p>	<p>Mike Sasser Safety Coordinator (704) 463-7311 P O Box 235 New London, NC 28127</p>	
<p>Review Engineer: Mark Cuilla</p> <p>Review Engineer's Signature: Date: date, 2011</p>		<p style="text-align: center;">Comments / Recommendations:</p> <p>Issue 04897/T18 Permit Issue Date: date, 2011 Permit Expiration Date: date, 2016</p>	

I. Purpose of Application

This permitting action is a renewal of an existing Title V permit pursuant to 2Q .0513. The existing Title V permit (**04897T17**) was issued on **October 2, 2008**, with an expiration date of **December 31, 2011**. The renewal application was received on **March 29, 2011**, or at least nine months prior to the expiration date. Therefore, the existing permit shall not expire until the renewal permit has been issued or denied. All terms and conditions of the existing permit shall remain in effect until the renewal permit has been issued or denied.

II. Facility Description

The facility is an operating sawmill with wood planing and wood drying operations.

III. History/Background/Application Chronology

January 12, 2007 – Permit **04897T16** issued as a first-time Title V permit.

October 2, 2008 – Permit **04897T17** issued as a minor modification to modify permit to add facility-wide modeling demonstration results.

March 21, 2011 – Annual compliance inspection completed by Carlotta Adams of the MRO.

March 29, 2011 – Permit application **8400020.11A** received as a Title V permit renewal application. The application was deemed complete for processing.

May 5, 2011 – DRAFT permit sent to Permittee and MRO for comment prior to public notice and EPA review. Denise Hayes of the MRO requested that the regional office address be corrected on the cover page of the permit. This modification was made.

date, 2011 – DRAFT permit sent to 30-day public notice and 45-day EPA review.

IV. Permit Modifications/Changes and ESM Discussion

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

Page	Section	Description of Change
Attachment	Insignificant activities	-amended permit revision number
Cover	-	-amended all dates and permit revision numbers
All	Header	-amended permit revision number
4	2.1 A.1.b 2.1 A.1.c 2.1 A.1.c.ii 2.1 A.1.e	-corrected rule cross reference -corrected rule cross reference -corrected rule cross reference -corrected rule cross reference
5	2.1 B.1.b 2.1 B.1.c	-corrected rule cross reference -corrected rule cross reference
6	2.1 B.2.a 2.1 B.2.b 2.1 B.2.c 2.1 B.3.b 2.1 B.3.c 2.1 B.3.c.ii	-added ID numbers -corrected rule cross reference -corrected rule cross reference and added ID numbers -corrected rule cross reference -added ID numbers -corrected rule cross reference
7	2.1 B.4.d	-corrected rule cross reference
8	2.1 C.1.b 2.1 C.1.d	-corrected rule cross reference -corrected rule cross reference
9	2.1 C.2.c 2.1 C.2.d 2.1 C.2.f 2.2 (Table)	-corrected rule cross reference -corrected rule cross reference and updated shell language -corrected rule cross reference -clarified emission limits where necessary
10	2.2 A.2.b 2.2 A.2.c 2.2 A.2.d	-corrected rule cross reference -corrected rule cross reference -corrected rule cross reference
12-22	General Conditions	-updated shell conditions (v3.4)
23	List of Acronyms	-added acronyms for CAIR/NAA/RACT per current shell

There were only minor, non-significant modifications to the equipment descriptions needed in TVEE.

V. Regulatory Review

The facility is currently subject to the following regulations:

15A NCAC 2D .0512, Particulates from Wood Products Finishing Plants
15A NCAC 2D .0515, Particulates from Miscellaneous Industrial Processes
15A NCAC 2D .0516, Sulfur Dioxide Emissions from Combustion Sources
15A NCAC 2D .0521, Control of Visible Emissions
15A NCAC 2D .1100, Control of Toxic Air Pollutants
15A NCAC 2D .1806, Control and Prohibition of Odorous Emissions
15A NCAC 2Q .0317, Avoidance Conditions (for 15A NCAC 2D .0530, Prevention of Significant Deterioration, and 15A NCAC 2D .1111, Maximum Achievable Control Technology (40 CFR 63, Subpart DDDD))
15A NCAC 2Q .0711, Emission Rates Requiring a Permit

A regulatory review for these current permit conditions will not be included in this document.

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

NSPS – The Permittee is not currently subject to any New Source Performance Standards. This permit renewal does not affect this status.

NESHAPS/MACT - The Permittee operates under a MACT avoidance condition for 40 CFR 63, Subpart DDDD (Plywood and Composite Wood Products). To ensure compliance and avoid applicability of this regulation, the Permittee is required to limit the amount of lumber dried in the two kilns (**ID Nos. K1 and ES-9**) to less than 110,000,000 board feet of dried lumber per 12-month rolling average basis. The permit requires monthly records of production and semi-annual reporting. This permit renewal does not affect this status.

Because of the MACT avoidance condition, the facility is now classified as a Title III minor facility. As part of this permit renewal process, the facility was reviewed for area source GACT applicability. No current standards were found to apply to this facility (note that the area source GACT for combustion sources – 40 CFR 63, Subpart JJJJJ – only applies to indirect-fired units. The Permittee operates direct-fired lumber drying units that are not subject to any requirements.

