

# Fact Sheet



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

Permit Number: **R30-06700095-2019**  
Applications Received: **April 16, 2018 and August 1, 2018**  
Plant Identification Number: **067-00095**  
Permittee: **JELD-WEN, Inc. D.B.A. JELD-WEN**  
Facility Name: **JELD-WEN, Wood Fiber Division**  
Mailing Address: **500 Jeld-Wen Road; Craigsville, WV 26205**

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Physical Location: Craigsville, Nicholas County, West Virginia  
UTM Coordinates: 529.8 km Easting • 4243.8 km Northing • Zone 17  
Directions: From Rt. 19 North of Summersville, take Rt. 41 North to Rt. 55 East,  
facility is approximately five miles and on the left.

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### Facility Description

The Wood Fiber Division – West Virginia facility operates under the primary SIC Code 2493 and the secondary SIC Code 2851. The facility manufactures door skins in a process similar to the hardboard manufacturing process. The fiber-containing material, or furnish, consists of green poplar chips. The furnish is mechanically separated into fiber by the refiner and is then dried in a tube dryer. Next, the fiber is blended with a “no added formaldehyde” resin, and a fiber mat is formed. The mat continues into a cold pre-compressor, which is followed by trimming operations. The mat is then consolidated in a steam-heated press. After the press, the door skins are cut to the final dimensions and painted with waterborne primer.

A wood-fired boiler burns residuals from the production process, as well as purchased hogged-fuel, to generate steam. Additional combustion sources include a natural gas-fired back-up boiler and natural gas heated ovens associated with the priming operations. The fiber dryer is heated by both steam and natural gas (direct-fired).

On August 1, 2018, the WV DEP DAQ received a Title V Significant Modification application for this facility, R30-06700095-2013 (SM02). This permit application was for reduction of potential HAP

emissions below major source thresholds and for small increases to certain throughputs/production rates. These changes were permitted through R13-2192Q.

### Emissions Summary

<b>Plantwide Emissions Summary [Tons per Year]</b>		
<b>Regulated Pollutants</b>	<b>Potential Emissions</b>	<b>2017 Actual Emissions</b>
Carbon Monoxide (CO)	92.60	29.67
Nitrogen Oxides (NO <sub>x</sub> )	172.78	48.66
Particulate Matter (PM <sub>2.5</sub> )	18.88	13.79
Particulate Matter (PM <sub>10</sub> )	23.24	13.79
Total Particulate Matter (TSP)	39.13	26.53
Sulfur Dioxide (SO <sub>2</sub> )	6.60	2.80
Volatile Organic Compounds (VOC)	155.61	68.88

*PM<sub>10</sub> is a component of TSP.*

Hazardous Air Pollutants	Potential Emissions	2017 Actual Emissions <sup>1</sup>
Acetaldehyde	0.29	1.33
Acrolein	1.40	1.46
Benzene	1.20	0.53
Carbon Tetrachloride	0.02	0.01
Chlorine	0.21	0.09
Dichloromethane	0.08	-
Formaldehyde	2.60	1.24
Glycol Ethers	1.10	-
Hexane	0.43	0.04
Hydrogen Chloride	4.90	2.12
Lead	0.02	0.01
Manganese	0.42	0.18
Methanol	1.73	1.00
Methyl Methacrylate	0.02	-
MDI	0.01	1.25
Naphthalene	0.03	0.01
Nickel	0.01	<0.01
Phenol	0.19	2.94
Propionaldehyde	0.11	0.87
Styrene	0.59	0.21
Tetrachloroethene	0.01	<0.01
Toluene	0.24	0.10
Methyl Chloroform	0.01	<0.01
Xylene	0.01	<0.01
Other HAPs	0.02	0.07
Total HAPs	15.65	13.44

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

<sup>1</sup>*Some 2017 Actual Emissions are higher than Potential Emissions because potential emissions were reduced by permitting actions during 2019.*

### Title V Program Applicability Basis

This facility has the potential to emit 172.78 TPY of NO<sub>x</sub> and 155.61 TPY of VOCs. Due to this facility's potential to emit over 100 tons per year of criteria pollutant, JELD-WEN, Inc. 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	To Prevent And Control Particulate Air Pollution From Combustion Of Fuel In Indirect Heat Exchangers
	45CSR6	Open burning prohibited.
	45CSR7	To Prevent And Control Particulate Matter Air Pollution From Manufacturing Processes And Associated Operations
	45CSR10	To Prevent And Control Air Pollution From The Emission Of Sulfur Oxides
	45CSR11	Standby plans for emergency episodes.
	45CSR13	NSR Permits
	45CSR16	Standards of Performance For New Stationary Sources Pursuant To 40 CFR Part 60
	45CSR30	Operating permit requirement.
	45CSR34	Emission Standards For Hazardous Air Pollutants
	WV Code § 22-5-4 (a) (14)	The Secretary can request any pertinent information such as annual emission inventory reporting.
	40 C.F.R. Part 60, Subpart Dc	Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units
	40 C.F.R. Part 61	Asbestos inspection and removal
	40 C.F.R. 63 Subpart JJJJJ	National Emission Standards for Hazardous Air Pollutants: Industrial, Commercial, and Institutional Boilers Area Sources.
	40 C.F.R. Part 64	Compliance Assurance Monitoring
	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 <i>(if any)</i>
R13-2192Q	March 26, 2019	

