JELD-WEN, inc.
407 Harbor Isles Blvd.
Klamath Falls, OR
97601 USA
541 883-3373 Tel
800 432-6322 Toll Free
541 885-7400 Fax
www.jeld-wen.com
RELIABILITY for real life®

April 11, 2013

Via Email and FedEx

Mr. Rex Compston
West Virginia Department of Environmental Protection
Division of Air Quality
601 57th Street, SE
Charleston, WV 25304

RE: Permit Modification and Title V Renewal Application
JELD-WEN, inc. d.b.a., JELD-WEN
Craigsville, West Virginia
Permit No. R30-06700095-2008(SM02) and R-13-2191O

Dear Mr. Compston:

As you are aware, the JELD-WEN facility located at 500 JELDWEN Road, Craigsville, West Virginia submitted an application on March 22, 2013 requesting the modification of Permit No. R13-2191O and the renewal and significant modification of Permit No. R30-06700095-2008 (SM02). Per your request, JELD-WEN is submitting electronic copies of the Title V renewal forms via email and two copies on the enclosed CDs to supplement the application.

Hard copies of the area map, plot plan, and process flow were included with the March 22, 2013 submittal. The signed original Title V General Application form will be submitted under a separate cover.

If you have questions or require additional information related to the application, contact me at 541-883-3373, ext. 2830 or Bonnie Basden at ext. 2521.

Sincerely,

JELD-WEN, inc.

Nathan C. Webb
Senior Environmental Manager

cc: Jay Borrell, JELD-WEN, inc.

Enclosures: (2) Copies Title V renewal forms on CD

SUPPLEMENTAL INFORMATION FOR TITLE V PERMIT RENEWAL
JELD-WEN, INC.
WOOD FIBER DIVISION – CRAIGSVILLE, WEST VIRGINIA
PERMIT NO. R30-06700095-2008 (SM02) & R-13-2191O

JELD-WEN ENVIRONMENTAL ENGINEERING
407 Harbor Isles Blvd.
Klamath Falls, OR 97601
(541) 883-3373

April 2012

JELD-WEN WINDOWS & DOORS

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WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF AIR QUALITY
601 57th Street SE
Charleston, WV 25304
Phone: (304) 926-0475
www.dep.wv.gov/daq

INITIAL/RENEWAL TITLE V PERMIT APPLICATION - GENERAL FORMS

Section 1: General Information

1. **Name of Applicant (As registered with the WV Secretary of State's Office):**
JELD-WEN, inc.
DBA JELD-WEN Fiber of West Virginia

2. Facility Name or Location:
500 JELD-WEN Road
Craigsville, WV 26205

3. DAQ Plant ID No.:
0 6 7 — 0 0 0 9 5

4. Federal Employer ID No. (FEIN):
9 3 0 4 9 6 3 4 2

5. **Permit Application Type:**

☐ Initial Permit — When did operations commence? 05/01/1998
☒ Permit Renewal — What is the expiration date of the existing permit? 09/22/2013
☐ Update to Initial/Renewal Permit Application

6. Type of Business Entity:

☒ Corporation ☐ Governmental Agency ☐ LLC
☐ Partnership ☐ Limited Partnership

7. Is the Applicant the:

☐ Owner ☐ Operator ☒ Both

If the Applicant is not both the owner and operator, please provide the name and address of the other party.

8. Number of onsite employees:
65

9. Governmental Code:

☒ Privately owned and operated; 0
☐ Federally owned and operated; 1
☐ State government owned and operated; 2
☐ County government owned and operated; 3
☐ Municipality government owned and operated; 4
☐ District government owned and operated; 5

10. Business Confidentiality Claims

Does this application include confidential information (per 45CSR31)? ☐ Yes ☒ No

If yes, identify each segment of information on each page that is submitted as confidential, and provide justification for each segment claimed confidential, including the criteria under 45CSR§31-4.1, and in accordance with the DAQ's *"PRECAUTIONARY NOTICE-CLAIMS OF CONFIDENTIALITY"* guidance.

11. Mailing Address		
Street or P.O. Box: PO Box 1769		
City: Craigsville	**State:** WV	**Zip: 26205-**
Telephone Number: (304) 742-5180	**Fax Number:** (304) 742-5188	

12. Facility Location		
Street: 500 JELDWEN Road	**City:** Craigsville	**County:** Nicholas
UTM Easting: 529749.6 km	**UTM Northing:** 4244034 km	**Zone:** ☒ 17 or ☐ 18

Directions: Take I-79N from Charleston 59 mi.
Take exit **57** and turn right on **US-19 S** 21 mi.
Take the **W Virginia 55** and turn left on E 1 mi.
Turn right to stay on **W Virginia 55 E** 11.7 mi.
Turn left at the turn lane onto Columbia Forest Products Rd. 0.1 mi
Turn left onto JELD-WEN Road 0.2 mi

Portable Source? ☐ Yes ☒ No

Is facility located within a nonattainment area? ☐ Yes ☒ No	**If yes, for what air pollutants?**
Is facility located within 50 miles of another state? ☐ Yes ☒ No	**If yes, name the affected state(s).**
Is facility located within 100 km of a Class I Area[1]? ☐ Yes ☒ No ~130 km from Dolly Sods & 106 km from Otter Creek Wilderness. **If no, do emissions impact a Class I Area[1]?** ☐ Yes ☒ No	**If yes, name the area(s).**

[1] *Class I areas include Dolly Sods and Otter Creek Wilderness Areas in West Virginia, and Shenandoah National Park and James River Face Wilderness Area in Virginia.*

13. Contact Information		
Responsible Official: Jay Borrell		**Title:** General Manager
Street or P.O. Box: PO Box 1769		
City: Craigsville	**State:** WV	**Zip: 26205-**
Telephone Number: (304) 742-5180	**Fax Number:** (304) 742-5188	
E-mail address: jaybo@jeld-wen.com		
Environmental Contact: Nate Webb		**Title:** Environmental Manager
Street or P.O. Box: PO Box 1540		
City: Klamath Falls	**State:** OR	**Zip: 97601-**
Telephone Number: (541) 883-3373	**Fax Number:** (541) 885-7400	
E-mail address: natew@jeld-wen.com		
Application Preparer: Nate Webb		**Title:** Environmental Manager
Company: JELD-WEN, inc.		
Street or P.O. Box: PO Box 1540		
City: Klamath Falls	**State:** OR	**Zip: 97601-**
Telephone Number: (541) 883-3373	**Fax Number:** (541) 885-7400	
E-mail address: natew@jeld-wen.com		

14. Facility Description

List all processes, products, NAICS and SIC codes for normal operation, in order of priority. Also list any process, products, NAICS and SIC codes associated with any alternative operating scenarios if different from those listed for normal operation.

Process	Products	NAICS	SIC
Wood Fiber Door Skin Mfg.	Wood Fiber Door Skins	321219	2493
Paint & Coating Manufacturing	Coatings	325510	2851

Provide a general description of operations.

The facility manufactures wood fiber door skins in a process similar to the hardboard manufacturing process. Wood chips are mechanically separated in to individual fibers at the refiner and dried in a steam and natural gas heated tube dryer. Next, the fiber is blended with MDI resin and formed into a fiber mat. The mat continues through an unheated precompressor followed by a series of saws that cut each mat to size. Mats are consolidated in a steam-heated press. After the press, the door skins are cut to the final dimensions and coated with waterborne primer.

15. Provide an **Area Map** showing plant location as **ATTACHMENT A**.

16. Provide a **Plot Plan(s)**, e.g. scaled map(s) and/or sketch(es) showing the location of the property on which the stationary source(s) is located as **ATTACHMENT B**. For instructions, refer to "Plot Plan - Guidelines."

17. Provide a detailed **Process Flow Diagram(s)** showing each process or emissions unit as **ATTACHMENT C**. Process Flow Diagrams should show all emission units, control equipment, emission points, and their relationships.

Section 2: Applicable Requirements

18. Applicable Requirements Summary	
Instructions: Mark all applicable requirements.	
☐ SIP	☐ FIP
☒ Minor source NSR (45CSR13)	☐ PSD (45CSR14)
☒ NESHAP (45CSR15)	☐ Nonattainment NSR (45CSR19)
☐ Section 111 NSPS	☒ Section 112(d) MACT standards
☐ Section 112(g) Case-by-case MACT	☐ 112(r) RMP
☐ Section 112(i) Early reduction of HAP	☐ Consumer/commercial prod. reqts., section 183(e)
☐ Section 129 Standards/Reqts.	☐ Stratospheric ozone (Title VI)
☐ Tank vessel reqt., section 183(f)	☐ Emissions cap 45CSR§30-2.6.1
☐ NAAQS, increments or visibility (temp. sources)	☒ 45CSR27 State enforceable only rule
☒ 45CSR4 State enforceable only rule	☐ Acid Rain (Title IV, 45CSR33)
☐ Emissions Trading and Banking (45CSR28)	☒ **C**ompliance **A**ssurance **M**onitoring (40CFR64)
☐ CAIR NO_x Annual Trading Program (45CSR39)	☐ CAIR NO_x Ozone Season Trading Program (45CSR40)
☐ CAIR SO_2 Trading Program (45CSR41)	

19. Non Applicability Determinations
List all requirements which the source has determined not applicable and for which a permit shield is requested. The listing shall also include the rule citation and the reason why the shield applies. The non-applicability determinations in the existing permit remain unchanged.
☒ Permit Shield

20. Facility-Wide Applicable Requirements

List all facility-wide applicable requirements. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*).

3.1.1., 45CSR§6-3.1.
3.1.2., 45CSR§6-3.2.
3.1.3., 40 C.F.R. §61.145(b) and 45CSR15
3.1.4., 45CSR§4-3.1
3.1.5., 45CSR§11-5.2
3.1.6., W.Va. Code § 22-5-4(a)(14)
3.1.7., 40 C.F.R. 82, Subpart F
3.1.8., 40 C.F.R. 68
3.1.9., 45CSR §7-5.1.]
3.1.10., 45CSR §7-5.2.

☒ Permit Shield

For all facility-wide applicable requirements listed above, provide monitoring/testing / recordkeeping / reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number and/or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

3.3.1., WV Code § 22-5-4(a)(15), 45CSR2, 45CSR7, 45CSR10, 45CSR16, 40CFR§60.45c.and 45CSR13
3.4.1., 45CSR§30-5.1.c.2.A., 45CSR13 – Permit R13-2192 §4.3.1
3.4.2., 45CSR§30-5.1.c.2.B., 40 CFR §60.48c(i)
3.4.3., 45CSR§30-5.1.c.
3.4.4., 45CSR§30-5.1.c.]
3.5.1., 45CSR§§30-4.4. *and* 5.1.c.3.D.
3.5.2., 45CSR§30-5.1.c.3.E.]
3.5.4., 45CSR§30-8.]
3.5.5., 45CSR§30-5.3.e.
3.5.6., 45CSR§30-5.1.c.3.A.
3.5.8., 45CSR§30-5.1.c.3.C. & 45CSR§30-5.1.c.3.B.
3.5.9., 45CSR§30-4.3.h.1.B.]
3.7.1., 45CSR§30-5.6.

Are you in compliance with all facility-wide applicable requirements? ☒ Yes ☐ No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

21. Active Permits/Consent Orders		
Permit or Consent Order Number	Date of Issuance MM/DD/YYYY	List any Permit Determinations that Affect the Permit *(if any)*
R13-2192O	01/03/2013	
R30-067-00095-2008(SM-02)	09/22/2008	
Civil Action No. 11-453 ST	08/04/2011	

22. Inactive Permits/Obsolete Permit Conditions		
Permit Number	Date of Issuance	Permit Condition Number
NA	MM/DD/YYYY	
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Section 3: Facility-Wide Emissions

23. Facility-Wide Emissions Summary [Tons per Year]	
Criteria Pollutants	Potential Emissions
Carbon Monoxide (CO)	88.0
Nitrogen Oxides (NO_X)	165.0
Lead (Pb)	1.2E-2
Particulate Matter ($PM_{2.5}$)[1]	
Particulate Matter (PM_{10})[1]	23.9
Total Particulate Matter (TSP)	41.2
Sulfur Dioxide (SO_2)	6.3
Volatile Organic Compounds (VOC)	123.4
Hazardous Air Pollutants[2]	Potential Emissions
See Attachment J, Table 18	
Regulated Pollutants other than Criteria and HAP	Potential Emissions
N_20	2.3
CH_4	18.0
CO_2	85,374

[1]$PM_{2.5}$ and PM_{10} are components of TSP.
[2]For HAPs that are also considered PM or VOCs, emissions should be included in both the HAPs section and the Criteria Pollutants section.

Section 4: Insignificant Activities

24. Insignificant Activities (Check all that apply)		
☒	1.	Air compressors and pneumatically operated equipment, including hand tools.
☒	2.	Air contaminant detectors or recorders, combustion controllers or shutoffs.
☒	3.	Any consumer product used in the same manner as in normal consumer use, provided the use results in a duration and frequency of exposure which are not greater than those experienced by consumer, and which may include, but not be limited to, personal use items; janitorial cleaning supplies, office supplies and supplies to maintain copying equipment.
☒	4.	Bathroom/toilet vent emissions.
☒	5.	Batteries and battery charging stations, except at battery manufacturing plants.
☒	6.	Bench-scale laboratory equipment used for physical or chemical analysis, but not lab fume hoods or vents. Many lab fume hoods or vents might qualify for treatment as insignificant (depending on the applicable SIP) or be grouped together for purposes of description.
☐	7.	Blacksmith forges.
☒	8.	Boiler water treatment operations, not including cooling towers.
☒	9.	Brazing, soldering or welding equipment used as an auxiliary to the principal equipment at the source.
☐	10.	CO_2 lasers, used only on metals and other materials which do not emit HAP in the process.
☒	11.	Combustion emissions from propulsion of mobile sources, except for vessel emissions from Outer Continental Shelf sources.
☒	12.	Combustion units designed and used exclusively for comfort heating that use liquid petroleum gas or natural gas as fuel.
☒	13.	Comfort air conditioning or ventilation systems not used to remove air contaminants generated by or released from specific units of equipment.
☐	14.	Demineralized water tanks and demineralizer vents.
☐	15.	Drop hammers or hydraulic presses for forging or metalworking.
☒	16.	Electric or steam-heated drying ovens and autoclaves, but not the emissions from the articles or substances being processed in the ovens or autoclaves or the boilers delivering the steam.
☐	17.	Emergency (backup) electrical generators at residential locations.
☐	18.	Emergency road flares.
☒	19.	Emission units which do not have any applicable requirements and which emit criteria pollutants (CO, NO_x, SO_2, VOC and PM) into the atmosphere at a rate of less than 1 pound per hour and less than 10,000 pounds per year aggregate total for each criteria pollutant from all emission units. Please specify all emission units for which this exemption applies along with the quantity of criteria pollutants emitted on an hourly and annual basis: Rotary Classifier (RS) – no emissions, completely enclosed Resin Storage Tank (ST1) – Less than 0.01 lbs/hr Resin Storage Tank (ST2) – Less than 0.01 lbs/hr Wax Storage Tank (ST3) – Less than 0.01 lbs/hr Paint Manufacturing Baghouse ((BH5) – PM Emissions 0.01 lbs/hr; 0.02 tons/yr _____ _____ _____

24. Insignificant Activities (Check all that apply)		
☒	20.	Emission units which do not have any applicable requirements and which emit hazardous air pollutants into the atmosphere at a rate of less than 0.1 pounds per hour and less than 1,000 pounds per year aggregate total for all HAPs from all emission sources. This limitation cannot be used for any source which emits dioxin/furans nor for toxic air pollutants as per 45CSR27. Please specify all emission units for which this exemption applies along with the quantity of hazardous air pollutants emitted on an hourly and annual basis: Resin Storage Tank (ST1) – Less than 0.01 lbs/hr Resin Storage Tank (ST2) – Less than 0.01 lbs/hr Wax Storage Tank (ST3) – Less than 0.01 lbs/hr _____
☐	21.	Environmental chambers not using hazardous air pollutant (HAP) gases.
☐	22.	Equipment on the premises of industrial and manufacturing operations used solely for the purpose of preparing food for human consumption.
☐	23.	Equipment used exclusively to slaughter animals, but not including other equipment at slaughterhouses, such as rendering cookers, boilers, heating plants, incinerators, and electrical power generating equipment.
☒	24.	Equipment used for quality control/assurance or inspection purposes, including sampling equipment used to withdraw materials for analysis.
☐	25.	Equipment used for surface coating, painting, dipping or spray operations, except those that will emit VOC or HAP.
☒	26.	Fire suppression systems.
☐	27.	Firefighting equipment and the equipment used to train firefighters.
☐	28.	Flares used solely to indicate danger to the public.
☒	29.	Fugitive emission related to movement of passenger vehicle provided the emissions are not counted for applicability purposes and any required fugitive dust control plan or its equivalent is submitted.
☐	30.	Hand-held applicator equipment for hot melt adhesives with no VOC in the adhesive formulation.
☒	31.	Hand-held equipment for buffing, polishing, cutting, drilling, sawing, grinding, turning or machining wood, metal or plastic.
☐	32.	Humidity chambers.
☐	33.	Hydraulic and hydrostatic testing equipment.
☒	34.	Indoor or outdoor kerosene heaters.
☒	35.	Internal combustion engines used for landscaping purposes.
☐	36.	Laser trimmers using dust collection to prevent fugitive emissions.
☐	37.	Laundry activities, except for dry-cleaning and steam boilers.
☒	38.	Natural gas pressure regulator vents, excluding venting at oil and gas production facilities.
☒	39.	Oxygen scavenging (de-aeration) of water.
☐	40.	Ozone generators.
☒	41.	Plant maintenance and upkeep activities (e.g., grounds-keeping, general repairs, cleaning, painting, welding, plumbing, re-tarring roofs, installing insulation, and paving parking lots) provided these activities are not conducted as part of a manufacturing process, are not related to the source's primary business activity, and not otherwise triggering a permit modification. (Cleaning and painting activities qualify if they are not subject to VOC or HAP control requirements. Asphalt batch plant

24. Insignificant Activities (Check all that apply)		
		owners/operators must still get a permit if otherwise requested.)
☐	42.	Portable electrical generators that can be moved by hand from one location to another. "Moved by Hand" means that it can be moved without the assistance of any motorized or non-motorized vehicle, conveyance, or device.
☒	43.	Process water filtration systems and demineralizers.
☒	44.	Repair or maintenance shop activities not related to the source's primary business activity, not including emissions from surface coating or de-greasing (solvent metal cleaning) activities, and not otherwise triggering a permit modification.
☒	45.	Repairs or maintenance where no structural repairs are made and where no new air pollutant emitting facilities are installed or modified.
☐	46.	Routing calibration and maintenance of laboratory equipment or other analytical instruments.
☒	47.	Salt baths using nonvolatile salts that do not result in emissions of any regulated air pollutants. Shock chambers.
☐	48.	Shock chambers.
☐	49.	Solar simulators.
☒	50.	Space heaters operating by direct heat transfer.
☐	51.	Steam cleaning operations.
☒	52.	Steam leaks.
☐	53.	Steam sterilizers.
☒	54.	Steam vents and safety relief valves.
☒	55.	Storage tanks, reservoirs, and pumping and handling equipment of any size containing soaps, vegetable oil, grease, animal fat, and nonvolatile aqueous salt solutions, provided appropriate lids and covers are utilized.
☒	56.	Storage tanks, vessels, and containers holding or storing liquid substances that will not emit any VOC or HAP. Exemptions for storage tanks containing petroleum liquids or other volatile organic liquids should be based on size limits such as storage tank capacity and vapor pressure of liquids stored and are not appropriate for this list.
☐	57.	Such other sources or activities as the Director may determine.
☒	58.	Tobacco smoking rooms and areas.
☐	59.	Vents from continuous emissions monitors and other analyzers.

Section 5: Emission Units, Control Devices, and Emission Points

25. Equipment Table

Fill out the **Title V Equipment Table** and provide it as **ATTACHMENT D**.

26. Emission Units

For each emission unit listed in the **Title V Equipment Table**, fill out and provide an **Emission Unit Form** as **ATTACHMENT E**.

For each emission unit not in compliance with an applicable requirement, fill out a **Schedule of Compliance Form** as **ATTACHMENT F**.

27. Control Devices

For each control device listed in the **Title V Equipment Table**, fill out and provide an **Air Pollution Control Device Form** as **ATTACHMENT G**.

For any control device that is required on an emission unit in order to meet a standard or limitation for which the potential pre-control device emissions of an applicable regulated air pollutant is greater than or equal to the Title V Major Source Threshold Level, refer to the **Compliance Assurance Monitoring (CAM) Form(s)** for CAM applicability. Fill out and provide these forms, if applicable, for each Pollutant Specific Emission Unit (PSEU) as **ATTACHMENT H**.

Section 6: Certification of Information

28. Certification of Truth, Accuracy and Completeness and Certification of Compliance

*Note: This Certification must be signed by a responsible official. The **original**, signed in **blue ink**, must be submitted with the application. Applications without an **original** signed certification will be considered as incomplete.*

a. Certification of Truth, Accuracy and Completeness

I certify that I am a responsible official (as defined at 45CSR§30-2.38) and am accordingly authorized to make this submission on behalf of the owners or operators of the source described in this document and its attachments. I certify under penalty of law that I have personally examined and am familiar with the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine and/or imprisonment.

b. Compliance Certification

Except for requirements identified in the Title V Application for which compliance is not achieved, I, the undersigned hereby certify that, based on information and belief formed after reasonable inquiry, all air contaminant sources identified in this application are in compliance with all applicable requirements.

Responsible official (type or print)	
Name: Jay Borrell	Title: General Manager

Responsible official's signature:

Signature: _____ Signature Date: _____

(Must be signed and dated in blue ink)

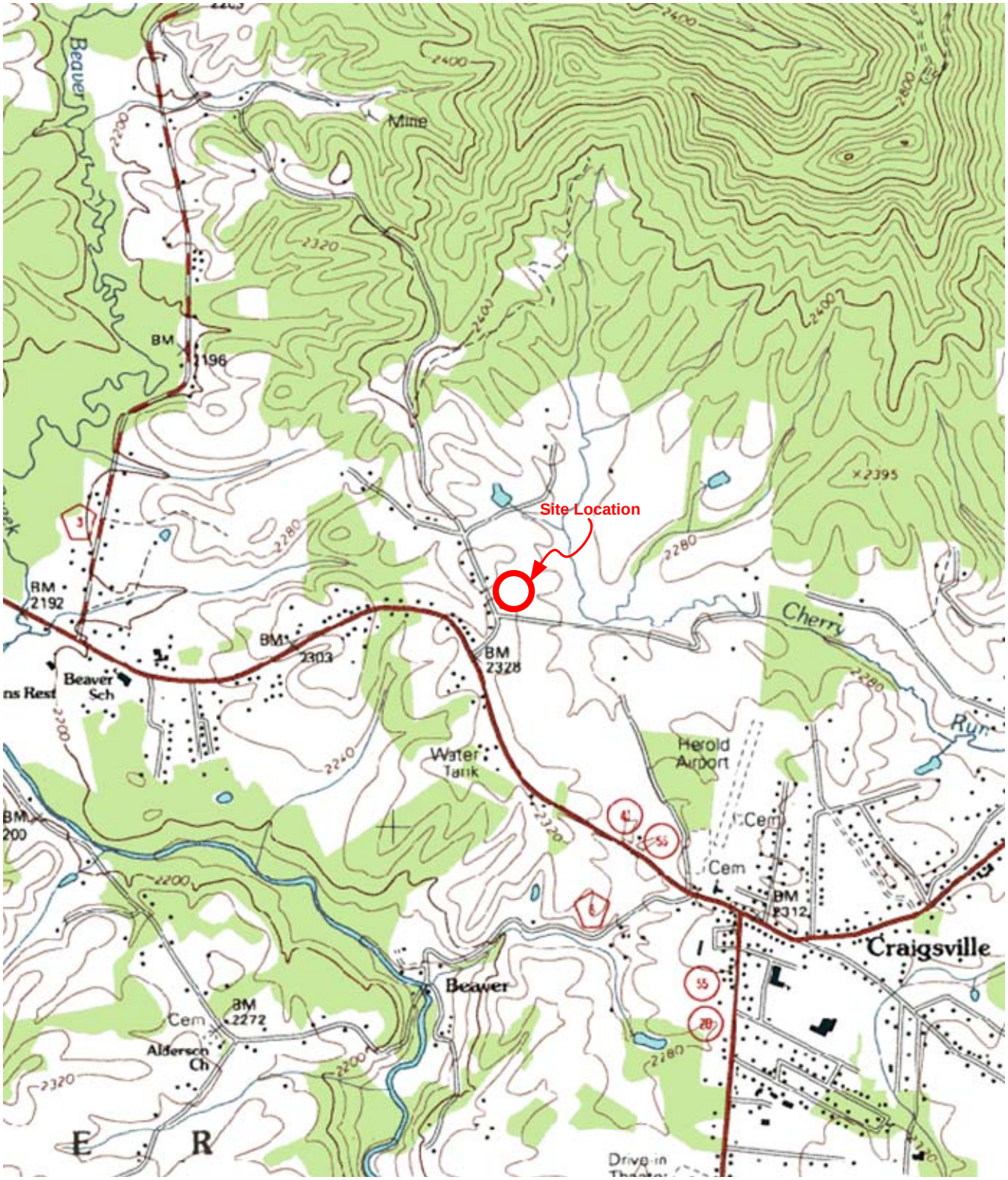
Note: Please check all applicable attachments included with this permit application:	
☒	ATTACHMENT A: Area Map
☒	ATTACHMENT B: Plot Plan(s)
☒	ATTACHMENT C: Process Flow Diagram(s)
☒	ATTACHMENT D: Equipment Table
☒	ATTACHMENT E: Emission Unit Form(s)
☒	ATTACHMENT F: Schedule of Compliance Form(s)
☒	ATTACHMENT G: Air Pollution Control Device Form(s)
☒	ATTACHMENT H: Compliance Assurance Monitoring (CAM) Form(s)

All of the required forms and additional information can be found and downloaded from, the DEP website at www.dep.wv.gov/daq, requested by phone (304) 926-0475, and/or obtained through the mail.

JELD-WEN

Craigsville, West Virginia
Topographic Map (July,1979)

Map center is 38° 20' 26"N, 80° 39' 44"W (WGS84/NAD83)
USGS Craigsville quadrangle



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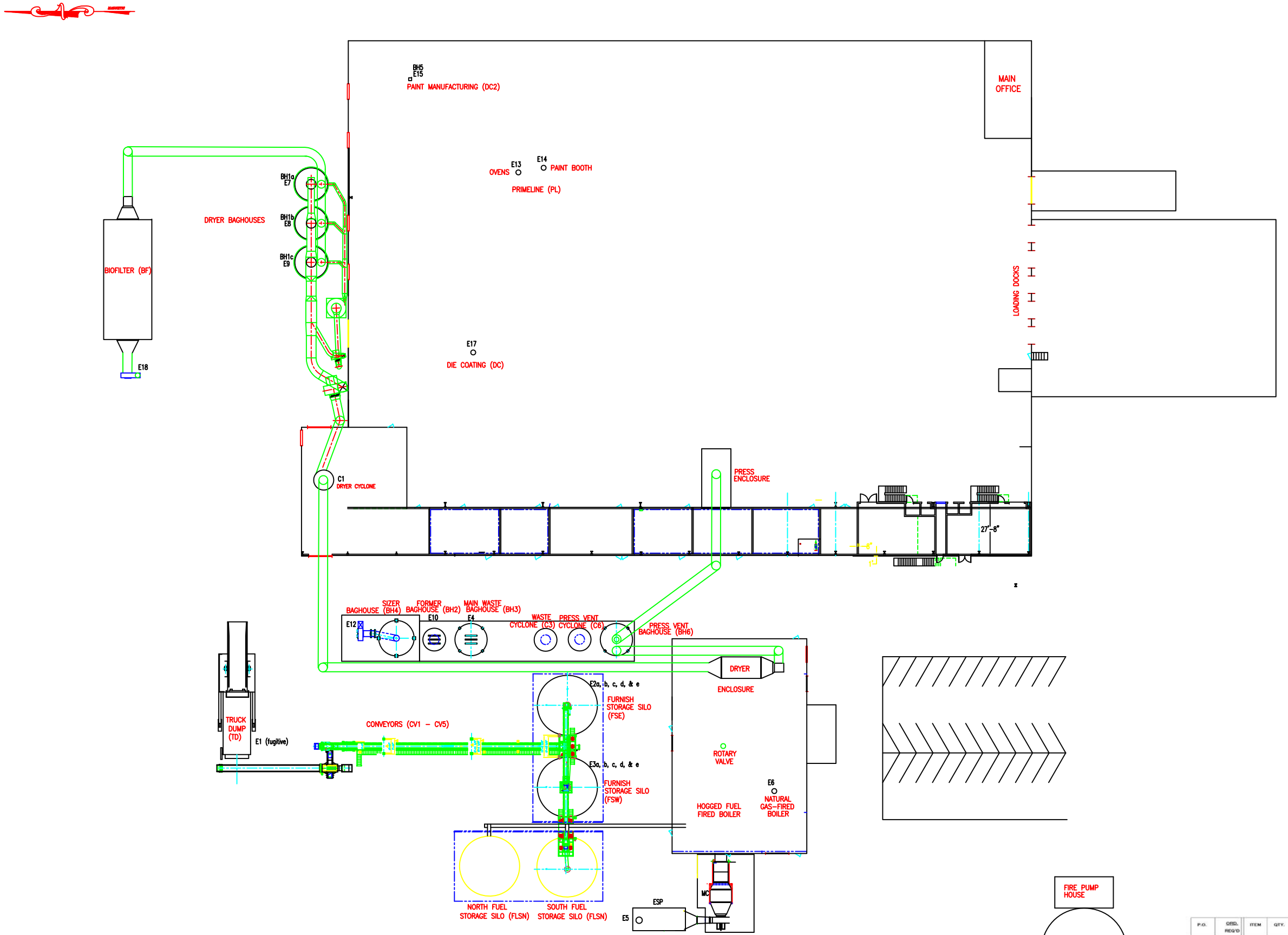
Updated July 2012

JELD-WEN Environmental Engineering

DWG. NUMBER

REVISION	DATE	DESCRIPTION	BY



P.O.	DISD. REQ'D	ITEM	QTY.	DESCRIPTION	WGHT.

JELD-WEN ENGINEERING: ENVIRONMENTAL ENGINEERING

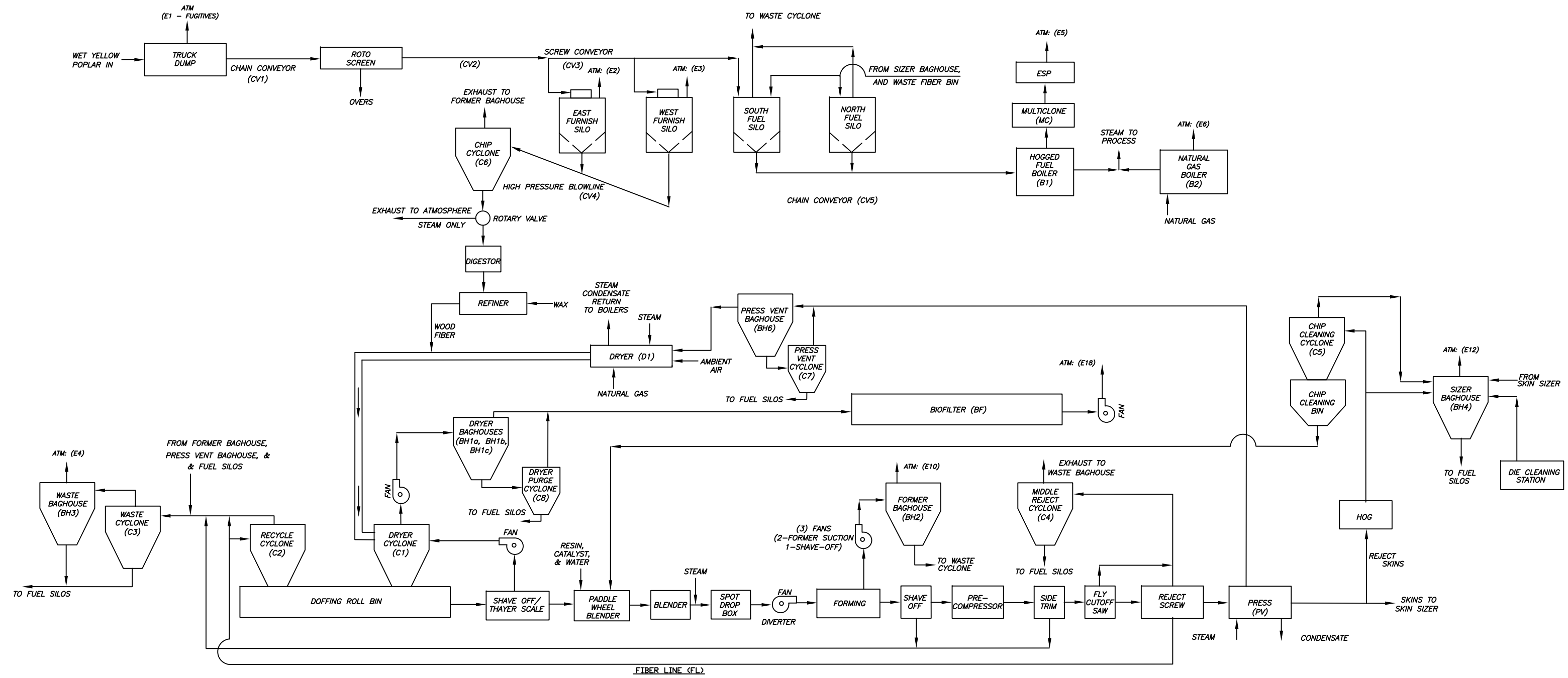
PHONE (541) 885-7420
P.O. BOX 1329 KLAMATH FALLS, OR

SCALE:	APPROVED BY:	DATE: July 2012	DRAWN BY: NCW

DRAWING TITLE:

Emission Source Map

PROJECT NUMBER	PLANT NAME & LOCATION	DWG. NUMBER	REV.	SHEET 1 OF 1 SHEETS
	JELD-WEN CRAIGSVILLE, WEST VIRGINIA			



JELD-WEN

PROCESS FLOW DIAGRAM
JELD–WEN WOOD FIBER DIVISION – WEST VIRGINIA
500 JELD–WEN Road
CRAIGSVILLE, WEST VIRGINIA

FIGURE: 1

ATTACHMENT D - Title V Equipment Table

(includes all emission units at the facility except those designated as insignificant activities in Section 4, Item 24 of the General Forms)

Emission Point ID[1]	Control Device[1]	Emission Unit ID[1]	Emission Unit Description	Design Capacity	Year Installed/ Modified
E1(Fugitive)	None	TD	Truck Dump	38,053 lbs/hr	May 1, 1998
E2a,b,c,d,e	None	FSE	East Furnish Storage Silo	46,563 ft3	May 1, 1998
E3a,b,c,d,e	None	FSW	West Furnish Storage Silo	46,563 ft3	May 1, 1998
E4	BH3	FLSN	North Fuel Storage Silo	28,740 ft3	May 1, 1998
	BH3	FLSS	South Fuel Storage Silo	28,740 ft3	May 1, 1998
	BH3	FLa	Fiber Line Prior to Press (Former)	13,323 lbs/hr	May 1, 1998
	BH3	C2	Recycle Cyclone	1,404 lbs/hr	May 1, 1998
	BH3	C3	Waste Cyclone	3,037 lbs/hr	May 1, 1998
	BH3	C4	Middle Reject Cyclone	1,404 lbs/hr	May 1, 1998
	BH3	C6	Chip Cyclone	23,944 lbs/hr	May 1, 1998
E5	MC, ESP	B1	Hogged Fuel-Fired Boiler	62.5MMBtu/hr	May 1, 1998
E6	None	B2	Natural Gas-Fired Boiler	37.7MMBtu/hr	May 1, 1998
E7[2]	BH1a	D1 / C1	Fiber Dryer / Dryer Cyclone	23,942 lbs/hr / 30,257 lbs/hr	May 1, 1998
E8[2]	BH1b				
E9[2]	BH1c				
E10	BH2	FLa	Fiber Line Prior to Press (Former)	13,323 lbs/hr	May 1, 1998
E11a,b[2]	None	PV	Press Vents	21,591 SF/hr	May 1, 1998
E12	BH4	FLb	Fiber Line After Press (Sizer)	21,591 SF/hr	May 1, 1998
	BH4	C5	Chip Cleaning Cyclone	2,667 lbs/hr	May 1, 1998
	BH4		Die Cleaning Operation	120 lbs/hr Na2CO3	2009
E13	None	PL	Primeline (Ovens)	3.8 MMBtu/hr (total)	May 1, 1998
E14a,b	None	PL	Primeline (Paint Booth)	71.0 gal/hr	May 1, 1998
E15	BH5	DC2	Paint Manufacturing	760 gals/hr	April 1, 1999
E16	None	RV	Rotary Valve	23,944 lbs/hr	May 1, 1998
E17	None	DC	Die Coating	(see PTE)	TBD
E18[3]	BH1a, BH1b, BH1c, BF, & BH6	D1, C1, C8, PV, & C7	Fiber Dryer Dryer Cyclone Dryer Baghouse Purge Cyclone Press Vents Press Vent Baghouse Purge Cyclone	23,942 lbs/hr 30,257 lbs/hr 302 lbs/hr 21,591 lbs/hr 3.2 lbs/hr	May 1, 1998
Fugitive	None	CV1-5	Conveyors	148 tons/hr (total)	May 1, 1998
Fugitive	None	RS	Rotary Classifier	40 tons/hr	May 1, 1998
Fugitive	None	ST1	Resin Storage Tank 1	7,000 gallons	May 1, 1998
Fugitive	None	ST2	Resin Storage Tank 2	7,000 gallons	May 1, 1998
Fugitive	None	ST3	Wax Storage Tank	10,000 gallons	May 1, 1998

[1]For 45CSR13 permitted sources, the numbering system used for the emission points, control devices, and emission units should be consistent with the numbering system used in the 45CSR13 permit. For grandfathered sources, the numbering system should be consistent with registrations or emissions inventory previously submitted to DAQ. For emission points, control devices, and emissions units which have not been previously labeled, use the following 45CSR13 numbering system: 1S, 2S, 3S,... or other appropriate description for emission units; 1C, 2C, 3C,... or other appropriate designation for control devices; 1E, 2E, 3E, ... or other appropriate designation for emission points.

