

**NORTH CAROLINA DIVISION OF
AIR QUALITY**

Air Permit Review

Permit Issue Date:

Region: Asheville Regional Office
County: Graham
NC Facility ID: 3800005
Inspector's Name: Brendan Davey
Date of Last Inspection: 06/16/2009
Compliance Code: 3 / Compliance - inspection

Facility Data			Permit Applicability (this application only)
Applicant (Facility's Name): Stanley Furniture Company, Inc. Facility Address: Stanley Furniture Company, Inc. 68 Snowbird Road Robbinsville, NC 28771 SIC: 2511 / Wood Household Furniture NAICS: 337122 / Nonupholstered Wood Household Furniture Manufacturing Facility Classification: Before: Title V After: Title V Fee Classification: Before: Title V After: Title V			SIP: NSPS: NESHAP: PSD: PSD Avoidance: NC Toxics: 112(r): Other:
Contact Data			Application Data
Facility Contact	Authorized Contact	Technical Contact	Application Number: 3800005.09A Date Received: 09/14/2009 Application Type: 112(j) Part I Application Schedule: TV-Significant Existing Permit Data Existing Permit Number: 03794/T18 Existing Permit Issue Date: 01/26/2010 Existing Permit Expiration Date: 12/31/2014
Dicky Webster Industrial Engineer II (828) 479-3311 68 Snowbird Road Robbinsville, NC 28771	Glenn Prillaman Chief Operating Officer (276) 627-2000 PO Box 30 Stanleytown, VA 24168	Cristina Loth Vice President of Engineering (276) 627-2000 P O Box 30 Stanleytown, VA 24168	
Review Engineer: Gautam Patnaik Review Engineer's Signature: _____ Date: _____		Comments / Recommendations: Issue 03794/T19 Permit Issue Date: Permit Expiration Date:	

1. Facility Description.

The facility is a wood furniture manufacturer.

2. Purpose of Application

On July 20, 2007, the D.C. Circuit Court vacated the boiler MACT Subpart DDDDD. The North Carolina Attorney General's office has determined that the NESHAP vacatuer 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 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.

This facility located in Graham County, North Carolina, has applied as part of this application to incorporate the CAA § 112(j), Part II MACT “Hammer” requirements. The facility has three boilers as listed below:

- One No. 6 fuel oil-fired boiler (ID No. FB-1),
- One wood fuel-fired boiler (ID No. FB-2) with associated multicyclone (ID No. MC-2), and
- One wood fuel/No. 6 fuel oil/finishing waste-fired boiler (ID No. FB-3) with associated multicyclone (ID No. MC-3)

None of these boilers are subject to any NSPS standards.

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

The application was to incorporate the emissions standards CAA § 112(j), Part II MACT “Hammer” and demonstration of compliance. Based on the fuel type being burned and the rating of the above boilers the emissions limits are specified Section 2., of the “CAA § 112(j) – Part II MACT “Hammer” Application Guidance for North Carolina Boilers and Process Heaters,” and incorporated into the modified permit (Section 2.2 C. 1. a., of modified Air Quality Permit No. 03794T19). The limits are as outlined below:

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
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Regulated Pollutant	Limits/Standards	Applicable Regulation
HAPs	<p>From firing No. 6 fuel oil in boiler (FB-1): Filterable PM: 0.45 lb/MMBtu Total Selected Metals*: 0.002 lb/MMBtu Mercury: 0.00002 lb/MMBtu Carbon Monoxide: 28 ppmvd, 7% O₂</p> <p>From firing wood in boiler (FB-2): Filterable PM: 0.39 lb/MMBtu Total Selected Metals*: 0.0005 lb/MMBtu Mercury: 0.000005 lb/MMBtu Hydrogen Chloride: 0.02 lb/MMBtu Carbon Monoxide: 508 ppmvd, 7% O₂</p> <p>From firing No. 6 fuel oil in boiler (FB-3): Filterable PM: 0.45 lb/MMBtu Total Selected Metals*: 0.002 lb/MMBtu Mercury: 0.00002 lb/MMBtu Carbon Monoxide: 28 ppmvd, 7% O₂</p> <p>From firing wood and finishing waste in boiler (FB-3): Particulate Matter (filterable): 0.39 lb/MMBtu Total Selected Metals*: 0.0005 lb/MMBtu Mercury: 0.000005 lb/MMBtu Hydrogen Chloride: 0.02 lb/MMBtu Carbon Monoxide: 508 ppmvd, 7% O₂</p>	15A NCAC 2D .1109 [CAA § 112(j)]

