

STATE OF MISSOURI



DEPARTMENT OF NATURAL RESOURCES

MISSOURI AIR CONSERVATION COMMISSION

PERMIT TO CONSTRUCT

Under the authority of RSMo 643 and the Federal Clean Air Act the applicant is authorized to construct the air contaminant source(s) described below, in accordance with the laws, rules and conditions as set forth herein.

Permit Number: 112011-003

Project Number: 2011-07-015
Installation Number: 203-0005

Parent Company: Hardwoods of Missouri

Parent Company Address: 502 East Old Highway 60, Birch Tree, MO 65438

Installation Name: Hardwoods of Missouri

Installation Address: 502 East Old Highway 60, Birch Tree, MO 65438

Location Information: Shannon County, S22, T27N, R5W

Application for Authority to Construct was made for:
Addition of a microbicide dip tank for the treatment of green lumber. This review was conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.

-
- Standard Conditions (on reverse) are applicable to this permit.
 - Standard Conditions (on reverse) and Special Conditions are applicable to this permit.

NOV 02 2011

EFFECTIVE DATE

DIRECTOR OR DESIGNEE
DEPARTMENT OF NATURAL RESOURCES

STANDARD CONDITIONS:

Permission to construct may be revoked if you fail to begin construction or modification within two years from the effective date of this permit. Permittee should notify the Air Pollution Control Program if construction or modification is not started within two years after the effective date of this permit, or if construction or modification is suspended for one year or more.

You will be in violation of 10 CSR 10-6.060 if you fail to adhere to the specifications and conditions listed in your application, this permit and the project review. In the event that there is a discrepancy between the permit application and this permit, the conditions of this permit shall take precedence. Specifically, all air contaminant control devices shall be operated and maintained as specified in the application, associated plans and specifications.

You must notify the Departments' Air Pollution Control Program of the anticipated date of start up of these air contaminant sources. The information must be made available within 30 days of actual startup. Also, you must notify the Department of Natural Resources Regional office responsible for the area within which you are located within 15 days after the actual start up of these air contaminant sources.

A copy of this permit and permit review shall be kept at the installation address and shall be made available to Department of Natural Resources' personnel upon request.

You may appeal this permit or any of the listed special conditions to the Administrative Hearing Commission (AHC), P.O. Box 1557, Jefferson City, MO 65102, as provided in RSMo 643.075.6 and 621.250.3. If you choose to appeal, you must file a petition with the AHC within 30 days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed. If it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the AHC.

If you choose not to appeal, this certificate, the project review and your application and associated correspondence constitutes your permit to construct. The permit allows you to construct and operate your air contaminant sources(s), but in no way relieves you of your obligation to comply with all applicable provisions of the Missouri Air Conservation Law, regulations of the Missouri Department of Natural Resources and other applicable federal, state and local laws and ordinances.

The Air Pollution Control Program invites your questions regarding this air pollution permit. Please contact the Construction Permit Unit at (573) 751-4817. If you prefer to write, please address your correspondence to the Missouri Department of Natural Resources, Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102-0176, attention: Construction Permit Unit.

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SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

The special conditions listed in this permit were included based on the authority granted the Missouri Air Pollution Control Program by the Missouri Air Conservation Law (specifically 643.075) and by the Missouri Rules listed in Title 10, Division 10 of the Code of State Regulations (specifically 10 CSR 10-6.060). For specific details regarding conditions, see 10 CSR 10-6.060 paragraph (12)(A)10. "Conditions required by permitting authority."

Hardwoods of Missouri
Shannon County, S22, T27N, R5W

1. Emission Limitation
 - A. Hardwoods of Missouri shall emit less than 5.0 tons of glycol ethers in any consecutive 12-month period from the open air dip tank (EU-10).
 - B. Attachment A or equivalent forms, such as electronic forms, approved by the Air Pollution Control Program shall be used to demonstrate compliance with Special Condition 1.A.
 - C. Hardwoods of Missouri shall maintain all records required by this permit for not less than five years and shall make them available immediately to any Missouri Department of Natural Resources' personnel upon request. These records shall include Material Safety Data Sheets (MSDS) for all materials used.
 - D. Hardwoods of Missouri shall report to the Air Pollution Control Program's Compliance/Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after the end of the month during which the records required by Special Condition 1.B. show an exceedance of the limit imposed by Special Condition 1.A.

REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT AND OPERATE
SECTION (5) REVIEW

Project Number: 2011-07-015
Installation ID Number: 203-0005
Permit Number:

Hardwoods of Missouri
502 East Old Highway 60
Birch Tree, MO 65438

Complete: July 11, 2011

Parent Company:
Hardwoods of Missouri
502 East Old Highway 60
Birch Tree, MO 65438

Shannon County, S22, T27N, R5W

REVIEW SUMMARY

- Hardwoods of Missouri has applied for the authority to install a microbicide dip tank for the treatment of green lumber.
- Hazardous Air Pollutant (HAP) emissions are expected from the proposed equipment. HAPs of concern from this process are glycol ethers.
- None of the New Source Performance Standards (NSPS) apply to the installation.
- None of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) apply to this installation. None of the currently promulgated Maximum Achievable Control Technology (MACT) regulations apply to the proposed equipment.
- No air pollution control equipment is being used in association with the new equipment.
- This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of Volatile Organic Compounds (VOCs) and HAPs are conditioned below de minimis levels.
- This installation is located in Shannon County, an attainment area for all criteria pollutants.
- This installation is not on the List of Named Installations found in 10 CSR 10-6.020(3)(B), Table 2. The installation's major source level is 250 tons per year and fugitive emissions are not counted toward major source applicability.
- Ambient air quality modeling was not performed since potential emissions of the application are conditioned below screening model action levels.

- Emissions testing are not required for the equipment.
- An application for an amendment to your Intermediate Operating Permit must be submitted within 90 days of equipment startup.
- Approval of this permit is recommended with special conditions.

INSTALLATION DESCRIPTION

Hardwoods of Missouri is an existing flooring manufacturing facility located in Birch Tree, Missouri in Shannon County. Hardwoods of Missouri was formerly known as Missouri Hardwood Flooring Company until it changed ownership in November 2009. The installation had previously operated three flooring mills at this site, but they have since reduced to operating only one mill.

The following permits have been issued to Hardwoods of Missouri from the Air Pollution Control Program.

Table 1: Permit History

Permit Number	Description
0184-012	Installation of one (1) hardwood-fired boiler.
0387-009	Replacement of two (2) existing boiler w/ 1-300hp wood-fired boiler.
0192-006	Addition of a new processing line including two (2) planing operations, three (3) sawing operations and the replacement of a sawdust storage building with a storage silo.
0497-022	Extension of existing Peerless Bin Model 62 Mono with Peerless Bin Model 30 Mono.
0797-020	Addition of Cut-up saw and Williams Hog.
112000-009	Addition of a wood crusher
OP2009-039	Intermediate Operating Permit

PROJECT DESCRIPTION

Hardwoods of Missouri has proposed to install a microbicide dip tank (EU-10) for the treatment of green lumber. The dip tank solution will contain a low concentration of two aqueous chemicals, a microbicide and a dispersant, that work together to prevent mold and sapstains. The dip tank solution will be diluted with water to an approximate mix ratio of two gallons microbicide, one gallon dispersant, and 100 gallons water. The installation estimated its maximum usage of the dip tank solution assuming 15 gallons solution per 1000 board feet (BF) of green lumber. The design rate of the mill was estimated by the applicant to be a maximum throughput of 600,000 board feet per month. At 4 weeks per month and 40 hours per week, the maximum hourly design rate of the mill would be 3750 BF per hour. This equates to 56 gallons dip tank solution per hour and 1.1 gallons microbicide concentrate per hour.

EMISSIONS/CONTROLS EVALUATION

The pollutants of concern from this project are VOCs and HAPs. The microbicide concentrate contains 60 percent glycol ethers and 1.2 percent methanol by weight. Both of these compounds are classified as VOCs and HAPs.

Potential emissions were calculated using a mass balance approach and assuming 100 percent of the VOC and HAP compounds are emitted. The dip tank (EU-10) is open to the ambient air and there are no add-on pollution control devices. Potential emissions of the application represent the potential of the new equipment, assuming continuous operation (8760 hours per year). The following table provides an emissions summary for this project.

Table 2: Emissions Summary (tons per year)

Pollutant	Regulatory <i>De Minimis</i> Levels ^[1]	Existing Potential Emissions ^[2]	Existing Actual Emissions (2010 EIQ)	Potential Emissions of the Application	Conditioned Potential Emissions ^[3]
PM _{2.5}	10.0	2.25	0.51	N/A	N/A
PM ₁₀ ^[4]	15.0	74.8	2.29	N/A	N/A
SOx	40.0	0.32	0.72	N/A	N/A
NOx	40.0	6.23	14.05	N/A	N/A
VOC	40.0	0.22	0.49	32.41	5.10
CO	100.0	7.63	17.2	N/A	N/A
Combined HAPs	25.0	0.31	0.8	32.41	5.10
Glycol Ethers	5.0	N/D	N/D	31.78	<5.0
Methanol	10.0	N/D	N/D	0.64	0.1

N/A = Not Applicable; N/D = Not Determined

¹For individual HAPs, values represent the SMAL

²Except where noted, existing potential emissions obtained from OP2009-039

³Conditioned potential emissions represent the potential emissions of the project considering the limit on emissions of glycol ethers to below the SMAL. Other pollutants are proportionately reduced.