[2]These table entries will no longer apply after installation of the Biofilter (BF), but no later than February 4, 2014.

[3]This table entry will apply after installation of the Biofilter (BF), but no later than February 4, 2014.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:** MC, ESP
B1	Hogged Fuel-Fired Boiler	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Wood-fired fuel cell boiler used for facility steam production.

Manufacturer:	**Model number:**	**Serial number:**
Wellons	IDIC8.0	

Construction date:	**Installation date:**	**Modification date(s):**
05/01/1997	05/01/1997	NA

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 62.5×10^6 BTU/hr

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
62.5×10^6 BTU/hr	$492{,}750\times10^6$ BTU/hr	8,322

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? _X_Yes ___ No	**If yes, is it?** ___ Indirect Fired _X_Direct Fired
Maximum design heat input and/or maximum horsepower rating: 62.5×10^6 BTU/hr	**Type and Btu/hr rating of burners:** Fuel Cell-Closed couples gasifier with vertical cylindrical combusting cell; 62.5×10^6 BTU/hr

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
Wood Fuel 7,805 BD-lbs/hr, 30,766 BDT/yr

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Wood Fuel			8,008 Btu/BD-lb

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO) [2]	20.25	79.84
Nitrogen Oxides (NO_X) [2]	33.24	131.03
Lead (Pb) [4]	0.003	0.01
Particulate Matter ($PM_{2.5}$) [3]	2.94	12.87
Particulate Matter (PM_{10}) [3]	2.94	12.87
Total Particulate Matter (TSP) [2]	2.94	12.87
Sulfur Dioxide (SO_2) [4]	1.56	6.16
Volatile Organic Compounds (VOC) [2]	6.25	27.38
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
See Attachment J, Table 3		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
N_2O [5]	0.58	2.28
CH_4 [5]	4.41	17.4
CO_2 [5]	12,925	50,949

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Notes:

(1) All emission estimates include the effect of applied control devices.

(2) Emission factors were taken from a source test performed at the JELD-WEN, Craigsville, West Virginia facility in April 2003. Two standard deviations were added to the results as a safety factor.

(3) Calculations assume that 100% of TSP is PM_{10}.

(4) Emission factors were taken from AP-42, Chapter 1.6, Wood Residue Combustion (9/2003).

(5) US EPA Mandatory GHG Reporting rule, Table C-1 (FR Vol. 74, No. 209, 30 Oct 2009).

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

See Title V Operating Permit R30-06700095-2008 (SM02) Conditions
4.1.1., *40 CFR 60 Subpart Dc.***[45CSR §2-3.1.]**
4.1.2., **[45CSR§2-9.1.]**
4.1.3., **[45CSR §2-4.4.]**
4.1.4., **[45CSR §2-9.2., 45CSR16, 40 CFR §60.11(d)]**
4.1.5., **[45CSR16, 40 CFR §§60.43c(b) and (d)]**
4.1.6., *45CSR§2-4.1.b., 45CSR§10-3.3.f., &* **[45CSR13 – Permit R13-2192 §4.1.10.]**
4.1.7. **[45CSR13 – Permit R13-2192 §4.1.11.]**
4.1.8. **[45CSR §10-3.8.]**
4.1.9. **[45CSR13 – Permit R13-2192 §4.1.9]**
4.1.10. **[45CSR §2-5.1.]**
4.1.11. **Operation and Maintenance of Air [45CSR13 – Permit R13-2192 §4.1.15, 45CSR§13-5.11.]**
4.1.12 **[40 C.F.R. 63, Subpart DDDDD],** 40 C.F.R. §63.7545(e).

____ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

See Title V Operating Permit R30-06700095-2008 (SM02) Conditions

4.2 Monitoring Requirements
4.2.1., **[45CSR §2-3.2., 45CSR16, 40 CFR §§60.47c(a) & (b)]**
4.2.5., **[45CSR§30-5.1.c.]**

4.3 Testing Requirements
4.3.1., **[45CSR§30-5.1.c.]**

4.4 Recordkeeping Requirements
4.4.1., **[45CSR§30-5.1.c.]**
4.4.2., **[45CSR §2-8.3.c., 45CSR16, 40 CFR §§60.47c(a) & (b)]**

4.5 Reporting Requirements
4.5.1., **[45CSR §2-9.3.]**
4.5.2., **[40 CFR §60.48c(b), 45CSR16]**
4.5.3., **[40 CFR §60.48c(c), 45CSR16]**
4.5.4., **[40 CFR §60.48c(j), 45CSR16]**

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:** None
B2	Natural Gas-Fired Boiler	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Natural Gas-Fired Boiler

Manufacturer:	**Model number:**	**Serial number:**
Burnham	25113	3P900506060PF
Construction date:	**Installation date:**	**Modification date(s):**
1997	1997	08/31/2001, boiler retubed

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 37.7×10^6 BTU/hr

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
37.7×10^6 BTU/hr	$297{,}227\times10^6$ BTU/yr	7,884 hr/yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? _X_Yes ___ No	**If yes, is it?** ___ Indirect Fired _X_Direct Fired
Maximum design heat input and/or maximum horsepower rating: 37.7×10^6 BTU/hr	**Type and Btu/hr rating of burners:** 37.7×10^6 BTU/hr

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
Natural Gas 39,057 ft^3/hr 308,000, 000 ft^3/yr

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas	0.022 gr/100 ft^3	0%	1,036

Emissions Data

Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO) [3]	3.06	13.39
Nitrogen Oxides (NO_X) [3]	6.20	25.46
Lead (Pb) [1]	0.00002	0.00007
Particulate Matter ($PM_{2.5}$) [2]	0.28	1.21
Particulate Matter (PM_{10}) [2]	0.28	1.21
Total Particulate Matter (TSP) [1]	0.28	1.21
Sulfur Dioxide (SO_2) [1]	0.02	0.1
Volatile Organic Compounds (VOC) [1]	0.20	0.88
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
See Attachment J, Table 3		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
N_2O [4]	0.01	0.04
CH_4 [4]	0.10	0.40
CO_2 [4]	5,353	21,103

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Notes:

(1) Emission factors were taken from AP-42, Chapter 1.4, Natural Gas Combustion (7/1998).

(2) Calculations assume that 100% of TSP is PM_{10}.

(3) Emission factors were taken from an engineering source test performed at the JELD-WEN, inc., Wood Fiber Division - Craigsville,

West Virginia facility in April 2003.

The emission factors are equal to the average of the test values plus two standard deviations.

(4) US EPA Mandatory GHG Reporting rule, Table C-1 (FR Vol. 74, No. 209, 30 Oct 2009).

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

See Title V Operating Permit R30-06700095-2008 (SM02) Conditions
4.1.1., *40 CFR 60 Subpart Dc.***[45CSR §2-3.1.]**
4.1.2., **[45CSR§2-9.1.]**
4.1.4., **[45CSR §2-9.2., 45CSR16, 40 CFR §60.11(d)]**
4.1.6., *45CSR§2-4.1.b., 45CSR§10-3.3.f., &* **[45CSR13 – Permit R13-2192 §4.1.10.]**
4.1.7. **[45CSR13 – Permit R13-2192 §4.1.11.]**
4.1.8. **[45CSR §10-3.8.]**
4.1.11. **Operation and Maintenance of Air [45CSR13 – Permit R13-2192 §4.1.15, 45CSR§13-5.11.]**
4.1.12 **[40 C.F.R. 63, Subpart DDDDD],** 40 C.F.R. §63.7545(e).

____ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

See Title V Operating Permit R30-06700095-2008 (SM02) Conditions

4.2 Monitoring Requirements
4.2.2., **[45CSR §2-3.2. and 45CSR§30-5.1.c.]**
4.2.5., **[45CSR§30-5.1.c.]**

4.3 Testing Requirements
None

4.4 Recordkeeping Requirements
4.4.1., **[45CSR§30-5.1.c.]**
4.4.2., **[45CSR §2-8.3.c., 45CSR16, 40 CFR §§60.47c(a) & (b)]**

4.5 Reporting Requirements
4.5.1., **[45CSR §2-9.3.]**
4.5.4., **[40 CFR §60.48c(j), 45CSR16]**

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___ No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:** BH3
C2	Recycle Cyclone	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
B&R Sheetmetal – 6 ft. diameter with an LC cone length

Manufacturer:	**Model number:**	**Serial number:**
B&R Sheetmetal	6 ft. diameter with LC cone length	
Construction date:	**Installation date:**	**Modification date(s):**
1997	05/01/1998	NA

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
1,404 lbs/hr	2,559 BDT/yr	7,884 hrs/yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: NA	**Type and Btu/hr rating of burners:** NA

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
NA

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
NA			

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	----	----
Nitrogen Oxides (NO_X)	----	----
Lead (Pb)	----	----
Particulate Matter ($PM_{2.5}$)	----(1)	----(1)
Particulate Matter (PM_{10})	----(1)	----(1)
Total Particulate Matter (TSP)	----(1)	----(1)
Sulfur Dioxide (SO_2)	----	----
Volatile Organic Compounds (VOC)	----	----
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
N_2O	----	----
CH_3	----	----
CO_2	----	----

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Notes:

(1) See Attachment J, Table 9, Cyclone is vent to a baghouse, emissions are included in the applicable baghouse emissions.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

See Title V Operating Permit R30-06700095-2008 (SM02) Condition Nos.

5.0 Source-Specific Requirements

5.1 Limitations and Standards

5.1.9., **[45CSR13 – Permit R13-2192 §4.1.7.]**
5.1.12., **[45CSR13 – Permit R13-2192 §4.1.10.]**
5.1.13., **[45CSR13 – Permit R13-2192 §4.1.11.]**
5.1.17., **[45CSR13 – Permit R13-2192 §4.1.15., 45CSR§13-5.11.]**
5.1.18., **[45CSR §7-3.1.]**
5.1.21., **[45CSR §7-4.12.]**
5.1.22., **[45CSR §7-9.1.]**

____ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

See Title V Operating Permit R30-06700095-2008 (SM02) Condition Nos.

5.2 Monitoring Requirements

5.2.6. **[45CSR30-5.1.c., 40CFR§64.6(c)]**
5.2.7. **[45CSR30-5.1.c., 40CFR§64.6(c) & §64.7(d)]]**

5.3 Testing Requirements

5.3.2. **[45CSR§7A-2.1., 45CSR§30-5.1.c., 40CFR§64.6(c) & §64.7(d)]**

5.4 Recordkeeping Requirements

3.4.1 & 5.4.1. **[45CSR§30-5.1.c.2.A., 45CSR13 – Permit R13-2192 §4.3.1]**
5.4.2. **[45CSR13 – Permit R13-2192 §4.3.2.]**
5.4.3. **[45CSR13 – Permit R13-2192 §4.3.3.]**

5.5 Reporting Requirements

5.5.1. **[40 CFR §64.9(a)]**

Are you in compliance with all applicable requirements for this emission unit? _X_Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

Description of Cyclones (C2, C3)

Particulate emissions from the cyclones are affected by the material throughput and the size distribution of the material. Hourly emissions are estimated based on the maximum hourly throughput for each cyclone. Annual emissions are based on the estimated quantity of residuals generated with a door skin production rate of 170,226,823 sqft/year – 1/8" basis. Because particulate size distribution data is not available, all particulate matter emitted has been conservatively assumed to be PM_{10}. Emissions from these cyclones are controlled by baghouse (BH3).

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:** BH3
C3	Waste Cyclone	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
B&R Sheetmetal – 6 ft. diameter with an LC cone length

Manufacturer:	**Model number:**	**Serial number:**
B&R Sheetmetal	6 ft. diameter with LC cone length	
Construction date:	**Installation date:**	**Modification date(s):**
1997	05/01/1998	NA

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
3,037 lbs/hr	5,564 BDT/yr	7,884 hrs/yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: NA	**Type and Btu/hr rating of burners:** NA

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
NA

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
NA			

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	----	----
Nitrogen Oxides (NO_X)	----	----
Lead (Pb)	----	----
Particulate Matter ($PM_{2.5}$)	----(1)	----(1)
Particulate Matter (PM_{10})	----(1)	----(1)
Total Particulate Matter (TSP)	----(1)	----(1)
Sulfur Dioxide (SO_2)	----	----
Volatile Organic Compounds (VOC)	----	----
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
N_2O	----	----
CH_3	----	----
CO_2	----	----

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Notes:

(1) See Attachment J, Table 9, Cyclone is vent to a baghouse, emissions are included in the applicable baghouse emissions.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

See Title V Operating Permit R30-06700095-2008 (SM02) Condition Nos.

5.0 Source-Specific Requirements

5.1 Limitations and Standards

5.1.9., **[45CSR13 – Permit R13-2192 §4.1.7.]**
5.1.12., **[45CSR13 – Permit R13-2192 §4.1.10.]**
5.1.13., **[45CSR13 – Permit R13-2192 §4.1.11.]**
5.1.17., **[45CSR13 – Permit R13-2192 §4.1.15., 45CSR§13-5.11.]**
5.1.18., **[45CSR §7-3.1.]**
5.1.21., **[45CSR §7-4.12.]**
5.1.22., **[45CSR §7-9.1.]**

____ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

See Title V Operating Permit R30-06700095-2008 (SM02) Condition Nos.

5.2 Monitoring Requirements

5.2.6. **[45CSR30-5.1.c., 40CFR§64.6(c)]**
5.2.7. **[45CSR30-5.1.c., 40CFR§64.6(c) & §64.7(d)]]**

5.3 Testing Requirements

5.3.2. **[45CSR§7A-2.1., 45CSR§30-5.1.c., 40CFR§64.6(c) & §64.7(d)]**

5.4 Recordkeeping Requirements

3.4.1 & 5.4.1. **[45CSR§30-5.1.c.2.A., 45CSR13 – Permit R13-2192 §4.3.1]**
5.4.2. **[45CSR13 – Permit R13-2192 §4.3.2.]**
5.4.3. **[45CSR13 – Permit R13-2192 §4.3.3.]**

5.5 Reporting Requirements

5.5.1. **[40 CFR §64.9(a)]**

Are you in compliance with all applicable requirements for this emission unit? _X_Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:** BH3
C4	Middle Reject Cyclone	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
B&R Sheetmetal – 6 ft. diameter with an LC cone length

Manufacturer:	**Model number:**	**Serial number:**
B&R Sheetmetal	6 ft. diameter with LC cone length	
Construction date:	**Installation date:**	**Modification date(s):**
1997	05/01/1998	NA

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
1,404 lbs/hr	2,559 BDT/yr	7,884 hrs/yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: NA	**Type and Btu/hr rating of burners:** NA

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
NA

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
NA			

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	----	----
Nitrogen Oxides (NO_X)	----	----
Lead (Pb)	----	----
Particulate Matter ($PM_{2.5}$)	----(1)	----(1)
Particulate Matter (PM_{10})	----(1)	----(1)
Total Particulate Matter (TSP)	----(1)	----(1)
Sulfur Dioxide (SO_2)	----	----
Volatile Organic Compounds (VOC)	----	----
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
N_2O	----	----
CH_3	----	----
CO_2	----	----

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Notes:

(1) See Attachment J, Table 9, Cyclone is vent to a baghouse, emissions are included in the applicable baghouse emissions.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

See Title V Operating Permit R30-06700095-2008 (SM02) Condition Nos.

5.0 Source-Specific Requirements

5.1 Limitations and Standards

5.1.9., **[45CSR13 – Permit R13-2192 §4.1.7.]**
5.1.12., **[45CSR13 – Permit R13-2192 §4.1.10.]**
5.1.13., **[45CSR13 – Permit R13-2192 §4.1.11.]**
5.1.17., **[45CSR13 – Permit R13-2192 §4.1.15., 45CSR§13-5.11.]**
5.1.18., **[45CSR §7-3.1.]**
5.1.21., **[45CSR §7-4.12.]**
5.1.22., **[45CSR §7-9.1.]**

____ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

See Title V Operating Permit R30-06700095-2008 (SM02) Condition Nos.

5.2 Monitoring Requirements

5.2.6. **[45CSR30-5.1.c., 40CFR§64.6(c)]**
5.2.7. **[45CSR30-5.1.c., 40CFR§64.6(c) & §64.7(d)]]**

5.3 Testing Requirements

5.3.2. **[45CSR§7A-2.1., 45CSR§30-5.1.c., 40CFR§64.6(c) & §64.7(d)]**

5.4 Recordkeeping Requirements

3.4.1 & 5.4.1. **[45CSR§30-5.1.c.2.A., 45CSR13 – Permit R13-2192 §4.3.1]**
5.4.2. **[45CSR13 – Permit R13-2192 §4.3.2.]**
5.4.3. **[45CSR13 – Permit R13-2192 §4.3.3.]**

5.5 Reporting Requirements

5.5.1. **[40 CFR §64.9(a)]**

Are you in compliance with all applicable requirements for this emission unit? _X_Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

Description of Middle Reject Cyclone (C4)

Particulate emissions from this cyclone are based on 15 percent maximum throughput of the reject screw. The middle reject cyclone is used for the metal detect juncture. When metal is detected in the blow line it kicks the material to the middle reject cyclone. Material from this cyclone is then blown to the fuel silos. The middle reject cyclone runs a maximum of 5 hours/day. Emissions from this cyclone are controlled by baghouse (BH3).

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:** BH4
C5	Chip Cleaning Cyclone	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
B&R Sheetmetal cyclone – 6 ft. diameter with an LC cone length.

Manufacturer:	**Model number:**	**Serial number:**
B&R Sheetmetal	6 ft. diameter with LC cone length	
Construction date:	**Installation date:**	**Modification date(s):**
1997	05/01/1998	NA

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
2,667 lbs/hr	1,459 BDT/yr	7,884 hrs/yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: NA	**Type and Btu/hr rating of burners:** NA

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
NA

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
NA			

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	----	----
Nitrogen Oxides (NO_X)	----	----
Lead (Pb)	----	----
Particulate Matter ($PM_{2.5}$)	----(1)	----(1)
Particulate Matter (PM_{10})	----(1)	----(1)
Total Particulate Matter (TSP)	----(1)	----(1)
Sulfur Dioxide (SO_2)	----	----
Volatile Organic Compounds (VOC)	----	----
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
N_2O	----	----
CH_3	----	----
CO_2	----	----

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Notes:

(1) See Attachment J, Table 9, Cyclone is vent to a baghouse, emissions are included in the applicable baghouse emissions.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

See Title V Operating Permit R30-06700095-2008 (SM02) Condition Nos.

5.0 Source-Specific Requirements

5.1 Limitations and Standards

5.1.9., **[45CSR13 – Permit R13-2192 §4.1.7.]**
5.1.12., **[45CSR13 – Permit R13-2192 §4.1.10.]**
5.1.13., **[45CSR13 – Permit R13-2192 §4.1.11.]**
5.1.17., **[45CSR13 – Permit R13-2192 §4.1.15., 45CSR§13-5.11.]**
5.1.18., **[45CSR §7-3.1.]**
5.1.21., **[45CSR §7-4.12.]**
5.1.22., **[45CSR §7-9.1.]**

____ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

See Title V Operating Permit R30-06700095-2008 (SM02) Condition Nos.

5.2 Monitoring Requirements

5.2.6. **[45CSR30-5.1.c., 40CFR§64.6(c)]**
5.2.7. **[45CSR30-5.1.c., 40CFR§64.6(c) & §64.7(d)]]**

5.3 Testing Requirements

5.3.2. **[45CSR§7A-2.1., 45CSR§30-5.1.c., 40CFR§64.6(c) & §64.7(d)]**

5.4 Recordkeeping Requirements

3.4.1 & 5.4.1. **[45CSR§30-5.1.c.2.A., 45CSR13 – Permit R13-2192 §4.3.1]**
5.4.2. **[45CSR13 – Permit R13-2192 §4.3.2.]**
5.4.3. **[45CSR13 – Permit R13-2192 §4.3.3.]**

5.5 Reporting Requirements

5.5.1. **[40 CFR §64.9(a)]**

Are you in compliance with all applicable requirements for this emission unit? _X_Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

Chip Cleaning Cyclone (C5)

The Chip Cleaning Cyclone serves a maintenance function. As needed, hogged reject door skins (chips) are diverted from the Skin Sizer Baghouse (BH4) and sent to the Chip Cleaning Cyclone. The chips are then stored in a holding bin and augered into the blender once or twice per day for use as a mechanical cleaning agent. Approximately 80 ft^3 of chips are used every 12 hours for cleaning. The cyclone operates as needed to maintain a full storage bin, probably 10 to 12 hours per day.

The Chip Cleaning Cyclone does not generate any particulate emissions not already accounted for elsewhere in this permit application. The cyclone is controlled by the Skin Sizer Baghouse, and material is simply diverted to the cyclone instead of being sent directly to the baghouse.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:** BH3
C6	Chip Cyclone	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
B&R Sheetmetal cyclone

Manufacturer:	**Model number:**	**Serial number:**
B&R Sheetmetal		

Construction date:	**Installation date:**	**Modification date(s):**
1997	05/01/1998	NA

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
23,944 lbs/hr	45,004 BDT/yr	7,884 hrs/yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: NA	**Type and Btu/hr rating of burners:** NA

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
NA

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
NA			

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	----	----
Nitrogen Oxides (NO_X)	----	----
Lead (Pb)	----	----
Particulate Matter ($PM_{2.5}$)	----(1)	----(1)
Particulate Matter (PM_{10})	----(1)	----(1)
Total Particulate Matter (TSP)	----(1)	----(1)
Sulfur Dioxide (SO_2)	----	----
Volatile Organic Compounds (VOC)	----	----
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
N_2O	----	----
CH_3	----	----
CO_2	----	----

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Notes:

(1) See Attachment J, Table 9, Cyclone is vent to a baghouse, emissions are included in the applicable baghouse emissions.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

See Title V Operating Permit R30-06700095-2008 (SM02) Condition Nos.

5.0 Source-Specific Requirements

5.1 Limitations and Standards

5.1.9., **[45CSR13 – Permit R13-2192 §4.1.7.]**
5.1.12., **[45CSR13 – Permit R13-2192 §4.1.10.]**
5.1.13., **[45CSR13 – Permit R13-2192 §4.1.11.]**
5.1.17., **[45CSR13 – Permit R13-2192 §4.1.15., 45CSR§13-5.11.]**
5.1.18., **[45CSR §7-3.1.]**
5.1.21., **[45CSR §7-4.12.]**
5.1.22., **[45CSR §7-9.1.]**

____ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

See Title V Operating Permit R30-06700095-2008 (SM02) Condition Nos.

5.2 Monitoring Requirements

5.2.6. **[45CSR30-5.1.c., 40CFR§64.6(c)]**
5.2.7. **[45CSR30-5.1.c., 40CFR§64.6(c) & §64.7(d)]]**

5.3 Testing Requirements

5.3.2. **[45CSR§7A-2.1., 45CSR§30-5.1.c., 40CFR§64.6(c) & §64.7(d)]**

5.4 Recordkeeping Requirements

3.4.1 & 5.4.1. **[45CSR§30-5.1.c.2.A., 45CSR13 – Permit R13-2192 §4.3.1]**
5.4.2. **[45CSR13 – Permit R13-2192 §4.3.2.]**
5.4.3. **[45CSR13 – Permit R13-2192 §4.3.3.]**

5.5 Reporting Requirements

5.5.1. **[40 CFR §64.9(a)]**

Are you in compliance with all applicable requirements for this emission unit? _X_Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

Description of Chip Cyclone (C6)

Particulate emissions from this cyclone are affected by material throughput from the furnish silos. Hourly emissions have been based on the maximum hourly throughput. Material is transferred from the furnish silos by chain conveyor to a blow line which brings the material to the cyclone. Materials from the cyclone are sent to the rotary valve. Emissions from this cyclone are controlled by baghouse (BH3).

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:** BH6, BH1a, BH1b, BH1c, & BF
C7	Press Vent Purge Cyclone	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
B&R Sheetmetal cyclone

Manufacturer:	**Model number:**	**Serial number:**
B&R Sheetmetal		

Construction date:	**Installation date:**	**Modification date(s):**
2013	2013	NA

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
3.2 lbs/hr	8.1 BDT/yr	7,884 hrs/yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: NA	**Type and Btu/hr rating of burners:** NA

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
NA

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
NA			

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	----	----
Nitrogen Oxides (NO_X)	----	----
Lead (Pb)	----	----
Particulate Matter ($PM_{2.5}$)	----(1)	----(1)
Particulate Matter (PM_{10})	----(1)	----(1)
Total Particulate Matter (TSP)	----(1)	----(1)
Sulfur Dioxide (SO_2)	----	----
Volatile Organic Compounds (VOC)	----	----
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
N_2O	----	----
CH_3	----	----
CO_2	----	----

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Notes:

(1) See Attachment J, Table 9, Cyclone is vent to a baghouse, emissions are included in the applicable baghouse emissions.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

See Title V Operating Permit R30-06700095-2008 (SM02) Condition Nos.

5.0 Source-Specific Requirements

5.1 Limitations and Standards

5.1.9., **[45CSR13 – Permit R13-2192 §4.1.7.]**
5.1.12., **[45CSR13 – Permit R13-2192 §4.1.10.]**
5.1.13., **[45CSR13 – Permit R13-2192 §4.1.11.]**
5.1.17., **[45CSR13 – Permit R13-2192 §4.1.15., 45CSR§13-5.11.]**
5.1.18., **[45CSR §7-3.1.]**
5.1.21., **[45CSR §7-4.12.]**
5.1.22., **[45CSR §7-9.1.]**

____ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

See Title V Operating Permit R30-06700095-2008 (SM02) Condition Nos.

5.2 Monitoring Requirements

5.2.6. **[45CSR30-5.1.c., 40CFR§64.6(c)]**
5.2.7. **[45CSR30-5.1.c., 40CFR§64.6(c) & §64.7(d)]]**

5.3 Testing Requirements

5.3.2. **[45CSR§7A-2.1., 45CSR§30-5.1.c., 40CFR§64.6(c) & §64.7(d)]**

5.4 Recordkeeping Requirements

3.4.1 & 5.4.1. **[45CSR§30-5.1.c.2.A., 45CSR13 – Permit R13-2192 §4.3.1]**
5.4.2. **[45CSR13 – Permit R13-2192 §4.3.2.]**
5.4.3. **[45CSR13 – Permit R13-2192 §4.3.3.]**

5.5 Reporting Requirements

5.5.1. **[40 CFR §64.9(a)]**

Are you in compliance with all applicable requirements for this emission unit? _X_Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:** BH1a, BH1b, & BH1c
C8	Dryer Baghouse Purge Cyclone	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
B&R Sheetmetal cyclone

Manufacturer:	**Model number:**	**Serial number:**
B&R Sheetmetal		

Construction date:	**Installation date:**	**Modification date(s):**
1997	05/01/1998	NA

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
302.4 lbs/hr	566.9 BDT/yr	7,884 hrs/yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: NA	**Type and Btu/hr rating of burners:** NA

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
NA

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
NA			

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	----	----
Nitrogen Oxides (NO_X)	----	----
Lead (Pb)	----	----
Particulate Matter ($PM_{2.5}$)	----(1)	----(1)
Particulate Matter (PM_{10})	----(1)	----(1)
Total Particulate Matter (TSP)	----(1)	----(1)
Sulfur Dioxide (SO_2)	----	----
Volatile Organic Compounds (VOC)	----	----
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
N_2O	----	----
CH_3	----	----
CO_2	----	----

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Notes:

(1) See Attachment J, Table 9, Cyclone is vent to a baghouse, emissions are included in the applicable baghouse emissions.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

See Title V Operating Permit R30-06700095-2008 (SM02) Condition Nos.

5.0 Source-Specific Requirements

5.1 Limitations and Standards

5.1.2., **[45CSR13 – Permit R13-2192 §4.1.2.]**
5.1.8., **[45CSR13 – Permit R13-2192 §4.1.6]**
5.1.9., **[45CSR13 – Permit R13-2192 §4.1.7.]**
5.1.11, **[45CSR34; 40 CFR§63.2240(b); 45CSR13 – Permit R13-2192 §4.1.8.]**
5.1.12., **[45CSR13 – Permit R13-2192 §4.1.10.]**
5.1.13., **[45CSR13 – Permit R13-2192 §4.1.11.]**
5.1.17., **[45CSR13 – Permit R13-2192 §4.1.15., 45CSR§13-5.11.]**
5.1.18., **[45CSR §7-3.1.]**
5.1.21., **[45CSR §7-4.12.]**
5.1.22., **[45CSR §7-9.1.]**

____ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

See Title V Operating Permit R30-06700095-2008 (SM02) Condition Nos.

5.2 Monitoring Requirements

5.2.3. **[45CSR§30-5.1.c.1.]**
5.2.6. **[45CSR30-5.1.c., 40CFR§64.6(c)]**
5.2.7. **[45CSR30-5.1.c., 40CFR§64.6(c) & §64.7(d)]]**

5.3 Testing Requirements

5.3.2. **[45CSR§7A-2.1., 45CSR§30-5.1.c., 40CFR§64.6(c) & §64.7(d)]**

5.4 Recordkeeping Requirements

3.4.1 & 5.4.1. **[45CSR§30-5.1.c.2.A., 45CSR13 – Permit R13-2192 §4.3.1]**
5.4.2. **[45CSR13 – Permit R13-2192 §4.3.2.]**
5.4.3. **[45CSR13 – Permit R13-2192 §4.3.3.]**
5.4.5. **[45CSR13 – Permit R13-2192 §4.3.5.]**
5.4.7. **[40 CFR §64.9(b)]**

5.5 Reporting Requirements

5.5.1. **[40 CFR §64.9(a)]**

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:** None
CV1-CV5	Conveyors	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
CV1 – Truck Dump to Rotary Classifier
CV2 – Rotary Classifier to Metal Detector
CV3 – Metal Detector to Furnish Storage Silos
CV4 – Furnish Storage Silos to Refiner
CV5 – Fuel Storage Silos to the Boiler

Manufacturer:	**Model number:**	**Serial number:**
NA	NA	NA

Construction date:	**Installation date:**	**Modification date(s):**
1997	05/01/1998	None

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
CV1 – 19 tons/hr; CV2 – 19 tons/hr; CV3 – 19 tons/hr; CV4 – 12 tons/hr; CV5 – 3.9 tons/hr

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
73 tons/hr (total)	55,574 tons/yr (total)	7,884 hrs/yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: NA	**Type and Btu/hr rating of burners:** NA

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
NA

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
NA			

Emissions Data			
Criteria Pollutants	Potential Emissions		
	PPH	TPY	
Carbon Monoxide (CO)	----	----	
Nitrogen Oxides (NO_X)	----	----	
Lead (Pb)	----	----	
Particulate Matter ($PM_{2.5}$)	1.73	5.18	
Particulate Matter (PM_{10})	1.73	5.18	
Total Particulate Matter (TSP)	3.67	10.95	
Sulfur Dioxide (SO_2)	----	----	
Volatile Organic Compounds (VOC)	----	----	
Hazardous Air Pollutants	Potential Emissions		
	PPH	TPY	
Regulated Pollutants other than Criteria and HAP	Potential Emissions		
	PPH	TPY	
N_2O	----	----	
CH_3	----	----	
CO_2	----	----	

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Notes:

(1) See Attachment J, Table 13.

Applicable Requirements
List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included. NA
____ Permit Shield
For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.) NA
Are you in compliance with all applicable requirements for this emission unit? _<u>X</u>_Yes ___No If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:** BH1a, BH1b, BH1c, BF
D1/C1	Fiber Dryer and Dryer Cyclone	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
See enclosed process description

Manufacturer:	**Model number:**	**Serial number:**
Dryer: Westec America Cyclone: B&R Sheetmetal	54 inch diameter x 270 feet long 10 ft. diameter x 20 ft. cone length	

Construction date:	**Installation date:**	**Modification date(s):**
1997	05/01/1998	NA

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
20 MMBtu/hr

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
30,258 lbs/hr	56,716 BDT/yr	7,884 hrs/yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: 20 MMBtu/hr	**Type and Btu/hr rating of burners:** 20 MMBtu/hr Maxon RG-IV air flow burner

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
Natural Gas – 20,720 scf/hr, 163.4 MMscf/yr.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas	0.022 gr/100 ft^3	0%	1,036

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	----(1)	----(1)
Nitrogen Oxides (NO_X)	----(1)	----(1)
Lead (Pb)	----	----
Particulate Matter ($PM_{2.5}$)	----(1)	----(1)
Particulate Matter (PM_{10})	----(1)	----(1)
Total Particulate Matter (TSP)	----(1)	----(1)
Sulfur Dioxide (SO_2)	----	----
Volatile Organic Compounds (VOC)	----(1)	----(1)
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
	----(1)	----(1)
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
N_2O	----(1)	----(1)
CH_3	----(1)	----(1)
CO_2	----(1)	----(1)

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Notes:

(1) See Attachment J, Table 7, Cyclone is controlled by the Dryer Baghouses (BH1a, BH1b, BH1c) and will be vented to the Biofilter (BF) by 02/04/2014.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

See Title V Operating Permit R30-06700095-2008 (SM02) Condition Nos.

5.0 Source-Specific Requirements

5.1 Limitations and Standards

5.1.2., **[45CSR13 – Permit R13-2192 §4.1.2.]**
5.1.8., **[45CSR13 – Permit R13-2192 §4.1.6]**
5.1.9., **[45CSR13 – Permit R13-2192 §4.1.7.]**
5.1.11, **[45CSR34; 40 CFR§63.2240(b); 45CSR13 – Permit R13-2192 §4.1.8.]**
5.1.12., **[45CSR13 – Permit R13-2192 §4.1.10.]**
5.1.13., **[45CSR13 – Permit R13-2192 §4.1.11.]**
5.1.17., **[45CSR13 – Permit R13-2192 §4.1.15., 45CSR§13-5.11.]**
5.1.18., **[45CSR §7-3.1.]**
5.1.21., **[45CSR §7-4.12.]**
5.1.22., **[45CSR §7-9.1.]**

____ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

See Title V Operating Permit R30-06700095-2008 (SM02) Condition Nos.