PSD – The Permittee operates under a PSD avoidance condition limiting volatile organic compound emissions to less than 250 tons per year from the two lumber kilns (**ID Nos. K1 and ES-9**). The permit condition includes monthly calculations (amount of lumber dried times an emission factor of 3.8 pounds VOC per thousand board feet) and recordkeeping of VOC emissions and semiannual reporting requirements. This permit renewal does not affect this status.

112(r) – The facility is not subject to Section 112(r) of the Clean Air Act requirements because it does not store one or more of the regulated substances in quantities above the thresholds in the Rule. This permit renewal does not affect this status.

CAM – 40 CFR 64 requires that a continuous compliance 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. The following table identifies the current equipment/control device relationships:

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
ES1	One wood planing operation	C1	One cyclone (168 inches in diameter)
		4B	One bagfilter (5,992 square feet of filter area)
ES2	One wood working operation	C2	One cyclone (51 inches in diameter)
ES4	One hammermill operation	C4	One cyclone (102 inches in diameter)
IES-11	One saw sharpening operation and associated	NA	One bagfilter (689 square feet of filter area)

The following table outlines the specific permit conditions for each source/control device arrangement and if the control device is installed to comply with that requirement:

Emission Source ID No(s).	Control Device ID No(s).	Permit Condition(s)*	Control Equipment Installed to Meet Permit Limit?
ES1	C1	15A NCAC 2D .0512	Particulate matter. Yes
	4B		
ES2	C2	15A NCAC 2D .0512	Particulate matter. Yes
ES4	C4	15A NCAC 2D .0512	Particulate matter. Yes
IES-11	-	-	Source is listed as insignificant activity. By definition, potential emissions from this source are less than 5 tons per year; therefore, CAM does not apply.

* The following permit conditions, where applicable, are not included in the CAM analysis:

1. 15A NCAC 2D .0521 – This regulation limits visible emissions to specific opacity levels based on equipment manufacture date. Visible emissions are not criteria pollutants subject to CAM analysis.
2. 15A NCAC 2D .1806 – This regulation limits odorous emissions. Odors are state-enforceable limits and are not criteria pollutants subject to CAM analysis.

(ES1) One wood planing operation – This operation is the sizing of dimensional lumber prior to the drying process. Per current guidance (DAQ woodworking spreadsheet), emissions of wood dust regulated as PM₁₀ from planing operations are estimated to be zero. Therefore, CAM does not apply to this control device.

(ES2) One wood working operation – This operation is the transport of dry wood shavings from the planer mill to the shavings bin (Note. This source has been called “shavings transport” in the past). Per the discussion above, no PM₁₀ emissions are expected. Therefore, CAM does not apply.

(ES4) One hammermill operation – This operation is the crushing of wood shavings in a hammermill and conveying material to collection bins prior to its use as a fuel in the woodwaste-fired boilers. The Permittee estimated emissions from these sources based on stack testing data for the source (as no emission factors for wood crushing could be identified). PM₁₀ emissions are estimated as follows:

Using a mass balance approach and an estimated control efficiency of 85% for a cyclone for PM₁₀ emissions: Total inlet = exhaust + catch.

0.223 pounds per hour are collected with cyclone (exhaust)

$(0.223 \text{ pounds per hour} \times 0.85) / (0.15) = 1.264 \text{ pounds per hour (catch)}$

Total inlet = 1.50 pounds per hour (**6.57 tons per year**).

This amount is less than the CAM applicability threshold of 100 tons per year. Therefore, CAM does not apply.

VII. Facility Wide Air Toxics

The Permittee is currently subject to modeled emission rates per 15A NCAC 2D .1100 for formaldehyde, acrolein, and phenol from the two lumber drying kilns (**ID Nos. K1 and ES-9**) per an approved modeling demonstration. No monitoring/recordkeeping/reporting is required to ensure compliance with these requirements. This permit renewal does not affect this status.

The permit also lists acetaldehyde as being emitted at rates below the toxic pollutants emission rate (TPER) per 15A NCAC 2Q .0711. This permit renewal does not affect this status.

VIII. Facility Emissions Review

There is no change in emissions for this renewal.

The following table represents the latest years' emission inventories from the facility:

Pollutant(s)	2008 Actual Emissions (tpy)	2009 Actual Emissions (tpy)
CO	-	19.32
NO _x	60.08	55.66
PM ₁₀	56.69	52.97
SO ₂	3.07	2.84
VOC	194.18	176.26
Total HAPs/TAPs	19.53	17.81

IX. Stipulation Review

The facility was last inspected by Carlotta Adams on **March 21, 2010**. Based on her observations the facility appeared to be in compliance with their Title V permit requirements.

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

A notice of the DRAFT Title V Permit shall be made pursuant to 15A NCAC 2Q .0521. 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. The Mecklenburg County Department of Environmental Protection is an affected area within 50 miles of this facility.

XI. Conclusions, Comments, and Recommendations

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

A consistency determination was not required for this renewal.

MRO recommends issuance of the permit and was sent a DRAFT permit prior to issuance (See Section III of this document for a discussion).

RCO concurs with MRO's recommendation to issue the renewed air permit.