

**NORTH CAROLINA DIVISION OF  
AIR QUALITY**

**Air Permit Review**

**Permit Issue Date:**

**Region:** Mooresville Regional Office  
**County:** Catawba  
**NC Facility ID:** 1800102  
**Inspector's Name:** Jennifer Manning  
**Date of Last Inspection:** 07/28/2010  
**Compliance Code:** 3 / Compliance - inspection

<b>Facility Data</b>			<b>Permit Applicability (this application only)</b>
<b>Applicant (Facility's Name):</b> Hickory Chair Company  <b>Facility Address:</b> Hickory Chair Company 37 9th Street Pl SE Hickory, NC 28602  <b>SIC:</b> 2512 / Upholstered Household Furniture <b>NAICS:</b> 337121 / Upholstered Household Furniture Manufacturing  <b>Facility Classification: Before:</b> Title V <b>After:</b> Title V <b>Fee Classification: Before:</b> Title V <b>After:</b> Title V			<b>SIP:</b> <b>NSPS:</b> <b>NESHAP:</b> <b>PSD:</b> <b>PSD Avoidance:</b> <b>NC Toxics:</b> <b>112(r):</b> <b>Other:</b>
<b>Contact Data</b>			<b>Application Data</b>
<b>Facility Contact</b>	<b>Authorized Contact</b>	<b>Technical Contact</b>	<b>Application Number:</b> 1800102.09A <b>Date Received:</b> 09/08/2009 <b>Application Type:</b> 112(j) Part I <b>Application Schedule:</b> TV-Significant <b>Existing Permit Data</b> <b>Existing Permit Number:</b> 02779/T21 <b>Existing Permit Issue Date:</b> 12/05/2008 <b>Existing Permit Expiration Date:</b> 11/30/2013
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<b>Review Engineer:</b> Mike Gordon  <b>Review Engineer's Signature:</b> _____ <b>Date:</b> _____		<b>Comments / Recommendations:</b> Issue 02779/T22 <b>Permit Issue Date:</b> <b>Permit Expiration Date:</b>	

**1. Purpose of Applications**

Hickory Chair Company is located in Hickory, Catawba County, North Carolina. Application No. 1800102.09A, received September 8, 2009 is a Part 2 Maximum Achievable Control Technology (MACT) "Hammer" application for one wood-fired fire tube boiler (38 million Btu per hour maximum heat input rate; ID No. WFB-1) and one No. 5 and No. 6 fuel oil-fired boiler (29.29 million Btu per hour maximum heat input rate; ID No. OFB). The boilers 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 September 8, 2009.

## 2. 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"> <li>• Change the issuance/effective dates of the permit;</li> <li>• Amend the application number and complete date;</li> <li>• Change permit revision number to T22;</li> <li>• Added references to 112(j) applicability</li> </ul>
-	7-12	2.1.A.4	Added requirements for 15A NCAC 2D .1109: CAA § 112(j); Case-by-Case MACT for Boilers & Process Heaters
-	16-18	2.1.C.4	Added requirements for 15A NCAC 2D .1109: CAA § 112(j); Case-by-Case MACT for Boilers & Process Heaters
20 – 28	19 - 26	Section 3	Update Section 3 General Conditions

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

- A. 15A NCAC 2D .1109 – CAA § 112(j); Case-by-Case MACT for Boilers & Process Heaters** – On July 20, 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 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.

NC DAQ has developed this guidance to provide standards and compliance procedures that it has determined meet the requirements of § 112(j) (<http://daq.state.nc.us/permits/112j/>).

On September 8, 2009, the NC DAQ received a Part 2 MACT “Hammer” application from this facility asking that the NC DAQ establish 112(j) emissions limitations in accordance with NC DAQ’s recommendations. The facility proposed to comply with the filterable particulate matter (PM), mercury (Hg), and carbon monoxide (CO) emission limitations that are consistent with the NC DAQ application guidance. NC DAQ has developed this guidance to provide standards and compliance procedures that it has determined meet the requirements of § 112(j). Filterable PM emission limitations are a surrogate for non-mercury metal hazardous air pollutants (HAP).

To demonstrate compliance with the standards, the facility will be required to conduct an annual compliance test. In most cases, the compliance test will be a stack test. However, the Permittee may choose to conduct a fuel analysis to demonstrate compliance with the

mercury limit. Also, if stack test results show that emissions from an affected source are less than 80% of any applicable emission limitation, the frequency of testing for that pollutant shall be reduced from once per year to once every five years.

## **B. Wood-Fired Boiler:**

One wood-fired fire tube boiler (38 million Btu per hour maximum heat input rate; ID No. WFB-1) and two associated multicyclones (20 nine-inch diameter tubes, each; ID Nos. CDMCY-1 and CDMCY-2)

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.

### **a. 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. Hickory Chair chose to comply with TSM emission limit of 5.00 E-04 lb/MMBtu for dry wood. 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, Hickory Chair chose an alternative to demonstrate compliance with the TSM emission limit.

Hickory Chair 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).

To demonstrate compliance with the standard, Hickory Chair will utilize an initial and periodic stack testing required to demonstrate compliance with the TSM limit as described in the NC DAQ guidance.

**b. 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, Hickory Chair 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.

**c. 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, Hickory Chair 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.

**d. 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, Hickory Chair will utilize an initial and periodic stack testing required to demonstrate compliance with the CO limit as described in the NC DAQ 112(j) application guidance, and the testing details will be placed in the permit.

**4. Recommendations**

This permit modification application 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. 02779T22 public notice and EPA comment periods are required. MRO has received a copy of this permit