5.2 Monitoring Requirements

5.2.3. **[45CSR§30-5.1.c.1.]**
5.2.6. **[45CSR30-5.1.c., 40CFR§64.6(c)]**
5.2.7. **[45CSR30-5.1.c., 40CFR§64.6(c) & §64.7(d)]]**

5.3 Testing Requirements

5.3.2. **[45CSR§7A-2.1., 45CSR§30-5.1.c., 40CFR§64.6(c) & §64.7(d)]**

5.4 Recordkeeping Requirements

3.4.1 & 5.4.1. **[45CSR§30-5.1.c.2.A., 45CSR13 – Permit R13-2192 §4.3.1]**
5.4.2. **[45CSR13 – Permit R13-2192 §4.3.2.]**
5.4.3. **[45CSR13 – Permit R13-2192 §4.3.3.]**
5.4.5. **[45CSR13 – Permit R13-2192 §4.3.5.]**
5.4.7. **[40 CFR §64.9(b)]**

5.5 Reporting Requirements

5.5.1. **[40 CFR §64.9(a)]**

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

Fiber Dryer and Dryer Cyclone Description

The fiber dryer is a tube dryer manufactured by Westec America. Heat is provided by both steam coils and the direct-firing of natural gas; each source is expected to provide about 50% of the heat input to the dryer. The natural gas burner is rated at 20 MMBtu/hr, but it is anticipated that it will normally be operated at about 50% of capacity. Dryer intake air includes the exhaust from the Press (PV) and the Rotary Valve (RV). The wood fiber exiting the dryer is separated from the air stream by the dryer cyclone and is then stored in the doffing roll bin.

Emissions from the dryer, and press are exhausted through the dryer cyclone. These emissions include VOC and HAP volatilized from the wood, natural gas combustion products, and particulate material from the fiber. Three Fiber Dryer Baghouses (BH1a, BH1b, and BH1c) control particulate emissions from the dryer cyclone. The exhaust from the three baghouses is vented into the Biofilter (BF) to control HAP emissions fulfilling the requirements of 40 CFR Part 63 Subpart DDDD.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:** None
DC	Die Coating	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
See Enclosed Process Description

Manufacturer:	**Model number:**	**Serial number:**
TBD	TBD	
Construction date:	**Installation date:**	**Modification date(s):**
TBD	TBD	NA

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
0.1 gal coating/hr	97 gal coating /yr	7,884 hrs/yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: NA	**Type and Btu/hr rating of burners:** NA

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
NA

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
NA			

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	----	----
Nitrogen Oxides (NO_X)	----	----
Lead (Pb)	----	----
Particulate Matter ($PM_{2.5}$)	0.01	0.005
Particulate Matter (PM_{10})	0.01	0.005
Total Particulate Matter (TSP)	0.01	0.005
Sulfur Dioxide (SO_2)	----	----
Volatile Organic Compounds (VOC)	2.08	1.0
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Methanol	0.08	0.04
Diethylene glycol monobutly	0.13	0.07
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
N_2O	----	----
CH_3	----	----
CO_2	----	----

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Notes:

(1) See Attachment J, Table 16

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

See Title V Operating Permit R30-06700095-2008 (SM02) Condition Nos.

5.0 Source-Specific Requirements

5.1 Limitations and Standards

5.1.9., **[45CSR13 – Permit R13-2192 §4.1.7.]**
5.1.21., **[45CSR §7-4.12.]**
5.1.22., **[45CSR §7-9.1.]**

____ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

See Title V Operating Permit R30-06700095-2008 (SM02) Condition Nos.

5.2 Monitoring Requirements

5.2.2. **[45CSR13 – Permit R13-2192 §4.3.8.]**

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

Description of Die Coating Process (DC)

The die coating process will include five basic steps as follows:

Step 1. Wipe the surface of each die half with a caustic cleaner/degreaser and rags.

Step 2. Media blast the surface of each steel die half in an enclosed booth using re-circulated air with no vent to atmosphere.

Step 3. Wipe the surface of each die half surface clean with isopropyl alcohol and rags.

Step 4. Apply a surface coating to each die half using a HPLV paint gun in the new die coating paint booth vented to atmosphere (E17).

Step 5. Place each die half on a hot plate, vented through the paint booth stack (E17), to cure the surface coating.

The entire process takes a minimum of ½ hour to complete on each die half. The surface coating on each die is allowed to dry completely before installing the die in the door skin press.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:** BH5
DC2	Paint Manufacturing	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
See Enclosed Process Description

Manufacturer:	**Model number:**	**Serial number:**
NA	NA	

Construction date:	**Installation date:**	**Modification date(s):**
1999	04/01/1999	NA

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): NA

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
1 batch/6 hours	600 batches /yr	3,600 hrs/yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: NA	**Type and Btu/hr rating of burners:** NA

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
NA

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
NA			

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	----	----
Nitrogen Oxides (NO_X)	----	----
Lead (Pb)	----	----
Particulate Matter ($PM_{2.5}$)	0.01	0.02
Particulate Matter (PM_{10})	0.01	0.02
Total Particulate Matter (TSP)	0.01	0.02
Sulfur Dioxide (SO_2)	----	----
Volatile Organic Compounds (VOC)	0.03	0.05
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Glycol Ether	0.004	0.008
Formaldehyde	0.0003	0.0006
Styrene	0.0008	0.0014
Xylene	0.0002	0.0004
Methyl Methacrylate	0.0002	0.0003
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
N_2O	----	----
CH_3	----	----
CO_2	----	----

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Notes:

(1) See Attachment J, Table 14

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

See Title V Operating Permit R30-06700095-2008 (SM02) Condition Nos.

5.0 Source-Specific Requirements

5.1 Limitations and Standards

5.1.9., **[45CSR13 – Permit R13-2192 §4.1.7.]**
5.1.26., **[45CSR34, 40 CFR §63.8055(a)]**

____ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

See Title V Operating Permit R30-06700095-2008 (SM02) Condition Nos.

5.5 Reporting Requirements

5.5.2. **[45CSR34, 40 CFR §63.4720(a), 40 CFR §§63.8075(b) & (e) and 40 CFR §63.10]**

Are you in compliance with all applicable requirements for this emission unit? _X_Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

Description of the Paint Manufacturing Process (DC2)

The facility manufactures water-based primer used to prime door skins at Wood Fiber Division – West Virginia and other wood products at a number of JELD-WEN, inc. door manufacturing facilities. The primer is made by mixing water-based acrylic latex with a number of additives and water. The maximum product usage and associated emissions are summarized in Attachment N, Supporting Emission Calculations.

During the pigment addition process, the dispenser is not operated in order to minimize any potential particulate emissions. A dust collector is positioned adjacent to the lid opening to draw any particulate that becomes suspended during the addition of the powder. Once the ingredients are added, the vacuum hose is attached to the opening in the lid to collect any material suspended during the dispersion process. The particulate matter collected by the dust collector is reused in subsequent batches. Emissions from the dust collector are vented inside the building.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:** BH2 & BH3
FLa	Fiber Line Prior to Press (Former)	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
See enclosed process description.

Manufacturer:	**Model number:**	**Serial number:**
NA	NA	NA
Construction date:	**Installation date:**	**Modification date(s):**
1997	05/01/1998	NA

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
BH2: 917 lbs/hr BH3: 374 lbs/hr	BH2: 1,699 BDT/yr BH3: 684 BDT/yr	7,884 hrs/yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: NA	**Type and Btu/hr rating of burners:** NA

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
NA

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
NA			

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	----	----
Nitrogen Oxides (NO_X)	----	----
Lead (Pb)	----	----
Particulate Matter ($PM_{2.5}$)	0.73	1.4
Particulate Matter (PM_{10})	0.73	1.4
Total Particulate Matter (TSP)	0.73	1.4
Sulfur Dioxide (SO_2)	----	----
Volatile Organic Compounds (VOC)	0.20	0.8
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Formaldehyde	0.08	0.30
Methanol	0.13	0.51
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
N_2O	----	----
CH_3	----	----
CO_2	----	----

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Notes:

(1) See Attachment J, Tables 9 & 10.

(2) Emissions from FLa eventually vent to atmosphere through the Former Baghouse (BH2) and the Waste Baghouse (BH3). Emission listed here are for the former Baghouse only. The Waste Baghouse emissions are accounted for by other emission units.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

See Title V Operating Permit R30-06700095-2008 (SM02) Condition Nos.

5.0 Source-Specific Requirements

5.1 Limitations and Standards

5.1.9., **[45CSR13 – Permit R13-2192 §4.1.7.]**
5.1.12., **[45CSR13 – Permit R13-2192 §4.1.10.]**
5.1.13., **[45CSR13 – Permit R13-2192 §4.1.11.]**
5.1.17., **[45CSR13 – Permit R13-2192 §4.1.15., 45CSR§13-5.11.]**
5.1.18., **[45CSR §7-3.1.]**
5.1.21., **[45CSR §7-4.12.]**
5.1.22., **[45CSR §7-9.1.]**

____ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

See Title V Operating Permit R30-06700095-2008 (SM02) Condition Nos.

5.2 Monitoring Requirements

5.2.3. **[45CSR§30-5.1.c.1.]**
5.2.6. **[45CSR30-5.1.c., 40CFR§64.6(c)]**
5.2.7. **[45CSR30-5.1.c., 40CFR§64.6(c) & §64.7(d)]]**

5.3 Testing Requirements

5.3.2. **[45CSR§7A-2.1., 45CSR§30-5.1.c., 40CFR§64.6(c) & §64.7(d)]**

5.4 Recordkeeping Requirements

3.4.1 & 5.4.1. **[45CSR§30-5.1.c.2.A., 45CSR13 – Permit R13-2192 §4.3.1]**
5.4.2. **[45CSR13 – Permit R13-2192 §4.3.2.]**
5.4.3. **[45CSR13 – Permit R13-2192 §4.3.3.]**
5.4.7. **[40 CFR §64.9(b)]**

5.5 Reporting Requirements

5.5.1. **[40 CFR §64.9(a)]**

Are you in compliance with all applicable requirements for this emission unit? _X_Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

Description of Fiberline Prior to the Press (FL(a))

Particulate, VOC, and HAP emissions generated by the operation are included in the affected source FL(a). Particulate material generated by the shave-off and trimming operation is captured by hoods and conveyed to the Middle Reject Cyclone (C4), which is used to recycle material back into the process. Although the particulate material originates from FL(a), all particulate emissions are accounted for on the affected source sheet for C4. Particulate emissions from C4 are controlled by the Former Baghouse (BH2).

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:** BH4
FLb	Fiber Dryer After the Press (Sizer)	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
See enclosed process description.

Manufacturer:	**Model number:**	**Serial number:**
NA	NA	NA
Construction date:	**Installation date:**	**Modification date(s):**
1997	05/01/1998	NA

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 18,650 SF/hr

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
BH4: 12,522 lbs/hr	BH4: 8,410 BDT/yr	7,884 hrs/yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: NA	**Type and Btu/hr rating of burners:** NA

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
NA

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
NA			

Emissions Data

Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	----	----
Nitrogen Oxides (NO_X)	----	----
Lead (Pb)	----	----
Particulate Matter ($PM_{2.5}$)	6.62	4.2
Particulate Matter (PM_{10})	6.62	4.2
Total Particulate Matter (TSP)	6.62	4.2
Sulfur Dioxide (SO_2)	----	----
Volatile Organic Compounds (VOC)	0.24	0.16
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Formaldehyde	0.24	0.16
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
N_2O	----	----
CH_3	----	----
CO_2	----	----

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Notes:

(1) See Attachment J, Tables 9 & 10.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

See Title V Operating Permit R30-06700095-2008 (SM02) Condition Nos.

5.0 Source-Specific Requirements

5.1 Limitations and Standards

5.1.9., **[45CSR13 – Permit R13-2192 §4.1.7.]**
5.1.12., **[45CSR13 – Permit R13-2192 §4.1.10.]**
5.1.13., **[45CSR13 – Permit R13-2192 §4.1.11.]**
5.1.14., **[45CSR13 – Permit R13-2192 §4.1.12.]**
5.1.17., **[45CSR13 – Permit R13-2192 §4.1.15., 45CSR§13-5.11.]**
5.1.18., **[45CSR §7-3.1.]**
5.1.21., **[45CSR §7-4.12.]**
5.1.22., **[45CSR §7-9.1.]**

____ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

See Title V Operating Permit R30-06700095-2008 (SM02) Condition Nos.

5.2 Monitoring Requirements

5.2.3. **[45CSR§30-5.1.c.1.]**
5.2.6. **[45CSR30-5.1.c., 40CFR§64.6(c)]**
5.2.7. **[45CSR30-5.1.c., 40CFR§64.6(c) & §64.7(d)]]**

5.3 Testing Requirements

5.3.2. **[45CSR§7A-2.1., 45CSR§30-5.1.c., 40CFR§64.6(c) & §64.7(d)]**

5.4 Recordkeeping Requirements

3.4.1 & 5.4.1. **[45CSR§30-5.1.c.2.A., 45CSR13 – Permit R13-2192 §4.3.1]**
5.4.2. **[45CSR13 – Permit R13-2192 §4.3.2.]**
5.4.3. **[45CSR13 – Permit R13-2192 §4.3.3.]**
5.4.7. **[40 CFR §64.9(b)]**
5.4.11., **[45CSR13 – Permit R13-2192 §4.3.10.]**

5.5 Reporting Requirements

5.5.1. **[40 CFR §64.9(a)]**

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

Description of Fiberline After Press (FL(b))

After the door skins exit the press, reject skins are chipped in an electric hog. The hogged material is pneumatically conveyed to the Sizer Baghouse (BH4). The rest of the skins continue to the unsized skin storage area prior to being cut to the final dimensions by the skin sizer saws. Particulate material generated by the sizing operation are captured by hoods and conveyed to BH4. The trim from the sizing operation is hogged and pneumatically conveyed to BH4.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:** BH3
FLSN	North Fuel Storage Silo	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
The North Fuel Storage Silo emission unit collects and stores wood fuel from the truck dump and door skin manufacturing operation for the wood-fired boiler.

Manufacturer:	**Model number:**	**Serial number:**
NA	NA	NA
Construction date:	**Installation date:**	**Modification date(s):**
1997	05/01/1998	NA

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 28,740 ft^3

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
7,805 BD-lbs/hr (combined)	32,475 BDT/yr (combined)	7,884 hrs/yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: NA	**Type and Btu/hr rating of burners:** NA

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
NA

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
NA			

Emissions Data

Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	----	----
Nitrogen Oxides (NO_X)	----	----
Lead (Pb)	----	----
Particulate Matter ($PM_{2.5}$)	----(1)	----(1)
Particulate Matter (PM_{10})	----(1)	----(1)
Total Particulate Matter (TSP)	----(1)	----(1)
Sulfur Dioxide (SO_2)	----	----
Volatile Organic Compounds (VOC)	----	----
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
N_2O	----	----
CH_3	----	----
CO_2	----	----

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Notes:

(1) See Attachment J, Table 9.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

See Title V Operating Permit R30-06700095-2008 (SM02) Condition Nos.

5.0 Source-Specific Requirements

5.1 Limitations and Standards

5.1.9., **[45CSR13 – Permit R13-2192 §4.1.7.]**
5.1.12., **[45CSR13 – Permit R13-2192 §4.1.10.]**
5.1.13., **[45CSR13 – Permit R13-2192 §4.1.11.]**
5.1.17., **[45CSR13 – Permit R13-2192 §4.1.15., 45CSR§13-5.11.]**
5.1.18., **[45CSR §7-3.1.]**
5.1.21., **[45CSR §7-4.12.]**
5.1.22., **[45CSR §7-9.1.]**

____ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

See Title V Operating Permit R30-06700095-2008 (SM02) Condition Nos.

5.2 Monitoring Requirements

5.2.3. **[45CSR§30-5.1.c.1.]**
5.2.6. **[45CSR30-5.1.c., 40CFR§64.6(c)]**
5.2.7. **[45CSR30-5.1.c., 40CFR§64.6(c) & §64.7(d)]]**

5.3 Testing Requirements

5.3.2. **[45CSR§7A-2.1., 45CSR§30-5.1.c., 40CFR§64.6(c) & §64.7(d)]**

5.4 Recordkeeping Requirements

3.4.1 & 5.4.1. **[45CSR§30-5.1.c.2.A., 45CSR13 – Permit R13-2192 §4.3.1]**
5.4.2. **[45CSR13 – Permit R13-2192 §4.3.2.]**
5.4.3. **[45CSR13 – Permit R13-2192 §4.3.3.]**
5.4.7. **[40 CFR §64.9(b)]**

5.5 Reporting Requirements

5.5.1. **[40 CFR §64.9(a)]**

Are you in compliance with all applicable requirements for this emission unit? _X_Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:** BH3
FLSS	South Fuel Storage Silo	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
The South Fuel Storage Silo emission unit collects and stores wood fuel from the truck dump and door skin manufacturing operation for the wood-fired boiler.

Manufacturer:	**Model number:**	**Serial number:**
NA	NA	NA
Construction date:	**Installation date:**	**Modification date(s):**
1997	05/01/1998	NA

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 28,740 ft^3

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
7,805 BD-lbs/hr (combined)	32,475 BDT/yr (combined)	7,884 hrs/yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: NA	**Type and Btu/hr rating of burners:** NA

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
NA

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
NA			

Emissions Data

Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	----	----
Nitrogen Oxides (NO_X)	----	----
Lead (Pb)	----	----
Particulate Matter ($PM_{2.5}$)	----(1)	----(1)
Particulate Matter (PM_{10})	----(1)	----(1)
Total Particulate Matter (TSP)	----(1)	----(1)
Sulfur Dioxide (SO_2)	----	----
Volatile Organic Compounds (VOC)	----	----
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Formaldehyde		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
N_2O	----	----
CH_3	----	----
CO_2	----	----

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Notes:

(1) See Attachment J, Table 9.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

See Title V Operating Permit R30-06700095-2008 (SM02) Condition Nos.

5.0 Source-Specific Requirements

5.1 Limitations and Standards

5.1.9., **[45CSR13 – Permit R13-2192 §4.1.7.]**
5.1.12., **[45CSR13 – Permit R13-2192 §4.1.10.]**
5.1.13., **[45CSR13 – Permit R13-2192 §4.1.11.]**
5.1.17., **[45CSR13 – Permit R13-2192 §4.1.15., 45CSR§13-5.11.]**
5.1.18., **[45CSR §7-3.1.]**
5.1.21., **[45CSR §7-4.12.]**
5.1.22., **[45CSR §7-9.1.]**

____ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

See Title V Operating Permit R30-06700095-2008 (SM02) Condition Nos.

5.2 Monitoring Requirements

5.2.3. **[45CSR§30-5.1.c.1.]**
5.2.6. **[45CSR30-5.1.c., 40CFR§64.6(c)]**
5.2.7. **[45CSR30-5.1.c., 40CFR§64.6(c) & §64.7(d)]]**

5.3 Testing Requirements

5.3.2. **[45CSR§7A-2.1., 45CSR§30-5.1.c., 40CFR§64.6(c) & §64.7(d)]**

5.4 Recordkeeping Requirements

3.4.1 & 5.4.1. **[45CSR§30-5.1.c.2.A., 45CSR13 – Permit R13-2192 §4.3.1]**
5.4.2. **[45CSR13 – Permit R13-2192 §4.3.2.]**
5.4.3. **[45CSR13 – Permit R13-2192 §4.3.3.]**
5.4.7. **[40 CFR §64.9(b)]**

5.5 Reporting Requirements

5.5.1. **[40 CFR §64.9(a)]**

Are you in compliance with all applicable requirements for this emission unit? _X_Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:** None
FSE	East Furnish Storage Silo	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
The East Furnish Storage Silo stores furnish from the truck dump until it is used in the door skin manufacturing operation.

Manufacturer:	**Model number:**	**Serial number:**
NA	NA	NA
Construction date:	**Installation date:**	**Modification date(s):**
1997	05/01/1998	NA

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 46,563 ft^3

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
38,053 BD-lbs/hr (combined)	45,004 BDT/yr (combined)	7,884 hrs/yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: NA	**Type and Btu/hr rating of burners:** NA

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
NA

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
NA			

Emissions Data

Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	----	----
Nitrogen Oxides (NO_X)	----	----
Lead (Pb)	----	----
Particulate Matter ($PM_{2.5}$)	0.40	0.5
Particulate Matter (PM_{10})	0.40	0.5
Total Particulate Matter (TSP)	1.62	1.9
Sulfur Dioxide (SO_2)	----	----
Volatile Organic Compounds (VOC)	----	----
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
N_2O	----	----
CH_3	----	----
CO_2	----	----

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Notes:

(1) See Attachment J, Table 6.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

See Title V Operating Permit R30-06700095-2008 (SM02) Condition Nos.

5.0 Source-Specific Requirements

5.1 Limitations and Standards

5.1.18., **[45CSR §7-3.1.]**

____ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

See Title V Operating Permit R30-06700095-2008 (SM02) Condition Nos.

5.3 Testing Requirements

5.3.2. **[45CSR§7A-2.1., 45CSR§30-5.1.c., 40CFR§64.6(c) & §64.7(d)]**

5.4 Recordkeeping Requirements

3.4.1 & 5.4.1. **[45CSR§30-5.1.c.2.A., 45CSR13 – Permit R13-2192 §4.3.1]**

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:** None
FSW	West Furnish Storage Silo	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
The West Furnish Storage Silo stores furnish from the truck dump until it is used in the door skin manufacturing operation.

Manufacturer:	**Model number:**	**Serial number:**
NA	NA	NA
Construction date:	**Installation date:**	**Modification date(s):**
1997	05/01/1998	NA

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 46,563 ft^3

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
38,053 BD-lbs/hr (combined)	45,004 BDT/yr (combined)	7,884 hrs/yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: NA	**Type and Btu/hr rating of burners:** NA

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
NA

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
NA			

Emissions Data

Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	----	----
Nitrogen Oxides (NO_X)	----	----
Lead (Pb)	----	----
Particulate Matter ($PM_{2.5}$)	0.40	0.5
Particulate Matter (PM_{10})	0.40	0.5
Total Particulate Matter (TSP)	1.62	1.9
Sulfur Dioxide (SO_2)	----	----
Volatile Organic Compounds (VOC)	----	----
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
N_2O	----	----
CH_3	----	----
CO_2	----	----

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Notes:

(1) See Attachment J, Table 6.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

See Title V Operating Permit R30-06700095-2008 (SM02) Condition Nos.

5.0 Source-Specific Requirements

5.1 Limitations and Standards

5.1.18., **[45CSR §7-3.1.]**

____ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

See Title V Operating Permit R30-06700095-2008 (SM02) Condition Nos.

5.3 Testing Requirements

5.3.2. **[45CSR§7A-2.1., 45CSR§30-5.1.c., 40CFR§64.6(c) & §64.7(d)]**

5.4 Recordkeeping Requirements

3.4.1 & 5.4.1. **[45CSR§30-5.1.c.2.A., 45CSR13 – Permit R13-2192 §4.3.1]**

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:** None
PL	Primeline	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
See enclosed process description

Manufacturer:	**Model number:**	**Serial number:**
George Koch Sons (ovens)	NA	NA
Construction date:	**Installation date:**	**Modification date(s):**
1997	05/01/1998	NA

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
1.4 MMBtu/hr (1st oven); 2.4 MMBtu/hr (3rd oven)

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
71.0 gallons primer/hr	506,425 gallons primer/yr	7,884 hrs/yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: 3.4 MMBtu/hr	**Type and Btu/hr rating of burners:** 1.4 MMBtu/hr (1st oven); 2.4 MMBtu/hr (3rd oven)

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
Natural Gas – 3,937 scf/hr, 31 MMscf/yr.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas	0.022 gr/100 ft^3	0%	1,036

Emissions Data

Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0.31	1.35
Nitrogen Oxides (NO_X)	0.37	1.61
Lead (Pb)	----	----
Particulate Matter ($PM_{2.5}$)	0.03	0.12
Particulate Matter (PM_{10})	0.03	0.12
Total Particulate Matter (TSP)	0.03	0.12
Sulfur Dioxide (SO_2)	0.002	0.01
Volatile Organic Compounds (VOC)[1]	21.31	75.96
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
	----[2]	----[2]
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
N_2O	0.001	0.004
CH_4	0.01	0.04
CO_2	540	2,127

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Notes:

(1) VOC emission limit is combined tontal from E13, & E14. Also, VOC emission limit includes emissions of Formaldehyde and Styrene.

(2) See Attachment J, Tables 11a, 11b, & 12

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

See Title V Operating Permit R30-06700095-2008 (SM02) Condition Nos.

5.0 Source-Specific Requirements

5.1 Limitations and Standards

5.1.7., **[45CSR13 – Permit R13-2192 §4.1.5]**
5.1.9., **[45CSR13 – Permit R13-2192 §4.1.7.]**
5.1.12., **[45CSR13 – Permit R13-2192 §4.1.10.]**
5.1.13., **[45CSR13 – Permit R13-2192 §4.1.11.]**
5.1.21., **[45CSR §7-4.12.]**
5.1.22., **[45CSR §7-9.1.]**

____ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

See Title V Operating Permit R30-06700095-2008 (SM02) Condition Nos.

5.2 Monitoring Requirements

5.2.3. **[45CSR§30-5.1.c.1.]**
5.2.4., **[45CSR13 – Permit R13-2192 §4.3.9.]**

5.3 Testing Requirements

5.3.2. **[45CSR§7A-2.1., 45CSR§30-5.1.c., 40CFR§64.6(c) & §64.7(d)]**

5.4 Recordkeeping Requirements

3.4.1 & 5.4.1. **[45CSR§30-5.1.c.2.A., 45CSR13 – Permit R13-2192 §4.3.1]**
5.4.6. **[45CSR13 – Permit R13-2192 §4.3.6.]**
5.4.9, **[45CSR§30-5.1.c., 45CSR34, 40 CFR §63.10(b)(2)(xiv)]**
5.4.10, **[45CSR34, 40 CFR §§63.4730 and 63.4731; 45CSR13 – Permit R13-2192 §4.3.11]**

5.5 Reporting Requirements

5.5.1. **[40 CFR §64.9(a)]**
5.5.2, **[45CSR34, 40 CFR §63.4720(a), 40 CFR §§63.8075(b) & (e) and 40 CFR §63.10]**

Are you in compliance with all applicable requirements for this emission unit? _X_Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

Primeline Description

The doorskins are primed with a waterborne primer with a VOC content less than or equal to 0.3 lbs/gal. A Material Safety Data Sheet for the primer is included as Attachment H of this application. The primeline will consist of three ovens and a paint booth. The first oven, located upstream of the paint booth, will pre-heat the door skins. This oven is heated by gas-fired infrared elements with a total rated capacity of 1.4 MMBtu/hr. The second oven, located just downstream of the paint booth, is a steam-heated high-velocity convection oven, which will drive off the volatile components of the paint. The third oven will complete the curing of the paint. The third oven is heated by gas-fired infrared elements with a total rated capacity of 2.4 MMBtu/hr.

The primer will be applied using automatic spray guns (Binks Model 550). The primer will be reduced slightly with water to obtain the proper viscosity for spraying. Because the primer is waterborne, organic solvents will not be used either for thinning or for clean-up.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:** BH6, BH1a, BH1b, BH1c, BF
PV	Press Vents	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Steam heated 5ft x8ft, eight-opening press used to consolidate wood fiber mats.

Manufacturer:	**Model number:**	**Serial number:**
COE Manufacturing	Steam heated eight-opening press	
Construction date:	**Installation date:**	**Modification date(s):**
1997	05/01/1998	NA

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
21,591 ft2/hr – 1/8" basis	170,226,823 ft2/hr – 1/8" basis	7,884 hrs/yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: NA	**Type and Btu/hr rating of burners:** NA

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
NA

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
NA			

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	----(1)	----(1)
Nitrogen Oxides (NO_X)	----(1)	----(1)
Lead (Pb)	----	----
Particulate Matter ($PM_{2.5}$)	----(1)	----(1)
Particulate Matter (PM_{10})	----(1)	----(1)
Total Particulate Matter (TSP)	----(1)	----(1)
Sulfur Dioxide (SO_2)	----	----
Volatile Organic Compounds (VOC)	----(1)	----(1)
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
	----(1)	----(1)
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
N_2O	----	----
CH_3	----	----
CO_2	----	----

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Notes:

(1) See Attachment J, Table 7, Press will be controlled by the Press Vent Baghouse (B6), Dryer Baghouses (BH1a, BH1b, BH1c) and Biofilter (BF) by 02/04/2014.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

See Title V Operating Permit R30-06700095-2008 (SM02) Condition Nos.

5.0 Source-Specific Requirements

5.1 Limitations and Standards

5.1.3., **[45CSR13 – Permit R13-2192 §4.1.3.]**
5.1.8., **[45CSR13 – Permit R13-2192 §4.1.6]**
5.1.9., **[45CSR13 – Permit R13-2192 §4.1.7.]**
5.1.11, **[45CSR34; 40 CFR§63.2240(b); 45CSR13 – Permit R13-2192 §4.1.8.]**
5.1.12., **[45CSR13 – Permit R13-2192 §4.1.10.]**
5.1.13., **[45CSR13 – Permit R13-2192 §4.1.11.]**
5.1.16., **[45CSR13 – Permit R13-2192 §4.1.13.]**
5.1.17., **[45CSR13 – Permit R13-2192 §4.1.15., 45CSR§13-5.11.]**
5.1.18., **[45CSR §7-3.1.]**
5.1.21., **[45CSR §7-4.12.]**
5.1.22., **[45CSR §7-9.1.]**

____ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

See Title V Operating Permit R30-06700095-2008 (SM02) Condition Nos.

5.2 Monitoring Requirements

5.2.3., **[45CSR§30-5.1.c.1.]**
5.2.5., **40 CFR§63.2262., [45CSR13 – Permit R13-2192 §4.2.1.]**
5.2.6., **[45CSR30-5.1.c., 40CFR§64.6(c)]**
5.2.7., **[45CSR30-5.1.c., 40CFR§64.6(c) & §64.7(d)]]**
5.2.8., **[45CSR13 – Permit R13-2192 §4.2.2.]**

5.3 Testing Requirements

5.3.2., **[45CSR§7A-2.1., 45CSR§30-5.1.c., 40CFR§64.6(c) & §64.7(d)]**

5.4 Recordkeeping Requirements

3.4.1 & 5.4.1., **[45CSR§30-5.1.c.2.A., 45CSR13 – Permit R13-2192 §4.3.1]**
5.4.2., **[45CSR13 – Permit R13-2192 §4.3.2.]**
5.4.3., **[45CSR13 – Permit R13-2192 §4.3.3.]**
5.4.4., **45CSR13 – Permit R13-2192 §4.3.4.]**
5.4.5., **[45CSR13 – Permit R13-2192 §4.3.5.]**
5.4.7., **[40 CFR §64.9(b)]**
5.4.9., **[45CSR§30-5.1.c., 45CSR34, 40 CFR §63.10(b)(2)(xiv)]**

5.5 Reporting Requirements

5.5.1. **[40 CFR §64.9(a)]**

Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

Description of the Fiber Line Press (PV)

Fiber mats are conveyed off of the Fiber Line, stacked into a loader, and loaded into a steam heated eight-opening press. The press contains steel dies with the desired door skin patterns in relief. Once all of the platens of the press are full, the press consolidates the resinated fiber under heat and pressure. The door skins are pressed until the resin has cured. The press opens and the door skins are unloaded.

Air emissions from the press are captured in a permanent total enclosure meeting the requirements of EPA Method 204 and exhausted to the Press Vent Baghouse (BH6) to control Particulate emissions. The Baghouse (BH6) exhaust is vented into the Fiber Dryer (D1) intake. The Fiber Dryer (D1) is exhausted to the Dryer Cyclone (C1) and then to three Fiber Dryer Baghouses (BH1a, BH1b, & BH1c) to control Particulate emissions from the Dryer (D1). The exhaust from the three Fiber Dryer Baghouses (BH1a, BH1b, & BH1c) is vented into the Biofilter (BF) to control HAP emissions fulfilling the requirements of 40 CFR Part 63 Subpart DDDD.

Potential press emissions are calculated using the maximum hourly and annual press throughput (21,591 ft2/hr and 170,226,823 ft2/yr – 1/8" basis) multiplied by the emission factors based on source testing conducted on the uncontrolled emission source and the Biofilter (BF) control efficiency provided by the manufacturer.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:** None
RS	Rotary Classifier	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
The rotary classifier removes large pieces of wood furnish from green wood chips prior to the conveyor to the furnish storage silos.

Manufacturer:	**Model number:**	**Serial number:**
NA	NA	NA
Construction date:	**Installation date:**	**Modification date(s):**
1997	05/01/1998	None

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
40 tons/hr

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
40 tons/hr (total)	144,520 tons/yr (total)	7,884 hrs/yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: NA	**Type and Btu/hr rating of burners:** NA

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
NA

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
NA			

Emissions Data

Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	----	----
Nitrogen Oxides (NO_X)	----	----
Lead (Pb)	----	----
Particulate Matter ($PM_{2.5}$)	Insignificant	Insignificant
Particulate Matter (PM_{10})	Insignificant	Insignificant
Total Particulate Matter (TSP)	Insignificant	Insignificant
Sulfur Dioxide (SO_2)	----	----
Volatile Organic Compounds (VOC)	----	----
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
N_2O	----	----
CH_3	----	----
CO_2	----	----

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Notes:

Emissions are believed to be insignificant.

Applicable Requirements
List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included. NA
____ Permit Shield
For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.) NA
Are you in compliance with all applicable requirements for this emission unit? _<u>X</u>_Yes ___No If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:** None
RV	Rotary Valve	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
See enclosed process description.

Manufacturer:	**Model number:**	**Serial number:**
Unknown		

Construction date:	**Installation date:**	**Modification date(s):**
1997	05/01/1998	NA

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
23,942 BD lbs/hr	45,004 BDT/yr	7,884 hrs/yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: NA	**Type and Btu/hr rating of burners:** NA

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
NA

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
NA			

Emissions Data

Criteria Pollutants	Potential Emissions

	PPH	TPY
Carbon Monoxide (CO)	----	----
Nitrogen Oxides (NO_X)	----	----
Lead (Pb)	----	----
Particulate Matter ($PM_{2.5}$)	0.59	1.10
Particulate Matter (PM_{10})	0.59	1.10
Total Particulate Matter (TSP)	2.35	4.41
Sulfur Dioxide (SO_2)	----	----
Volatile Organic Compounds (VOC)	0.81	1.5
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Total HAP	0.54(1)	1.0(1)
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
N_2O	----	----
CH_3	----	----
CO_2	----	----

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Notes:

(1) For individual HAP See Attachment J, Table 8.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

See Title V Operating Permit R30-06700095-2008 (SM02) Condition Nos.

5.0 Source-Specific Requirements

5.1 Limitations and Standards

5.1.9., **[45CSR13 – Permit R13-2192 §4.1.7.]**
5.1.21., **[45CSR §7-4.12.]**
5.1.22., **[45CSR §7-9.1.]**

____ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

See Title V Operating Permit R30-06700095-2008 (SM02) Condition Nos.

5.4 Recordkeeping Requirements

3.4.1 & 5.4.1., **[45CSR§30-5.1.c.2.A., 45CSR13 – Permit R13-2192 §4.3.1]**
5.4.13., [45CSR34, 40 CFR §63.2283]

5.5 Reporting Requirements

5.5.3. **[45CSR34, 40 CFR §§63.2280(a), (c), and (d)]**
5.5.4., **[45CSR34, 40 CFR §§63.2281(c) through (g)]**

Are you in compliance with all applicable requirements for this emission unit? _X_Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:** None
ST1	Resin Storage Tank #1	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Resin Tank #1 stores MDI resin for use in the door skin manufacturing process.

Manufacturer:	**Model number:**	**Serial number:**
NA	NA	NA
Construction date:	**Installation date:**	**Modification date(s):**
1997	05/01/1998	None

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 7,000 gallons

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
		8,760 hours/yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: NA	**Type and Btu/hr rating of burners:** NA

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
NA

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
NA			

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	----	----
Nitrogen Oxides (NO_X)	----	----
Lead (Pb)	----	----
Particulate Matter ($PM_{2.5}$)	----	----
Particulate Matter (PM_{10})	----	----
Total Particulate Matter (TSP)	----	----
Sulfur Dioxide (SO_2)	----	----
Volatile Organic Compounds (VOC)	Insignificant	Insignificant
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
	Insignificant	Insignificant
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
N_2O	----	----
CH_3	----	----
CO_2	----	----

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Notes:

Emissions are believed to be insignificant.

Applicable Requirements
List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included. NA
____ Permit Shield
For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.) NA
Are you in compliance with all applicable requirements for this emission unit? _<u>X</u>_Yes ___No If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:** None
ST2	Resin Storage Tank #2	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Resin Tank #1 stores MDI resin for use in the door skin manufacturing process.

Manufacturer:	**Model number:**	**Serial number:**
NA	NA	NA
Construction date:	**Installation date:**	**Modification date(s):**
1997	05/01/1998	None

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 7,000 gallons

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
		8,760 hours/yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: NA	**Type and Btu/hr rating of burners:** NA

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
NA

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
NA			

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	----	----
Nitrogen Oxides (NO_X)	----	----
Lead (Pb)	----	----
Particulate Matter ($PM_{2.5}$)	----	----
Particulate Matter (PM_{10})	----	----
Total Particulate Matter (TSP)	----	----
Sulfur Dioxide (SO_2)	----	----
Volatile Organic Compounds (VOC)	Insignificant	Insignificant
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
	Insignificant	Insignificant
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
N_2O	----	----
CH_3	----	----
CO_2	----	----

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Notes:

Emissions are believed to be insignificant.

Applicable Requirements
List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included. NA
____ Permit Shield
For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.) NA
Are you in compliance with all applicable requirements for this emission unit? _<u>X</u>_Yes ___No If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:** None
ST3	Wax Storage Tank	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Resin Tank #1 stores MDI resin for use in the door skin manufacturing process.

Manufacturer:	**Model number:**	**Serial number:**
NA	NA	NA
Construction date:	**Installation date:**	**Modification date(s):**
1997	05/01/1998	None

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 10,000 gallons

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
		8,760 hours/yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: NA	**Type and Btu/hr rating of burners:** NA

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
NA

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
NA			

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	----	----
Nitrogen Oxides (NO_X)	----	----
Lead (Pb)	----	----
Particulate Matter ($PM_{2.5}$)	----	----
Particulate Matter (PM_{10})	----	----
Total Particulate Matter (TSP)	----	----
Sulfur Dioxide (SO_2)	----	----
Volatile Organic Compounds (VOC)	Insignificant	Insignificant
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
	Insignificant	Insignificant
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
N_2O	----	----
CH_3	----	----
CO_2	----	----

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Notes:

Emissions are believed to be insignificant.

Applicable Requirements
List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included. NA
____ Permit Shield
For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.) NA
Are you in compliance with all applicable requirements for this emission unit? _<u>X</u>_Yes ___No If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:** None
TD	Truck Dump	

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
See enclosed process description.

Manufacturer:	**Model number:**	**Serial number:**
NA	NA	NA
Construction date:	**Installation date:**	**Modification date(s):**
1997	05/01/1998	NA

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): NA

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
38,053 BD-lbs/hr (combined)	55,574 BDT/yr (combined)	7,884 hrs/yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: NA	**Type and Btu/hr rating of burners:** NA

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
NA

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
NA			

Emissions Data

Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	----	----
Nitrogen Oxides (NO_X)	----	----
Lead (Pb)	----	----
Particulate Matter ($PM_{2.5}$)	0.81	1.2
Particulate Matter (PM_{10})	0.81	1.2
Total Particulate Matter (TSP)	3.23	4.7
Sulfur Dioxide (SO_2)	----	----
Volatile Organic Compounds (VOC)	----	----
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
N_2O	----	----
CH_3	----	----
CO_2	----	----

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Notes:

(1) See Attachment J, Table 6.

Applicable Requirements
List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included. NA
____ Permit Shield
For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.) NA
Are you in compliance with all applicable requirements for this emission unit? _X_ Yes ___No If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

Description of the Truck Dump (TD)

The Truck Dump is a receiving bin for wet green poplar chips used in the door skin manufacturing process and wood residuals for combustion in the Hogged Fuel-Fired Boiler (B1) with a total maximum hourly throughput of 38,053 BD lbs/hr. Fugitive particulate emissions from the Truck Dump (TD) are estimated based on a particle size analysis of plytrim from a similar source multiplied by the potential hourly and annual material throughput.

ATTACHMENT F - Schedule of Compliance Form

Complete this section if you indicated noncompliance with any of the applicable requirements identified in the permit application. For each emission unit which is not in compliance, identify the applicable requirement, the reason(s) for noncompliance, a description of how the source will achieve compliance, and a detailed schedule of compliance. If there is a consent order that applies to this requirement, attach a copy to this form.

1. Applicable Requirement

Unit(s): PV & D1/C1	**Applicable Requirement:** 40 CFR Subpart DDDD

2. Reason for Noncompliance: JELD-WEN was in the process of demonstrating that this facility was a part of the low risk subcategory of Plywood and Composite Wood Products manufacturing facilities as specified in Appendix B of Subpart DDDD which would have exempted them from applicability to the requirements of this subpart. However, the low risk subcategory portion of this Subpart DDDD was vacated by the United States Court of Appeals for the District of Columbia Circuit.

3. How will Compliance be Achieved? Compliance will be achieved by complying with all provisions of the consent decree including the requirement to be in final compliance with the MACT no later than August 4, 2014.

4. Consent Order Number (if applicable): Consent Decree (Civil Action No. 11-453 ST)

5. Schedule of Compliance. Provide a schedule of remedial measures, including an enforceable sequence of actions with milestones, leading to compliance, including a date for final compliance.

Remedial Measure or Action	Date to be Achieved
See Consent Decree (Civil Action No. 11-453 ST)	

6. Submittal of Progress Reports. Quarterly Progress Reports are submitted to WVDEP, USDOJ, USEPA and USEPA Region III.

Content of Progress Report: See Consent Decree (Civil Action No. 11-453 ST)	**Report starting date:** first report due 10/31/2011 **Submittal frequency:** Quarterly

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: BF	**List all emission units associated with this control device.** Press Vents (PV), Fiber Dryer (D1), Dryer Cyclone (C1)	
Manufacturer: MET-PRO	**Model number:** High Temp Biofilter	**Installation date:** by 02/04/2014

Type of Air Pollution Control Device:

___ Baghouse/Fabric Filter	___ Venturi Scrubber	___ Multiclone
___ Carbon Bed Adsorber	___ Packed Tower Scrubber	___ Single Cyclone
___ Carbon Drum(s)	___ Other Wet Scrubber	___ Cyclone Bank
___ Catalytic Incinerator	___ Condenser	___ Settling Chamber
___ Thermal Incinerator	___ Flare	_X_ Other (describe) _Biofilter___
___ Wet Plate Electrostatic Precipitator		___ Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Formaldehyde	90%	90%
Methanol	90%	90%

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).

- Design inlet gas flow rate: 100,000 ACFM @125^{o}F
- Expected average inlet gas flow rate: 77,000 ACFM @125^{o}F
- Inlet gas velocity: 4,211 ft/sec
- Designed Liquid flow rate : Trickle Filter – 668 gpm; Biobed – 75 gpm

Is this device subject to the CAM requirements of 40 C.F.R. 64? ___Yes _X_ No

If Yes, **Complete ATTACHMENT H**

If No**, Provide justification.** The Biofilter (BF) is exempt from the requirements of 40 CFR 64 as the associated emission units are regulated under 40 CFR part 63 subpart DDDD to, pursuant to section 112 of the Clean Air Act.

40 CFR 64.2 (b)1.i. states "The requirements of this part shall not apply to … standards proposed by the Administrator after November 15, 1990 pursuant to section 111 or 112 of the Act."

Describe the parameters monitored and/or methods used to indicate performance of this control device.

The facility will monitor and record the parameters required by 40 CFR Part 63 Subpart DDDD.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: BH1a	**List all emission units associated with this control device.** Fiber Dryer (D1), Dryer Cyclone (C1)	
Manufacturer: Clarkes' Sheet Metal	**Model number:** 1-100-20	**Installation date:** 05/01/1998

Type of Air Pollution Control Device:

_X_ Baghouse/Fabric Filter	___ Venturi Scrubber	___ Multiclone
___ Carbon Bed Adsorber	___ Packed Tower Scrubber	___ Single Cyclone
___ Carbon Drum(s)	___ Other Wet Scrubber	___ Cyclone Bank
___ Catalytic Incinerator	___ Condenser	___ Settling Chamber
___ Thermal Incinerator	___ Flare	___ Other (describe) _____
___ Wet Plate Electrostatic Precipitator		___ Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Particulate Matter	100%	99.95%

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).

- Polypropylene bags
- 6,451 SF total cloth area
- 6.97:1 ft/min operating air to cloth ratio
- 34,000 acfm @ 160^{o}F
- Continuous operation, reverse jet

Is this device subject to the CAM requirements of 40 C.F.R. 64? _X_ Yes ___ No

If Yes, **Complete ATTACHMENT H**

If No**, Provide justification.**

Describe the parameters monitored and/or methods used to indicate performance of this control device.

The facility will perform month visible emissions inspections and internal baghouse inspections at least quarterly. The facility will also record the quantity of material throughput to the baghouses monthly and annually.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: BH1b	**List all emission units associated with this control device.** Fiber Dryer (D1), Dryer Cyclone (C1)	
Manufacturer: Clarkes' Sheet Metal	**Model number:** 1-100-20	**Installation date:** 05/01/1998

Type of Air Pollution Control Device:

_X_ Baghouse/Fabric Filter	___ Venturi Scrubber	___ Multiclone
___ Carbon Bed Adsorber	___ Packed Tower Scrubber	___ Single Cyclone
___ Carbon Drum(s)	___ Other Wet Scrubber	___ Cyclone Bank
___ Catalytic Incinerator	___ Condenser	___ Settling Chamber
___ Thermal Incinerator	___ Flare	___ Other (describe) _____
___ Wet Plate Electrostatic Precipitator		___ Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Particulate Matter	100%	99.95%

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).

- Polypropylene bags
- 6,451 SF total cloth area
- 6.97:1 ft/min operating air to cloth ratio
- 34,000 acfm @ 160^{o}F
- Continuous operation, reverse jet

Is this device subject to the CAM requirements of 40 C.F.R. 64? _X_ Yes ___ No

If Yes, **Complete ATTACHMENT H**

If No**, Provide justification.**

Describe the parameters monitored and/or methods used to indicate performance of this control device.

The facility will perform month visible emissions inspections and internal baghouse inspections at least quarterly. The facility will also record the quantity of material throughput to the baghouses monthly and annually.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: BH1c	**List all emission units associated with this control device.** Fiber Dryer (D1), Dryer Cyclone (C1)	
Manufacturer: Clarkes' Sheet Metal	**Model number:** 1-100-20	**Installation date:** 05/01/1998

Type of Air Pollution Control Device:

_X_ Baghouse/Fabric Filter	___ Venturi Scrubber	___ Multiclone
___ Carbon Bed Adsorber	___ Packed Tower Scrubber	___ Single Cyclone
___ Carbon Drum(s)	___ Other Wet Scrubber	___ Cyclone Bank
___ Catalytic Incinerator	___ Condenser	___ Settling Chamber
___ Thermal Incinerator	___ Flare	___ Other (describe) _____
___ Wet Plate Electrostatic Precipitator		___ Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Particulate Matter	100%	99.95%

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).

- Polypropylene bags
- 6,451 SF total cloth area
- 6.97:1 ft/min operating air to cloth ratio
- 34,000 acfm @ 160^{o}F
- Continuous operation, reverse jet

Is this device subject to the CAM requirements of 40 C.F.R. 64? _X_ Yes ___ No

If Yes, **Complete ATTACHMENT H**

If No**, Provide justification.**

Describe the parameters monitored and/or methods used to indicate performance of this control device.

The facility will perform month visible emissions inspections and internal baghouse inspections at least quarterly. The facility will also record the quantity of material throughput to the baghouses monthly and annually.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: BH2 (Former Baghouse)	**List all emission units associated with this control device.** Fiber line prior to the press (FLa)	
Manufacturer: Clarkes' Sheet Metal	**Model number:** P38-20	**Installation date:** 05/01/1998

Type of Air Pollution Control Device:

_X_ Baghouse/Fabric Filter	___ Venturi Scrubber	___ Multiclone
___ Carbon Bed Adsorber	___ Packed Tower Scrubber	___ Single Cyclone
___ Carbon Drum(s)	___ Other Wet Scrubber	___ Cyclone Bank
___ Catalytic Incinerator	___ Condenser	___ Settling Chamber
___ Thermal Incinerator	___ Flare	___ Other (describe) _____
___ Wet Plate Electrostatic Precipitator		___ Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Particulate Matter	100%	99.92%

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).

- Polypropylene bags
- 2,527 SF total cloth area
- 9.14:1 ft/min operating air to cloth ratio
- 23,100 acfm @ 160^{o}F
- Continuous operation, reverse jet

Is this device subject to the CAM requirements of 40 C.F.R. 64? _X_ Yes ___ No

If Yes, **Complete ATTACHMENT H**

If No**, Provide justification.**

Describe the parameters monitored and/or methods used to indicate performance of this control device.

The facility will perform month visible emissions inspections and internal baghouse inspections at least quarterly. The facility will also record the quantity of material throughput to the baghouses monthly and annually.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: BH3	**List all emission units associated with this control device.** Fiber line prior to the press (FLa), North Fuel Storage Silo (FLSN), South Fuel Storage Silo (FLSS), C2, C3, C4, C6	
Manufacturer: Clarkes' Sheet Metal	**Model number:** 1-100-20	**Installation date:** 05/01/1998

Type of Air Pollution Control Device:

_X_ Baghouse/Fabric Filter	___ Venturi Scrubber	___ Multiclone
___ Carbon Bed Adsorber	___ Packed Tower Scrubber	___ Single Cyclone
___ Carbon Drum(s)	___ Other Wet Scrubber	___ Cyclone Bank
___ Catalytic Incinerator	___ Condenser	___ Settling Chamber
___ Thermal Incinerator	___ Flare	___ Other (describe) _____
___ Wet Plate Electrostatic Precipitator		___ Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Particulate Matter	100%	99.92%

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).

- Polypropylene bags
- 6,451 SF total cloth area
- 6.97:1 ft/min operating air to cloth ratio
- 34,000 acfm @ 160^{o}F
- Continuous operation, reverse jet

Is this device subject to the CAM requirements of 40 C.F.R. 64? _X_ Yes ___ No

If Yes, **Complete ATTACHMENT H**

If No**, Provide justification.**

Describe the parameters monitored and/or methods used to indicate performance of this control device.

The facility will perform month visible emissions inspections and internal baghouse inspections at least quarterly. The facility will also record the quantity of material throughput to the baghouses monthly and annually.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: BH4 (Sizer Baghouse)	**List all emission units associated with this control device.** Fiber line after the press (FLb), Chip Cleaning Cyclone (C5)	
Manufacturer: Clarkes' Sheet Metal	**Model number:** P57-20	**Installation date:** 05/01/1998

Type of Air Pollution Control Device:

_X_ Baghouse/Fabric Filter	___ Venturi Scrubber	___ Multiclone
___ Carbon Bed Adsorber	___ Packed Tower Scrubber	___ Single Cyclone
___ Carbon Drum(s)	___ Other Wet Scrubber	___ Cyclone Bank
___ Catalytic Incinerator	___ Condenser	___ Settling Chamber
___ Thermal Incinerator	___ Flare	___ Other (describe) _____
___ Wet Plate Electrostatic Precipitator		___ Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Particulate Matter	100%	99.92%

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).

- Polypropylene bags
- 4,548 SF total cloth area
- 7.03:1 ft/min operating air to cloth ratio
- 32,000 acfm @ 160^{o}F
- Continuous operation, reverse jet

Is this device subject to the CAM requirements of 40 C.F.R. 64? _X_ Yes ___ No

If Yes, **Complete ATTACHMENT H**

If No**, Provide justification.**

Describe the parameters monitored and/or methods used to indicate performance of this control device.

The facility will perform month visible emissions inspections and internal baghouse inspections at least quarterly. The facility will also record the quantity of material throughput to the baghouses monthly and annually.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: BH5	**List all emission units associated with this control device.** Paint Manufacturing (DC2)	
Manufacturer: Donaldson Filtration Systems	**Model number:** DLMC 1.2.15	**Installation date:** 04/01/1999

Type of Air Pollution Control Device:

_X_ Baghouse/Fabric Filter	___ Venturi Scrubber	___ Multiclone
___ Carbon Bed Adsorber	___ Packed Tower Scrubber	___ Single Cyclone
___ Carbon Drum(s)	___ Other Wet Scrubber	___ Cyclone Bank
___ Catalytic Incinerator	___ Condenser	___ Settling Chamber
___ Thermal Incinerator	___ Flare	___ Other (describe) _____
___ Wet Plate Electrostatic Precipitator		___ Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Particulate Matter	100%	99.9%

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).

- Polypropylene bags
- 323 SF total cloth area
- 9.3:1 ft/min operating air to cloth ratio
- 3,000 acfm @ 160^{o}F

Is this device subject to the CAM requirements of 40 C.F.R. 64? __ Yes _X_ No

If Yes, **Complete ATTACHMENT H**

If No**, Provide justification.** The baghouse is a fugitive emissions source that vents inside the building.

Describe the parameters monitored and/or methods used to indicate performance of this control device.

The facility will record the quantity of material used in paint manufacturing and monitor the visible emissions daily during operation. The dust collector vents inside of the building in the paint manufacturing area. Employees know immediate if there is visible emissions from the baghouse.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: BH6	**List all emission units associated with this control device.** Press Vents (PV)	
Manufacturer: Clarkes' Sheet Metal	**Model number:** 1-100-20	**Installation date:** by 02/04/2013

Type of Air Pollution Control Device:

_X_ Baghouse/Fabric Filter	___ Venturi Scrubber	___ Multiclone
___ Carbon Bed Adsorber	___ Packed Tower Scrubber	___ Single Cyclone
___ Carbon Drum(s)	___ Other Wet Scrubber	___ Cyclone Bank
___ Catalytic Incinerator	___ Condenser	___ Settling Chamber
___ Thermal Incinerator	___ Flare	___ Other (describe) _____
___ Wet Plate Electrostatic Precipitator		___ Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Particulate Matter	100%	99.92%

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).

- Polypropylene bags
- 6,451 SF total cloth area
- 6.97:1 ft/min operating air to cloth ratio
- 83,333 acfm @ 160^{o}F
- Continuous operation, reverse jet

Is this device subject to the CAM requirements of 40 C.F.R. 64? _X_ Yes ___ No

If Yes, **Complete ATTACHMENT H**

If No**, Provide justification.**

Describe the parameters monitored and/or methods used to indicate performance of this control device.

The facility will perform month visible emissions inspections and internal baghouse inspections at least quarterly. The facility will also record the quantity of material throughput to the baghouses monthly and annually.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: ESP	**List all emission units associated with this control device.** Hogged fuel-fired boiler (B1)	
Manufacturer: Wellons	**Model number:** 2W-091-1119	**Installation date:** 05/01/1998

Type of Air Pollution Control Device:

___ Baghouse/Fabric Filter	___ Venturi Scrubber	___ Multiclone
___ Carbon Bed Adsorber	___ Packed Tower Scrubber	___ Single Cyclone
___ Carbon Drum(s)	___ Other Wet Scrubber	___ Cyclone Bank
___ Catalytic Incinerator	___ Condenser	___ Settling Chamber
___ Thermal Incinerator	___ Flare	___ Other (describe) _____
___ Wet Plate Electrostatic Precipitator		_X_ Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Particulate Matter	80%	80%

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).

- Gas Flow Rate = 32,000 acfm @ 350^{o}F
- Gas velocity through the precipitator = 2.60 ft/sec
- 24 Opzel plate collecting electrodes
- 7,246 SF of active collecting surface
- 132 rigid discharge electrodes

Is this device subject to the CAM requirements of 40 C.F.R. 64? _X_ Yes ___ No

If Yes, **Complete ATTACHMENT H**

If No**, Provide justification.**

Describe the parameters monitored and/or methods used to indicate performance of this control device.

The facility will monitor visible emissions continuously using a COMS (not to exceed 10%, six-minute average).

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: MC	**List all emission units associated with this control device.** Hogged fuel-fired boiler (B1)	
Manufacturer: Wellons	**Model number:** 2W-091-1119	**Installation date:** 05/01/1998

Type of Air Pollution Control Device:

___ Baghouse/Fabric Filter	___ Venturi Scrubber	_X_ Multiclone
___ Carbon Bed Adsorber	___ Packed Tower Scrubber	___ Single Cyclone
___ Carbon Drum(s)	___ Other Wet Scrubber	___ Cyclone Bank
___ Catalytic Incinerator	___ Condenser	___ Settling Chamber
___ Thermal Incinerator	___ Flare	___ Other (describe) _____
___ Wet Plate Electrostatic Precipitator		___ Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Particulate Matter	94%	85%

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).

- Cone Length = 9.56 inches
- Pressure drop across system = 3 inches H20
- Number of tubes = 66
- Tube diameter = 8.125
- Tube length = 20.72

Is this device subject to the CAM requirements of 40 C.F.R. 64? _X_ Yes ___ No

If Yes, **Complete ATTACHMENT H**

If No**, Provide justification.**

Describe the parameters monitored and/or methods used to indicate performance of this control device.

The facility will monitor visible emissions continuously using a COMS (not to exceed 10%, six-minute average).

ATTACHMENT H: COMPLIANCE ASSURANCE MONITORING PLAN FORMS

ATTACHMENT H - Compliance Assurance Monitoring (CAM) Plan Form

For definitions and information about the CAM rule, please refer to 40 CFR Part 64. Additional information (including guidance documents) may also be found at http://www.epa.gov/ttn/emc/cam.html

CAM APPLICABILITY DETERMINATION

1) Does the facility have a PSEU (Pollutant-Specific Emissions Unit considered separately with respect to **EACH** regulated air pollutant) that is subject to CAM (40 CFR Part 64), which must be addressed in this CAM plan submittal? To determine applicability, a PSEU must meet **all** of the following criteria (*If No, then the remainder of this form need not be completed*): ☒ YES ☐ NO

a. The PSEU is located at a major source that is required to obtain a Title V permit;

b. The PSEU is subject to an emission limitation or standard for the applicable regulated air pollutant that is NOT exempt;

LIST OF EXEMPT EMISSION LIMITATIONS OR STANDARDS:

- NSPS (40 CFR Part 60) or NESHAP (40 CFR Parts 61 and 63) proposed after 11/15/1990.
- Stratospheric Ozone Protection Requirements.
- Acid Rain Program Requirements.
- Emission Limitations or Standards for which a WVDEP Division of Air Quality Title V permit specifies a continuous compliance determination method, as defined in 40 CFR §64.1.
- An emission cap that meets the requirements specified in 40 CFR §70.4(b)(12).

c. The PSEU uses an add-on control device (as defined in 40 CFR §64.1) to achieve compliance with an emission limitation or standard;

d. The PSEU has potential pre-control device emissions of the applicable regulated air pollutant that are equal to or greater than the Title V Major Source Threshold Levels; AND

e. The PSEU is NOT an exempt backup utility power emissions unit that is municipally-owned.

BASIS OF CAM SUBMITTAL

2) Mark the appropriate box below as to why this CAM plan is being submitted as part of an application for a Title V permit:

☒ RENEWAL APPLICATION. **ALL** PSEUs for which a CAM plan has NOT yet been approved need to be addressed in this CAM plan submittal.

☐ INITIAL APPLICATION (submitted after 4/20/98). **ONLY** large PSEUs (i. e., PSEUs with potential post-control device emissions of an applicable regulated air pollutant that are equal to or greater than Major Source Threshold Levels) need to be addressed in this CAM plan submittal.

☐ SIGNIFICANT MODIFICATION TO LARGE PSEUs. **ONLY** large PSEUs being modified after 4/20/98 need to be addressed in this cam plan submittal. For large PSEUs with an approved CAM plan, Only address the appropriate monitoring requirements affected by the significant modification.

3) [a] BACKGROUND DATA AND INFORMATION					
Complete the following table for **all** PSEUs that need to be addressed in this CAM plan submittal. This section is to be used to provide background data and information for each PSEU In order to supplement the submittal requirements specified in 40 CFR §64.4. If additional space is needed, attach and label accordingly.					
PSEU DESIGNATION	DESCRIPTION	POLLUTANT	CONTROL DEVICE	[b] EMISSION LIMITATION or STANDARD	[c] MONITORING REQUIREMENT
Fiber Dryer (D1) & Dryer Cyclone (C1)	Fiber Dryer	PM/PM10/ PM 2.5	BH1a	45 CSR § 7-3.1	Periodic monitoring of visible emissions (EPA Method 22)
Fiber Dryer (D1) & Dryer Cyclone (C1)	Fiber Dryer	PM/PM10/ PM 2.5	BH1b	45 CSR § 7-3.1	Periodic monitoring of visible emissions (EPA Method 22)
Fiber Dryer (D1) & Dryer Cyclone (C1)	Fiber Dryer	PM/PM10/ PM 2.5	BH1c	45 CSR § 7-3.1	Periodic monitoring of visible emissions (EPA Method 22)
EXAMPLE Boiler No. 1	Wood-Fired Boiler	PM	Multiclone	45CSR§2-4.1.c.; 9.0 lb/hr	Monitor pressure drop across multiclone: Weekly inspection of multiclone

[a] If a control device is common to more than one PSEU, one monitoring plan may be submitted for the control device with the affected PSEUs identified and any conditions that must be maintained or monitored in accordance with 40 CFR §64.3(a). If a single PSEU is controlled by more than one control device similar in design and operation, one monitoring plan for the applicable control devices may be submitted with the applicable control devices identified and any conditions that must be maintained or monitored in accordance with 40 CFR §64.3(a).

[b] Indicate the emission limitation or standard for any applicable requirement that constitutes an emission limitation, emission standard, or standard of performance (as defined in 40 CFR §64.1).

[c] Indicate the monitoring requirements for the PSEU that are required by an applicable regulation or permit condition.

CAM MONITORING APPROACH CRITERIA			
Complete this section for **EACH** PSEU that needs to be addressed in this CAM plan submittal. This section may be copied as needed for each PSEU. This section is to be used to provide monitoring data and information for EACH indicator selected for EACH PSEU in order to meet the monitoring design criteria specified in 40 CFR §64.3 and §64.4. if more than two indicators are being selected for a PSEU or if additional space is needed, attach and label accordingly with the appropriate PSEU designation, pollutant, and indicator numbers.			
4a) PSEU Designation: Fiber Dryer (D1) & Dryer Cyclone (C1)	**4b) Pollutant:** PM/PM10/ PM 2.5	**4c) [a] Indicator No. 1:** Periodic monitoring of visible emissions	**4d) [a] Indicator No. 2:**
5a) GENERAL CRITERIA Describe the MONITORING APPROACH used to measure the indicators:		EPA Method 22	
[b] Establish the appropriate INDICATOR RANGE or the procedures for establishing the indicator range which provides a reasonable assurance of compliance:		No visible emissions	
5b) PERFORMANCE CRITERIA Provide the SPECIFICATIONS FOR OBTAINING REPRESENTATIVE DATA, such as detector location, installation specifications, and minimum acceptable accuracy:		Measurements are made at the associated emissions points	
[c] For new or modified monitoring equipment, provide VERIFICATION PROCEDURES, including manufacturer's recommendations, TO CONFIRM THE OPERATIONAL STATUS of the monitoring:		NA	
Provide QUALITY ASSURANCE AND QUALITY CONTROL (QA/QC) PRACTICES that are adequate to ensure the continuing validity of the data, (i.e., daily calibrations, visual inspections, routine maintenance, RATA, etc.):		The observer will be famliar with EPA Method 22 and follow Method 22-like procedures	
[d] Provide the MONITORING FREQUENCY:		Monthly	
Provide the DATA COLLECTION PROCEDURES that will be used:		Manual log entries	
Provide the DATA AVERAGING PERIOD for the purpose of determining whether an excursion or exceedance has occurred:		NA	

[a] Describe all indicators to be monitored which satisfies 40 CFR §64.3(a). Indicators of emission control performance for the control device and associated capture system may include measured or predicted emissions (including visible emissions or opacity), process and control device operating parameters that affect control device (and capture system) efficiency or emission rates, or recorded findings of inspection and maintenance activities.

[b] Indicator Ranges may be based on a single maximum or minimum value or at multiple levels that are relevant to distinctly different operating conditions, expressed as a function of process variables, expressed as maintaining the applicable indicator in a particular operational status or designated condition, or established as interdependent between more than one indicator. For CEMS, COMS, or PEMS, include the most recent certification test for the monitor.

[c] The verification for operational status should include procedures for installation, calibration, and operation of the monitoring equipment, conducted in accordance with the manufacturer's recommendations, necessary to confirm the monitoring equipment is operational prior to the commencement of the required monitoring.

[d] Emission units with post-control PTE ≥ 100 percent of the amount classifying the source as a major source (i.e., Large PSEU) must collect four or more values per hour to be averaged. A reduced data collection frequency may be approved in limited circumstances. Other emission units must collect data at least once per 24 hour period.

RATIONALE AND JUSTIFICATION

Complete this section for **EACH** PSEU that needs to be addressed in this CAM plan submittal. This section may be copied as needed for each PSEU. This section is to be used to provide rationale and justification for the selection of EACH indicator and monitoring approach and EACH indicator range in order to meet the submittal requirements specified in 40 CFR §64.4.

6a) PSEU Designation:	6b) Regulated Air Pollutant:
Fiber Dryer (D1) & Dryer Cyclone (C1)	PM/PM10/PM 2.5

7) **INDICATORS AND THE MONITORING APPROACH**: Provide the rationale and justification for the selection of the indicators and the monitoring approach used to measure the indicators. Also provide any data supporting the rationale and justification. Explain the reasons for any differences between the verification of operational status or the quality assurance and control practices proposed, and the manufacturer's recommendations. (If additional space is needed, attach and label accordingly with the appropriate PSEU designation and pollutant):

Visible emissions will be used as an indicator. Normal process operation will not produce conditions that adversely affect the baghouses, so no process operation parameters will be monitored.

Visible emissions from the biofilter exhaust downstream of the baghouse will be monitored monthly using EPA Reference Method 22-like procedures. The observation will be performed for a sufficient time interval, but not less than one minute and will be recorded on a log by the observer.

8) **INDICATOR RANGES**: Provide the rationale and justification for the selection of the indicator ranges. The rationale and justification shall indicate how **EACH** indicator range was selected by either a COMPLIANCE OR PERFORMANCE TEST, a TEST PLAN AND SCHEDULE, or by ENGINEERING ASSESSMENTS. Depending on which method is being used for each indicator range, include the specific information required below for that specific indicator range. (If additional space is needed, attach and label accordingly with the appropriate PSEU designation and pollutant):

- COMPLIANCE OR PERFORMANCE TEST (Indicator ranges determined from control device operating parameter data obtained during a compliance or performance test conducted under regulatory specified conditions or under conditions representative of maximum potential emissions under anticipated operating conditions. Such data may be supplemented by engineering assessments and manufacturer's recommendations). The rationale and justification shall INCLUDE a summary of the compliance or performance test results that were used to determine the indicator range, and documentation indicating that no changes have taken place that could result in a significant change in the control system performance or the selected indicator ranges since the compliance or performance test was conducted.

- TEST PLAN AND SCHEDULE (Indicator ranges will be determined from a proposed implementation plan and schedule for installing, testing, and performing any other appropriate activities prior to use of the monitoring). The rationale and justification shall INCLUDE the proposed implementation plan and schedule that will provide for use of the monitoring as expeditiously as practicable after approval of this CAM plan, except that in no case shall the schedule for completing installation and beginning operation of the monitoring exceed 180 days after approval.

- ENGINEERING ASSESSMENTS (Indicator Ranges or the procedures for establishing indicator ranges are determined from engineering assessments and other data, such as manufacturers' design criteria and historical monitoring data, because factors specific to the type of monitoring, control device, or PSEU make compliance or performance testing unnecessary). The rationale and justification shall INCLUDE documentation demonstrating that compliance testing is not required to establish the indicator range.

RATIONALE AND JUSTIFICATION:

The selected indicator range is no visible emissions. When an excursion occurs, corrective action will be initiated beginning with an evaluation of the occurrence to determine the action required to correct the situation.

All excursions will be documented and reported. An indicator range of no visible emissions was selected because:

(1) an increase in the visible emissions is indicative of an incease in particulate emissions; and
(2) a monitoring technique which does not require a Method 9 observer is desired.

Although Method 22 applies to fugitive sources, the visible/no visible emissions observation technique of Method 22 can be applied to ducted emissions; i.e., Method 22-like observations.

ATTACHMENT H - Compliance Assurance Monitoring (CAM) Plan Form

For definitions and information about the CAM rule, please refer to 40 CFR Part 64. Additional information (including guidance documents) may also be found at http://www.epa.gov/ttn/emc/cam.html

CAM APPLICABILITY DETERMINATION

1) Does the facility have a PSEU (Pollutant-Specific Emissions Unit considered separately with respect to **EACH** regulated air pollutant) that is subject to CAM (40 CFR Part 64), which must be addressed in this CAM plan submittal? To determine applicability, a PSEU must meet **all** of the following criteria (*If No, then the remainder of this form need not be completed*): ☒ YES ☐ NO

a. The PSEU is located at a major source that is required to obtain a Title V permit;

b. The PSEU is subject to an emission limitation or standard for the applicable regulated air pollutant that is NOT exempt;

LIST OF EXEMPT EMISSION LIMITATIONS OR STANDARDS:

- NSPS (40 CFR Part 60) or NESHAP (40 CFR Parts 61 and 63) proposed after 11/15/1990.
- Stratospheric Ozone Protection Requirements.
- Acid Rain Program Requirements.
- Emission Limitations or Standards for which a WVDEP Division of Air Quality Title V permit specifies a continuous compliance determination method, as defined in 40 CFR §64.1.
- An emission cap that meets the requirements specified in 40 CFR §70.4(b)(12).

c. The PSEU uses an add-on control device (as defined in 40 CFR §64.1) to achieve compliance with an emission limitation or standard;

d. The PSEU has potential pre-control device emissions of the applicable regulated air pollutant that are equal to or greater than the Title V Major Source Threshold Levels; AND

e. The PSEU is NOT an exempt backup utility power emissions unit that is municipally-owned.

BASIS OF CAM SUBMITTAL

2) Mark the appropriate box below as to why this CAM plan is being submitted as part of an application for a Title V permit:

☒ RENEWAL APPLICATION. **ALL** PSEUs for which a CAM plan has NOT yet been approved need to be addressed in this CAM plan submittal.

☐ INITIAL APPLICATION (submitted after 4/20/98). **ONLY** large PSEUs (i. e., PSEUs with potential post-control device emissions of an applicable regulated air pollutant that are equal to or greater than Major Source Threshold Levels) need to be addressed in this CAM plan submittal.

☐ SIGNIFICANT MODIFICATION TO LARGE PSEUs. **ONLY** large PSEUs being modified after 4/20/98 need to be addressed in this cam plan submittal. For large PSEUs with an approved CAM plan, Only address the appropriate monitoring requirements affected by the significant modification.

3) [a] BACKGROUND DATA AND INFORMATION					
Complete the following table for **all** PSEUs that need to be addressed in this CAM plan submittal. This section is to be used to provide background data and information for each PSEU In order to supplement the submittal requirements specified in 40 CFR §64.4. If additional space is needed, attach and label accordingly.					
PSEU DESIGNATION	DESCRIPTION	POLLUTANT	CONTROL DEVICE	[b] EMISSION LIMITATION or STANDARD	[c] MONITORING REQUIREMENT
Fiber Prior to the Press (FLa)	Material Transfer	PM/PM10/ PM 2.5	BH2	45 CSR § 7-3.1	Periodic monitoring of visible emissions (EPA Method 22)
EXAMPLE Boiler No. 1	Wood-Fired Boiler	PM	Multiclone	45CSR§2-4.1.c.; 9.0 lb/hr	Monitor pressure drop across multiclone: Weekly inspection of multiclone

[a] If a control device is common to more than one PSEU, one monitoring plan may be submitted for the control device with the affected PSEUs identified and any conditions that must be maintained or monitored in accordance with 40 CFR §64.3(a). If a single PSEU is controlled by more than one control device similar in design and operation, one monitoring plan for the applicable control devices may be submitted with the applicable control devices identified and any conditions that must be maintained or monitored in accordance with 40 CFR §64.3(a).

[b] Indicate the emission limitation or standard for any applicable requirement that constitutes an emission limitation, emission standard, or standard of performance (as defined in 40 CFR §64.1).

[c] Indicate the monitoring requirements for the PSEU that are required by an applicable regulation or permit condition.