⁴Emissions of PM₁₀ obtained from construction permit 112000-009 because the operating permit did not consider construction permit limitations

PERMIT RULE APPLICABILITY

This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of VOC and HAPs are conditioned below de minimis levels.

APPLICABLE REQUIREMENTS

Hardwoods of Missouri shall comply with the following applicable requirements. The Missouri Air Conservation Laws and Regulations should be consulted for specific record keeping, monitoring, and reporting requirements. Compliance with these emission standards, based on information submitted in the application, has been verified at the time this application was approved. For a complete list of applicable requirements for your installation, please consult your operating permit.

GENERAL REQUIREMENTS

- *Submission of Emission Data, Emission Fees and Process Information*, 10 CSR 10-6.110
The emission fee is the amount established by the Missouri Air Conservation Commission annually under Missouri Air Law 643.079(1). Submission of a hardcopy EIQ is required by April 1 for the previous year's emissions. Otherwise, submission of an electronic EIQ via MOEIS is required by May 1.
- *Operating Permits*, 10 CSR 10-6.065
- *Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin*, 10 CSR 10-6.170
- *Restriction of Emission of Odors*, 10 CSR 10-6.165

STAFF RECOMMENDATION

On the basis of this review conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*, I recommend this permit be granted with special conditions.

Kathi Jantz
Environmental Engineer

Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated June 24, 2011, received July 11, 2011, designating Hardwoods of Missouri as the owner and operator of the installation.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.

Attachment A – Monthly Glycol Ethers Compliance Worksheet

Hardwoods of Missouri
 Shannon County, S22, T27N, R5W
 Project Number: 2011-07-015
 Installation ID Number: 203-0005
 Permit Number: _____

This sheet covers the month of _____ in the year _____.

Column 1	Column 2	Column 3	Column 4 (a)	Column 5 (b)
Material Used (Name)	Amount of Material Used (Include Units)	Density (Pounds per Gallon)	Glycol Ether Content (Weight %)	Glycol Ether Emissions (Tons)
Busan 1009			60%	
Others....				
(c) Total Glycol Ether Emissions Calculated for this Month in Tons:				
(d) Last Month's 12-Month Glycol Ether Emissions Total, in Tons:				
(e) Previous Year's Monthly Glycol Ether Emissions Total, in Tons:				
(f) Current 12-month Total of Glycol Ether Emissions in Tons: [(c) + (d) - (e)]				

Instructions: This worksheet must include all materials containing glycol ethers used in the microbicide dip tank (EU-10)

- (a) Glycol ether content should be obtained from the Material Safety Data Sheet (MSDS). If the content is given as a range, then the maximum value should be used.
- (b) 1) If usage is in tons - [Column 2] x [Column 4] = [Column 5];
 2) If usage is in pounds - [Column 2] x [Column 4] x [0.0005] = [Column 5];
 3) If usage is in gallons - [Column 2] x [Column 3] x [Column 4] x [0.0005] = [Column 5];
- (c) Summation of [Column 5] in Tons;
- (d) 12-Month glycol ether emissions (f) from last month's Attachment A in Tons;
- (e) 1-Month glycol ether emissions total (c) from the previous year's Attachment A in Tons; and
- (f) Calculate the new 12-month glycol ether emissions total. A 12-Month glycol ether emissions total (f) of less than **5.0** tons indicates compliance.

Mr. Jeff Davis
Owner
Hardwoods of Missouri
502 East Old Highway 60
Birch Tree, MO 65438

RE: New Source Review Permit - Project Number: 2011-07-015

Dear Mr. Davis:

Enclosed with this letter is your permit to construct. Please study it carefully. Also, note the special conditions, if any, on the accompanying pages. The document entitled, "Review of Application for Authority to Construct," is part of the permit and should be kept with this permit in your files. Operation in accordance with these conditions, your new source review permit application and with your amended operating permit is necessary for continued compliance. The reverse side of your permit certificate has important information concerning standard permit conditions and your rights and obligations under the laws and regulations of the State of Missouri.

If you have any questions regarding this permit, please do not hesitate to contact Kathi Jantz, at the Department's Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102 or at (573) 751-4817. Thank you for your attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Kendall B. Hale
New Source Review Unit Chief

KBH:kjl

Enclosures

c: Southeast Regional Office
PAMS File: 2011-07-015

Permit Number: