West Virginia Department of Environmental Protection
Division of Air Quality

Fact Sheet

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

Permit Number: **R30-08300025-2013**
Application Received: **December 19, 2011**
Plant Identification Number: **03-54-083-00025**
Permittee: **Armstrong Hardwood Flooring Company**
Facility Name: **Beverly Mill**
Mailing Address: **160 Route 250 South, Beverly, WV 26253**

Physical Location:	Beverly, Randolph County, West Virginia
UTM Coordinates:	597.41 km Easting • 4,296.88 km Northing • Zone 17
Directions:	From Charleston take I-79 North to exit 99, proceed east on US Route 33 to Elkins. From Elkins take US Route 250 South. The facility is located approximately 1.6 miles south of Beverly in Randolph County.

Facility Description

The Beverly facility manufactures finished and unfinished hardwood flooring under Standard Industrial Classification (SIC) code 2426. Green lumber is purchased and stacked in the Mill Yard to facilitate air drying of the lumber. The lumber is then further dried in the steam heated pre-dryer and/or one of 38 lumber kilns. Kiln-dried lumber is transferred by one of three lumber tilts to the Mill rough end saws. The rough end saws cut the lumber into strips for transfer to one of six lines of knot saws, side matchers, and end matchers. The unfinished wood flooring is graded, stacked and either stored or transferred to one of two finishing lines. Finished hardwood flooring is graded and packaged for shipment to mill customers.

Boilers: The facility currently operates two wood fuel-fired boilers (each 48.8 MMBTU/hr) to provide steam for the drying kilns, the stain curing ovens, and the building heating system. A third propane-fired

boiler (96.7 MMBTU/hr) is used as backup for periods of shutdown of the wood fired boilers. Each of the wood-fired boilers (001-01 & 001-02) is equipped with 7,600 square feet of heat surface for generating steam from the combustion of wood waste. Sawdust and wood waste from the mill operations are collected in silos and burned as fuel. These boilers are designed to generate a maximum of 37,110 pounds of steam by burning a maximum of 6,445 pounds per hour of wood waste fuel. An electrostatic precipitator controls particulate matter emissions from the two wood fired boilers.

A 96.7 MMBTU/hr Propane gas fired boiler (001-03) and associated propane unloading station was installed in 2007. This boiler is limited to 400 hours of operation per year.

Flooring Mill: The flooring mill consists of six (6) lines where cutting, planing, and edging operations are performed to convert kiln-dried hardwood lumber into unfinished hardwood flooring. The kiln-dried lumber is fed to the rough end for preliminary sorting, cutting, and sizing and then to one of the six processing lines. The Flooring Mill also includes several hogs, three hogged fuel silos, and two truck loadouts for hogged fuel. The flooring mill is designed to convert 163,800,000 board-feet of kiln-dried lumber into 109,200,000 square feet of unfinished hardwood flooring per year. Particulate emissions are controlled by seven (7) baghouses (No.'s 2 through 8).

Finishing Lines: Unfinished hardwood flooring is supplied to two (2) Finishing Lines for sanding, staining, sealing, application of topcoat, and packaging for shipment. Each line contains a stain rollcoater unit with stain applicators and a two-zone, natural gas-fired high velocity stain cure oven; a sealer rollcoater unit with hooded roll applicators and UV cure oven; a hooded topcoat rollcoater and UV cure oven; and a two-stage hooded topcoat rollcoater. Each finishing line is designed to produce 59,600,000 square feet of finished hardwood flooring per year. Particulate emissions from the finishing lines are controlled by Baghouse No. 1.

Yard Operations: Yard operations consist of receiving green lumber to the pre-dryer and/or lumber kilns, and transfer of dried lumber from the lumber kilns to dry storage. The mill operates one steam-heated pre-dryer and 38 steam-heated lumber kilns to dry green lumber for further processing in the mill and finishing lines. The pre-dryer is designed for 1,600,000 board-feet per charge (charge cycle is approximately 35 days). Each of the 38 kilns is designed for 102,000 board-feet per charge (charge cycle normally averages 15 days). Rolling stock transport of lumber results in the generation of fugitive particulate matter emissions.

Emissions Summary

Plantwide Emissions Summary [Tons per Year]

Regulated Pollutants	Potential Emissions	2011 Actual Emissions
Carbon Monoxide (CO)	227.0	94.41
Nitrogen Oxides (NO_X)	107.4	70.43
Particulate Matter (PM_{10})	54.6	4.58
Total Particulate Matter (TSP)	237.2	4.58
Sulfur Dioxide (SO_2)	11.31	10.29
Volatile Organic Compounds (VOC)	224.0	92.62

PM_{10} is a component of TSP.