CAM MONITORING APPROACH CRITERIA			
Complete this section for **EACH** PSEU that needs to be addressed in this CAM plan submittal. This section may be copied as needed for each PSEU. This section is to be used to provide monitoring data and information for EACH indicator selected for EACH PSEU in order to meet the monitoring design criteria specified in 40 CFR §64.3 and §64.4. if more than two indicators are being selected for a PSEU or if additional space is needed, attach and label accordingly with the appropriate PSEU designation, pollutant, and indicator numbers.			
4a) PSEU Designation: Fiber Prior to the Press (FLa)	**4b) Pollutant:** PM/PM10/ PM 2.5	**4c) [a] Indicator No. 1:** Periodic monitoring of visible emissions	**4d) [a] Indicator No. 2:**
5a) GENERAL CRITERIA Describe the MONITORING APPROACH used to measure the indicators:		EPA Method 22	
[b] Establish the appropriate INDICATOR RANGE or the procedures for establishing the indicator range which provides a reasonable assurance of compliance:		No visible emissions	
5b) PERFORMANCE CRITERIA Provide the SPECIFICATIONS FOR OBTAINING REPRESENTATIVE DATA, such as detector location, installation specifications, and minimum acceptable accuracy:		Measurements are made at the associated emissions point	
[c] For new or modified monitoring equipment, provide VERIFICATION PROCEDURES, including manufacturer's recommendations, TO CONFIRM THE OPERATIONAL STATUS of the monitoring:		NA	
Provide QUALITY ASSURANCE AND QUALITY CONTROL (QA/QC) PRACTICES that are adequate to ensure the continuing validity of the data, (i.e., daily calibrations, visual inspections, routine maintenance, RATA, etc.):		The observer will be famliar with EPA Method 22 and follow Method 22-like procedures	
[d] Provide the MONITORING FREQUENCY:		Monthly	
Provide the DATA COLLECTION PROCEDURES that will be used:		Manual log entries	
Provide the DATA AVERAGING PERIOD for the purpose of determining whether an excursion or exceedance has occurred:		NA	

[a] Describe all indicators to be monitored which satisfies 40 CFR §64.3(a). Indicators of emission control performance for the control device and associated capture system may include measured or predicted emissions (including visible emissions or opacity), process and control device operating parameters that affect control device (and capture system) efficiency or emission rates, or recorded findings of inspection and maintenance activities.

[b] Indicator Ranges may be based on a single maximum or minimum value or at multiple levels that are relevant to distinctly different operating conditions, expressed as a function of process variables, expressed as maintaining the applicable indicator in a particular operational status or designated condition, or established as interdependent between more than one indicator. For CEMS, COMS, or PEMS, include the most recent certification test for the monitor.

[c] The verification for operational status should include procedures for installation, calibration, and operation of the monitoring equipment, conducted in accordance with the manufacturer's recommendations, necessary to confirm the monitoring equipment is operational prior to the commencement of the required monitoring.

[d] Emission units with post-control PTE ≥ 100 percent of the amount classifying the source as a major source (i.e., Large PSEU) must collect four or more values per hour to be averaged. A reduced data collection frequency may be approved in limited circumstances. Other emission units must collect data at least once per 24 hour period.

RATIONALE AND JUSTIFICATION

Complete this section for **EACH** PSEU that needs to be addressed in this CAM plan submittal. This section may be copied as needed for each PSEU. This section is to be used to provide rationale and justification for the selection of EACH indicator and monitoring approach and EACH indicator range in order to meet the submittal requirements specified in 40 CFR §64.4.

6a) PSEU Designation:	6b) Regulated Air Pollutant:
Fiber Prior to the Press (FLa)	PM/PM10/PM 2.5

7) **INDICATORS AND THE MONITORING APPROACH**: Provide the rationale and justification for the selection of the indicators and the monitoring approach used to measure the indicators. Also provide any data supporting the rationale and justification. Explain the reasons for any differences between the verification of operational status or the quality assurance and control practices proposed, and the manufacturer's recommendations. (If additional space is needed, attach and label accordingly with the appropriate PSEU designation and pollutant):

Visible emissions will be used as an indicator. Normal process operation will not produce conditions that adversely affect the baghouse, so no process operation parameters will be monitored.

Visible emissions from the baghouse exhaust will be monitored monthly using EPA Reference Method 22-like procedures. The observation will be performed for a sufficient time interval, but not less than one minute and will be recorded on a log by the observer.

8) **INDICATOR RANGES**: Provide the rationale and justification for the selection of the indicator ranges. The rationale and justification shall indicate how **EACH** indicator range was selected by either a COMPLIANCE OR PERFORMANCE TEST, a TEST PLAN AND SCHEDULE, or by ENGINEERING ASSESSMENTS. Depending on which method is being used for each indicator range, include the specific information required below for that specific indicator range. (If additional space is needed, attach and label accordingly with the appropriate PSEU designation and pollutant):

- COMPLIANCE OR PERFORMANCE TEST (Indicator ranges determined from control device operating parameter data obtained during a compliance or performance test conducted under regulatory specified conditions or under conditions representative of maximum potential emissions under anticipated operating conditions. Such data may be supplemented by engineering assessments and manufacturer's recommendations). The rationale and justification shall INCLUDE a summary of the compliance or performance test results that were used to determine the indicator range, and documentation indicating that no changes have taken place that could result in a significant change in the control system performance or the selected indicator ranges since the compliance or performance test was conducted.

- TEST PLAN AND SCHEDULE (Indicator ranges will be determined from a proposed implementation plan and schedule for installing, testing, and performing any other appropriate activities prior to use of the monitoring). The rationale and justification shall INCLUDE the proposed implementation plan and schedule that will provide for use of the monitoring as expeditiously as practicable after approval of this CAM plan, except that in no case shall the schedule for completing installation and beginning operation of the monitoring exceed 180 days after approval.

- ENGINEERING ASSESSMENTS (Indicator Ranges or the procedures for establishing indicator ranges are determined from engineering assessments and other data, such as manufacturers' design criteria and historical monitoring data, because factors specific to the type of monitoring, control device, or PSEU make compliance or performance testing unnecessary). The rationale and justification shall INCLUDE documentation demonstrating that compliance testing is not required to establish the indicator range.

RATIONALE AND JUSTIFICATION:

The selected indicator range is no visible emissions. When an excursion occurs, corrective action will be initiated beginning with an evaluation of the occurrence to determine the action required to correct the situation.

All excursions will be documented and reported. An indicator range of no visible emissions was selected because:

(1) an increase in the visible emissions is indicative of an incease in particulate emissions; and
(2) a monitoring technique which does not require a Method 9 observer is desired.

Although Method 22 applies to fugitive sources, the visible/no visible emissions observation technique of Method 22 can be applied to ducted emissions; i.e., Method 22-like observations.

ATTACHMENT H - Compliance Assurance Monitoring (CAM) Plan Form

For definitions and information about the CAM rule, please refer to 40 CFR Part 64. Additional information (including guidance documents) may also be found at http://www.epa.gov/ttn/emc/cam.html

CAM APPLICABILITY DETERMINATION

1) Does the facility have a PSEU (Pollutant-Specific Emissions Unit considered separately with respect to **EACH** regulated air pollutant) that is subject to CAM (40 CFR Part 64), which must be addressed in this CAM plan submittal? To determine applicability, a PSEU must meet **all** of the following criteria (*If No, then the remainder of this form need not be completed*): ☒ YES ☐ NO

a. The PSEU is located at a major source that is required to obtain a Title V permit;

b. The PSEU is subject to an emission limitation or standard for the applicable regulated air pollutant that is NOT exempt;

LIST OF EXEMPT EMISSION LIMITATIONS OR STANDARDS:

- NSPS (40 CFR Part 60) or NESHAP (40 CFR Parts 61 and 63) proposed after 11/15/1990.
- Stratospheric Ozone Protection Requirements.
- Acid Rain Program Requirements.
- Emission Limitations or Standards for which a WVDEP Division of Air Quality Title V permit specifies a continuous compliance determination method, as defined in 40 CFR §64.1.
- An emission cap that meets the requirements specified in 40 CFR §70.4(b)(12).

c. The PSEU uses an add-on control device (as defined in 40 CFR §64.1) to achieve compliance with an emission limitation or standard;

d. The PSEU has potential pre-control device emissions of the applicable regulated air pollutant that are equal to or greater than the Title V Major Source Threshold Levels; AND

e. The PSEU is NOT an exempt backup utility power emissions unit that is municipally-owned.

BASIS OF CAM SUBMITTAL

2) Mark the appropriate box below as to why this CAM plan is being submitted as part of an application for a Title V permit:

☒ RENEWAL APPLICATION. **ALL** PSEUs for which a CAM plan has NOT yet been approved need to be addressed in this CAM plan submittal.

☐ INITIAL APPLICATION (submitted after 4/20/98). **ONLY** large PSEUs (i. e., PSEUs with potential post-control device emissions of an applicable regulated air pollutant that are equal to or greater than Major Source Threshold Levels) need to be addressed in this CAM plan submittal.

☐ SIGNIFICANT MODIFICATION TO LARGE PSEUs. **ONLY** large PSEUs being modified after 4/20/98 need to be addressed in this cam plan submittal. For large PSEUs with an approved CAM plan, Only address the appropriate monitoring requirements affected by the significant modification.

3) [a] BACKGROUND DATA AND INFORMATION					
Complete the following table for **all** PSEUs that need to be addressed in this CAM plan submittal. This section is to be used to provide background data and information for each PSEU In order to supplement the submittal requirements specified in 40 CFR §64.4. If additional space is needed, attach and label accordingly.					
PSEU DESIGNATION	DESCRIPTION	POLLUTANT	CONTROL DEVICE	[b] EMISSION LIMITATION or STANDARD	[c] MONITORING REQUIREMENT
FLa, FLSN, FLSS, C2, C3, C4, C6	Material Transfer	PM/PM10/ PM 2.5	BH3	45 CSR § 7-3.1	Periodic monitoring of visible emissions (EPA Method 22)
EXAMPLE Boiler No. 1	Wood-Fired Boiler	PM	Multiclone	45CSR§2-4.1.c.; 9.0 lb/hr	Monitor pressure drop across multiclone: Weekly inspection of multiclone

[a] If a control device is common to more than one PSEU, one monitoring plan may be submitted for the control device with the affected PSEUs identified and any conditions that must be maintained or monitored in accordance with 40 CFR §64.3(a). If a single PSEU is controlled by more than one control device similar in design and operation, one monitoring plan for the applicable control devices may be submitted with the applicable control devices identified and any conditions that must be maintained or monitored in accordance with 40 CFR §64.3(a).

[b] Indicate the emission limitation or standard for any applicable requirement that constitutes an emission limitation, emission standard, or standard of performance (as defined in 40 CFR §64.1).

[c] Indicate the monitoring requirements for the PSEU that are required by an applicable regulation or permit condition.

CAM MONITORING APPROACH CRITERIA

Complete this section for **EACH** PSEU that needs to be addressed in this CAM plan submittal. This section may be copied as needed for each PSEU. This section is to be used to provide monitoring data and information for EACH indicator selected for EACH PSEU in order to meet the monitoring design criteria specified in 40 CFR §64.3 and §64.4. if more than two indicators are being selected for a PSEU or if additional space is needed, attach and label accordingly with the appropriate PSEU designation, pollutant, and indicator numbers.

4a) PSEU Designation: FLa, FLSN, FLSS, C2, C3, C4, C6	**4b) Pollutant:** PM/PM10/ PM 2.5	**4c) [a] Indicator No. 1:** Periodic monitoring of visible emissions	**4d) [a] Indicator No. 2:**
5a) GENERAL CRITERIA Describe the MONITORING APPROACH used to measure the indicators:		EPA Method 22	
[b] Establish the appropriate INDICATOR RANGE or the procedures for establishing the indicator range which provides a reasonable assurance of compliance:		No visible emissions	
5b) PERFORMANCE CRITERIA Provide the SPECIFICATIONS FOR OBTAINING REPRESENTATIVE DATA, such as detector location, installation specifications, and minimum acceptable accuracy:		Measurements are made at the associated emissions point	
[c] For new or modified monitoring equipment, provide VERIFICATION PROCEDURES, including manufacturer's recommendations, TO CONFIRM THE OPERATIONAL STATUS of the monitoring:		NA	
Provide QUALITY ASSURANCE AND QUALITY CONTROL (QA/QC) PRACTICES that are adequate to ensure the continuing validity of the data, (i.e., daily calibrations, visual inspections, routine maintenance, RATA, etc.):		The observer will be famliar with EPA Method 22 and follow Method 22-like procedures	
[d] Provide the MONITORING FREQUENCY:		Monthly	
Provide the DATA COLLECTION PROCEDURES that will be used:		Manual log entries	
Provide the DATA AVERAGING PERIOD for the purpose of determining whether an excursion or exceedance has occurred:		NA	

[a] Describe all indicators to be monitored which satisfies 40 CFR §64.3(a). Indicators of emission control performance for the control device and associated capture system may include measured or predicted emissions (including visible emissions or opacity), process and control device operating parameters that affect control device (and capture system) efficiency or emission rates, or recorded findings of inspection and maintenance activities.

[b] Indicator Ranges may be based on a single maximum or minimum value or at multiple levels that are relevant to distinctly different operating conditions, expressed as a function of process variables, expressed as maintaining the applicable indicator in a particular operational status or designated condition, or established as interdependent between more than one indicator. For CEMS, COMS, or PEMS, include the most recent certification test for the monitor.

[c] The verification for operational status should include procedures for installation, calibration, and operation of the monitoring equipment, conducted in accordance with the manufacturer's recommendations, necessary to confirm the monitoring equipment is operational prior to the commencement of the required monitoring.

[d] Emission units with post-control PTE ≥ 100 percent of the amount classifying the source as a major source (i.e., Large PSEU) must collect four or more values per hour to be averaged. A reduced data collection frequency may be approved in limited circumstances. Other emission units must collect data at least once per 24 hour period.

RATIONALE AND JUSTIFICATION

Complete this section for **EACH** PSEU that needs to be addressed in this CAM plan submittal. This section may be copied as needed for each PSEU. This section is to be used to provide rationale and justification for the selection of EACH indicator and monitoring approach and EACH indicator range in order to meet the submittal requirements specified in 40 CFR §64.4.

6a) PSEU Designation:	6b) Regulated Air Pollutant:
FLa, FLSN, FLSS, C2, C3, C4, C6	PM/PM10/PM 2.5

7) **INDICATORS AND THE MONITORING APPROACH**: Provide the rationale and justification for the selection of the indicators and the monitoring approach used to measure the indicators. Also provide any data supporting the rationale and justification. Explain the reasons for any differences between the verification of operational status or the quality assurance and control practices proposed, and the manufacturer's recommendations. (If additional space is needed, attach and label accordingly with the appropriate PSEU designation and pollutant):

Visible emissions will be used as an indicator. Normal process operation will not produce conditions that adversely affect the baghouse, so no process operation parameters will be monitored.

Visible emissions from the baghouse exhaust will be monitored monthly using EPA Reference Method 22-like procedures. The observation will be performed for a sufficient time interval, but not less than one minute and will be recorded on a log by the observer.

8) **INDICATOR RANGES**: Provide the rationale and justification for the selection of the indicator ranges. The rationale and justification shall indicate how **EACH** indicator range was selected by either a COMPLIANCE OR PERFORMANCE TEST, a TEST PLAN AND SCHEDULE, or by ENGINEERING ASSESSMENTS. Depending on which method is being used for each indicator range, include the specific information required below for that specific indicator range. (If additional space is needed, attach and label accordingly with the appropriate PSEU designation and pollutant):

- COMPLIANCE OR PERFORMANCE TEST (Indicator ranges determined from control device operating parameter data obtained during a compliance or performance test conducted under regulatory specified conditions or under conditions representative of maximum potential emissions under anticipated operating conditions. Such data may be supplemented by engineering assessments and manufacturer's recommendations). The rationale and justification shall INCLUDE a summary of the compliance or performance test results that were used to determine the indicator range, and documentation indicating that no changes have taken place that could result in a significant change in the control system performance or the selected indicator ranges since the compliance or performance test was conducted.

- TEST PLAN AND SCHEDULE (Indicator ranges will be determined from a proposed implementation plan and schedule for installing, testing, and performing any other appropriate activities prior to use of the monitoring). The rationale and justification shall INCLUDE the proposed implementation plan and schedule that will provide for use of the monitoring as expeditiously as practicable after approval of this CAM plan, except that in no case shall the schedule for completing installation and beginning operation of the monitoring exceed 180 days after approval.

- ENGINEERING ASSESSMENTS (Indicator Ranges or the procedures for establishing indicator ranges are determined from engineering assessments and other data, such as manufacturers' design criteria and historical monitoring data, because factors specific to the type of monitoring, control device, or PSEU make compliance or performance testing unnecessary). The rationale and justification shall INCLUDE documentation demonstrating that compliance testing is not required to establish the indicator range.

RATIONALE AND JUSTIFICATION:

The selected indicator range is no visible emissions. When an excursion occurs, corrective action will be initiated beginning with an evaluation of the occurrence to determine the action required to correct the situation.

All excursions will be documented and reported. An indicator range of no visible emissions was selected because:

(1) an increase in the visible emissions is indicative of an incease in particulate emissions; and
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Although Method 22 applies to fugitive sources, the visible/no visible emissions observation technique of Method 22 can be applied to ducted emissions; i.e., Method 22-like observations.

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For definitions and information about the CAM rule, please refer to 40 CFR Part 64. Additional information (including guidance documents) may also be found at http://www.epa.gov/ttn/emc/cam.html

CAM APPLICABILITY DETERMINATION

1) Does the facility have a PSEU (Pollutant-Specific Emissions Unit considered separately with respect to **EACH** regulated air pollutant) that is subject to CAM (40 CFR Part 64), which must be addressed in this CAM plan submittal? To determine applicability, a PSEU must meet **all** of the following criteria (*If No, then the remainder of this form need not be completed*): ☒ YES ☐ NO

a. The PSEU is located at a major source that is required to obtain a Title V permit;

b. The PSEU is subject to an emission limitation or standard for the applicable regulated air pollutant that is NOT exempt;

LIST OF EXEMPT EMISSION LIMITATIONS OR STANDARDS:

- NSPS (40 CFR Part 60) or NESHAP (40 CFR Parts 61 and 63) proposed after 11/15/1990.
- Stratospheric Ozone Protection Requirements.
- Acid Rain Program Requirements.
- Emission Limitations or Standards for which a WVDEP Division of Air Quality Title V permit specifies a continuous compliance determination method, as defined in 40 CFR §64.1.
- An emission cap that meets the requirements specified in 40 CFR §70.4(b)(12).

c. The PSEU uses an add-on control device (as defined in 40 CFR §64.1) to achieve compliance with an emission limitation or standard;

d. The PSEU has potential pre-control device emissions of the applicable regulated air pollutant that are equal to or greater than the Title V Major Source Threshold Levels; AND

e. The PSEU is NOT an exempt backup utility power emissions unit that is municipally-owned.

BASIS OF CAM SUBMITTAL

2) Mark the appropriate box below as to why this CAM plan is being submitted as part of an application for a Title V permit:

☒ RENEWAL APPLICATION. **ALL** PSEUs for which a CAM plan has NOT yet been approved need to be addressed in this CAM plan submittal.

☐ INITIAL APPLICATION (submitted after 4/20/98). **ONLY** large PSEUs (i. e., PSEUs with potential post-control device emissions of an applicable regulated air pollutant that are equal to or greater than Major Source Threshold Levels) need to be addressed in this CAM plan submittal.

☐ SIGNIFICANT MODIFICATION TO LARGE PSEUs. **ONLY** large PSEUs being modified after 4/20/98 need to be addressed in this cam plan submittal. For large PSEUs with an approved CAM plan, Only address the appropriate monitoring requirements affected by the significant modification.

3) [a] BACKGROUND DATA AND INFORMATION					
Complete the following table for **all** PSEUs that need to be addressed in this CAM plan submittal. This section is to be used to provide background data and information for each PSEU In order to supplement the submittal requirements specified in 40 CFR §64.4. If additional space is needed, attach and label accordingly.					
PSEU DESIGNATION	DESCRIPTION	POLLUTANT	CONTROL DEVICE	[b] EMISSION LIMITATION or STANDARD	[c] MONITORING REQUIREMENT
FLa, C5	Material Transfer	PM/PM10/ PM 2.5	BH4	45 CSR § 7-3.1	Periodic monitoring of visible emissions (EPA Method 22)
EXAMPLE Boiler No. 1	Wood-Fired Boiler	PM	Multiclone	45CSR§2-4.1.c.; 9.0 lb/hr	Monitor pressure drop across multiclone: Weekly inspection of multiclone

[a] If a control device is common to more than one PSEU, one monitoring plan may be submitted for the control device with the affected PSEUs identified and any conditions that must be maintained or monitored in accordance with 40 CFR §64.3(a). If a single PSEU is controlled by more than one control device similar in design and operation, one monitoring plan for the applicable control devices may be submitted with the applicable control devices identified and any conditions that must be maintained or monitored in accordance with 40 CFR §64.3(a).

[b] Indicate the emission limitation or standard for any applicable requirement that constitutes an emission limitation, emission standard, or standard of performance (as defined in 40 CFR §64.1).

[c] Indicate the monitoring requirements for the PSEU that are required by an applicable regulation or permit condition.

CAM MONITORING APPROACH CRITERIA			
Complete this section for **EACH** PSEU that needs to be addressed in this CAM plan submittal. This section may be copied as needed for each PSEU. This section is to be used to provide monitoring data and information for EACH indicator selected for EACH PSEU in order to meet the monitoring design criteria specified in 40 CFR §64.3 and §64.4. if more than two indicators are being selected for a PSEU or if additional space is needed, attach and label accordingly with the appropriate PSEU designation, pollutant, and indicator numbers.			
4a) PSEU Designation: FLa, C5	**4b) Pollutant:** PM/PM10/ PM 2.5	**4c) [a] Indicator No. 1:** Periodic monitoring of visible emissions	**4d) [a] Indicator No. 2:**
5a) GENERAL CRITERIA Describe the MONITORING APPROACH used to measure the indicators:		EPA Method 22	
[b] Establish the appropriate INDICATOR RANGE or the procedures for establishing the indicator range which provides a reasonable assurance of compliance:		No visible emissions	
5b) PERFORMANCE CRITERIA Provide the SPECIFICATIONS FOR OBTAINING REPRESENTATIVE DATA, such as detector location, installation specifications, and minimum acceptable accuracy:		Measurements are made at the associated emissions point	
[c] For new or modified monitoring equipment, provide VERIFICATION PROCEDURES, including manufacturer's recommendations, TO CONFIRM THE OPERATIONAL STATUS of the monitoring:		NA	
Provide QUALITY ASSURANCE AND QUALITY CONTROL (QA/QC) PRACTICES that are adequate to ensure the continuing validity of the data, (i.e., daily calibrations, visual inspections, routine maintenance, RATA, etc.):		The observer will be famliar with EPA Method 22 and follow Method 22-like procedures	
[d] Provide the MONITORING FREQUENCY:		Monthly	
Provide the DATA COLLECTION PROCEDURES that will be used:		Manual log entries	
Provide the DATA AVERAGING PERIOD for the purpose of determining whether an excursion or exceedance has occurred:		NA	

[a] Describe all indicators to be monitored which satisfies 40 CFR §64.3(a). Indicators of emission control performance for the control device and associated capture system may include measured or predicted emissions (including visible emissions or opacity), process and control device operating parameters that affect control device (and capture system) efficiency or emission rates, or recorded findings of inspection and maintenance activities.

[b] Indicator Ranges may be based on a single maximum or minimum value or at multiple levels that are relevant to distinctly different operating conditions, expressed as a function of process variables, expressed as maintaining the applicable indicator in a particular operational status or designated condition, or established as interdependent between more than one indicator. For CEMS, COMS, or PEMS, include the most recent certification test for the monitor.

[c] The verification for operational status should include procedures for installation, calibration, and operation of the monitoring equipment, conducted in accordance with the manufacturer's recommendations, necessary to confirm the monitoring equipment is operational prior to the commencement of the required monitoring.

[d] Emission units with post-control PTE ≥ 100 percent of the amount classifying the source as a major source (i.e., Large PSEU) must collect four or more values per hour to be averaged. A reduced data collection frequency may be approved in limited circumstances. Other emission units must collect data at least once per 24 hour period.

RATIONALE AND JUSTIFICATION

Complete this section for **EACH** PSEU that needs to be addressed in this CAM plan submittal. This section may be copied as needed for each PSEU. This section is to be used to provide rationale and justification for the selection of EACH indicator and monitoring approach and EACH indicator range in order to meet the submittal requirements specified in 40 CFR §64.4.

6a) PSEU Designation:	6b) Regulated Air Pollutant:
FLa, C5	PM/PM10/PM 2.5

7) **INDICATORS AND THE MONITORING APPROACH**: Provide the rationale and justification for the selection of the indicators and the monitoring approach used to measure the indicators. Also provide any data supporting the rationale and justification. Explain the reasons for any differences between the verification of operational status or the quality assurance and control practices proposed, and the manufacturer's recommendations. (If additional space is needed, attach and label accordingly with the appropriate PSEU designation and pollutant):

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- COMPLIANCE OR PERFORMANCE TEST (Indicator ranges determined from control device operating parameter data obtained during a compliance or performance test conducted under regulatory specified conditions or under conditions representative of maximum potential emissions under anticipated operating conditions. Such data may be supplemented by engineering assessments and manufacturer's recommendations). The rationale and justification shall INCLUDE a summary of the compliance or performance test results that were used to determine the indicator range, and documentation indicating that no changes have taken place that could result in a significant change in the control system performance or the selected indicator ranges since the compliance or performance test was conducted.

- TEST PLAN AND SCHEDULE (Indicator ranges will be determined from a proposed implementation plan and schedule for installing, testing, and performing any other appropriate activities prior to use of the monitoring). The rationale and justification shall INCLUDE the proposed implementation plan and schedule that will provide for use of the monitoring as expeditiously as practicable after approval of this CAM plan, except that in no case shall the schedule for completing installation and beginning operation of the monitoring exceed 180 days after approval.

- ENGINEERING ASSESSMENTS (Indicator Ranges or the procedures for establishing indicator ranges are determined from engineering assessments and other data, such as manufacturers' design criteria and historical monitoring data, because factors specific to the type of monitoring, control device, or PSEU make compliance or performance testing unnecessary). The rationale and justification shall INCLUDE documentation demonstrating that compliance testing is not required to establish the indicator range.

RATIONALE AND JUSTIFICATION:

The selected indicator range is no visible emissions. When an excursion occurs, corrective action will be initiated beginning with an evaluation of the occurrence to determine the action required to correct the situation.

All excursions will be documented and reported. An indicator range of no visible emissions was selected because:

(1) an increase in the visible emissions is indicative of an incease in particulate emissions; and
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Although Method 22 applies to fugitive sources, the visible/no visible emissions observation technique of Method 22 can be applied to ducted emissions; i.e., Method 22-like observations.

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CAM APPLICABILITY DETERMINATION

1) Does the facility have a PSEU (Pollutant-Specific Emissions Unit considered separately with respect to **EACH** regulated air pollutant) that is subject to CAM (40 CFR Part 64), which must be addressed in this CAM plan submittal? To determine applicability, a PSEU must meet **all** of the following criteria (*If No, then the remainder of this form need not be completed*): ☒ YES ☐ NO

a. The PSEU is located at a major source that is required to obtain a Title V permit;

b. The PSEU is subject to an emission limitation or standard for the applicable regulated air pollutant that is NOT exempt;

LIST OF EXEMPT EMISSION LIMITATIONS OR STANDARDS:

- NSPS (40 CFR Part 60) or NESHAP (40 CFR Parts 61 and 63) proposed after 11/15/1990.
- Stratospheric Ozone Protection Requirements.
- Acid Rain Program Requirements.
- Emission Limitations or Standards for which a WVDEP Division of Air Quality Title V permit specifies a continuous compliance determination method, as defined in 40 CFR §64.1.
- An emission cap that meets the requirements specified in 40 CFR §70.4(b)(12).

c. The PSEU uses an add-on control device (as defined in 40 CFR §64.1) to achieve compliance with an emission limitation or standard;

d. The PSEU has potential pre-control device emissions of the applicable regulated air pollutant that are equal to or greater than the Title V Major Source Threshold Levels; AND

e. The PSEU is NOT an exempt backup utility power emissions unit that is municipally-owned.

BASIS OF CAM SUBMITTAL

2) Mark the appropriate box below as to why this CAM plan is being submitted as part of an application for a Title V permit:

☒ RENEWAL APPLICATION. **ALL** PSEUs for which a CAM plan has NOT yet been approved need to be addressed in this CAM plan submittal.

☐ INITIAL APPLICATION (submitted after 4/20/98). **ONLY** large PSEUs (i. e., PSEUs with potential post-control device emissions of an applicable regulated air pollutant that are equal to or greater than Major Source Threshold Levels) need to be addressed in this CAM plan submittal.

☐ SIGNIFICANT MODIFICATION TO LARGE PSEUs. **ONLY** large PSEUs being modified after 4/20/98 need to be addressed in this cam plan submittal. For large PSEUs with an approved CAM plan, Only address the appropriate monitoring requirements affected by the significant modification.

3) [a] BACKGROUND DATA AND INFORMATION					
Complete the following table for **all** PSEUs that need to be addressed in this CAM plan submittal. This section is to be used to provide background data and information for each PSEU In order to supplement the submittal requirements specified in 40 CFR §64.4. If additional space is needed, attach and label accordingly.					
PSEU DESIGNATION	DESCRIPTION	POLLUTANT	CONTROL DEVICE	[b] EMISSION LIMITATION or STANDARD	[c] MONITORING REQUIREMENT
Press Vents (PV)	Material Transfer	PM/PM10/ PM 2.5	BH6	45 CSR § 7-3.1	Periodic monitoring of visible emissions (EPA Method 22)
EXAMPLE Boiler No. 1	Wood-Fired Boiler	PM	Multiclone	45CSR§2-4.1.c.; 9.0 lb/hr	Monitor pressure drop across multiclone: Weekly inspection of multiclone

[a] If a control device is common to more than one PSEU, one monitoring plan may be submitted for the control device with the affected PSEUs identified and any conditions that must be maintained or monitored in accordance with 40 CFR §64.3(a). If a single PSEU is controlled by more than one control device similar in design and operation, one monitoring plan for the applicable control devices may be submitted with the applicable control devices identified and any conditions that must be maintained or monitored in accordance with 40 CFR §64.3(a).

[b] Indicate the emission limitation or standard for any applicable requirement that constitutes an emission limitation, emission standard, or standard of performance (as defined in 40 CFR §64.1).

[c] Indicate the monitoring requirements for the PSEU that are required by an applicable regulation or permit condition.

CAM MONITORING APPROACH CRITERIA

Complete this section for **EACH** PSEU that needs to be addressed in this CAM plan submittal. This section may be copied as needed for each PSEU. This section is to be used to provide monitoring data and information for EACH indicator selected for EACH PSEU in order to meet the monitoring design criteria specified in 40 CFR §64.3 and §64.4. if more than two indicators are being selected for a PSEU or if additional space is needed, attach and label accordingly with the appropriate PSEU designation, pollutant, and indicator numbers.

4a) PSEU Designation: Press Vents (PV)	**4b) Pollutant:** PM/PM10/ PM 2.5	**4c) [a] Indicator No. 1:** Periodic monitoring of visible emissions	**4d) [a] Indicator No. 2:**
5a) GENERAL CRITERIA Describe the MONITORING APPROACH used to measure the indicators:		EPA Method 22	
[b] Establish the appropriate INDICATOR RANGE or the procedures for establishing the indicator range which provides a reasonable assurance of compliance:		No visible emissions	
5b) PERFORMANCE CRITERIA Provide the SPECIFICATIONS FOR OBTAINING REPRESENTATIVE DATA, such as detector location, installation specifications, and minimum acceptable accuracy:		Measurements are made at the associated emissions point	
[c] For new or modified monitoring equipment, provide VERIFICATION PROCEDURES, including manufacturer's recommendations, TO CONFIRM THE OPERATIONAL STATUS of the monitoring:		NA	
Provide QUALITY ASSURANCE AND QUALITY CONTROL (QA/QC) PRACTICES that are adequate to ensure the continuing validity of the data, (i.e., daily calibrations, visual inspections, routine maintenance, RATA, etc.):		The observer will be famliar with EPA Method 22 and follow Method 22-like procedures	
[d] Provide the MONITORING FREQUENCY:		Monthly	
Provide the DATA COLLECTION PROCEDURES that will be used:		Manual log entries	
Provide the DATA AVERAGING PERIOD for the purpose of determining whether an excursion or exceedance has occurred:		NA	

[a] Describe all indicators to be monitored which satisfies 40 CFR §64.3(a). Indicators of emission control performance for the control device and associated capture system may include measured or predicted emissions (including visible emissions or opacity), process and control device operating parameters that affect control device (and capture system) efficiency or emission rates, or recorded findings of inspection and maintenance activities.

[b] Indicator Ranges may be based on a single maximum or minimum value or at multiple levels that are relevant to distinctly different operating conditions, expressed as a function of process variables, expressed as maintaining the applicable indicator in a particular operational status or designated condition, or established as interdependent between more than one indicator. For CEMS, COMS, or PEMS, include the most recent certification test for the monitor.

[c] The verification for operational status should include procedures for installation, calibration, and operation of the monitoring equipment, conducted in accordance with the manufacturer's recommendations, necessary to confirm the monitoring equipment is operational prior to the commencement of the required monitoring.

[d] Emission units with post-control PTE ≥ 100 percent of the amount classifying the source as a major source (i.e., Large PSEU) must collect four or more values per hour to be averaged. A reduced data collection frequency may be approved in limited circumstances. Other emission units must collect data at least once per 24 hour period.

RATIONALE AND JUSTIFICATION

Complete this section for **EACH** PSEU that needs to be addressed in this CAM plan submittal. This section may be copied as needed for each PSEU. This section is to be used to provide rationale and justification for the selection of EACH indicator and monitoring approach and EACH indicator range in order to meet the submittal requirements specified in 40 CFR §64.4.

6a) PSEU Designation:	6b) Regulated Air Pollutant:
Press Vents (PV)	PM/PM10/PM 2.5

7) **INDICATORS AND THE MONITORING APPROACH**: Provide the rationale and justification for the selection of the indicators and the monitoring approach used to measure the indicators. Also provide any data supporting the rationale and justification. Explain the reasons for any differences between the verification of operational status or the quality assurance and control practices proposed, and the manufacturer's recommendations. (If additional space is needed, attach and label accordingly with the appropriate PSEU designation and pollutant):

Visible emissions will be used as an indicator. Normal process operation will not produce conditions that adversely affect the baghouse, so no process operation parameters will be monitored.

Visible emissions from the biofilter exhaust downstream of the baghouse will be monitored monthly using EPA Reference Method 22-like procedures. The observation will be performed for a sufficient time interval, but not less than one minute and will be recorded on a log by the observer.

8) **INDICATOR RANGES**: Provide the rationale and justification for the selection of the indicator ranges. The rationale and justification shall indicate how **EACH** indicator range was selected by either a COMPLIANCE OR PERFORMANCE TEST, a TEST PLAN AND SCHEDULE, or by ENGINEERING ASSESSMENTS. Depending on which method is being used for each indicator range, include the specific information required below for that specific indicator range. (If additional space is needed, attach and label accordingly with the appropriate PSEU designation and pollutant):

- COMPLIANCE OR PERFORMANCE TEST (Indicator ranges determined from control device operating parameter data obtained during a compliance or performance test conducted under regulatory specified conditions or under conditions representative of maximum potential emissions under anticipated operating conditions. Such data may be supplemented by engineering assessments and manufacturer's recommendations). The rationale and justification shall INCLUDE a summary of the compliance or performance test results that were used to determine the indicator range, and documentation indicating that no changes have taken place that could result in a significant change in the control system performance or the selected indicator ranges since the compliance or performance test was conducted.

- TEST PLAN AND SCHEDULE (Indicator ranges will be determined from a proposed implementation plan and schedule for installing, testing, and performing any other appropriate activities prior to use of the monitoring). The rationale and justification shall INCLUDE the proposed implementation plan and schedule that will provide for use of the monitoring as expeditiously as practicable after approval of this CAM plan, except that in no case shall the schedule for completing installation and beginning operation of the monitoring exceed 180 days after approval.

- ENGINEERING ASSESSMENTS (Indicator Ranges or the procedures for establishing indicator ranges are determined from engineering assessments and other data, such as manufacturers' design criteria and historical monitoring data, because factors specific to the type of monitoring, control device, or PSEU make compliance or performance testing unnecessary). The rationale and justification shall INCLUDE documentation demonstrating that compliance testing is not required to establish the indicator range.