* Facilities may choose to comply with the Total Selected Metals (TSM) standard *in lieu* of the particulate matter (PM) standard. Facilities are not required to comply with both the PM and TSM standards.

The applicant had filed an application to comply with TSM. However, in discussion with them on 3/3/10 the applicant mentioned that they wanted the option to comply with either particulate matter or the Total Selected Metals (TSM). Also they had filed the application with the option to comply with the use of Health Based Compliance Alternative (HBCA) for HAPs emissions. Again, in discussion with them on 3/4/10 they mentioned that that their intention was to use the “without use of HBCA” option and they plan to provide that in writing. They plan to use the fuel analysis option to demonstrate compliance. As per the HBCA Application Guidance document the applicant has till three year from the date of compliance to comply with the emission standards.

For emissions from boiler (FB-3) while burning finishing waste it was determined to have the same emissions from that of wood with moisture content less than 20%.

The table below is the emissions from the before controls, estimated emissions from the boilers as per AP-42 emissions factors:

Boilers	Million Btu/hr	HCl emissions rate lbs/hr	Cl ₂ emissions rate lbs/hr	Mn emissions rate lbs/hr
One No. 6 fuel oil-fired boiler (FB-1)	15			3.0 E-04 (oil)
One wood fuel-fired boiler (FB-2)	44.3	8.42 E-01 (wood)	3.5 E-02 (wood)	7.09 E-02 (wood)
One wood fuel/No. 6 fuel oil/finishing waste-fired boiler (FB-3)	36.0	6.84 E-01 (wood)	2.84 E-02 (wood)	5.76 E-02 (wood) 7.2 E-04 (oil)

Initial Performance Testing

The applicant will use the fuel analysis option to demonstrate compliance, however they are required to perform once, an initial compliance test to demonstrate compliance to comply with CO emissions limits. This test is to be conducted within 180 days of the initial compliance date. The testing procedures are as per the HBCA Application Guidance document and outlined in Section 2.2 C. 1. d., of the modified permit.

Compliance by Fuel Analyses

The applicant has opted to demonstrate compliance with the emissions standards as specified in the table above by fuel analyses. The analyses shall be conducted according to the procedures HBCA Application Guidance document and outlined in Section 2.2 C. 1. e., of the modified permit.

Periodic Fuel Analysis Requirements

The applicant must conduct a fuel analysis for each type of fuel burned, every five years.

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

The applicant shall retain a record of the amounts of each fuel fired in the affected boilers, each month.

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

The applicant shall provide a semi annual summary report of any deviation.

4. Recommendations

This permit modification application for this facility has been reviewed by NC DAQ to determine compliance with all procedures and requirements. DAQ has determined that this facility appears to be in compliance with all applicable requirements. The permit for this facility was recently renewed and all the General Conditions have been updated.

5. Table of Changes

Page(s)	Section	Description of Change(s)
3	Source Table	Added 112(j) designations to all boilers.
4	2.1 A.	Add 112(j) to boiler (FB-1)
6	2.1 B.	Add 112(j) to boiler (FB-2)
8	2.1 C.	Add 112(j) to boiler (FB-3)
20	2.2 C. 1.a	Emissions limits for boilers as per 112(j) standards.
2.1	2.2 C. 1.d.	Initial Performance Testing to demonstrate compliance with 112(j).
21	2.2 C. 1.e.	Compliance by Fuel Analyses to demonstrate compliance with 112(j).
23	2.2 C. 1.f., & g.	Periodic Fuel Analysis to demonstrate compliance with 112(j).
38-47	Section 3	Update General Provisions with the most recent revision (v. 3.1)