

**NORTH CAROLINA DIVISION OF
AIR QUALITY**

Air Permit Review

Permit Issue Date: **XX/XX/2010**

Region: Washington Regional Office
County: Wayne
NC Facility ID: 9600058
Inspector's Name: Bernie Pittman
Date of Last Inspection: 06/02/2009
Compliance Code: 3 / Compliance - inspection

Facility Data			Permit Applicability (this application only)
Applicant (Facility's Name): Georgia - Pacific Plywood/OSB/CNS - Dudley Facility Address: Georgia - Pacific Plywood/OSB/CNS - Dudley 139 Brewington Road Dudley, NC 28333 SIC: 2436 / Softwood Veneer And Plywood NAICS: 321212 / Softwood Veneer and Plywood Manufacturing Facility Classification: Before: Title V After: Title V Fee Classification: Before: Title V After: Title V			SIP: N/A NSPS: N/A NESHAP: N/A PSD: N/A PSD Avoidance: N/A NC Toxics: N/A 112(r): N/A Other: [2D .1109 - 112(j)]Part 2 MACT Hammer for Boilers & Process Heaters]
Contact Data			Application Data
Facility Contact	Authorized Contact	Technical Contact	Application Number: 9600058.09B Date Received: 03/23/2009 Application Type: 112(j) Part 2 Application Schedule: TV-Significant Existing Permit Data Existing Permit Number: 09268/T10 Existing Permit Issue Date: 03/23/2010 Existing Permit Expiration Date: 12/31/2014
Floyd Reardon Environmental Coordinator (919) 736-4385 P O Box 308 Dudley, NC 28333	Gary Joshway, Sr. Plant Manager (919) 736-4385 139 Brewington Road Dudley, NC 28333	Steve Wilson Senior Environmental Engineer (803) 782-5890 15 Monckton Blvd, Ste B Columbia, SC 29206	
Review Engineer: Jeff Twisdale Review Engineer's Signature: _____ Date: _____		Comments / Recommendations: Issue 09268/T11 Permit Issue Date: XX/XX/2010 Permit Expiration Date: 12/31/2014	

I. Purpose of Applications

Georgia-Pacific (GP) Wood Products, LLC is located in Dudley, Wayne County, North Carolina. Application No. 9600058.09B, received March 23, 2009 and deemed complete on January 7, 2010, is a Part 2 Maximum Achievable Control Technology (MACT) "Hammer" application for one existing wood residual/bark/edge seal/paint solids-fired boiler (**ID No. ES-B1, 254 million Btu per hour (MMBtu/hr) heat input capacity**). The boiler will be subject to MACT "Hammer" otherwise known as Section 112(j) of the Clean Air Act (CAA) or 15A NCAC 2D .1109 "112(j) Case-by-Case MACT." Note that NC DAQ received Part 1 of this application on January 23, 2009.

II. Permit Modifications/Changes

The following table describes the modifications to the current permit:

Old Page(s)	New Page(s)	Condition/Item	Description of Change(s)
Global	Global	N/A	<ul style="list-style-type: none"> Change the application number and complete date; Change permit revision number to T11; and Change the issuance/effective dates of the permit
4	4	Equipment List / Table	Add 2D .1109 designation to the emission source ID No. column for the boiler (ID No. ES-B1)
18	18	2.1 E.	Modify the limits/standards summary table to also include 2D .1109 and the specific limits for HAPs
N/A	22 - 28	2.1 E.7.	Add 2D .1109 specific conditions including limits, testing, monitoring, recordkeeping and reporting for ES-B1
52 - 60	58 - 66	Section 3	Update General Conditions to version 3.1

Note: Condition/Item numbers are as they appear in Permit No. 09268T11.

III. Regulatory Review – 15A NCAC 2D .1109 – CAA § 112(j); Case-by-Case MACT for Boilers & Process Heaters

- A. **Rule Summary:** On July 30, 2007, the D.C. Circuit Court vacated the National Emission Standard for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers and Process Heaters, which had been promulgated under 40 CFR 63, Subpart DDDDD. The North Carolina Attorney General's office has determined that the NESHAP vacatur equates to the failure of the U.S. EPA to promulgate a valid standard as required under Section 112(d) of the Clean Air Act (CAA). As a result, the site-specific Maximum Achievable Control Technology (MACT) standards required under CAA § 112(j), commonly referred to as the MACT "Hammer" provisions, have been triggered. North Carolina regulations implementing the MACT hammer are found at 15A NCAC 2D .1109.

On March 23, 2009, the NC DAQ received a Part 2 MACT "Hammer" application from this facility asking that the NC DAQ establish 112(j) emissions limitations. Then on January 7, 2010, the NC DAQ received an addendum to the Part 2 MACT "Hammer" application that included a Health-Based Compliance Alternative (HBCA) eligibility demonstration for the total selected metals (TSM) emission limit as well as other proposed emission limitations based on NC DAQ's 112(j) guidance.

- B. **Wood-Fired Boiler:** One residual wood residual/bark/edge seal/paint solids-fired boiler (254.0 MMBtu/hr heat input capacity, **ID No. ES-B1**) with the associated multicyclone (**ID No. CD-MC**) and venturi scrubber (**ID No. CD-SC**) installed in series.

The facility proposed Total Selected Metals (TSM), Hydrogen Chloride (HCl), Mercury (Hg), and Carbon Monoxide (CO) emission limitations that are consistent with the NC DAQ application guidance (<http://daq.state.nc.us/permits/112j/>). NC DAQ has developed this guidance to provide standards and compliance procedures that it has determined meet the requirements of § 112(j).