RATIONALE AND JUSTIFICATION:

The selected indicator range is no visible emissions. When an excursion occurs, corrective action will be initiated beginning with an evaluation of the occurrence to determine the action required to correct the situation.

All excursions will be documented and reported. An indicator range of no visible emissions was selected because:

(1) an increase in the visible emissions is indicative of an incease in particulate emissions; and
(2) a monitoring technique which does not require a Method 9 observer is desired.

Although Method 22 applies to fugitive sources, the visible/no visible emissions observation technique of Method 22 can be applied to ducted emissions; i.e., Method 22-like observations.

ATTACHMENT H - Compliance Assurance Monitoring (CAM) Plan Form

For definitions and information about the CAM rule, please refer to 40 CFR Part 64. Additional information (including guidance documents) may also be found at http://www.epa.gov/ttn/emc/cam.html

CAM APPLICABILITY DETERMINATION

1) Does the facility have a PSEU (Pollutant-Specific Emissions Unit considered separately with respect to **EACH** regulated air pollutant) that is subject to CAM (40 CFR Part 64), which must be addressed in this CAM plan submittal? To determine applicability, a PSEU must meet **all** of the following criteria (*If No, then the remainder of this form need not be completed*): ☒ YES ☐ NO

a. The PSEU is located at a major source that is required to obtain a Title V permit;

b. The PSEU is subject to an emission limitation or standard for the applicable regulated air pollutant that is NOT exempt;

LIST OF EXEMPT EMISSION LIMITATIONS OR STANDARDS:

- NSPS (40 CFR Part 60) or NESHAP (40 CFR Parts 61 and 63) proposed after 11/15/1990.
- Stratospheric Ozone Protection Requirements.
- Acid Rain Program Requirements.
- Emission Limitations or Standards for which a WVDEP Division of Air Quality Title V permit specifies a continuous compliance determination method, as defined in 40 CFR §64.1.
- An emission cap that meets the requirements specified in 40 CFR §70.4(b)(12).

c. The PSEU uses an add-on control device (as defined in 40 CFR §64.1) to achieve compliance with an emission limitation or standard;

d. The PSEU has potential pre-control device emissions of the applicable regulated air pollutant that are equal to or greater than the Title V Major Source Threshold Levels; AND

e. The PSEU is NOT an exempt backup utility power emissions unit that is municipally-owned.

BASIS OF CAM SUBMITTAL

2) Mark the appropriate box below as to why this CAM plan is being submitted as part of an application for a Title V permit:

☒ RENEWAL APPLICATION. **ALL** PSEUs for which a CAM plan has NOT yet been approved need to be addressed in this CAM plan submittal.

☐ INITIAL APPLICATION (submitted after 4/20/98). **ONLY** large PSEUs (i. e., PSEUs with potential post-control device emissions of an applicable regulated air pollutant that are equal to or greater than Major Source Threshold Levels) need to be addressed in this CAM plan submittal.

☐ SIGNIFICANT MODIFICATION TO LARGE PSEUs. **ONLY** large PSEUs being modified after 4/20/98 need to be addressed in this cam plan submittal. For large PSEUs with an approved CAM plan, Only address the appropriate monitoring requirements affected by the significant modification.

3) [a] BACKGROUND DATA AND INFORMATION					
Complete the following table for **all** PSEUs that need to be addressed in this CAM plan submittal. This section is to be used to provide background data and information for each PSEU In order to supplement the submittal requirements specified in 40 CFR §64.4. If additional space is needed, attach and label accordingly.					
PSEU DESIGNATION	DESCRIPTION	POLLUTANT	CONTROL DEVICE	[b] EMISSION LIMITATION or STANDARD	[c] MONITORING REQUIREMENT
Hogged Fuel-Fired Boiler (B1)	Wood Combustion	PM/PM10/ PM 2.5	ESP	45 CSR § 2-3.1; 45 CSR § 2-3.2; 45 CSR § 2-4.1.b; 45 CSR § 2-4.2; 45 CSR § 2-5.1; 45 CSR § 2-9.1	Opacity; secondary voltage; inspection
EXAMPLE Boiler No. 1	Wood-Fired Boiler	PM	Multiclone	45CSR§2-4.1.c.; 9.0 lb/hr	Monitor pressure drop across multiclone: Weekly inspection of multiclone

[a] If a control device is common to more than one PSEU, one monitoring plan may be submitted for the control device with the affected PSEUs identified and any conditions that must be maintained or monitored in accordance with 40 CFR §64.3(a). If a single PSEU is controlled by more than one control device similar in design and operation, one monitoring plan for the applicable control devices may be submitted with the applicable control devices identified and any conditions that must be maintained or monitored in accordance with 40 CFR §64.3(a).

[b] Indicate the emission limitation or standard for any applicable requirement that constitutes an emission limitation, emission standard, or standard of performance (as defined in 40 CFR §64.1).

[c] Indicate the monitoring requirements for the PSEU that are required by an applicable regulation or permit condition.

CAM MONITORING APPROACH CRITERIA			
Complete this section for **EACH** PSEU that needs to be addressed in this CAM plan submittal. This section may be copied as needed for each PSEU. This section is to be used to provide monitoring data and information for EACH indicator selected for EACH PSEU in order to meet the monitoring design criteria specified in 40 CFR §64.3 and §64.4. if more than two indicators are being selected for a PSEU or if additional space is needed, attach and label accordingly with the appropriate PSEU designation, pollutant, and indicator numbers.			
4a) PSEU Designation: Hogged Fuel-Fired Boiler (B1)	**4b) Pollutant:** PM/PM10/ PM 2.5	**4c) [a] Indicator No. 1:** Opacity	**4d) [a] Indicator No. 2:** Secondary Voltage
5a) GENERAL CRITERIA Describe the MONITORING APPROACH used to measure the indicators:			
[b] Establish the appropriate INDICATOR RANGE or the procedures for establishing the indicator range which provides a reasonable assurance of compliance:		0-10% Opacity	28 - 55 Kilovolts 0 - 250 milliamps
5b) PERFORMANCE CRITERIA Provide the SPECIFICATIONS FOR OBTAINING REPRESENTATIVE DATA, such as detector location, installation specifications, and minimum acceptable accuracy:		Continous Opacity Monitor (COMS)	Check voltage for irregularities outside normal operting range as per manufacturer's recommendation
[c] For new or modified monitoring equipment, provide VERIFICATION PROCEDURES, including manufacturer's recommendations, TO CONFIRM THE OPERATIONAL STATUS of the monitoring:		NA	NA
Provide QUALITY ASSURANCE AND QUALITY CONTROL (QA/QC) PRACTICES that are adequate to ensure the continuing validity of the data, (i.e., daily calibrations, visual inspections, routine maintenance, RATA, etc.):		Calibrate the COMS based on manufacturer's recommendations	NA
[d] Provide the MONITORING FREQUENCY:		Continuous	Daily checks
Provide the DATA COLLECTION PROCEDURES that will be used:		Daily check of the COMS, as per manufacturer's recommendation	Manually record results of inspection
Provide the DATA AVERAGING PERIOD for the purpose of determining whether an excursion or exceedance has occurred:		NA	NA

[a] Describe all indicators to be monitored which satisfies 40 CFR §64.3(a). Indicators of emission control performance for the control device and associated capture system may include measured or predicted emissions (including visible emissions or opacity), process and control device operating parameters that affect control device (and capture system) efficiency or emission rates, or recorded findings of inspection and maintenance activities.

[b] Indicator Ranges may be based on a single maximum or minimum value or at multiple levels that are relevant to distinctly different operating conditions, expressed as a function of process variables, expressed as maintaining the applicable indicator in a particular operational status or designated condition, or established as interdependent between more than one indicator. For CEMS, COMS, or PEMS, include the most recent certification test for the monitor.

[c] The verification for operational status should include procedures for installation, calibration, and operation of the monitoring equipment, conducted in accordance with the manufacturer's recommendations, necessary to confirm the monitoring equipment is operational prior to the commencement of the required monitoring.

[d] Emission units with post-control PTE ≥ 100 percent of the amount classifying the source as a major source (i.e., Large PSEU) must collect four or more values per hour to be averaged. A reduced data collection frequency may be approved in limited circumstances. Other emission units must collect data at least once per 24 hour period.

CAM MONITORING APPROACH CRITERIA			
Complete this section for **EACH** PSEU that needs to be addressed in this CAM plan submittal. This section may be copied as needed for each PSEU. This section is to be used to provide monitoring data and information for EACH indicator selected for EACH PSEU in order to meet the monitoring design criteria specified in 40 CFR §64.3 and §64.4. if more than two indicators are being selected for a PSEU or if additional space is needed, attach and label accordingly with the appropriate PSEU designation, pollutant, and indicator numbers.			
4a) PSEU Designation: Hogged Fuel-Fired Boiler (B1)	**4b) Pollutant:** PM/PM10/ PM 2.5	**4c) [a] Indicator No. 1:** Inspections	**4d) [a] Indicator No. 2:**
5a) GENERAL CRITERIA Describe the MONITORING APPROACH used to measure the indicators:			
[b] Establish the appropriate INDICATOR RANGE or the procedures for establishing the indicator range which provides a reasonable assurance of compliance:		Inspect for missing or worn parts	
5b) PERFORMANCE CRITERIA Provide the SPECIFICATIONS FOR OBTAINING REPRESENTATIVE DATA, such as detector location, installation specifications, and minimum acceptable accuracy:		Manufacturer's design	
[c] For new or modified monitoring equipment, provide VERIFICATION PROCEDURES, including manufacturer's recommendations, TO CONFIRM THE OPERATIONAL STATUS of the monitoring:		NA	
Provide QUALITY ASSURANCE AND QUALITY CONTROL (QA/QC) PRACTICES that are adequate to ensure the continuing validity of the data, (i.e., daily calibrations, visual inspections, routine maintenance, RATA, etc.):		NA	
[d] Provide the MONITORING FREQUENCY:		At least semi-annually according to manufacturer's recommendation.	
Provide the DATA COLLECTION PROCEDURES that will be used:		Manually record inspection results and any repairs made.	
Provide the DATA AVERAGING PERIOD for the purpose of determining whether an excursion or exceedance has occurred:		NA	

[a] Describe all indicators to be monitored which satisfies 40 CFR §64.3(a). Indicators of emission control performance for the control device and associated capture system may include measured or predicted emissions (including visible emissions or opacity), process and control device operating parameters that affect control device (and capture system) efficiency or emission rates, or recorded findings of inspection and maintenance activities.

[b] Indicator Ranges may be based on a single maximum or minimum value or at multiple levels that are relevant to distinctly different operating conditions, expressed as a function of process variables, expressed as maintaining the applicable indicator in a particular operational status or designated condition, or established as interdependent between more than one indicator. For CEMS, COMS, or PEMS, include the most recent certification test for the monitor.

[c] The verification for operational status should include procedures for installation, calibration, and operation of the monitoring equipment, conducted in accordance with the manufacturer's recommendations, necessary to confirm the monitoring equipment is operational prior to the commencement of the required monitoring.

[d] Emission units with post-control PTE ≥ 100 percent of the amount classifying the source as a major source (i.e., Large PSEU) must collect four or more values per hour to be averaged. A reduced data collection frequency may be approved in limited circumstances. Other emission units must collect data at least once per 24 hour period.

RATIONALE AND JUSTIFICATION

Complete this section for **EACH** PSEU that needs to be addressed in this CAM plan submittal. This section may be copied as needed for each PSEU. This section is to be used to provide rationale and justification for the selection of EACH indicator and monitoring approach and EACH indicator range in order to meet the submittal requirements specified in 40 CFR §64.4.

6a) PSEU Designation:	6b) Regulated Air Pollutant:
Hogged Fuel-Fired Boiler (B1)	PM/PM10/PM 2.5

7) **INDICATORS AND THE MONITORING APPROACH**: Provide the rationale and justification for the selection of the indicators and the monitoring approach used to measure the indicators. Also provide any data supporting the rationale and justification. Explain the reasons for any differences between the verification of operational status or the quality assurance and control practices proposed, and the manufacturer's recommendations. (If additional space is needed, attach and label accordingly with the appropriate PSEU designation and pollutant):

Opacity, secondary voltage and equipment inspections will be used as control device indicators. The general monitoring approach was taken from normal operation of similar equipment at other facilities. Details of the monitoring approach are supported by either manufacturer's recommendations or site-specific experience of the normal operation of the hogged fuel-fired boiler.

8) **INDICATOR RANGES**: Provide the rationale and justification for the selection of the indicator ranges. The rationale and justification shall indicate how **EACH** indicator range was selected by either a COMPLIANCE OR PERFORMANCE TEST, a TEST PLAN AND SCHEDULE, or by ENGINEERING ASSESSMENTS. Depending on which method is being used for each indicator range, include the specific information required below for that specific indicator range. (If additional space is needed, attach and label accordingly with the appropriate PSEU designation and pollutant):

- COMPLIANCE OR PERFORMANCE TEST (Indicator ranges determined from control device operating parameter data obtained during a compliance or performance test conducted under regulatory specified conditions or under conditions representative of maximum potential emissions under anticipated operating conditions. Such data may be supplemented by engineering assessments and manufacturer's recommendations). The rationale and justification shall INCLUDE a summary of the compliance or performance test results that were used to determine the indicator range, and documentation indicating that no changes have taken place that could result in a significant change in the control system performance or the selected indicator ranges since the compliance or performance test was conducted.

- TEST PLAN AND SCHEDULE (Indicator ranges will be determined from a proposed implementation plan and schedule for installing, testing, and performing any other appropriate activities prior to use of the monitoring). The rationale and justification shall INCLUDE the proposed implementation plan and schedule that will provide for use of the monitoring as expeditiously as practicable after approval of this CAM plan, except that in no case shall the schedule for completing installation and beginning operation of the monitoring exceed 180 days after approval.

- ENGINEERING ASSESSMENTS (Indicator Ranges or the procedures for establishing indicator ranges are determined from engineering assessments and other data, such as manufacturers' design criteria and historical monitoring data, because factors specific to the type of monitoring, control device, or PSEU make compliance or performance testing unnecessary). The rationale and justification shall INCLUDE documentation demonstrating that compliance testing is not required to establish the indicator range.

RATIONALE AND JUSTIFICATION:

Performing routine monitoring and inspections of the COMS, secondary voltage and equipment will aid in identifying potential problems with the control device (e.g. collection plates, seals, and electrical systems) which can be repaired before a significant problem occurs.

ATTACHMENT I: SUGGESTED DRAFT PERMIT LANGUAGE - PERMIT NO. R30-06700095-2008 (SM02) W/ REQUESTED CHANGES

West Virginia Department of Environmental Protection
Division of Air Quality

Joe Manchin, III
Governor

Randy C. Huffman
Cabinet Secretary

Permit to Operate

Pursuant to
Title V
of the Clean Air Act

Issued to:

JELD-WEN, Inc. D.B.A. JELD-WEN
JELD-WEN, Wood Fiber Division/Craigsville, WV
R30-06700095-2008

John A. Benedict
Director

Issued: September 22, 2008 • Effective: October 6, 2008
Expiration: September 22, 2013 • Renewal Application Due: March 22, 2013

Permit Number: **R30-06700095 -2008**
Permittee: **JELD-WEN, Inc. D.B.A. JELD-WEN**
Facility Name: **JELD-WEN, Wood Fiber Division**
Mailing Address: **Post Office Box 1769, Craigsville, WV 26205**

This permit is issued in accordance with the West Virginia Air Pollution Control Act (West Virginia Code §§ 22-5-1 et seq.) and 45CSR30 C Requirements for Operating Permits. The permittee identified at the above-referenced facility is authorized to operate the stationary sources of air pollutants identified herein in accordance with all terms and conditions of this permit.

Facility Location:	Craigsville, Nicholas County, West Virginia
Mailing Address:	500 JELD-WEN Road, Craigsville, WV 26205
Telephone Number:	(304) 742-5180
Type of Business Entity:	Corporation
Facility Description:	Door-skin Manufacturing (wood product)
SIC Codes:	Primary 2493; Secondary 2851; Tertiary N/A
UTM Coordinates:	529.8 km Easting $ 4243.8 km Northing $ Zone 17

Any person whose interest may be affected, including, but not necessarily limited to, the applicant and any person who participated in the public comment process, by a permit issued, modified or denied by the Secretary may appeal such action of the Secretary to the Air Quality Board pursuant to article one [§§ 22B-1-1 et seq.], Chapter 22B of the Code of West Virginia. West Virginia Code §22-5-14.

Issuance of this Title V Operating Permit does not supersede or invalidate any existing permits under 45CSR13, 14 or 19, although all applicable requirements from such permits governing the facility's operation and compliance have been incorporated into the Title V Operating Permit.

Table of Contents

1.0 Emission Units and Active R13, R14, and R19 Permits

1.1. Emission Units

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
TD	E1 (Fugitive)	Truck Dump	May 1, 1998	38,053 lbs/hr	None
FSE	E2a,b,c,d,e	East Furnish Storage Silo	May 1, 1998	46,563 ft^3	None
FSW	E3a,b,c,d,e	West Furnish Storage Silo	May 1, 1998	46,563 ft^3	None
FLSN	E4	North Fuel Storage Silo	May 1, 1998	28,740 ft^3	BH3
FLSS		South Fuel Storage Silo	May 1, 1998	28,740 ft^3	
FLa		Fiber Line Prior to Press (Former)	May 1, 1998	13,323 lbs/hr	
C2		Recycle Cyclone	May 1, 1998	1404 lbs/hr	
C3		Waste Cyclone	May 1, 1998	3037 lbs/hr	
C4		Middle Reject Cyclone	May 1, 1998	1404 lbs/hr	
C6		Chip Cyclone	May 1, 1998	23,944 lbs/hr	
B1	E5	Hogged Fuel-Fired Boiler	May 1, 1998	62.5 MMBtu/hr	MC, ESP
B2	E6	Natural Gas-Fired Boiler	May 1, 1998	37.7 MMBtu/hr	None
D1[1]	E7	Fiber Dryer (also called Furnish Dryer in this permit and in R13-2192)	May 1, 1998	23,942 lbs/hr	BH1a
	E8				BH1b
C1[1]	E9	Dryer Cyclone		30,257 lbs/hr	BH1c
D1[2] C1[2] C8[2] PV[2] ~~RV[2]~~ C7[2]	E18	Fiber Dryer Dryer Cyclone Dryer Baghouse Purge Cyclone Press Vents ~~Rotary Valve~~ Press Vent Baghouse Purge Cyclone	May 1, 1998	23,942 lbs/hr 30,257 lbs/hr 302 lbs/hr 21,591 SF/hr ~~23,944 lb/hr~~ 3.2 lbs/hr	BH1a BH1b BH1c BF BH6
FLa	E10	Fiber Line Prior to Press (Former)	May 1, 1998	13,323 lbs/hr	BH2
FE14[1]	E11a,b	Press Vents	May 1, 1998	21,591 SF/hr	None
FLb	E12	Fiber Line After Press (Sizer)	May 1, 1998	21,591 SF/hr	BH4
C5		Chip Cleaning Cyclone	May 1, 1998	2667 lbs/hr	
		Die Cleaning Operation	2009	120 lbs/hr Na2CO3	
PL	E13	Primeline (Ovens)	May 1, 1998	3.8 MMBtu/hr (total)	None
PL	E14~~a,b~~	Primeline (Paint Booth)	May 1, 1998	71.0 gals/hr	None
DC2	E15	Paint Manufacturing	April 1, 1999	760 gals/hr	BH5
~~RV[1]~~	E16	Rotary Valve	May 1, 1998	23,944 lbs/hr	None
DC	E17	Die Coating	May 1, 1998	97 gal coating/yr	None
CV1-5	Fugitive	Conveyors	May 1, 1998	148 tons/hr (total)	None
RS	Fugitive	Rotary Classifier	May 1, 1998	40 tons/hr	None
ST1	Fugitive	Resin Storage Tank 1	May 1, 1998	7,000 gallons	None

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
ST2	Fugitive	Resin Storage Tank 2	May 1, 1998	7,000 gallons	None
ST3	Fugitive	Wax Storage Tank	May 1, 1998	10,000 gallons	None

[1]These table entries will no longer apply after installation of the Biofilter (BF), but no later than February 4, 2014.
[2]This table entry will apply after installation of the Biofilter (BF), but no later than February 4, 2014.

1.2. Active R13, R14, and R19 Permits

The underlying authority for any conditions from R13, R14, and/or R19 permits contained in this operating permit is cited using the original permit number (e.g. R13-1234). The current applicable version of such permit(s) is listed below.

Permit Number	Date of Issuance
R13-2192~~N~~O	~~February 23, 2012~~ January 3, 2013

2.0 General Conditions

2.1. Definitions

2.1.1. All references to the "West Virginia Air Pollution Control Act" or the "Air Pollution Control Act" mean those provisions contained in W.Va. Code §§ 22-5-1 to 22-5-18.

2.1.2. The "Clean Air Act" means those provisions contained in 42 U.S.C. §§ 7401 to 7671q, and regulations promulgated thereunder.

2.1.3. "Secretary" means the Secretary of the Department of Environmental Protection or such other person to whom the Secretary has delegated authority or duties pursuant to W.Va. Code §§ 22-1-6 or 22-1-8 (45CSR§30-2.12.). The Director of the Division of Air Quality is the Secretary's designated representative for the purposes of this permit.

2.1.4. Unless otherwise specified in a permit condition or underlying rule or regulation, all references to a "rolling yearly total" shall mean the sum of the data, values or parameters being measured, monitored, or recorded, at any given time for the previous twelve (12) consecutive calendar months.

2.2. Acronyms

CAAA	Clean Air Act Amendments	**NSPS**	New Source Performance Standards
CBI	Confidential Business Information	**PM**	Particulate Matter
CEM	Continuous Emission Monitor	**PM_{10}**	Particulate Matter less than 10μm in diameter
CES	Certified Emission Statement	**pph**	Pounds per Hour
C.F.R. *or* CFR	Code of Federal Regulations	**ppm**	Parts per Million
CO	Carbon Monoxide	**PSD**	Prevention of Significant Deterioration
C.S.R. *or* CSR	Codes of State Rules	**psi**	Pounds per Square Inch
DAQ	Division of Air Quality	**SIC**	Standard Industrial Classification
DEP	Department of Environmental Protection	**SIP**	State Implementation Plan
FOIA	Freedom of Information Act	**SO_2**	Sulfur Dioxide
HAP	Hazardous Air Pollutant	**TAP**	Toxic Air Pollutant
HON	Hazardous Organic NESHAP	**TPY**	Tons per Year
HP	Horsepower	**TRS**	Total Reduced Sulfur
lbs/hr *or* lb/hr	Pounds per Hour	**TSP**	Total Suspended Particulate
LDAR	Leak Detection and Repair	**USEPA**	United States Environmental Protection Agency
M	Thousand	**UTM**	Universal Transverse Mercator
MACT	Maximum Achievable Control Technology	**VEE**	Visual Emissions Evaluation
MM	Million	**VOC**	Volatile Organic Compounds
MMBtu/hr *or* mmbtu/hr	Million British Thermal Units per Hour		
MMCF/hr *or* mmcf/hr	Million Cubic Feet Burned per Hour		
NA	Not Applicable		
NAAQS	National Ambient Air Quality Standards		
NESHAPS	National Emissions Standards for Hazardous Air Pollutants		
NO_x	Nitrogen Oxides		

2.3. Permit Expiration and Renewal

2.3.1. Permit duration. This permit is issued for a fixed term of five (5) years and shall expire on the date specified on the cover of this permit, except as provided in 45CSR§30-6.3.b. and 45CSR§30-6.3.c.
[45CSR§30-5.1.b.]

2.3.2. A permit renewal application is timely if it is submitted at least six (6) months prior to the date of permit expiration.
[45CSR§30-4.1.a.3.]

2.3.3. Permit expiration terminates the source's right to operate unless a timely and complete renewal application has been submitted consistent with 45CSR§30-6.2. and 45CSR§30-4.1.a.3.
[45CSR§30-6.3.b.]

2.3.4. If the Secretary fails to take final action to deny or approve a timely and complete permit application before the end of the term of the previous permit, the permit shall not expire until the renewal permit has been issued or denied, and any permit shield granted for the permit shall continue in effect during that time.
[45CSR§30-6.3.c.]

2.4. Permit Actions

2.4.1. This permit may be modified, revoked, reopened and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.
[45CSR§30-5.1.f.3.]

2.5. Reopening for Cause

2.5.1. This permit shall be reopened and revised under any of the following circumstances:

a. Additional applicable requirements under the Clean Air Act or the Secretary's legislative rules become applicable to a major source with a remaining permit term of three (3) or more years. Such a reopening shall be completed not later than eighteen (18) months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to 45CSR§§30-6.6.a.1.A. or B.

b. Additional requirements (including excess emissions requirements) become applicable to an affected source under Title IV of the Clean Air Act (Acid Deposition Control) or other legislative rules of the Secretary. Upon approval by U.S. EPA, excess emissions offset plans shall be incorporated into the permit.

c. The Secretary or U.S. EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.

d. The Secretary or U.S. EPA determines that the permit must be revised or revoked and reissued to assure compliance with the applicable requirements.

[45CSR§30-6.6.a.]

2.6. Administrative Permit Amendments

2.6.1. The permittee may request an administrative permit amendment as defined in and according to the procedures specified in 45CSR§30-6.4.
[45CSR§30-6.4.]

2.7. Minor Permit Modifications

2.7.1. The permittee may request a minor permit modification as defined in and according to the procedures specified in 45CSR§30-6.5.a.
[45CSR§30-6.5.a.]

2.8. Significant Permit Modification

2.8.1. The permittee may request a significant permit modification, in accordance with 45CSR§30-6.5.b., for permit modifications that do not qualify for minor permit modifications or as administrative amendments.
[45CSR§30-6.5.b.]

2.9. Emissions Trading

2.9.1. No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading, and other similar programs or processes for changes that are provided for in the permit and that are in accordance with all applicable requirements.
[45CSR§30-5.1.h.]

2.10. Off-Permit Changes

2.10.1. Except as provided below, a facility may make any change in its operations or emissions that is not addressed nor prohibited in its permit and which is not considered to be construction nor modification under any rule promulgated by the Secretary without obtaining an amendment or modification of its permit. Such changes shall be subject to the following requirements and restrictions:

a. The change must meet all applicable requirements and may not violate any existing permit term or condition.

b. The permittee must provide a written notice of the change to the Secretary and to U.S. EPA within two (2) business days following the date of the change. Such written notice shall describe each such change, including the date, any change in emissions, pollutants emitted, and any applicable requirement that would apply as a result of the change.

c. The change shall not qualify for the permit shield.

d. The permittee shall keep records describing all changes made at the source that result in emissions of regulated air pollutants, but not otherwise regulated under the permit, and the emissions resulting from those changes.

e. No permittee may make any change subject to any requirement under Title IV of the Clean Air Act (Acid Deposition Control) pursuant to the provisions of 45CSR§30-5.9.
f. No permittee may make any changes which would require preconstruction review under any provision of Title I of the Clean Air Act (including 45CSR14 and 45CSR19) pursuant to the provisions of 45CSR§30-5.9.

[45CSR ' 30-5.9.]

2.11. Operational Flexibility

2.11.1. The permittee may make changes within the facility as provided by § 502(b)(10) of the Clean Air Act. Such operational flexibility shall be provided in the permit in conformance with the permit application and applicable requirements. No such changes shall be a modification under any rule or any provision of Title I of the Clean Air Act (including 45CSR14 and 45CSR19) promulgated by the Secretary in accordance with Title I of the Clean Air Act and the change shall not result in a level of emissions exceeding the emissions allowable under the permit.
[45CSR§30-5.8]

2.11.2. Before making a change under 45CSR§30-5.8., the permittee shall provide advance written notice to the Secretary and to U.S. EPA, describing the change to be made, the date on which the change will occur, any changes in emissions, and any permit terms and conditions that are affected. The permittee shall thereafter maintain a copy of the notice with the permit, and the Secretary shall place a copy with the permit in the public file. The written notice shall be provided to the Secretary and U.S. EPA at least seven (7) days prior to the date that the change is to be made, except that this period may be shortened or eliminated as necessary for a change that must be implemented more quickly to address unanticipated conditions posing a significant health, safety, or environmental hazard. If less than seven (7) days notice is provided because of a need to respond more quickly to such unanticipated conditions, the permittee shall provide notice to the Secretary and U.S. EPA as soon as possible after learning of the need to make the change.
[45CSR§30-5.8.a.]

2.11.3. The permit shield shall not apply to changes made under 45CSR§30-5.8., except those provided for in 45CSR§30-5.8.d. However, the protection of the permit shield will continue to apply to operations and emissions that are not affected by the change, provided that the permittee complies with the terms and conditions of the permit applicable to such operations and emissions. The permit shield may be reinstated for emissions and operations affected by the change:

a. If subsequent changes cause the facility's operations and emissions to revert to those authorized in the permit and the permittee resumes compliance with the terms and conditions of the permit, or

b. If the permittee obtains final approval of a significant modification to the permit to incorporate the change in the permit.

[45CSR§30-5.8.c.]

2.11.4. "Section 502(b)(10) changes" are changes that contravene an express permit term. Such changes do not include changes that would violate applicable requirements or contravene enforceable permit terms and conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements.
[45CSR§30-2.39]

2.12. Reasonably Anticipated Operating Scenarios

2.12.1. The following are terms and conditions for reasonably anticipated operating scenarios identified in this permit.

a. Contemporaneously with making a change from one operating scenario to another, the permittee shall record in a log at the permitted facility a record of the scenario under which it is operating and to document the change in reports submitted pursuant to the terms of this permit and 45CSR30.

b. The permit shield shall extend to all terms and conditions under each such operating scenario; and

c. The terms and conditions of each such alternative scenario shall meet all applicable requirements and the requirements of 45CSR30.

[45CSR§30-5.1.i.]

2.13. Duty to Comply

2.13.1. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the West Virginia Code and the Clean Air Act and is grounds for enforcement action by the Secretary or USEPA; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.
[45CSR§30-5.1.f.1.]

2.14. Inspection and Entry

2.14.1. The permittee shall allow any authorized representative of the Secretary, upon the presentation of credentials and other documents as may be required by law, to perform the following:

a. At all reasonable times (including all times in which the facility is in operation) enter upon the permittee's premises where a source is located or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

c. Inspect at reasonable times (including all times in which the facility is in operation) any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit;

d. Sample or monitor at reasonable times substances or parameters to determine compliance with the permit or applicable requirements or ascertain the amounts and types of air pollutants discharged.

[45CSR§30-5.3.b.]

2.15. Schedule of Compliance

2.15.1. For sources subject to a compliance schedule, certified progress reports shall be submitted consistent with the applicable schedule of compliance set forth in this permit and 45CSR§30-4.3.h., but at least every six (6) months, and no greater than once a month, and shall include the following:

a. Dates for achieving the activities, milestones, or compliance required in the schedule of compliance, and dates when such activities, milestones or compliance were achieved; and

b. An explanation of why any dates in the schedule of compliance were not or will not be met, and any preventative or corrective measure adopted.

[45CSR§30-5.3.d.]

2.16. Need to Halt or Reduce Activity not a Defense

2.16.1. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. However, nothing in this paragraph shall be construed as precluding consideration of a need to halt or reduce activity as a mitigating factor in determining penalties for noncompliance if the health, safety, or environmental impacts of halting or reducing operations would be more serious than the impacts of continued operations.
[45CSR§30-5.1.f.2.]

2.17. Emergency

2.17.1. An "emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.
[45CSR§30-5.7.a.]

2.17.2. Effect of any emergency. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions of 45CSR§30-5.7.c. are met.
[45CSR§30-5.7.b.]

2.17.3. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:

a. An emergency occurred and that the permittee can identify the cause(s) of the emergency;

b. The permitted facility was at the time being properly operated;

c. During the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit; and

d. Subject to the requirements of 45CSR§30-5.1.c.3.C.1, the permittee submitted notice of the emergency to the Secretary within one (1) working day of the time when emission limitations were exceeded due to the

emergency and made a request for variance, and as applicable rules provide. This notice, report, and variance request fulfills the requirement of 45CSR§30-5.1.c.3.B. This notice must contain a detailed description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.

[45CSR§30-5.7.c.]

2.17.4. In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof.
[45CSR§30-5.7.d.]

2.17.5. This provision is in addition to any emergency or upset provision contained in any applicable requirement.
[45CSR§30-5.7.e.]

2.18. Federally-Enforceable Requirements

2.18.1. All terms and conditions in this permit, including any provisions designed to limit a source's potential to emit and excepting those provisions that are specifically designated in the permit as "State-enforceable only", are enforceable by the Secretary, USEPA, and citizens under the Clean Air Act.
[45CSR§30-5.2.a.]

2.18.2. Those provisions specifically designated in the permit as “State-enforceable only” shall become “Federally-enforceable” requirements upon SIP approval by the USEPA.

2.19. Duty to Provide Information

2.19.1. The permittee shall furnish to the Secretary within a reasonable time any information the Secretary may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Secretary copies of records required to be kept by the permittee. For information claimed to be confidential, the permittee shall furnish such records to the Secretary along with a claim of confidentiality in accordance with 45CSR31. If confidential information is to be sent to USEPA, the permittee shall directly provide such information to USEPA along with a claim of confidentiality in accordance with 40 C.F.R. Part 2.
[45CSR§30-5.1.f.5.]

2.20. Duty to Supplement and Correct Information

2.20.1. Upon becoming aware of a failure to submit any relevant facts or a submittal of incorrect information in any permit application, the permittee shall promptly submit to the Secretary such supplemental facts or corrected information.
[45CSR§30-4.2.]

2.21. Permit Shield

2.21.1. Compliance with the conditions of this permit shall be deemed compliance with any applicable requirements as of the date of permit issuance provided that such applicable requirements are included and are specifically identified in this permit or the Secretary has determined that other requirements specifically identified are not applicable to the source and this permit includes such a determination or a concise summary thereof.
[45CSR§30-5.6.a.]

2.21.2. Nothing in this permit shall alter or affect the following:

a. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance; or

b. The applicable requirements of the Code of West Virginia and Title IV of the Clean Air Act (Acid Deposition Control), consistent with § 408 (a) of the Clean Air Act.

c. The authority of the Administrator of U.S. EPA to require information under § 114 of the Clean Air Act or to issue emergency orders under § 303 of the Clean Air Act.

[45CSR§30-5.6.c.]

2.22. Credible Evidence

2.22.1. Nothing in this permit shall alter or affect the ability of any person to establish compliance with, or a violation of, any applicable requirement through the use of credible evidence to the extent authorized by law. Nothing in this permit shall be construed to waive any defenses otherwise available to the permittee including but not limited to any challenge to the credible evidence rule in the context of any future proceeding.
[45CSR§30-5.3.e.3.B. and 45CSR38]

2.23. Severability

2.23.1. The provisions of this permit are severable. If any provision of this permit, or the application of any provision of this permit to any circumstance is held invalid by a court of competent jurisdiction, the remaining permit terms and conditions or their application to other circumstances shall remain in full force and effect.
[45CSR§30-5.1.e.]

2.24. Property Rights

2.24.1. This permit does not convey any property rights of any sort or any exclusive privilege.
[45CSR§30-5.1.f.4]

2.25. Acid Deposition Control

2.25.1. Emissions shall not exceed any allowances that the source lawfully holds under Title IV of the Clean Air Act (Acid Deposition Control) or rules of the Secretary promulgated thereunder.

a. No permit revision shall be required for increases in emissions that are authorized by allowances acquired pursuant to the acid deposition control program, provided that such increases do not require a permit revision under any other applicable requirement.

b. No limit shall be placed on the number of allowances held by the source. The source may not, however, use allowances as a defense to noncompliance with any other applicable requirement.

c. Any such allowance shall be accounted for according to the procedures established in rules promulgated under Title IV of the Clean Air Act.

[45CSR§30-5.1.d.]

2.25.2. Where applicable requirements of the Clean Air Act are more stringent than any applicable requirement of regulations promulgated under Title IV of the Clean Air Act (Acid Deposition Control), both provisions shall be incorporated into the permit and shall be enforceable by the Secretary and U. S. EPA. **[45CSR§30-5.1.a.2.]**

3.0 Facility-Wide Requirements

3.1. Limitations and Standards

3.1.1. **Open burning.** The open burning of refuse by any person, firm, corporation, association or public agency is prohibited except as noted in 45CSR§6-3.1.
[45CSR§6-3.1.]