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," which may be downloaded from DAQ's website.

**Determinations and Justifications**

**Revisions to Emission Units Table**

With this modification, the Fiber Dryer, Dryer Cyclone, and Press Vents (Emission Point IDs: E7, E8, E9, and E11a,b) were removed. After the installation of the Biofilter (BF), these emission points are no longer in use.

Additionally, the design capacities were increased for the Press Vents and Die Coating (Emission Point IDs: E18 and E17) as part of the requested changes in the modification application.

**40 CFR 63 Subpart JJJJJ: National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources.**

The facility began construction in 1997 and was permitted as a minor source of HAPs. It was later discovered that formaldehyde and methanol emissions from the facility were far greater than what was initially permitted and that the facility was, in fact, a major source of HAPs. Therefore, the facility became subject to 40 CFR 63, Subparts DDDD, QQQQ, and HHHHH. The facility also became subject to the Boiler MACT, 40CFR63, Subpart DDDDD, as an existing source on January 31, 2016. In 2013 as part of a Department of Justice Consent Order, JELD-WEN installed a biofilter to control HAP emissions, which were expected to be approximately 14.5 TPY based on control efficiency estimates supplied by the biofilter manufacturer. When combined with HAP emissions from other sources at the facility (primarily the wood fired boiler) the facility remained a major source of HAPs. However, during source testing required by Subpart DDDD and performed in 2014 and 2016, it was determined that actual HAP emissions from the biofilter are less than 1 ton per year thereby making the facility a minor source of HAPs. Due to US EPA's previous "once in always in" policy, the facility remained subject to 40 CFR 63, Subparts DDDD, QQQQ, DDDDD, and HHHHH. However, on January 25, 2018, EPA issued a guidance memorandum withdrawing the "once in always in" policy for the classification of major sources of hazardous air pollutants under section 112 of the Clean Air Act. With the new guidance, sources of hazardous air pollutants previously classified as "major sources" may be reclassified as "area" sources at any time, provided the facility limits its potential to emit below major source thresholds. With the R13-2192Q and Title V Significant Modification applications received on August 1, 2018, JELD-WEN will become a minor source of HAPs and will no longer be subject to Subparts DDDD, QQQQ, DDDDD, and HHHHH. However, the facility will now be subject to the area source boiler MACT, 40 CFR 63, Subpart JJJJJ.

The natural gas fired boiler (B2) is exempt from the rule per 40CFR§63.11195(e).

The wood fired boiler (B1) is subject to Subpart JJJJJ because it is an existing affected source at an area source of HAPs, and per 40CFR§63.11237 Boiler B1 is defined as a biomass fired boiler. The main requirements for said boiler are as follows:

- Conduct an initial tune-up as specified in 40CFR§63.11214 and conduct a tune-up of the boiler biennially as specified in 40CFR§63.11223.
- A one-time energy assessment must be performed by a qualified energy assessor.

As a result of this regulatory change, all permit conditions from the previous permit that contained requirements from 40 CFR 63, Subparts DDDD, QQQQ, DDDDD, and HHHHH were removed; this includes the removal of Appendix A, which contained language from 40 CFR 63, Subparts DDDD and QQQQ.

As a result of the regulatory changes and NSR changes, Sections 4.0 and 5.0 of this Permit Renewal are significantly different than these sections in the previous permit. Sections 4.0 and 5.0 are summarized in the table below:

Condition Number	Summary of Condition	Regulatory Citation	R13-2192Q Condition
<b>Section 4.0: Boilers [emission point ID(s): E5, E6]</b>			
4.1.1.	10% opacity limit	45CSR §2-3.1.; 45CSR16, 40 CFR §60.43c(c)	N/A
4.1.2.	Visible emissions standards apply except in periods of start-ups, shutdowns and malfunctions	45CSR §2-9.1.	N/A
4.1.3.	No addition of sulfur oxides to boiler exit gas stream	45CSR §2-4.4.	N/A
4.1.4.	Equipment shall be maintained and operated in a manner consistent with good air pollution control practice for minimizing emissions	45CSR §2-9.2., 45CSR16, 40 CFR §60.11(d)	N/A
4.1.5.	PM limit for E5	45CSR16, 40 CFR §§60.43c(b) and (d)	N/A
4.1.6.	Wood fired boiler emission limits	N/A	4.1.7.
4.1.7.	Gas fired boiler emission limits	N/A	4.1.8.
4.1.8.	Continuous 24-hour averaging for SO <sub>2</sub> compliance.	45CSR §10-3.8.	N/A
4.1.9.	Fugitive particulate matter control system	45CSR §2-5.1.	N/A
4.1.10.	Operation and maintenance of air pollution control equipment	45CSR§13-5.10.	4.1.21.
4.1.11.	Initial tune-up of boiler B1	45CSR34; 40 CFR §63.11201(b) and Table 2, Item 6 of 40CFR63, Subpart JJJJJ	4.1.17.
4.1.12.	One-time energy assessment	45CSR34; 40 CFR §63.11201(b) and Table 2, Item 16 of 40CFR63, Subpart JJJJJ	4.1.18.

<b>Condition Number</b>	<b>Summary of Condition</b>	<b>Regulatory Citation</b>	<b>R13-2192Q Condition</b>
4.1.13.	Annual heat input to boiler B1	N/A	4.1.19.
4.1.14.	Annual heat input to boiler B2	N/A	4.1.20.
4.1.15.	Continuous compliance: tune-ups	45CSR34; 40 CFR §§63.11223(a) and (b)	N/A
4.2.1.	COMS for boiler B1	45CSR §2-3.2., 45CSR16, 40 CFR §§60.47c(a) & (b)	N/A
4.2.2.	Methods 9 and 22 observations for boiler B2	45CSR §2-3.2. and 45CSR§30-5.1.c.	N/A
4.2.3.	Compliance with the CO, NO <sub>x</sub> and VOC emission limitations	45CSR§30-5.1.c.	N/A
4.3.1.	Stack testing and ESP monitoring for boiler B1	45CSR§30-5.1.c.	N/A
4.3.2.	Testing to demonstrate compliance with the VOC and Total HAP emission limits of 4.1.6.	N/A	4.2.1.
4.4.1.	Demonstrate proper fuels used in boilers	45CSR§30-5.1.c.	N/A
4.4.2.	Records of the operating schedule, and the quality and quantity of fuel	45CSR§2-8.3.c., 45CSR§2A-7.1., 40 CFR §60.48c(g), 45CSR16	N/A
4.4.3.	Monthly records of the total heat input to boiler B1	N/A	4.3.10.
4.4.4.	Monthly records of the total heat input to boiler B2	N/A	4.3.11.
4.4.5.	Recordkeeping requirements from 40CFR63, Subpart JJJJJ	45CSR34; 40 CFR §§63.11225(c)(1), (c)(2), and (d)	N/A
4.5.1.	Reporting of malfunctions of boiler B1 and/or boiler B2 or their air pollution control equipment	45CSR §2-9.3.	N/A
4.5.2.	Submission of performance test results	40 CFR §60.48c(b), 45CSR16	N/A
4.5.3.	Excess emissions reports	40 CFR §60.48c(c), 45CSR16	N/A
4.5.4.	Reporting period for the reports required under 40 C.F.R. Part 60 Subpart Dc	40 CFR §60.48c(j), 45CSR16	N/A
4.5.5.	Annual compliance certification	45CSR34; 40 CFR §§63.11225(b), (b)(1), and (b)(2)	N/A
<b>Section 5.0: Door Skin Manufacturing [emission point ID(s): E1-E6, E10, E12-18]</b>			
5.1.1.	No added Formaldehyde (NAF) resin	N/A	4.1.1.