Also, the facility has chosen to comply with a HBCA for TSM that included a site-specific compliance demonstration for Manganese (Mn). The HBCA eligibility demonstration is consistent with the procedures provided by the EPA in the vacated § 112(d) standard for boilers and process heaters.

1. Total Selected Metals (TSM) or Filterable Particulate Matter (PM)

In accordance with the 112(j) application guidance provided by NC DAQ, affected facilities may propose either a TSM limit or a filterable PM limit. GP chose to comply with TSM emission limit. The regulated TSM normally includes arsenic, beryllium, cadmium, chromium, lead, Mn, nickel, and selenium, and the associated limit is based on the sum of emissions for those eight selected metals; however, GP chose an alternative to demonstrate compliance with the TSM emission limit.

GP demonstrated eligibility for the HBCA for TSM emissions using the procedures consistent with the NC DAQ application guidance and will comply with the TSM emission standards based on the sum of emissions for seven selected metals (by excluding Mn emissions from the summation of TSM emissions).

GP modeled a maximum Mn emission rate of 1.35 lb/hr for this boiler in the site-specific assessment in HBCA. The Mn emission rate was based on an average Mn concentration of 72 ppm in the green wood fuel assuming a fuel heat content of 4,500 Btu/lb and a very conservative combined multicyclone and venturi scrubber removal efficiency of 67%. GP used data collected from a stack test at the Dudley site on October 7, 2003. Mr. Jerry Freeman of the Air Quality Analysis Branch (AQAB) evaluated the Air Toxics Risk Assessment that determines if the facility qualifies for the HBCA for TSM and approved it through a memo dated March 1, 2010.

Therefore, the facility is eligible for the HBCA for TSM emissions since the site-specific compliance demonstration indicates that none of the hazard quotient (HQ) values (0.98) for Mn are greater than 1.0 at locations where people live or congregate (e.g., schools, daycare centers, etc.). Therefore, the TSM emission rates (*3.00 E-04 lb/MMBtu for green wood and 5.00 E-04 lb/MMBtu for dry wood*) will be included in the draft permit when firing wood (*green and dry*) with the notation that Mn shall not be included in the determination of TSM. *Note that GP primarily burns green wood, but can burn dry wood.*

To demonstrate compliance with the standard, GP will utilize an initial and periodic stack testing required to demonstrate compliance with the TSM limit as described in the NC DAQ guidance. Also, the Permittee shall maintain the venturi scrubber (ID No. CD-SC) minimum pressure drop and/or liquid flow rate at or above operating levels, adjusted for variability, established during the performance test that demonstrated compliance with the limit. The Permittee shall install, operate and maintain a continuous parameter monitoring system (CPMS) for the scrubber minimum pressure drop and/or liquid flow rate over 3-hour block averages to demonstrate compliance with the TSM limit. Compliance is expected.

2. Mercury (Hg)

This facility has proposed a Hg limit of 5.0 E-06 lbs/MMBtu, which is consistent with the NC DAQ application guidance.

To demonstrate compliance with the standard, GP will utilize an initial and periodic (*once every 5 years*) fuel analyses required to demonstrate compliance with the Hg limit as described in the NC DAQ 112(j) application guidance, and the fuel analyses details will be placed in the permit. Also, the Permittee shall maintain the venturi scrubber (ID No. CD-SC) minimum pressure drop and/or liquid flow rate at or above operating levels, adjusted for variability, established during the initial performance test that demonstrated compliance with the limit. The Permittee shall install, operate and maintain a CPMS for the scrubber minimum pressure drop and/or liquid flow rate over 3-hour block averages to demonstrate compliance with the Hg limit. Compliance is expected.

3. Hydrogen Chloride (HCl)

This facility has proposed an HCl limit of 0.02 lbs/MMBtu that is consistent with the NC DAQ 112(j) application guidance for this size/type of boiler.

To demonstrate compliance with the standard, GP will utilize an initial and periodic stack testing required to demonstrate compliance with the HCl limit as described in the NC DAQ 112(j) application guidance, and the testing details will be placed in the permit. Also, the Permittee shall maintain the venturi scrubber (ID No. CD-SC) pH and the minimum pressure drop and/or liquid flow rate at or above operating levels, adjusted for variability, established during the performance test that demonstrated compliance with the limit. The Permittee shall install, operate and maintain a CPMS for the scrubber pH and the minimum pressure drop and/or liquid flow rate over 3-hour block averages to demonstrate compliance with the HCl limit. Compliance is expected.

4. Carbon Monoxide (CO)

This facility proposed a CO limit of 508 ppmvd, corrected to 7% oxygen, which is consistent with the NC DAQ application guidance for this size/type of boiler.

To demonstrate compliance with the standard, the Permittee shall install, operate and maintain a Continuous Emission Monitoring System (CEMS) for CO and oxygen according to the applicable procedures under Performance Specification (PS) 3 or 4A or 40 CFR 60, Appendix B, and according to other procedures that are detailed in the permit. The Permittee shall calculate and record a 30-day rolling average emission rate (CO) on a daily basis as the average of all of the hourly CO emission data for the preceding 30 operating days. No initial performance stack test for CO is required since the facility is utilizing CEMS. Compliance is expected.

IV. Recommendations

This permit modification application for the GP facility located in Dudley, Wayne County, North Carolina has been reviewed by NC DAQ to determine compliance with all procedures and requirements. NC DAQ has determined that this facility appears to be complying with all applicable requirements.

Recommend Issuance of Permit No. 09268T11 after completion of the public notice and EPA comment periods.