Hazardous Air Pollutants	Potential Emissions	2011 Actual Emissions
Acrolein	1.75	1.12
Benzene	1.80	1.18
Formaldehyde	1.88	1.24
Hydrogen Chloride	8.15	5.34
Toluene	4.07	0.30
Xylene	0.66	0.01
Aggregated HAPs	24.4	10.10

Some of the above HAPs may be counted as PM or VOCs.

Title V Program Applicability Basis

This facility has the potential to emit over 100 tons per year of carbon monoxide (CO), nitrogen oxides (NO_X), and volatile organic compounds (VOCs). Due to this facility's potential to emit over 100 tons per year of criteria pollutants, Armstrong Hardwood Flooring Company 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.
This facility has been found to be subject to the following applicable rules:

Federal and State:	45CSR2	Particulate matter from Fuel Burning Units.
	45CSR6	Open burning prohibited.
	45CSR7	Particulate matter from manufacturing source(s).
	45CSR10	SO_2 from Fuel Buring Units.
	45CSR11	Standby plans for emergency episodes.
	45CSR13	Construction permit requirements.
	WV Code § 22-5-4 (a) (14)	The Secretary can request any pertinent information such as annual emission inventory reporting.
	45CSR30	Operating permit requirement.
	45CSR 34	Emission Standards for Hazardous Air Pollutants Pursuant to 40 C.F.R. Part 63
	40 C.F.R. Part 61	Asbestos inspection and removal
	40 C.F.R. Part 63, Subpart JJJJJJ	National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources
	40 C.F.R. Part 64	Compliance Assurance Monitoring Plan
	40 C.F.R. Part 82, Subpart F	Ozone depleting substances
State Only:	45CSR4	No objectionable odors.

Each State and Federally-enforceable condition of the Title V Operating Permit references the specific relevant requirements of 45CSR30 or the applicable requirement upon which it is based. Any condition of the Title V permit that is enforceable by the State but is not Federally-enforceable is identified in the 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)*
R13-1147L	09/07/2010	N/A

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

40 C.F.R. Part 63, Subpart JJJJJJ - Two (2) existing 48.8 MMBtu/hr wood-fired boilers (001-01, 001-02) are subject to subpart JJJJJJ per 40CFR§§ 63.11194(a) and (b). Requirements for this subpart are added in conditions 4.1.11, 4.1.12, 4.5.4 and 4.5.5 of this permit.

The existing 96.7 MM Btu/hr propane boiler (001-03) is defined under 40CFR§63.11237 as a gas-fired boiler. Gas-fired boilers are not subject to 40cfr 63, Subpart JJJJJJ per §63.11195(e)

40CFR64 Compliance Assurance Monitoring (CAM) for Boilers No. 1 and No.2 was addressed in the previous renewal. Section 7 (CAM requirements for Emission Unit IDs, (001-01, 001-02)) has been deleted and the requirements have been merged into section 4.

Conditions 4.2.1, 4.2.3 and 4.4.1 have been updated by adding CAM for Dry ESP (008). Conditions 4.2.4 and 4.4.5 have been added.

The following table provides a summary of the CAM requirements of the ESP (008):

CAM Plan Summary of Requirements (ESP)

	Indicator No. 1	**Indicator No. 2**
I. Indicator	Secondary voltage, Secondary amperage – *(4.2.3)*	Visible Emissions (VE) – *(4.2.1.)*
Measurement Approach	Secondary voltage and secondary amperage measured once per shift – *(4.2.3.)*	Weekly VE checks. Subsequent VE tests by 40 CFR 60, Appendix A, Method 9 certified individuals - *(4.2.1.)*
II. Indicator Range	An excursion is defined as a reading of secondary voltage below 20 kilovolts, or secondary amperage below 20 milliamps – *(4.2.3.)*	An excursion is defined as a six minute block average of 15-second readings greater than 10% opacity – *(4.2.1)*
III. Performance Criteria A. Data Representativeness	PTE <100% of major source classification. Minimum of one (1) parameter readings per 24 hour period. Readings to be recorded once per shift - *(4.2.3.)*	Individuals trained and certified in accordance with 40 CFR 60, Appendix A, Method 9. A field test correlates the opacity to PM concentration measured by Method 5 – *(4.2.1.)*
B. Verification of Operational Status	Calibrated upon installation. Evaluated once per shift to verify normal operation - *(4.2.3)*	N/A
C. QA/QC Practices and Criteria	Loss of signal or out-of-control periods will result in replacement of the defective component, or replacement of the instrument in-kind – *(4.2.4)*	Individuals conducting emission checks must be trained and knowledgeable in 40 CFR 60, Appendix A, Method 22. Trained personnel taking VE readings are to attend semiannual training and recertification classes - *(4.2.1.)*
D. Monitoring Frequency	Monitoring data and operational status of the precipitator recorded once per shift - *(4.2.3)*	Weekly visible emission checks. If visible emissions are present, conduct Method 9 test to verify compliance - *(4.2.1.)*
Data Collection Procedures	Electronic Display - *(4.2.3)*	Manual records - *(4.4.1.)*
Averaging Period	N/A	Six minute block average, based on 15-second readings unless 60 minute tests is required (Method 9) – *(4.2.1)*

CAM Plan Summary of Requirements (Baghouses)

Initially, in the previous Title V renewal application (2007), the permittee included the baghouses associated with the Flooring Mill and Finishing Lines as being subject to CAM requirements. However, it was later determined during the application review process for the previous Title V renewal (2007), that the initial Title V permit already established continuous compliance determination methods consisting of daily inspections and visible emission checks, therefore the control devices qualified for the exemption provided in 40 C.F.R. §64.2(b)(1)(vi). It has been determined during review of this Title V renewal however, that the compliance determination methods do not qualify as a continuous determination method under 40 C.F.R. §64.2(b)(1)(vi) and the emission units and associated baghouses are subject to CAM. Therefore, CAM requirements for Baghouses Nos. 1, 2, 3, 4, 5, 6, 7, and 8 for the Flooring Mill and Finishing Lines have been added to Sections 5 and 6 of the permit as follows.

- Conditions 6.2.1, 6.2.2, 6.4.4 and 6.4.5 have been updated by adding CAM for Baghouse No.1 (003).
- Conditions 6.2.4, 6.4.7, 6.4.8 and 6.5.2 have been added as CAM requirements for Baghouse No.1 (003).
- Conditions 5.2.1, 5.2.2, 5.4.1 and 5.4.2 have been updated by adding CAM requirements for Baghouses (004-007, 009-011).
- Conditions 5.2.3, 5.4.3, 5.4.4 and 5.5.2 have been added as CAM requirements for Baghouses (004-007, 009-011).

The following table provides a summary of the CAM requirements for the baghouses (003, 004-007, 009-011).

	Indicator No. 1	**Indicator No. 2**
I. Indicator	Differential pressure drop across baghouse.	Visible Emissions (VE)
Measurement Approach	Pressure differential gauges are installed in the appropriate locations on each baghouse compartment.(5.2.2 and 6.2.2)	Weekly VE check. Subsequent VE tests by 40 CFR 60, Appendix A, Method 9 certified individuals. .(5.2.1 and 6.2.1)
II. Indicator Range	An excursion is defined as any differential pressure drop reading from any baghouse below 0.25 inches of water column, or above 6.5 inches of water column. (5.2.2 and 6.2.2)	An excursion is defined as a six minute block average of 15-second readings greater than 20% opacity.(5.2.1 and 6.2.1)
III. Performance Criteria A. Data Representativeness	Pressure drop across the baghouse is measured at the baghouse inlet and exhaust. (5.2.2 and 6.2.2)	Individuals trained and certified in accordance with 40 CFR 60, Appendix A, Method 22. A field test correlates the opacity to PM concentration measured by Method 5. (5.2.1 and 6.2.1)
B. Verification of Operational Status	N/A	Initial correlation conducted.
C. QA/QC Practices and Criteria	The gauges for each of the baghouses will be checked for calibration at least once per year to ensure accurate readings. Loss of signal or out-of-control periods will result in replacement of a gauge in-kind.(5.2.3 and 6.2.4)	Individuals conducting VE checks must be trained and knowledgeable in 40 CFR 60, Appendix A, Method 22. Trained personnel taking VE tests are to attend semiannual training and recertification classes.(5.2.1 and 6.2.1)
D. Monitoring Frequency	Daily manual readings.(5.2.2 and 6.2.2)	Weekly VE checks. If visible emissions are present, conduct Method 9 VE test within 72 hours. .(5.2.1 and 6.2.1)
Data Collection Procedures	Differential pressure measurements recorded manually in a logbook.(5.2.2 and 6.2.2)	Manual records.(5.2.1) and (6.2.1)
Averaging Period	None	Six minute block average, based on 15-second readings unless 60 minute tests is required (Method 9)

Non-Applicability Determinations

The following requirements have been determined not to be applicable to the subject facility due to the following:

a. 40 CFR 60 Subpart Dc - *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units.* The two (2) wood-fired boilers located at Armstrong Hardwood Flooring Company's Beverly Mill are not subject to this requirement because the boilers had been purchased prior to the date the rule was proposed.

b. 40 CFR 63 Subpart QQQQ – *National Emission Standards for Hazardous Air Pollutants: Surface Coating of Wood Building Products.* The facility has demonstrated that by the compliance date of May 15, 2006, they were a minor source of HAPs. With the establishment of HAP emission limits below major source thresholds, the facility shall not be subject to Subpart QQQQ.

Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule.
The facility has not submitted any application for a PSD modification; therefore, the requirements of the GHG tailoring rule are non-applicable.

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: December 4, 2012
Ending Date: January 3, 2013

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

Beena Modi
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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Response to Comments (Statement of Basis)

Not applicable.