<b>Condition Number</b>	<b>Summary of Condition</b>	<b>Regulatory Citation</b>	<b>R13-2192Q Condition</b>
5.1.2.	Maximum Furnish Dryer Throughput	N/A	4.1.2.
5.1.3.	Maximum production of Door Skins	N/A	4.1.3.
5.1.4.	Maximum production of Hogged Door Skins	N/A	4.1.4.
5.1.5.	Maximum primer usage	N/A	4.1.5.
5.1.6.	Emissions from the biofilter (E18)	45CSR§7-4.1.	4.1.6.
5.1.7.	Emissions from the rotary valve (E16)	45CSR§7-4.1.	4.1.9.
5.1.8.	Baghouse emissions	45CSR§7-4.1.	4.1.10.
5.1.9.	Emissions from the Primeline Ovens (E13)	45CSR§7-4.1.	4.1.11.
5.1.10.	Emissions from the Primeline Paint Booth (E14)	45CSR§7-4.1.	4.1.12.
5.1.11.	Emissions from the Paint Manufacturing (E15)	45CSR§7-4.1.	4.1.13.
5.1.12.	Emissions from the Die Coating (E17)	N/A	4.1.14.
5.1.13.	Maximum sodium bicarbonate usage in the die cleaning operation	N/A	4.1.15.
5.1.14.	Operation and Maintenance of Air Pollution Control Equipment.	45CSR§13-5.10.	4.1.21.
5.1.15.	20% opacity limit	45CSR §7-3.1.	N/A
5.1.16.	No visible emissions from any storage structure(s) required to have a full enclosure and particulate matter control device.	45CSR §7-3.7.	N/A
5.1.17.	Flow straightening devices for air sampling	45CSR §7-4.12.	N/A
5.1.18.	Emissions during malfunctions	45CSR §7-9.1.	N/A
5.2.1.	Monitor and record the amount and VOC/HAP content of the primer, polymer and all paint manufacturing raw materials used	N/A	4.3.7.
5.2.2.	Monitor and record the amount and HAP/VOC content of the die coating used	N/A	4.3.8.
5.2.3.	CAM: visual inspection of the bags, bag connections, and dust hoppers of baghouses	45CSR30-5.1.c., 40CFR§64.6(c)	N/A
5.2.4.	CAM: differential pressure readings (pressure drop) across baghouses and excursions	45CSR§30-5.1.c., 40CFR§64.6(c) & §64.7(d)	N/A
5.2.5.	CAM: proper maintenance	45CSR§30-5.1.c., 40CFR§64.7(b)	N/A
5.2.6.	CAM: continued operations	45CSR§30-5.1.c., 40CFR§64.7(c)	N/A



<b>Condition Number</b>	<b>Summary of Condition</b>	<b>Regulatory Citation</b>	<b>R13-2192Q Condition</b>
5.2.7.	CAM: documentation of need for improved monitoring	45CSR§30-5.1.c., 40CFR§64.7(e)	N/A
5.3.1.	Visible emissions testing	45CSR§7A-2.1., 45CSR§30-5.1.c., 40CFR§64.6(c) & §64.7(d)	N/A
5.3.2.	EPA approved testing to demonstrate compliance with the VOC and Total HAP emission limits of condition 5.1.6	N/A	4.2.1.
5.4.1.	Record of Monitoring– See section 3.4.1.	N/A	N/A
5.4.2.	Record of maintenance of air pollution control equipment	N/A	4.3.2.
5.4.3.	Record of malfunctions of air pollution control equipment	N/A	4.3.3.
5.4.4.	Records of the type and amount of resin used on a monthly basis	N/A	4.3.4.
5.4.5.	Records of the hours of operation and the amount of production	N/A	4.3.5.
5.4.6.	Records of the amount of primer used on a monthly basis	N/A	4.3.6.
5.4.7.	CAM recordkeeping	45CSR§30-5.1.c, 40 CFR §64.9(b)	N/A
5.4.8.	Records of the amount of sodium bicarbonate used at the die cleaning operation	N/A	4.3.9.
5.5.1.	CAM: monitoring reports	45CSR§30-5.1.c., 40 CFR §64.9(a)	N/A

**Compliance Assurance Monitoring (CAM)**

BH5 was previously listed in a permit condition specifying CAM requirements for this facility. However, it does not have potential pre-control device emissions equal to or greater than 100 percent of the amount required for a source to be classified as a major source, therefore CAM does not apply. Therefore, it has been removed from condition 5.2.3. of this Permit Renewal.

BH6 has been added to this facility since approval of the previous Permit Renewal. BH6 is considered inherent process equipment, therefore CAM does not apply.

**Removal of Compliance Plan**

Section 5.6 of the previous Title V permit contained a compliance plan. This compliance plan contained requirements that the permittee was required to follow until the installation of the Biofilter (BF), but no later than February 4, 2014. The biofilter has been installed, and this date has passed. Therefore, the compliance plan is no longer in effect and was removed.

**Non-Applicability Determinations**

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

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: Thursday, April 11, 2019  
Ending Date: Monday, May 13, 2019

### **Point of Contact**

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

Rex Compston, P.E.  
West Virginia Department of Environmental Protection  
Division of Air Quality  
601 57<sup>th</sup> Street SE  
Charleston, WV 25304  
Phone: 304/926-0499 ext. 1209 • Fax: 304/926-0478  
[Rex.E.Compston@wv.gov](mailto:Rex.E.Compston@wv.gov)

### **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.

### **Response to Comments (Statement of Basis)**

Not applicable.