West Virginia Department of Environmental Protection
Division of Air Quality

Fact Sheet

For Final Significant Modification Permitting Action Under 45CSR30 and Title V of the Clean Air Act

This Fact Sheet serves to address the changes specific to this Significant Modification, and shall be considered a supplement to the Fact Sheet corresponding with the Title V operating permit issued on October 24, 2007.

Permit Number: **R30-00700016-2007**
Application Received: **06-01-2009**
Plant Identification Number: **03-54-00700016**
Permittee: **Weyerhaeuser NR Company**
Facility Name: **Heaters Facility**
Mailing Address: **HC65 Box 1A, Heaters, WV 26627**

Permit Action Number: SM02 Revised: 12-07-2009

Physical Location:	Heaters, Braxton County, West Virginia
UTM Coordinates:	529.939 km Easting • 4,290.213 km Northing • Zone 17
Directions:	Exit I-79 at the Flatwoods exit, then proceed North on Route 4/US 19 approximately 3.2 miles. The facility entrance is on the left.

Description of Modification

On July 30, 2004, the U.S. Environmental Protection Agency (EPA) promulgated standards under 40 CFR 63, Subpart DDDD for Plywood and Composite Wood Products (PCWP MACT) manufacturing facilities. This regulation applies to oriented strand board (OSB) manufacturers located at major HAP emissions sources. On June 19, 2007, the low-risk option of the PCWP Regulation was vacated by the United States Court of Appeals for the District of Columbia Circuit; the compliance date was also reset to October 1, 2007. As a result, on July 19, 2007, Weyerhaeuser requested a one-year extension of the compliance date from the West Virginia Department of Environmental Protection. The extension was granted with the compliance date of October 1, 2008. Due to delays in the transport and delivery of two large cyclones, the mill received a consent order that addressed a short duration of time that extended the startup date of MACT controls until November 15, 2008.

Since this time, the mill has demonstrated compliance with the PCWP MACT by limiting emissions to no more than 20 parts per million dry volume (ppmvd) of total hydrocarbons measured as carbon from its main stack, emission point ID 21. Emissions were first controlled with a regenerative thermal oxidizer (RTO) and then later with the RTO retrofitted to operate as a regenerative catalytic oxidizer (RCO). The company plans to utilize the fuel saving benefits of the RCO while retaining the ability to transition back to RTO operation should the catalytic system experience problems in the future.

The exhaust treatment system, which starts after the product separation cyclones, consists of an in-duct spray chamber, followed by a finishing cyclone, then a wet electrostatic precipitator, which is finally followed by the thermal/catalytic oxidizer. The entire treatment process actually consists of two separate exhaust ducts, as described above, which run in parallel. Each parallel exhaust system services two driers. The OSB press exhaust is also integrated into the treatment process after the finishing cyclones. However, a fraction of the press vent exhaust is also supplied to the fuel cells as combustion air for additional VOC destruction.

As mentioned briefly above, the mill has demonstrated compliance with the PCWP MACT during thermal oxidizer operation using the second compliance option from Table 1B of MACT subpart DDDD: limiting emissions of total HAP, measured as THC (as carbon), to 20 ppmvd. This limit applies to the dryer and press emissions. The mill has installed and is currently operating two natural gas fired (RCO/RTO) units on the dryers and press to comply with this limit. Two RCOs previously existed on the Main Stack (Emission Point ID 21), but were removed from service in 2003. The mill received a minor source construction and modification permit to modify these units, allowing their operation as either an RTO or an RCO. It should be noted that combustion byproducts from the wood fired fuel cells, auxiliary natural gas dryer burners, and the natural gas fired oxidizer are also vented to the atmosphere via the main stack (ID 21).

The primary purpose of this significant modification is to incorporate the specific operating parameters defined within the facility's Notification of Compliance Status (NOCS) Report submitted in accordance with MACT subpart DDDD. This report defines RCO/RTO minimum operating temperatures, which correlate with a successful compliance demonstration via stack testing. These minimum temperature requirements are incorporated within section 4.0 of the Title V Permit.

Emissions Summary

The emissions associated with this permit modification remain unchanged from the last permitting action, which incorporated the routine maintenance exemption in accordance with PWCP MACT allowances. The permit as proposed does not establish any additional pollutant limits, but does recognize the results of two compliance testing events, which were successful in establishing operating parameters to serve as continuous compliance measures. The results of these tests, one in RTO operating mode and one with the RCO operating, are summarized in Table 1.

Table 1. Compliance Testing Emission Summary

Emission Point E-21					
Volume of Wood Pressed	**37,500 ft^3/ hr**		**37,625 ft^3/ hr**		
Flow	**207,557 scfm**		**206,561 scfm**		
Test Date	**June 11, 2009**		**March 17-18, 2009**		
Control Device	**RCO (A - Temp 550 F) (B – Temp 550 F)**		**RTO (A - Temp 1524 F) (B - Temp 1520 F)**		
Pollutants	**lb/hr**	**Tons/yr if operated 8760 hours/yr**	**lb/hr**	**Tons/yr if operated 8760 hours/yr**	**Permit limit Tons/yr**
PM	6.53	28.60	8.29	36.31	76.00
CO	17.88	78.31	12.33	54.01	226.00
NOx	28.76	125.97	34.91	152.91	226.00
VOC as (propane) OTM-26[1] WPP1 VOC[2]	**8.41**	**36.84**	**2.77**	**12.13**	**60.49**
VOC as (propane) Method 25A	13.18		2.36		N/A
Formaldehyde	2.00	8.76	0.32	1.40	9.63
Methanol	0.29[3]	1.26	0.50	2.19	9.21
Methane	7.6	33.29	0.14	0.61	N/A
Ethane	NA		0.13	0.57	N/A

[1] OTM-26 is EPA guidance on how to calculate VOC for wood products industry, includes formaldehyde and methanol adjustments to Method 25A VOC measurements

[2] WPP1 VOC – defined by OTM-26 as "Wood Products Protocol 1 VOC" and is used for NSR and Title V applicability

[3] Methanol values were measured to be below method detection levels, which could have been a result of exceeding the 30 day sample hold time for this one pollutant.

As a result of having to evaluate various VOC groupings, Table 2 below is provided to summarize EPA guidance on using Other Test Method (OTM) -26 to calculate the wood products protocol 1 (WPP1) VOC classification. WPP1 VOC calculations are necessary for purposes of SIPs, NSR, and Title V implementation. Additionally, Table 3 is provided as a summary of the total hydrocarbon (THC) calculations that were used to determine compliance with 40 C.F.R. 63, Subpart DDDD concentration limits.

Table 2. VOC Summary of OTM-26 Calculations

Pollutant Classification	RCO	RTO
	lb/hr	lb/hr
VOC expressed as (propane) Method 25A	13.18	2.36
Formaldehyde NCASI Method 98.01	2.00	0.32
Methanol NCASI 98.01 Estimated from non-detect (ND) values	0.29	0.50
Sum VOCs	**15.47**	**3.18**
Adjustments		
Methanol equivalent expressed as (propane) Method 25A	0.09	0.15
Methane Method 18	7.60	0.14
Methane equivalent expressed as (propane)	6.97	0.13
Ethane Method 18	N/A	0.14
Ethane equivalent expressed as (propane)	N/A	0.14
Sum Equivalent Adjustments	**7.06**	**0.42**
Net VOCs express as (propane) WPP1 VOC [1]	**8.41**	**2.77**

[1]This value is tabulated in accordance with EPA guidance document OTM-26 and should be used for NSR and Title V applicability. This VOC value is denoted as "Wood Products Protocol 1 (WPP1) VOC"

Table 3. MACT VOC Concentration Summary

Pollutant Classification	RCO		RTO	
	lb/hr	ppm	lb/hr	ppm
VOC expressed as (propane) Method 25A	13.18	27.80 as carbon	2.36	5.00 as carbon
Adjustments				
Methane measured by Method 18	7.60	14.70 as carbon	0.14	0.27 as carbon
Ethane measured by Method 18	NA	NA	0.13	0.13 as carbon
Net VOC expressed as total hydrocarbons minus methane and ethane	5.58	13.10 as carbon	2.09	4.60 as carbon
MACT concentration limit		20 ppm as carbon		20 ppm as carbon

It was noted by the writer that the RCO test results on page 15 of 69 express the weight rate of methane on a carbon basis (5.7 lbs/hr) as compared to the (7.6 lb/hr) tabulated above, which is more appropriately expressed on a methane weight basis for comparison. No matter how the weight basis is expressed within the calculations, the important thing here is that the concentration is expressed on a carbon basis in order to correlate with the MACT limit.

The writer also finds it pertinent to note the methanol results were tabulated and run after the maximum sample hold times associated with NCASI method 98.01. This was as a result of determining the need for a methanol analysis after the writer's review of the stack test report. Therefore, the company acted in good faith and attempted to provide a measurement for methanol, however the results were tabulated below the method's detection levels, which brings the sample hold time into question. Nevertheless, since methanol exhibits a 65% response factor under method 25A as VOC, the writer feels confident that the majority of the methanol was accounted for correctly with respect to MACT compliance. The possibility of additional methanol being present is not expected to result in any concentration that would exceed the 20 ppm (THC as Carbon) MACT limit due to a compliance margin of 8 ppm, but will be addressed by confirmatory testing, which is to occur once per permit term or sooner at the Director's discretion if necessary.

Title V Program Applicability Basis

When considering the proposed changes associated with this modification, this facility maintains the potential to emit 229 tons/yr (tpy) carbon monoxide (CO), 228.9 tpy nitrogen oxides (NOx), and 30 tpy aggregate HAPs. Due to this facility's potential to emit over 100 tons per year of criteria pollutants and over 25 tons per year of aggregate HAPs, Weyerhaeuser's Heaters facility is required to have an operating permit pursuant to Title V of the Federal Clean Air Act as amended and 45CSR30.

Legal and Factual Basis for Permit Conditions

The State and Federally-enforceable conditions of the Title V Operating Permits are based upon the requirements of the State of West Virginia Operating Permit Rule 45CSR30 for the purposes of Title V of the Federal Clean Air Act and the underlying applicable requirements in other state and federal rules.

The modification to this facility has been found to be subject to the following applicable rules:

Federal and State:	45CSR13	
	45CSR30	Operating permit requirement.
	40 C.F.R. 63, Subpart DDDD	Plywood and Composite Wood Products MACT
State Only:	45CSR27	Best Available Technology (BAT) for Formaldehyde TAP

Each State and Federally-enforceable condition of the draft Title V Operating Permit references the specific relevant requirements of 45CSR30 or the applicable requirement upon which it is based. Any condition of the draft Title V permit that is enforceable by the State but is not Federally-enforceable is identified in the draft Title V permit as such.

The Secretary's authority to require standards under 40 C.F.R. Part 60 (NSPS), 40 C.F.R. Part 61 (NESHAPs), and 40 C.F.R. Part 63 (NESHAPs MACT) is provided in West Virginia Code §§ 22-5-1 *et seq.*, 45CSR16, 45CSR34 and 45CSR30.

Active Permits/Consent Orders

Permit or Consent Order Number	Date of Issuance	Permit Determinations or Amendments That Affect the Permit *(if any)*
R13-1761G	03/12/2009	

Conditions from this facility's Rule 13 permit(s) governing construction-related specifications and timing requirements will not be included in the Title V Operating Permit but will remain independently enforceable under the applicable Rule 13 permit(s). All other conditions from this facility's Rule 13 permit(s) governing the source's operation and compliance have been incorporated into this Title V permit in accordance with the "General Requirement Comparison Table B," which may be downloaded from DAQ's website.

Determinations and Justifications

Weyerhaeuser's Heaters facility was found to be in compliance with the MACT THC limit of 20 ppm as required by 40 C.F.R. 63, Subpart DDDD. As a result, continuous compliance will be monitored under either control scenario by maintaining a continuous record of RTO/RCO operating temperature. This temperature limit is defined under subpart DDDD as the average of 3 minimum 15 minute temperature observations, one per each hourly test run, recorded during a successful compliance demonstration.

Non-Applicability Determinations

N/A

Request for Variances or Alternatives

None

Insignificant Activities

Insignificant emission unit(s) and activities are identified in the Title V application.

Comment Period

Beginning Date: October 13, 2009
Ending Date: November 12, 2009

All written comments should be addressed to the following individual and office:

Jesse Hanshaw, PE
Title V Permit Writer
West Virginia Department of Environmental Protection
Division of Air Quality
601 57th Street SE
Charleston, WV 25304

Procedure for Requesting Public Hearing

During the public comment period, any interested person may submit written comments on the draft permit and may request a public hearing, if no public hearing has already been scheduled. A request for public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. The Secretary shall grant such a request for a hearing if he/she concludes that a public hearing is appropriate. Any public hearing shall be held in the general area in which the facility is located.

Point of Contact

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Division of Air Quality
601 57th Street SE
Charleston, WV 25304
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Response to Comments (Statement of Basis)

During the official public and EPA notice periods no comments were received.