3.1.2. **Open burning exemptions.** The exemptions listed in 45CSR§6-3.1 are subject to the following stipulation: Upon notification by the Secretary, no person shall cause, suffer, allow or permit any form of open burning during existing or predicted periods of atmospheric stagnation. Notification shall be made by such means as the Secretary may deem necessary and feasible.
[45CSR§6-3.2.]

3.1.3. **Asbestos.** The permittee is responsible for thoroughly inspecting the facility, or part of the facility, prior to commencement of demolition or renovation for the presence of asbestos and complying with 40 C.F.R. § 61.145, 40 C.F.R. § 61.148, and 40 C.F.R. § 61.150. The permittee, owner, or operator must notify the Secretary at least ten (10) working days prior to the commencement of any asbestos removal on the forms prescribed by the Secretary if the permittee is subject to the notification requirements of 40 C.F.R. § 61.145(b)(3)(i). The USEPA, the Division of Waste Management and the Bureau for Public Health - Environmental Health require a copy of this notice to be sent to them.
[40 C.F.R. §61.145(b) and 45CSR15]

3.1.4. **Odor.** No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor at any location occupied by the public.
[45CSR§4-3.1 State-Enforceable only.]

3.1.5. **Standby plan for reducing emissions.** When requested by the Secretary, the permittee shall prepare standby plans for reducing the emissions of air pollutants in accordance with the objectives set forth in Tables I, II, and III of 45CSR11.
[45CSR§11-5.2]

3.1.6. **Emission inventory.** The permittee is responsible for submitting, on an annual basis, an emission inventory in accordance with the submittal requirements of the Division of Air Quality.
[W.Va. Code § 22-5-4(a)(14)]

3.1.7. **Ozone-depleting substances.** For those facilities performing maintenance, service, repair or disposal of appliances, the permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 C.F.R. Part 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B:

a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the prohibitions and required practices pursuant to 40 C.F.R. §§ 82.154 and 82.156.

b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 C.F.R. § 82.158.

c. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 C.F.R. § 82.161.

[40 C.F.R. 82, Subpart F]

3.1.8. **Risk Management Plan.** Should this stationary source, as defined in 40 C.F.R. § 68.3, become subject to Part 68, then the owner or operator shall submit a risk management plan (RMP) by the date specified in 40 C.F.R. § 68.10 and shall certify compliance with the requirements of Part 68 as part of the annual compliance certification as required by 40 C.F.R. Part 70 or 71.
[40 C.F.R. 68]

3.1.9. No person shall cause, suffer, allow or permit any manufacturing process or storage structure generating fugitive particulate matter to operate that is not equipped with a system, which may include, but not be limited to, process equipment design, control equipment design or operation and maintenance procedures, to minimize the emissions of fugitive particulate matter. To minimize means such system shall be installed, maintained and operated to ensure the lowest fugitive particulate matter emissions reasonably achievable. (Not applicable to E5 & E6)
[45CSR §7-5.1.]

3.1.10. The owner or operator of a plant shall maintain particulate matter control of the plant premises, and plant owned, leased or controlled access roads, by paving, application of asphalt, chemical dust suppressants or other suitable dust control measures. Good operating practices shall be implemented and when necessary particulate matter suppressants shall be applied in relation to stockpiling and general material handling to minimize particulate matter generation and atmospheric entrainment. (Not applicable to E5 & E6)

3.1.11. **[45CSR §7-5.2.]**

3.2. Monitoring Requirements

3.2.1. (*Reserved*)

3.3. Testing Requirements

3.3.1. **Stack testing.** As per provisions set forth in this permit or as otherwise required by the Secretary, in accordance with the West Virginia Code, underlying regulations, permits and orders, the permittee shall conduct test(s) to determine compliance with the emission limitations set forth in this permit and/or established or set forth in underlying documents. The Secretary, or his duly authorized representative, may at his option witness or conduct such test(s). Should the Secretary exercise his option to conduct such test(s), the operator shall provide all necessary sampling connections and sampling ports to be located in such manner as the Secretary may require, power for test equipment and the required safety equipment, such as scaffolding, railings and ladders, to comply with generally accepted good safety practices. Such tests shall be conducted in accordance with the methods and procedures set forth in this permit or as otherwise approved or specified by the Secretary in accordance with the following:

a. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with 40 C.F.R. Parts 60, 61, and 63, if applicable, in accordance with the Secretary's delegated authority and any established equivalency determination methods which are applicable.

b. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with applicable requirements which do not involve federal delegation. In specifying or approving such alternative testing to the test methods,

the Secretary, to the extent possible, shall utilize the same equivalency criteria as would be used in approving such changes under Section 3.3.1.a. of this permit.

c. All periodic tests to determine mass emission limits from or air pollutant concentrations in discharge stacks and such other tests as specified in this permit shall be conducted in accordance with an approved test protocol. Unless previously approved, such protocols shall be submitted to the Secretary in writing at least thirty (30) days prior to any testing and shall contain the information set forth by the Secretary. In addition, the permittee shall notify the Secretary at least fifteen (15) days prior to any testing so the Secretary may have the opportunity to observe such tests. This notification shall include the actual date and time during which the test will be conducted and, if appropriate, verification that the tests will fully conform to a referenced protocol previously approved by the Secretary.

[WV Code § 22-5-4(a)(15), 45CSR2, 45CSR7, 45CSR10, 45CSR16, 40CFR§60.45c.and 45CSR13]

3.4. Recordkeeping Requirements

3.4.1. **Monitoring information.** The permittee shall keep records of monitoring information that include the following:

a. The date, place as defined in this permit and time of sampling or measurements;

b. The date(s) analyses were performed;

c. The company or entity that performed the analyses;

d. The analytical techniques or methods used;

e. The results of the analyses; and

f. The operating conditions existing at the time of sampling or measurement.

[45CSR§30-5.1.c.2.A., 45CSR13 – Permit R13-2192 §4.3.1]

3.4.2. **Retention of records.** The permittee shall retain records of all required monitoring data and support information for a period of at least five (5) years from the date of monitoring sample, measurement, report, application, or record creation date. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. Where appropriate, records may be maintained in computerized form in lieu of the above records. *Compliance with the streamlined five (5) year retention of records assures compliance with 40 CFR §60.48c(i).*
[45CSR§30-5.1.c.2.B., 40 CFR §60.48c(i)]

3.4.3. **Odors.** For the purposes of 45CSR4, the permittee shall maintain a record of all odor complaints received, any investigation performed in response to such a complaint, and any responsive action(s) taken.
[45CSR§30-5.1.c. State-Enforceable only.]

3.4.4. The permittee shall maintain records indicating the use of any dust suppressants or any other suitable dust control measures applied at the facility. The permittee shall also inspect all fugitive dust control systems monthly to ensure that they are operated and maintained in conformance with their designs. The permittee shall

maintain records of all scheduled and non-scheduled maintenance and shall state any maintenance or corrective actions taken as a result of the monthly inspections, the times the fugitive dust control system(s) were inoperable and any corrective actions taken.
[45CSR§30-5.1.c.]

3.5. Reporting Requirements

3.5.1. **Responsible official.** Any application form, report, or compliance certification required by this permit to be submitted to the DAQ and/or USEPA shall contain a certification by the responsible official that states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.
[45CSR§§30-4.4. *and* 5.1.c.3.D.]

3.5.2. A permittee may request confidential treatment for the submission of reporting required under 45CSR§30-5.1.c.3. pursuant to the limitations and procedures of W.Va. Code § 22-5-10 and 45CSR31.
[45CSR§30-5.1.c.3.E.]

3.5.3. All notices, requests, demands, submissions and other communications required or permitted to be made to the Secretary of DEP and/or USEPA shall be made in writing and shall be deemed to have been duly given when delivered by hand, mailed first class or by private carrier with postage prepaid to the address(es) set forth below or to such other person or address as the Secretary of the Department of Environmental Protection may designate:

If to the DAQ:

Director
WVDEP
Division of Air Quality
601 57th Street SE
Charleston, WV 25304

Phone: 304/926-0475
FAX: 304/926-0478

If to the US EPA:

Associate Director
Office of Enforcement and Permits Review (3AP12)
U. S. Environmental Protection Agency
Region III
1650 Arch Street
Philadelphia, PA 19103-2029

3.5.4. **Certified emissions statement.** The permittee shall submit a certified emissions statement and pay fees on an annual basis in accordance with the submittal requirements of the Division of Air Quality.
[45CSR§30-8.]

3.5.5. **Compliance certification.** The permittee shall certify compliance with the conditions of this permit on the forms provided by the DAQ. In addition to the annual compliance certification, the permittee may be required to submit certifications more frequently under an applicable requirement of this permit. The annual certification shall be submitted to the DAQ and USEPA on or before March 15 of each year, and shall certify compliance for the period ending December 31. The permittee shall maintain a copy of the certification on site for five (5) years from submittal of the certification.
[45CSR§30-5.3.e.]

3.5.6. **Semi-annual monitoring reports.** The permittee shall submit reports of any required monitoring on or before September 15 for the reporting period January 1 to June 30 and on or before March 15 for the reporting period July 1 to December 31. All instances of deviation from permit requirements must be clearly identified in such reports. All required reports must be certified by a responsible official consistent with 45CSR§30-4.4. **[45CSR§30-5.1.c.3.A.]**

3.5.7. **Emergencies.** For reporting emergency situations, refer to Section 2.17 of this permit.

3.5.8. **Deviations.**

a. In addition to monitoring reports required by this permit, the permittee shall promptly submit supplemental reports and notices in accordance with the following:

1. Any deviation resulting from an emergency or upset condition, as defined in 45CSR§30-5.7., shall be reported by telephone or telefax within one (1) working day of the date on which the permittee becomes aware of the deviation, if the permittee desires to assert the affirmative defense in accordance with 45CSR§30-5.7. A written report of such deviation, which shall include the probable cause of such deviations, and any corrective actions or preventative measures taken, shall be submitted and certified by a responsible official within ten (10) days of the deviation.

2. Any deviation that poses an imminent and substantial danger to public health, safety, or the environment shall be reported to the Secretary immediately by telephone or telefax. A written report of such deviation, which shall include the probable cause of such deviation, and any corrective actions or preventative measures taken, shall be submitted by the responsible official within ten (10) days of the deviation.

3. Deviations for which more frequent reporting is required under this permit shall be reported on the more frequent basis.

4. All reports of deviations shall identify the probable cause of the deviation and any corrective actions or preventative measures taken.

[45CSR§30-5.1.c.3.C.]

b. The permittee shall, in the reporting of deviations from permit requirements, including those attributable to upset conditions as defined in this permit, report the probable cause of such deviations and any corrective actions or preventive measures taken in accordance with any rules of the Secretary. **[45CSR§30-5.1.c.3.B.]**

3.5.9. **New applicable requirements.** If any applicable requirement is promulgated during the term of this permit, the permittee will meet such requirements on a timely basis, or in accordance with a more detailed schedule if required by the applicable requirement. **[45CSR§30-4.3.h.1.B.]**

3.6. Compliance Plan

3.6.1. Not Applicable

3.7. Permit Shield

3.7.1. The permittee is hereby granted a permit shield in accordance with 45CSR§30-5.6. The permit shield applies provided the permittee operates in accordance with the information contained within this permit.

3.7.2. The following requirements specifically identified are not applicable to the source based on the determinations set forth below. The permit shield shall apply to the following requirements provided the conditions of the determinations are met.

a. Not Applicable

4.0 Source-Specific Requirements [Boilers (Emission Points *E5, E6*)]

4.1. Limitations and Standards

4.1.1. Visible Emissions from each of the boiler stacks (E5, E6) shall not exceed ten (10) percent opacity based on a six minute block average. *Compliance with this streamlined VE limit assures compliance with 40 CFR 60 Subpart Dc.*
[45CSR §2-3.1.]

4.1.2. The visible emission standards shall apply at all times except in periods of start-ups, shutdowns and malfunctions.
[45CSR§2-9.1.]

4.1.3. The addition of sulfur oxides to boiler B1's exit gas stream for the purpose of improving emissions control equipment efficiency is prohibited unless written approval for such addition is provided by the Secretary.
[45CSR §2-4.4.]

4.1.4. Any fuel burning unit(s) including associated air pollution control equipment, shall at all times, including periods of start-up, shutdowns, and malfunctions, to the extent practicable, 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)]

4.1.5. No owner or operator of an affected facility that combusts wood shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of 0.10 lb/MMBtu heat input if the affected facility has an annual capacity factor for wood greater than 30 percent. The PM standard applies at all times except during periods of startup, shutdown, or malfunction. (*E5*)
[45CSR16, 40 CFR §§60.43c(b) and (d)]

4.1.6. The following hourly emission rates shall not be exceeded:

Emission Point ID No.	Hourly Emission Point Limit (lb/hr)					
	CO	Lead	NO_x	PM_{10}*	SO_2**	VOC
E5	20.25	0.003	33.24	2.94	1.56	6.25
E6	3.06	-----	6.20	0.28	0.02	0.20

** Compliance with these streamlined PM limits assures compliance with 45CSR§2-4.1.b.*
***Compliance with these streamlined SO_2 limits assures compliance with 45CSR§10-3.3.f.*
[45CSR13 – Permit R13-2192 §4.1.10.]

4.1.7. The following annual emission point limits shall not be exceeded:

Emission Point ID No.	Annual Emission Point Limit (TPY)					
	CO	Lead	NO_x	PM_{10}	SO_2	VOC
E5	79.84	0.01	131.03	12.87	6.16	27.38
E6	13.39	-----	25.46	1.21	0.1	0.88

[45CSR13 – Permit R13-2192 §4.1.11.]

4.1.8. Compliance with the allowable sulfur dioxide emission limitations shall be based on a continuous twenty-four (24) hour averaging time. Emissions shall not be allowed to exceed the weight emissions standards for sulfur dioxide as set forth in 45CSR10, except during one (1) continuous twenty-four (24) hour period in each calendar month. During this one (1) continuous twenty-four hour period, emissions shall not be allowed to exceed such weight emission standards by more than ten percent (10%) without causing a violation of 45CSR10. A continuous twenty-four (24) hour period is defined as one (1) calendar day
[45CSR §10-3.8.]

4.1.9. Total hazardous air pollutant (HAP) emissions from the wood-fired boiler (Equipment ID No. B1) and venting through Emission Point ID No. E5 shall not exceed 2.42 lb/hr and 9.52 TPY.
[45CSR13 – Permit R13-2192 §4.1.9]

4.1.10. No person shall cause, suffer, allow or permit any source of fugitive particulate matter to operate that is not equipped with a fugitive particulate matter control system. This system shall be operated and maintained in such a manner as to minimize the emission of fugitive particulate matter. Sources of fugitive particulate matter associated with fuel burning units shall include, but not be limited to, the following:

a. Stockpiling of ash or fuel either in the open or in enclosures such as silos;

b. Transport of ash in vehicles or on conveying systems, to include spillage, tracking or blowing of particulate matter from or by such vehicles or equipment; and

c. Ash or fuel handling systems and ash disposal areas.

[45CSR §2-5.1.]

4.1.11. **Operation and Maintenance of Air Pollution Control Equipment.** The permittee shall, to the extent practicable, install, maintain, and operate all pollution control equipment listed in Section 1.0 and associated monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions, or comply with any more stringent limits set forth in this permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary.
[45CSR13 – Permit R13-2192 §4.1.15, 45CSR§13-5.11.]

4.1.12. Boiler MACT. The permittee shall comply with the following requirements related to 40 C.F.R. 63, Subpart DDDDD:

a. The Boilers B1 and B2 [E5 and E6] shall comply with all applicable requirements for existing affected sources, pursuant to 40 C.F.R. 63, Subpart DDDDD, "National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters" no later than the existing source compliance date of ~~March 21, 2014, or as amended by US EPA~~ January 31, 2016.
[40 C.F.R. 63, Subpart DDDDD]

b. If required to submit a Notification of Compliance Status (NOCS) pursuant to 40 C.F.R. 63, Subpart DDDDD, the permittee shall also submit a complete application for significant modification to the Title V permit to incorporate the specific requirements of the rule no later than the maximum time allowed for the NOCS submittal in 40 C.F.R. §63.7545(e).

If requested, this Title V permitting deadline may be changed upon written approval by the Director. The permittee shall request the change in writing at least 30 days prior to the application due date.
[40 C.F.R. 63, Subpart DDDDD, 45CSR§30-6.5.b.]

4.2. Monitoring Requirements

4.2.1. A continuous opacity monitoring system (COMS) for measuring the opacity of the emissions discharged to the atmosphere from boiler B1 (E5) shall be utilized, calibrated, maintained, and the output of the system shall be recorded. All COMS for measuring opacity shall be operated in accordance with the applicable procedures under Performance Specification 1 of Appendix B of 40 CFR Part 60. The span value of the opacity COMS shall be between 60 and 80 percent.
[45CSR §2-3.2., 45CSR16, 40 CFR §§60.47c(a) & (b)]

4.2.2. Compliance with the visible emission requirements for boiler B2 (E6) shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 22 once a month. Visible emissions shall be observed using method 22 for at least one (1) minute. If visible emissions are observed, the permittee shall conduct a Method 9 reading unless the cause for the visible emissions is corrected within 24 hours.
[45CSR §2-3.2. and 45CSR§30-5.1.c.]

4.2.3. ***Reserved***

4.2.4. ***Reserved***

4.2.5. Compliance with the CO, NO_x and VOC emission limitations established for the Hogged Fuel Boiler (E5) and the Natural Gas Boiler (E6), shall be demonstrated as follows

a. The permittee shall operate an oxygen monitor to measure the oxygen content of the Hogged Fuel Boiler (E5) exhaust. Unless a different range for the oxygen content is established through testing that is requested to be performed by the Secretary or a duly authorized representative of the Secretary, which demonstrates compliance with the CO, NO_x and VOC emission limitations, the oxygen content shall be maintained within the design specifications indicated below. If a new parameter range is established through such testing for each pollutant, the permit must be revised to reflect the new established range.

1. The boiler exhaust oxygen content shall range between 1 % and 20 %.

2. The oxygen content shall be recorded once every 12 hours during boiler operation.

3. If a test is requested to be performed by the Secretary, a report, including the measured oxygen content during the required source test, measured oxygen content for at least three months of operation, and proposed oxygen content range for the boiler shall be submitted to the Director within sixty (60) days of completing the test. The oxygen content range shall not apply to periods of start-up, shut down, or idle (less than 10,000 pounds of steam per hour) conditions.

b. Continual compliance with the Natural Gas Boiler (E6) CO and NO_x emission limitations shall be demonstrated by means required in 4.4.1.b. of this permit.

[45CSR§30-5.1.c.]

4.3. Testing Requirements

4.3.1. Compliance with the particulate matter emission limitations established for the Hogged Fuel Boiler B1 (E5) shall be demonstrated as follows:

a. Stack testing shall be performed in accordance with 40 C.F.R. § 60.45c and 45CSR2 Appendix Compliance Test Procedures for 45CSR2," or alternative method approved by the Director, once per permit term and/or within five years of the most recent successful tests. Results from such testing shall be submitted to the Director within sixty (60) days from the date of completion of said testing;

b. The permittee shall monitor and record the following parameters for the Hogged Fuel Boiler B1 (E5):

1. Operating secondary voltage on the ESP of 28 to 55 Kilovolts.

2. Operating secondary current on the ESP of 0 to 250 milliamps.

3. Monitored parameters will be recorded once every 24 hours when the unit is operating.

These parameters shall be maintained within the design specifications as indicated above. If different ranges for the parameters that demonstrate compliance with the particulate matter emission limitation are established through testing under 4.3.1.a., the permit must be revised to reflect the new ranges.

[45CSR§30-5.1.c.]

4.4. Recordkeeping Requirements

4.4.1. Compliance with the lead, and sulfur dioxide emissions limitations established for the Hogged Fuel Boiler B1 (E5) and the particulate matter, sulfur dioxide and VOC emissions limitations established for the Natural Gas Boiler B2 (E6) shall be demonstrated as follows:

a. Demonstrate that wood was used as the only fuel in the Hogged Fuel Boiler B1 (E5).

b. Demonstrate that natural gas was used as the only fuel in the Natural Gas Boiler B2 (E6).

c. Continual compliance with the particulate matter, sulfur dioxide and VOC emission limitations for the Natural Gas Boiler B2 (E6) shall be demonstrated by maintaining records required in 4.4.2.a.

[45CSR§30-5.1.c.]

4.4.2. Records of the operating schedule, and the quality and quantity of fuel burned in each fuel burning unit shall be maintained as specified below:

a. For fuel burning unit(s) which burn only pipeline quality natural gas, such records shall include, but not be limited to, the date and time of start-up and shutdown, and the quantity of fuel consumed on a monthly basis. *(E6)*.

b. For fuel burning unit(s) which burn only wood, such records shall include, but not be limited to, the date and time of start-up and shutdown, the quantity of fuel consumed on a daily basis and a quarterly ash and BTU analysis. *(E5)*.

[45CSR§2-8.3.c., 45CSR§2A-7.1., 40 CFR §60.48c(g), 45CSR16]

4.5. Reporting Requirements

4.5.1. Any malfunction of boiler B1 and/or boiler B2 or their air pollution control equipment, which results in any excess particulate matter emission rate or excess opacity shall be reported to the Secretary as provided in one of the following:

a. Excess opacity periods meeting the following conditions may be reported on a quarterly basis unless otherwise required by the Secretary:

1. The excess opacity period does not exceed thirty (30) minutes within any 24-hour period; and

2. Excess opacity does not exceed 40%.

b. The owner or operator shall report to the Secretary any malfunction resulting in excess particulate matter or excess opacity, not meeting the criteria set forth in 4.5.1.a. above (45CSR§2-9.3.a.), by telephone, telefax, or e-mail by the end of the next business day after becoming aware of such condition. The owner or operator shall file a certified written report concerning the malfunction with the Secretary within thirty (30) days providing the following information:

1. A detailed explanation of the factors involved or causes of the malfunction;

2. The date and time of duration (with starting and ending times) of the period of excess emissions;

3. An estimate of the mass of excess emissions discharged during the malfunction period;

4. The maximum opacity measured or observed during the malfunction;

5. Immediate remedial actions taken at the time of the malfunction to correct or mitigate the effects of the malfunction; and

6. A detailed explanation of the corrective measures or program that will be implemented to prevent a recurrence of the malfunction and a schedule for such implementation.

[45CSR §2-9.3.]

4.5.2. The owner or operator of each affected facility subject to the PM or opacity limits of 40 C.F.R. § 60.43c, shall submit to the Administrator the performance test data from the initial and any subsequent performance tests. (*E5*)
[40 CFR §60.48c(b), 45CSR16]

4.5.3. The owner or operator of each wood-fired affected facility subject to the opacity limits under 40 C.F.R. § 60.43c(c) shall submit excess emission reports for any excess emissions from the affected facility which occur during the reporting period. (*E5*)
[40 CFR §60.48c(c), 45CSR16]

4.5.4. The reporting period for the reports required under 40 C.F.R. Part 60 Subpart Dc is each six-month period. All reports shall be submitted to the Administrator and Director and shall be postmarked by the 30th day following the end of the reporting period. (*E5, E6*).
[40 CFR §60.48c(j), 45CSR16]

4.6. Compliance Plan

4.6.1. Not Applicable

5.0 Source-Specific Requirements [Door Skin Manufacturing (Emission Points *E1-E4, E10, E12-15, E17-18~~E7 E15~~*)]

**Note – "CAM" in this section shall mean Compliance Assurance Monitoring. (See fact sheet for CAM Plan monitoring table)*

5.1. Limitations and Standards

5.1.1. The permittee shall use only a no added Formaldehyde (NAF) resin with a maximum 0% Formaldehyde by weight.
[45CSR13 – Permit R13-2192 §4.1.1.]

5.1.2. Maximum Furnish Dryer Throughput shall not exceed 23,942 oven dried pounds per hour nor 45,000 oven dried tons per year.
[45CSR13 – Permit R13-2192 §4.1.2.]

5.1.3. Maximum production of Door Skins shall not exceed 21,591 square feet per hour nor 170,226,823 square feet per year based on a 1/8th inch basis.
[45CSR13 – Permit R13-2192 §4.1.3.]

5.1.4. Maximum production of Hogged Door Skins shall not exceed 10,796 square feet per hour nor 25,534,023 square feet per year based on a 1/8th inch basis.
[45CSR13 – Permit R13-2192 §4.1.4.]

5.1.5. ***Reserved***

5.1.6. ***Reserved***

5.1.7. Maximum primer usage shall not exceed 71.0 gallons per hour nor 506,425 gallons per year.
[45CSR13 – Permit R13-2192 §4.1.5]

5.1.8. ~~Emissions of Hazardous Air Pollutants from the Furnish Dryer (E7,E8 and E9) shall not exceed the following~~ Emissions of Hazardous Air Pollutants from the Biofilter (E18) controlling HAP emissions from the Fiber Dryer (D1), and Press Vents (PV~~), and Rotary Valve (RV)~~ shall not exceed the following:

Pollutant	Pounds per Hour	Tons Per Year
Acetaldehyde	~~0.72~~ ~~0.88~~ 0.87	~~1.36~~ 1.96
Acrolein	~~0.39~~ ~~0.68~~ 0.55	~~0.74~~ ~~1.59~~ 1.34
Benzene	0.02	0.03
Formaldehyde	~~0.62~~ 0.08	~~1.17~~ ~~0.19~~ 0.18
Methanol	~~12.09~~ ~~1.30~~ 1.26	~~22.73~~ ~~2.55~~ 2.48
Phenol	~~1.38~~ 1.91	~~2.59~~ 4.68
Propionaldehyde	~~0.39~~ 0.55	~~0.74~~ ~~1.35~~ 1.34
MDI	0.55	2.15
Total HAPs	**~~15.61~~ ~~5.97~~ 5.79**	**~~29.36~~ ~~14.5~~ 14.16**

[45CSR13 – Permit R13-2192 §4.1.6]

5.1.9. Emissions from the facility shall not exceed the following:

Emission Unit	Emission Point ID	Annual Emission Point Limit (tons per year)		
		Styrene	Formaldehyde	Methanol
Fuel Silos Fiber Line (Pre-Press) Cyclones (2-6)	E4	--	0.78	--
Wood Boiler	E5	0.47	1.10	--
Nat. Gas Boiler	E6	--	0.02	--
Fiber Dryer~~(Pre-Press),~~ & Press ~~& Rotary Valve~~	~~E7,E8,E9~~ E18	--	~~1.17~~ ~~0.19~~ 0.18	~~22.73~~ ~~2.55~~ 2.48
Fiber Line	E10	--	0.30	0.51
~~Press Vents~~	~~E11a, E11b~~	~~--~~	~~0.67~~	~~2.08~~
Fiber Line (After Press)	E12	--	0.16	--
Primeline (Ovens)	E13	--	0.01	--
Primeline (Paint Booth)	E14	0.09	0.03	--
Paint Manufacturing	E15	0.01	0.01	--
Rotary Valve	E16	--	0.02	0.73
Die Coating	E17	--	--	0.05
Total		**0.57**	~~**4.27**~~ ~~**2.6**~~ **2.61**	~~**26.1**~~ ~~**3.11**~~ **3.77**

[45CSR13 – Permit R13-2192 §4.1.7.]

5.1.10. ***Reserved***

5.1.11. Emissions from the Fiber Dryer, and Press Vents ~~and Rotary Valve~~ shall be routed to the Biofilter (BF). Said biofilter shall be designed, installed, operated, and maintained so as to achieve ~~a minimum 90% control efficiency of Methanol and Formaldehyde~~ compliance with 40 CFR 63 Subpart DDDD.
[45CSR34; 40 CFR§63.2240(b); 45CSR13 – Permit R13-2192 §4.1.8.]

~~Emissions of Hazardous Air Pollutants from the Press vents (PV-E11a,E11b) shall not exceed the following:~~

~~Pollutant~~	~~Pounds per Hour~~	~~Tons Per Year~~
~~Acetaldehyde~~	~~0.15~~	~~0.60~~
~~Acrolein~~	~~0.15~~	~~0.60~~
~~MDI~~	~~0.55~~	~~2.15~~
~~Formaldehyde~~	~~0.17~~	~~0.67~~
~~Methanol~~	~~0.53~~	~~2.08~~

~~Phenol~~	~~0.53~~	~~2.08~~
~~Propionaldehyde~~	~~0.15~~	~~0.60~~
~~**Total HAPs**~~	~~**2.23**~~	~~**8.78**~~

~~**[45CSR13 – Permit R13-2192 §4.1.8.]**~~

5.1.12. The following hourly emission rates shall not be exceeded:

Emission Point ID No.	Hourly Emission Point Limit (lb/hr)				
	CO	**NO_x**	**PM_{10}****	**SO_2**	**VOC**
E4	-----	-----	0.80	-----	-----
~~E7~~	~~0.54~~	~~0.64~~	~~0.10~~	~~-----~~	~~12.08~~
~~E8~~	~~0.54~~	~~0.64~~	~~0.10~~	~~-----~~	~~12.08~~
~~E9~~	~~0.54~~	~~0.64~~	~~0.10~~	~~-----~~	~~12.08~~
E10	-----	-----	0.73	-----	-----
E18	1.74	2.04	0.17	0.01	18.15
~~E11a, E11b~~	~~-----~~	~~-----~~	~~2.41~~	~~-----~~	~~-----~~
E12	-----	-----	6.26	-----	-----
E13	0.31	0.37	0.03	-----	21.31*
* Hourly VOC emission limit is combined total from E13 and E14~~, E14a, and E14b~~. Also, VOC emission limit includes emissions of Formaldehyde and Styrene.					

** *Compliance with these streamlined PM_{10} limits assures compliance with the 45CSR§7-4.1. PM limits.*
[45CSR13 – Permit R13-2192 §4.1.10.]

5.1.13. The following annual emission point limits shall not be exceeded.

Emission Point ID No.	Annual Emission Point Limit (TPY)				
	CO	**NO_x**	**PM_{10}**	**SO_2**	**VOC**
E4	-----	-----	2.30	-----	-----
~~E7~~	~~2.37~~	~~2.82~~	~~0.32~~	~~0.02~~	~~43.25~~
~~E8~~	~~2.37~~	~~2.82~~	~~0.32~~	~~0.02~~	~~43.25~~
~~E9~~	~~2.37~~	~~2.82~~	~~0.32~~	~~0.02~~	~~43.25~~
E10	-----	-----	1.36	-----	-----
E18	7.11	8.46	0.32	0.06	39.22
~~E11a, E11b~~	~~-----~~	~~-----~~	~~7.93~~	~~-----~~	~~-----~~
E12	-----	-----	4.32	-----	-----
E13	1.35	1.61	0.12	0.01	75.96*

* VOC emission limit is combined total from E13 and E14~~, E14a, and E14b~~. Also, VOC emission limit includes emissions of Formaldehyde and Styrene.

[45CSR13 – Permit R13-2192 §4.1.11.]

5.1.14. Maximum sodium bicarbonate usage in the die cleaning operation shall not exceed 22 tons per year based on a 12 month rolling yearly total.
[45CSR13 – Permit R13-2192 §4.1.12.]

5.1.15. *Reserved*

5.1.16. JELD-WEN shall comply with all provisions of its consent decree (Civil Action No. 3:11-453ST, DOJ No. 90-5-2-1-09567) including but not limited to the requirement to be in final compliance with the MACT no later than August 4, 2014.
[45CSR13 – Permit R13-2192 §4.1.13.]

5.1.17. **Operation and Maintenance of Air Pollution Control Equipment.** The permittee shall, to the extent practicable, install, maintain, and operate all pollution control equipment listed in Section 1.0 and associated monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions, or comply with any more stringent limits set forth in this permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary.
[45CSR13 – Permit R13-2192 §4.1.15., 45CSR§13-5.11.]

5.1.18. No person shall cause, suffer, allow or permit emission of smoke and/or particulate matter into the open air from any process source operation which is greater than twenty (20) percent opacity.
[45CSR §7-3.1.]

5.1.19. No person shall cause, suffer, allow or permit visible emissions from any storage structure(s) associated with any manufacturing process(es) that pursuant to 45CSR§7-5.1 is required to have a full enclosure and be equipped with a particulate matter control device. (*E2, E3*).
[45CSR §7-3.7.]

5.1.20. Prime Line Paint Booth particulate matter emissions vented into open air from each emission point E14~~a and E14b~~ shall not exceed 4.75 lb/hr:
[45CSR §7-4.1.]

5.1.21. Any stack serving any process source operation or air pollution control equipment on any process source operation shall contain flow straightening devices or a vertical run of sufficient length to establish flow patterns consistent with acceptable stack sampling procedures.
[45CSR §7-4.12.]

5.1.22. Due to unavoidable malfunction of equipment, emissions exceeding those set forth in 45CSR7 may be permitted by the Director for periods not to exceed ten (10) days upon specific application to the Director. Such application shall be made within twenty-four (24) hours of the malfunction. In cases of major equipment failure, additional time periods may be granted by the Director provided a corrective program has been submitted by the owner or operator and approved by the Director.
[45CSR §7-9.1.]

5.1.23. Organic HAP emissions to the atmosphere from the coating operation(s) must be limited to no more than the applicable emission limit(s) in Table 2 (i.e., 0.06 lb HAP/Gal solids)of 40 CFR 63 Subpart QQQQ. (Emission Unit PL)

[45CSR13 – Permit R13-2192 §4.1.14, 45CSR34, 40 CFR §63.4690(b)]

5.1.24. To determine compliance with the organic HAP emission limit of condition 5.1.23. above, the facility has opted to use the compliant material option and shall demonstrate that the organic HAP content of each coating used in the coating operation(s) is less than or equal to the emission limit and that each thinner and each cleaning material used contains no organic HAP. The facility must meet all of the requirements of 40 CFR §§63.4740, 63.4741 and 63.4742, (see Appendix A). *(Subpart QQQQ)*
[45CSR34, 40 CFR §63.4691(a)]

5.1.25. While using the compliant material option as specified in 40 CFR §63.4691(a), (i.e., compliant material option), the coating operation(s) must be in compliance with the applicable emission limit in 40 CFR §63.4690 (i.e., 0.06 lb HAP/Gal solids) at all times. *(Subpart QQQQ)*
[45CSR34, 40 CFR §63.4700(a)(1)]

5.1.26. As an alternative to complying with the requirements in Table 1 to 40 CFR 63 Subpart HHHHH for each individual stationary process vessel the facility has opted to use the compliant materials option and shall comply with a 5 weight percent HAP limit for process vessels that are used to manufacture coatings with a HAP content of less than 0.05 kg per kg product as specified in paragraph (b) of 40 CFR §63.8055. (Emission Unit DC2)
[45CSR34, 40 CFR §63.8055(a)]

5.2. Monitoring Requirements

5.2.1. In order to determine compliance with styrene emission limits on emission points E14 and E15 in Section 5.1.9. of this permit, the permittee shall monitor and record the amount and styrene content of the primer and polymer used.
[45CSR13 – Permit R13-2192 §4.3.7.]

5.2.2. In order to determine compliance with the methanol emission limit on emission point E17 in section 5.1.9 of this permit, the permittee shall monitor and record the amount and methanol content of the die coating used.
[45CSR13 – Permit R13-2192 §4.3.8.]

5.2.3. To determine compliance with criteria pollutant emissions limits set forth in Section 5.1.13. of this permit, results from stack tests shall be multiplied by the hours of operation for each source to which an emission limit applies. Emission factors from the results of the most recent tests shall be determined and used for compliance with section 5.1.12.
[45CSR§30-5.1.c.1.]

5.2.4. In order to determine compliance with formaldehyde emission limit on emission points E14 and E15 in condition 5.1.9 of this permit, the permittee shall monitor and record the amount and formaldehyde content of the primer and preservative used.
[45CSR13 – Permit R13-2192 §4.3.9.]

5.2.5. ~~Any future testing of the press vents required by the Director shall be performed while the press enclosure is under negative pressure that meets the criteria of 40 CFR 51 Appendix M, Method 204. Additionally, said testing shall be performed while the building is also under negative pressure.~~
Within 180 days of installation of the biofilter, the permittee shall perform or have performed testing to demonstrate compliance with ~~the methanol, and formaldehyde emission limits of condition 5.1.8 and the percent reduction requirement of~~ 40 CFR 63 Subpart DDDD as outlined in condition 5.1.11 of this permit. Said testing shall be done in accordance with 40 CFR§63.2262. **[45CSR13 – Permit R13-2192 §4.2.1.]**

5.2.6. The permittee shall operate and maintain baghouses and the permittee shall conduct a quarterly visual inspection of the bags, bag connections, and dust hoppers of the baghouses at each emission point specified, in order to ensure proper operation of the baghouses. Records shall state the date and time of each baghouse inspection, the inspection results, and corrective actions taken, if any.
[45CSR30-5.1.c., 40CFR§64.6(c)]

5.2.7. Differential pressure readings (pressure drop) across baghouses BH1a, BH1b, BH1c, BH2, BH3 and BH4 shall be taken and manually recorded on a daily basis. Any pressure drop reading less than 0.2 inches of water or greater than 4.0 inches of water is defined as an excursion per the 40CFR64 CAM Plan. The observer shall be familiar with the pressure drop operating range and the proper operation of the baghouse and will inspect the pressure gauges for proper operation.

Upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant-specific emissions unit(s), including the control device(s) and associated capture system(s), to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.

[45CSR30-5.1.c., 40CFR§64.6(c) & §64.7(d)]]

5.2.8. Within 180 days of installation of the biofilter, the permittee shall perform or have performed EPA approved testing to demonstrate compliance with the VOC emission limits of condition 5.1.12 (Emission Point E18 only).
[45CSR13 – Permit R13-2192 §4.2.2.]

5.3. Testing Requirements

5.3.1. ***Reserved*** ~~In order to determine compliance with conditions 5.1.8 and 5.1.11 of this permit, within 180 days of switching to the NAF resin the facility shall perform testing using NCASI Method ISS/FP A105.01 to determine emission levels of acetaldehyde, acrolein, formaldehyde, phenol, methanol, and propionaldehyde. To determine emission levels of MDI, Modified Method 207/CTM 036 shall be used. Alternative methods may also be used upon written approval of the Director. Results of said stack tests shall be submitted to the Director within 60 days of completion of the testing. At a minimum the press production/dryer throughput shall be recorded at the time of testing.~~
~~[45CSR13 – Permit R13-2192 §5.2.1.]~~

5.3.2. Compliance with the visible emission requirements for the process source operations emission points E4, ~~E7, E8, E9,~~ E10, ~~&~~ E12, & E18 shall be determined by conducting weekly Method 22-like visible emission checks and for the process source operations emission points E2, E3, ~~E11b,~~ E13, E14~~a, & E14b~~ monthly Method 22-like visible emission checks. At a minimum, the observer must be trained and knowledgeable regarding the effects of background contrast, ambient lighting, observer position relative to lighting, wind, and the presence of uncombined water (condensing water vapor) on the visibility of emissions. This training may be obtained from written materials found in the References 1 and 2 from 40 C.F.R. Part 60, Appendix A, Method 22 or from the lecture portion of the 40 C.F.R. Part 60, Appendix A, Method 9 certification course.

The visible emission check shall be performed during periods of normal facility operation and appropriate weather conditions and for a sufficient time interval, but no less than one (1) minute, to determine if any visible emissions are present.

If visible emissions are present during these checks or at any other time, compliance shall be determined by conducting tests in accordance with 45CSR§§7A-2.1.a. and 2.1.b. Visible emissions greater than 20 percent

opacity is defined as an excursion per the 40CFR64 CAM Plan for emission points E4, ~~E7, E8, E9,~~ E10, ~~&~~ E12, & E18.

Upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant-specific emissions unit(s), including the control device(s) and associated capture system(s), to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.

[45CSR§7A-2.1., 45CSR§30-5.1.c., 40CFR§64.6(c) & §64.7(d)]]

5.4. Recordkeeping Requirements

5.4.1. **Record of Monitoring**– See section 3.4.1.

5.4.2. **Record of Maintenance of Air Pollution Control Equipment.** For all pollution control equipment listed in Section 1.0, the permittee shall maintain accurate records of all required pollution control equipment inspection and/or preventative maintenance procedures.
[45CSR13 – Permit R13-2192 §4.3.2.]

5.4.3. **Record of Malfunctions of Air Pollution Control Equipment.** For all air pollution control equipment listed in Section 1.0, the permittee shall maintain records of the occurrence and duration of any malfunction or operational shutdown of the air pollution control equipment during which excess emissions occur. For each such case, the following information shall be recorded:

a. The equipment involved.

b. Steps taken to minimize emissions during the event.

c. The duration of the event.

d. The estimated increase in emissions during the event.

For each such case associated with an equipment malfunction, the additional information shall also be recorded:

e. The cause of the malfunction.

f. Steps taken to correct the malfunction.

g. Any changes or modifications to equipment or procedures that would help prevent future recurrences of the malfunction.

[45CSR13 – Permit R13-2192 §4.3.3.]

5.4.4. In order to determine compliance with Section 5.1.1 of this permit the permittee shall keep records of the type and amount of resin used on a monthly basis.
45CSR13 – Permit R13-2192 §4.3.4.]

5.4.5. In order to determine compliance with the production limits set forth in Sections 5.1.2, 5.1.3 and 5.1.4 of this permit the permittee shall keep records of the hours of operation and the amount of production.
[45CSR13 – Permit R13-2192 §4.3.5.]

5.4.6. In order to determine compliance with the usage limits set forth in Section 5.1.7 of this permit the permittee

shall keep records of the amount of ~~wax and~~ primer used on a monthly basis.
[45CSR13 – Permit R13-2192 §4.3.6.]

5.4.7. For CAM, the owner or operator shall comply with the recordkeeping requirements of permit conditions 3.4.1. and 3.4.2. The owner or operator shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to 40 CFR §64.8 and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under 40 CFR Part 64 (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions). **[40 CFR §64.9(b)]**

5.4.8. To demonstrate compliance with the 5 weight percent HAP limit of condition 5.1.26., records of the weight percent HAP content shall be maintained in accordance with 40 CFR §63.10(b).
[45CSR§30-5.1.c., 45CSR34, 40 CFR §63.10(b)(2)(vii)].

5.4.9. Records of all documentation supporting initial notifications and notifications of compliance status under 40 CFR § 63.9 shall be maintained accordance with 40 CFR §63.10(b).
[45CSR§30-5.1.c., 45CSR34, 40 CFR §63.10(b)(2)(xiv)]

5.4.10. Records of the data and information specified in 40 CFR §63.4730 pertaining to compliant material option must be collected and kept as specified in §63.4731 (see Appendix A). *(Subpart QQQQ)*
[45CSR34, 40 CFR §§63.4730 and 63.4731; 45CSR13 – Permit R13-2192 §4.3.11]

5.4.11. To determine compliance with usage limit set forth in Section 5.1.14 of this permit, the permittee will keep monthly records of the amount of sodium bicarbonate used at the die cleaning operation.
[45CSR13 – Permit R13-2192 §4.3.10.]

5.4.12. The permittee shall install, operate and maintain a continuous parameter monitoring system (CPMS) in accordance with 40 CFR§63.2269 and all output of said system shall be recorded.
[45CSR13 – Permit R13-2192 §4.3.12.]

5.4.13. To ensure compliance with 40 CFR 63 Subpart DDDD for the rotary valve, records shall be kept as listed in 40 CFR §§63.2282(a) & (b) and in accordance with 40 CFR§63.2283 (see Appendix A).
[45CSR34, 40 CFR §63.2283]

5.5. Reporting Requirements

5.5.1. For CAM, monitoring reports shall be submitted to the director and at a minimum shall include and be in accordance with information in permit conditions 3.5.6. and 3.5.8. as applicable. Also, at a minimum, the following information, as applicable, shall be included:

a. Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

b. Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and

A description of the actions taken to implement a QIP during the reporting period as specified in 40 CFR §64.8. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that

the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.
[40 CFR §64.9(a)]

5.5.2. Semiannual compliance report(s) shall be submitted to the WVDAQ and a copy(s) sent to USEPA Region 3 in accordance with section 3.5.6. of this permit and must contain the information specified in 40 CFR §63.4720(a) (Subpart QQQQ) and paragraphs (e)(1) through (8) of 40 CFR §63.8075 (Subpart HHHHH).
[45CSR34, 40 CFR §63.4720(a), 40 CFR §§63.8075(b) & (e) and 40 CFR §63.10]

5.5.3. To ensure compliance with 40 CFR 63 Subpart DDDD for the rotary valve, notifications must be submitted to the WVDAQ in accordance with 40 CFR §63.2280(a), (c) and (d) (see Appendix A).
[45CSR34, 40 CFR §§63.2280(a), (c), and (d)]

5.5.4. To ensure compliance with 40 CFR 63 Subpart DDDD for the rotary valve, semiannual compliance report(s) shall be submitted to the WVDAQ and a copy(s) sent to USEPA Region 3 in accordance with section 3.5.6. of this permit and must contain the information specified in 40 CFR §§63.2281(c) through (g) (see Appendix A).
[45CSR34, 40 CFR §§63.2281(c) through (g)]

5.6. Compliance Plan

5.6.1. ~~Not Applicable~~ The facility is not currently in compliance with 40 C.F.R. 63, Subpart DDDD. However, the facility has entered into a Consent Decree (Civil Action No. 11-453ST, DOJ No. 90-5-2-1-09567) with USEPA which requires initial compliance with all 40 C.F.R. 63, Subpart DDDD requirements by February 4, 2014 and final compliance by August 4, 2014. As a result of this consent decree, R13-2192O was approved for installation of the Biofilter (BF). The changes associated with R13-2192O have been incorporated in this permit by revising/removing/adding conditions 5.1.8, 5.1.9, 5.1.11, 5.1.12, 5.1.13, 5.2.5, 5.2.8, 5.3.1, 5.3.2, 5.4.12, and 5.4.13. The facility must be in initial compliance with the aforementioned conditions by February 4, 2014 and final compliance by August 4, 2014. Until the installation of the Biofilter (BF), but no later than February 4, 2014, the facility must comply with the following requirements instead of conditions 5.1.8, 5.1.9, 5.1.11, 5.1.12, 5.1.13, 5.2.5, 5.2.8, 5.3.2, 5.4.12, and 5.4.13:

5.6.1.1. Emissions of Hazardous Air Pollutants from the Furnish Dryer (E7, E8, and E9) shall not exceed the following:

Pollutant	Pounds per Hour	Tons Per Year
Acetaldehyde	0.72	1.36
Acrolein	0.39	0.74
Benzene	0.02	0.03
Formaldehyde	0.62	1.17
Methanol	12.09	22.73
Phenol	1.38	2.59
Propionaldehyde	0.39	0.74
Total HAPs	**15.61**	**29.36**

[45CSR§30-4.3.h.1.C.]

5.6.1.2. Emissions from the facility shall not exceed the following:

Emission Unit	**Emission Point ID**	**Annual Emission Point Limit (tons per year)**		
		Styrene	**Formaldehyde**	**Methanol**
Fuel Silos Fiber Line (Pre-Press) Cyclones (2-6)	E4	--	0.78	--
Wood Boiler	E5	0.47	1.10	--
Nat. Gas Boiler	E6	--	0.02	--
Fiber Dryer(Pre-Press)	E7,E8,E9	--	1.17	22.73
Fiber Line	E10	--	0.30	0.51
Press Vents	E11a, E11b	--	0.67	2.08
Fiber Line (After Press)	E12	--	0.16	--
Primeline (Ovens)	E13	--	0.01	--
Primeline (Paint Booth)	E14	0.09	0.03	--
Paint Manufacturing	E15	0.01	0.01	--
Rotary Valve	E16	--	0.02	0.73
Die Coating	E17	--	--	0.05
Total		**0.57**	**4.27**	**26.1**

[45CSR§30-4.3.h.1.C.]

5.6.1.3. Emissions of Hazardous Air Pollutants from the Press vents (PV-E11a,E11b) shall not exceed the

following:

Pollutant	Pounds per Hour	Tons Per Year
Acetaldehyde	0.15	0.60
Acrolein	0.15	0.60
MDI	0.55	2.15
Formaldehyde	0.17	0.67
Methanol	0.53	2.08
Phenol	0.53	2.08
Propionaldehyde	0.15	0.60
Total HAPs	**2.23**	**8.78**

[45CSR§30-4.3.h.1.C.]

5.6.1.4. The following hourly emission rates shall not be exceeded:

Emission Point ID No.	**Hourly Emission Point Limit (lb/hr)**				
	CO	**NO_x**	**PM_{10}****	**SO_2**	**VOC**
E4	-----	-----	0.80	-----	-----
E7	0.54	0.64	0.10	-----	12.08
E8	0.54	0.64	0.10	-----	12.08
E9	0.54	0.64	0.10	-----	12.08
E10	-----	-----	0.73	-----	-----
E11a, E11b	-----	-----	2.41	-----	-----
E12	-----	-----	6.26	-----	-----
E13	0.31	0.37	0.03	-----	21.31*

* Hourly VOC emission limit is combined total from E13, E14~~a, and E14b~~. Also, VOC emission limit includes emissions of Formaldehyde and Styrene.

*** Compliance with these streamlined PM_{10} limits assures compliance with the 45CSR§7-4.1. PM limits.*

[45CSR§30-4.3.h.1.C.]

5.6.1.5. The following annual emission point limits shall not be exceeded.

Emission Point ID No.	Annual Emission Point Limit (TPY)				
	CO	NO_x	PM_{10}	SO_2	VOC
E4	-----	-----	2.30	-----	-----
E7	2.37	2.82	0.32	0.02	43.25
E8	2.37	2.82	0.32	0.02	43.25
E9	2.37	2.82	0.32	0.02	43.25
E10	-----	-----	1.36	-----	-----
E11a, E11b	-----	-----	7.93	-----	-----
E12	-----	-----	4.32	-----	-----
E13	1.35	1.61	0.12	0.01	75.96*
* VOC emission limit is combined total from E13 E14~~a, and E14b~~. Also, VOC emission limit includes emissions of Formaldehyde and Styrene.					

[45CSR§30-4.3.h.1.C.]

5.6.1.6. Any future testing of the press vents required by the Director shall be performed while the press enclosure is under negative pressure that meets the criteria of 40 CFR 51 Appendix M, Method 204. Additionally, said testing shall be performed while the building is also under negative pressure.
[45CSR§30-4.3.h.1.C.]

5.6.1.7. In order to determine compliance with conditions 5.6.1.1 and 5.6.1.3 of this permit, within 180 days of switching to the NAF resin the facility shall perform testing using NCASI Method ISS/FP-A105.01 to determine emission levels of acetaldehyde, acrolein, formaldehyde, phenol, methanol, and propionaldehyde. To determine emission levels of MDI, Modified Method 207/CTM-036 shall be used. Alternative methods may also be used upon written approval of the Director. Results of said stack tests shall be submitted to the Director within 60 days of completion of the testing. At a minimum the press production/dryer throughput shall be recorded at the time of testing.
[45CSR§30-4.3.h.1.C.]

5.6.1.8. Compliance with the visible emission requirements for the process source operations emission points E4, E7, E8, E9, E10, & E12 shall be determined by conducting weekly Method 22-like visible emission checks and for the process source operations emission points E2, E3, E11a, E11b, E13, E14~~a, & E14b~~ monthly Method 22-like visible emission checks. At a minimum, the observer must be trained and knowledgeable regarding the effects of background contrast, ambient lighting, observer position relative to lighting, wind, and the presence of uncombined water (condensing water vapor) on the visibility of emissions. This training may be obtained from written materials found in the References 1 and 2 from 40 C.F.R. Part 60, Appendix A, Method 22 or from the lecture portion of the 40 C.F.R. Part 60, Appendix A, Method 9 certification course.

The visible emission check shall be performed during periods of normal facility operation and appropriate weather conditions and for a sufficient time interval, but no less than one (1) minute, to determine if any visible emissions are present.

If visible emissions are present during these checks or at any other time, compliance shall be determined by conducting tests in accordance with 45CSR§§7A-2.1.a. and 2.1.b. Visible emissions greater than 20 percent opacity is defined as an excursion per the 40CFR64 CAM Plan for emission points E4, E7, E8, E9, E10, & E12.

Upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant-specific emissions unit(s), including the control device(s) and associated capture system(s), to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.

[45CSR§7A-2.1., 40 CFR§§64.6(c) & 64.7(d), 45CSR§30-4.3.h.1.C.]

Table 1
Production and Process Rates
JELD-WEN, inc., Wood Fiber Division - Craigsville, West Virginia

Emission Source	Maximum Rates			
	Hourly		Annual	
Maximum Production				
Fiber Dryer Throughput	23,942	BD-lbs	45,000	BDT
Door Skins	21,591	SF-1/8"	170,226,823	SF-1/8"
Hogged Door Skins	10,796	SF-1/8"	25,534,023	SF-1/8"
Maximum Combustion Sources				
Wood-Fired Boiler - Combustion	62.5	MMBtu	492,750	MMBtu
Wood-Fired Boiler - Fuel Usage	7,805	BD-lbs	30,766	BDT
Natural Gas Boiler	37.7	MMBtu	297,227	MMBtu
Natural Gas Furnish Dryer	20.0	MMBtu	157,680	MMBtu
Primeline Oven #1	1.4	MMBtu	11,038	MMBtu
Primeline Oven #3	2.4	MMBtu	18,922	MMBtu
Maximum Truck Dump Throughput				
Purchased Furnish	38,053	BD-lbs	45,014	BDT
Maximum Raw Material Throughput				
Primer Usage	71.0	gallons	506,425	gallons
Maximum Hours of Operation				
Facility Hours		--	7,884	hours

Table 2

Wood-Fired Boiler (B1 - E5) Criteria Pollutant Emissions

JELD-WEN, inc., Wood Fiber Division - Craigsville, West Virginia

Pollutant	Emission Factor (lbs/MMBtu)		Maximum Emissions (1)	
			lbs/hr (a)	tons/yr (b)
TSP	1.64E-02	(2)	1.03	4.1
PM10	1.64E-02	(3)	1.03	4.1
SO2	2.50E-02	(4)	1.56	6.2
CO	3.24E-01	(2)	20.25	79.8
NOx	5.32E-01	(2)	33.24	131.0
VOC	1.73E-02	(2)	1.08	4.3
Lead	4.80E-05	(4)	3.00E-03	1.2E-02
N_2O	9.26E-03	(5)	5.79E-01	2.3
CH_4	7.05E-02	(5)	4.41	17.4
CO_2	207	(5)	12,925	50,949

Calculations:

(a) Maximum hourly emissions (lbs/hr) = (maximum hourly boiler combustion [MMBtu/hr]) x (emission factor [lbs/MMBtu])

Maximum hourly boiler combustion [MMBtu/hr] = 62.5 (6)

(b) Maximum annual emissions (tons/yr) = (maximum annual boiler combustion [MMBtu/yr]) x (emission factor [lbs/MMBtu]) / (2000 lbs/ton)

Maximum annual boiler combustion [MMBtu/yr] = 492,750 (6)

Notes:

(1) All emission estimates include the effect of applied control devices.

(2) Emission factors were taken from a source test performed at the JELD-WEN, inc., Wood Fiber Division - Craigsville, West Virginia facility in April 2003. Two standard deviations were added to the results as a safety factor.

(3) Calculations assume that 100% of TSP is PM_{10}.

(4) Emission factors were taken from AP-42, Chapter 1.6, Wood Residue Combustion (9/2003).

(5) US EPA Mandatory GHG Reporting rule, Table C-1 (FR Vol. 74, No. 209, 30 Oct 2009).

Table 3
Wood-Fired Boiler (B1 - E5) HAP Emissions
JELD-WEN, inc., Wood Fiber Division - Craigsville, West Virginia

HAP	Emission Factor (lbs/MMBtu)		Maximum Emissions	
			lbs/hr [(a)]	tons/yr [(b)]
1,1,1-Trichloroethane	3.1E-05	(1)	1.9E-03	7.6E-03
1,2-Dichloroethane	2.9E-05	(1)	1.8E-03	7.1E-03
1,2-Dichloropropane	3.3E-05	(1)	2.1E-03	8.1E-03
2,4-Dinitrophenol	1.8E-07	(1)	1.1E-05	4.4E-05
4-Nitrophenol	1.1E-07	(1)	6.9E-06	2.7E-05
Acenaphthene	9.1E-07	(1)	5.7E-05	2.2E-04
Acenaphthylene	5.0E-06	(1)	3.1E-04	1.2E-03
Acetaldehyde	8.3E-04	(1)	5.2E-02	2.0E-01
Acetophenone	3.2E-09	(1)	2.0E-07	7.9E-07
Acrolein	4.0E-03	(1)	2.5E-01	9.9E-01
Anthracene	3.0E-06	(1)	1.9E-04	7.4E-04
Antimony	7.9E-06	(2)	4.9E-04	1.9E-03
Arsenic	2.2E-05	(2)	1.4E-03	5.4E-03
Benz(a)anthracene	6.5E-08	(1)	4.1E-06	1.6E-05
Benzene	4.2E-03	(1)	2.6E-01	1.0
Benzo(a)pyrene	2.6E-06	(1)	1.6E-04	6.4E-04
Benzo(b)fluoranthene	1.0E-07	(1)	6.3E-06	2.5E-05
Benzo(g,h,i)perylene	9.3E-08	(1)	5.8E-06	2.3E-05
Benzo(k)fluoranthene	3.6E-08	(1)	2.3E-06	8.9E-06
Beryllium	1.1E-06	(2)	6.9E-05	2.7E-04
bis(2-Ethylhexyl)phthalate	4.7E-08	(1)	2.9E-06	1.2E-05
Bromomethane	1.5E-05	(1)	9.4E-04	3.7E-03
Cadmium	4.1E-06	(2)	2.6E-04	1.0E-03
Carbon tetrachloride	4.5E-05	(1)	2.8E-03	1.1E-02
Chlorine	7.9E-04	(1)	4.9E-02	1.9E-01
Chlorobenzene	3.3E-05	(1)	2.1E-03	8.1E-03
Chloroform	2.8E-05	(1)	1.8E-03	6.9E-03
Chloromethane	2.3E-05	(1)	1.4E-03	5.7E-03
Chromium (total)	2.1E-05	(2)	1.3E-03	5.2E-03
Chrysene	3.8E-08	(1)	2.4E-06	9.4E-06
Cobalt	6.5E-06	(2)	4.1E-04	1.6E-03
Dibenzo(a,h)anthracene	9.1E-09	(1)	5.7E-07	2.2E-06
Dichloromethane	2.9E-04	(1)	1.8E-02	7.1E-02
Ethylbenzene	3.1E-05	(1)	1.9E-03	7.6E-03
Fluoranthene	1.6E-06	(1)	1.0E-04	3.9E-04
Fluorene	3.4E-06	(1)	2.1E-04	8.4E-04
Formaldehyde	4.4E-03	(1)	2.8E-01	1.1
Hydrogen chloride	1.9E-02	(1)	1.2	4.7
Indeno(1,2,3,c,d)pyrene	8.7E-08	(1)	5.4E-06	2.1E-05

Table 3

Wood-Fired Boiler (B1 - E5) HAP Emissions

JELD-WEN, inc., Wood Fiber Division - Craigsville, West Virginia

HAP	Emission Factor (lbs/MMBtu)		Maximum Emissions	
			lbs/hr [(a)]	tons/yr [(b)]
Manganese	1.6E-03	(2)	1.0E-01	3.9E-01
Mercury	3.5E-06	(2)	2.2E-04	8.6E-04
Naphthalene	9.7E-05	(1)	6.1E-03	2.4E-02
Nickel	3.3E-05	(2)	2.1E-03	8.1E-03
Pentachlorophenol	5.1E-08	(1)	3.2E-06	1.3E-05
Phenanthrene	7.0E-06	(1)	4.4E-04	1.7E-03
Phenol	5.1E-05	(1)	3.2E-03	1.3E-02
Polychlorinated biphenyls	8.1E-09	(1)	5.1E-07	2.0E-06
Polychlorinated dioxins	1.7E-06	(1)	1.0E-04	4.1E-04
Polychlorinated furans	1.9E-09	(1)	1.2E-07	4.6E-07
Propionaldehyde	6.1E-05	(1)	3.8E-03	1.5E-02
Pyrene	3.7E-06	(1)	2.3E-04	9.1E-04
Selenium	2.8E-06	(2)	1.8E-04	6.9E-04
Styrene	1.9E-03	(1)	1.2E-01	4.7E-01
Tetrachloroethylene	3.8E-05	(1)	2.4E-03	9.4E-03
Toluene	9.2E-04	(1)	5.8E-02	2.3E-01
Trichloroethylene	3.0E-05	(1)	1.9E-03	7.4E-03
Vinyl chloride	1.8E-05	(1)	1.1E-03	4.4E-03
Xylenes	2.5E-05	(1)	1.6E-03	6.2E-03
	Total HAPs		2.42	9.52

Calculations:

(a) Maximum hourly emissions (lbs/hr) = (maximum hourly boiler combustion [MMBtu/hr]) x (emission factor [lbs/MMBtu])

Maximum hourly boiler combustion [MMBtu/hr] = 62.5 (3)

(b) Maximum annual emissions (tons/yr) = (maximum annual boiler combustion [MMBtu/yr]) x (emission factor [lbs/MMBtu]) / (2000 lbs/ton)

Maximum annual boiler combustion [MMBtu/yr] = 492,750 (3)

Notes:

(1) Emission factors were taken from AP-42, Chapter 1.6, Table 1.6-3, Emission Factors for Speciated Organic Compounds from Wood Residue Combustion (September 2003).

(2) Emission factors were taken from AP-42, Chapter 1.6, Table 1.6-4, Emission Factors for Trace Elements from Wood Residue Combustion (September 2003).

(3) See Table 1, Production and Process Rates.

JELD-WEN WINDOWS & DOORS

Table 4

Natural Gas-Fired Boiler (B2 - E6) Criteria Pollutant Emissions

JELD-WEN, inc., Wood Fiber Division - Craigsville, West Virginia

Pollutant	Emission Factor (lbs/MMscf)		Maximum Emissions	
			lbs/hr [(a)]	tons/yr [(b)]
TSP	7.6	(1)	0.28	1.09
PM10	7.6	(2)	0.28	1.09
SO2	0.6	(1)	0.02	0.09
CO	0.7	(3)	0.03	0.10
NOx	170	(3)	6.20	24.45
VOC	5.5	(1)	0.20	0.79
Lead	5.0E-04	(1)	1.8E-05	7.2E-05
N_2O	2.68E-04	(4)	1.01E-02	0.04
CH_4	2.68E-03	(4)	0.10	0.40
CO_2	142	(4)	5,353	21,103

Calculations:

(a) Maximum hourly emissions (lbs/hr) = (emission factor [lbs/MMscf]) x (maximum hourly boiler combustion [MMBtu/hr]) / (natural gas heating value [MMBtu/MMscf])

Maximum hourly boiler combustion [MMBtu/hr] = 37.7 (5)

Natural gas heating value [MMBtu/MMscf] = 1,036 (6)

(b) Maximum annual emissions (tons/yr) = (emission factor [lbs/MMscf]) x (maximum annual boiler combustion [MMBtu/yr]) / (natural gas heating value [MMBtu/MMscf]) / (2000 lbs/ton)

Maximum annual boiler combustion [MMBtu/yr] = 297,227 (5)

Natural gas heating value [MMBtu/MMscf] = 1,036 (6)

Notes:

(1) Emission factors were taken from AP-42, Chapter 1.4, Natural Gas Combustion (7/1998).

(2) Calculations assume that 100% of TSP is PM_{10}.

(3) Emission factors were taken from an engineering source test performed at the JELD-WEN, inc., Wood Fiber Division - Craigsville, West Virginia facility in April 2003.
The emission factors are equal to the average of the test values plus two standard deviations.

(4) US EPA Mandatory GHG Reporting rule, Table C-1 (FR Vol. 74, No. 209, 30 Oct 2009).

(5) See Table 1, Production and Process Rates.

(6) Provided by Hope Natural Gas.

Table 5

Natural Gas-Fired Boiler (B2 - E6) HAP Emissions

JELD-WEN, inc., Wood Fiber Division - Craigsville, West Virginia

HAP	Emission Factor (lbs/MMscf)		Maximum Emissions	
			lbs/hr [(a)]	tons/yr [(b)]
Acenaphthene	1.8E-06	(1)	6.6E-08	2.6E-07
Acenaphthylene	1.8E-06	(1)	6.6E-08	2.6E-07
Anthracene	2.4E-06	(1)	8.7E-08	3.4E-07
Arsenic	2.0E-04	(2)	7.3E-06	2.9E-05
Benz(a)anthracene	1.8E-06	(1)	6.6E-08	2.6E-07
Benzene	2.1E-03	(1)	7.6E-05	3.0E-04
Benzo(a)pyrene	1.2E-06	(1)	4.4E-08	1.7E-07
Benzo(b)fluoranthene	1.8E-06	(1)	6.6E-08	2.6E-07
Benzo(g,h,i)perylene	1.2E-06	(1)	4.4E-08	1.7E-07
Benzo(k)fluoranthene	1.8E-06	(1)	6.6E-08	2.6E-07
Beryllium	1.2E-05	(2)	4.4E-07	1.7E-06
Cadmium	1.1E-03	(2)	4.0E-05	1.6E-04
Chromium (total)	1.4E-03	(2)	5.1E-05	2.0E-04
Chrysene	1.8E-06	(1)	6.6E-08	2.6E-07
Cobalt	8.4E-05	(2)	3.1E-06	1.2E-05
Dibenzo(a,h)anthracene	1.2E-06	(1)	4.4E-08	1.7E-07
Fluoranthene	3.0E-06	(1)	1.1E-07	4.3E-07
Fluorene	2.8E-06	(1)	1.0E-07	4.0E-07
Formaldehyde	7.5E-02	(1)	2.7E-03	1.1E-02
Hexane	1.8E+00	(1)	6.6E-02	2.6E-01
Indeno(1,2,3,c,d)pyrene	1.8E-06	(1)	6.6E-08	2.6E-07
Manganese	3.8E-04	(2)	1.4E-05	5.5E-05
Mercury	2.6E-04	(2)	9.5E-06	3.7E-05
Naphthalene	6.1E-04	(1)	2.2E-05	8.8E-05
Nickel	2.1E-03	(2)	7.6E-05	3.0E-04
Phenanthrene	1.7E-05	(1)	6.2E-07	2.4E-06
Pyrene	5.0E-06	(1)	1.8E-07	7.2E-07
Selenium	2.4E-05	(2)	8.7E-07	3.4E-06

Table 5
Natural Gas-Fired Boiler (B2 - E6) HAP Emissions
JELD-WEN, inc., Wood Fiber Division - Craigsville, West Virginia

HAP	Emission Factor (lbs/MMscf)		Maximum Emissions	
			lbs/hr [(a)]	tons/yr [(b)]
Toluene	3.4E-03	(1)	1.2E-04	4.9E-04
2-Methylnaphthalene	2.4E-05	(1)	8.7E-07	3.4E-06
3-Methylchloranthrene	1.8E-06	(1)	6.6E-08	2.6E-07
Dichlorobenzene	1.2E-03	(1)	4.4E-05	1.7E-04
7,12-Dimethylbenz(a)anthracene	1.6E-05	(1)	5.8E-07	2.3E-06
	Total HAPs		0.07	0.27

Calculations:

(a) Maximum hourly emissions (lbs/hr) = (emission factor [lbs/MMscf]) x (maximum hourly boiler combustion [MMBtu/hr]) / (natural gas heating value [MMBtu/MMscf])

Maximum hourly boiler combustion [MMBtu/hr] = 37.7 (3)

Natural gas heating value [MMBtu/MMscf] = 1,036 (4)

(b) Maximum annual emissions (tons/yr) = (emission factor [lbs/MMscf]) x (maximum annual boiler combustion [MMBtu/yr]) / (natural gas heating value [MMBtu/MMscf]) / (2000 lbs/ton)

Maximum annual boiler combustion [MMBtu/yr] = 297,227 (3)

Natural gas heating value [MMBtu/MMscf] = 1,036 (4)

Notes:

(1) Emission factors were taken from AP-42, Chapter 1.4, Table 1.4-3, Emission Factors for Speciated Organic Compounds from Natural Gas Combustion (July 1998).

(2) Emission factors were taken from AP-42, Chapter 1.4, Table 1.4-4, Emission Factors for Metals from Natural Gas Combustion (July 1998).

(3) See Table 1, Production and Process Rates.

(4) Provided by Hope Natural Gas.

Table 6
Truck Dump (TD) Fugitive Particulate Emissions
JELD-WEN, inc., Wood Fiber Division - Craigsville, West Virginia

Emission Unit	Pollutant	Fraction of Material [(1)] (%)	Maximum Emissions	
			lbs/hr [(a)]	tons/yr [(b)]
Truck Dump (TD)	TSP	0.0085%	3.23	4.7
	PM10	0.0021%	0.81	1.2
East Furnish Silo (FSE)	TSP	0.0085%	1.62	1.9
	PM10	0.0021%	0.40	0.5
West Furnish Silo (FSW)	TSP	0.0085%	1.62	1.9
	PM10	0.0021%	0.40	0.5
		Total TSP	6.47	8.5
		Total PM10	1.62	2.1

Calculations:

(a) Maximum hourly emissions (lbs/hr) = (maximum hourly truck dump throughput [BD-lb/hr]) x (fraction of material [%])

Maximum hourly truck dump throughput [BD-lb/hr] =	38,053	(2)
Maximum hourly east furnish silo throughput [BD-lb/hr] =	19,026	(3)
Maximum hourly west furnish silo throughput [BD-lb/hr] =	19,026	(3)

(b) Maximum annual emissions (tons/yr) = (maximum annual truck dump throughput [BDT/yr]) x (fraction of material [%])

Maximum annual truck dump throughput [BDT/yr] =	55,574	(2)
Maximum annual east furnish silo throughput [BDT/yr] =	22,507	(3)
Maximum annual west furnish silo throughput [BDT/yr] =	22,507	(3)

Notes:

(1) Based on a particle size analysis of plytrim. Material less than 150 microns in diameter was conservatively assumed to be TSP. The PM_{10} emissions were assumed to be 25% of the TSP emissions.

(2) See Table 1, Production and Process Rates. Sum of the furnish and wood fuel truck dump throughputs.

(3) See Table 1, Production and Process Rates. Assumes each furnish silo receives half of the furnish truck dump throughput.

Table 7
Biofilter (BF-E18) Estimated Emissions
JELD-WEN, inc., Wood Fiber Division - Craigsville, West Virginia

Pollutant	Maximum Emissions at Biofilter Inlet		Maximum Estimated Biofilter Outlet Emissions			
	lbs/hr (1)	tons/yr (1)	lbs/hr (a)		tons/yr (b)	
TSP	0.17	0.32	0.17	(a)	0.32	(b)
PM10	0.17	0.32	0.17	(a)	0.32	(b)
VOC	30.65	64.29	17.72	(c)	38.42	(d)
CO	1.74	6.88	1.74	(a)	6.88	(b)
NOx	2.04	8.04	2.04	(a)	8.04	(b)
Acetaldehyde	*0.87*	*1.96*	0.87	(a)	1.96	(b)
Acrolein	*0.55*	*1.34*	0.55	(a)	1.34	(b)
Benzene	*0.02*	*0.03*	0.02	(a)	0.03	(b)
Formaldehyde	*0.79*	*1.84*	0.08	(a)	0.18	(b)
Methanol	*12.62*	*24.81*	1.26	(a)	2.48	(b)
Phenol	*1.91*	*4.68*	1.91	(a)	4.68	(b)
Propionaldehyde	*0.55*	*1.34*	0.55	(a)	1.34	(b)
MDI	*0.55*	*2.15*	0.55	(a)	2.15	(b)
		Total HAP	5.78		14.2	

Calculations:

(a) Maximum hourly emissions at biofilter oulet (lbs/hr) = (maximum hourly emissions at biofilter inlet [lbs/hr]) x (1 - pollutant control efficiency [%])

(b) Maximum annual emissions at biofilter outlet (tons/yr) = (maximum annual emissions at biofilter inlet [tons/yr]) x (1 - pollutant control efficiency [%])

biofilter VOC control efficiency [%] = 5% (2)

Methanol & Formaldehyde control efficiency [%] = 90% (2)

Other HAP control efficiency [%] = 0% (2)

biofilter TSP/PM10 control efficiency [%] = 0% (2)

(c) Maximum hourly VOC emissions at biofilter oulet (lbs/hr) = (VOC emissions at inlet [lbs/hr] - Formaldehyde emissions at inlet [lbs/hr] - Methanol emissions at inlet [lbs/hr]) x (1 - VOC control efficiency [%]) + Formaldehyde emissions at oulet [lbs/hr] + Methanol emissions at oulet [lbs/hr]

(d) Maximum annual VOC emissions at biofilter oulet (tons/yr) = (VOC emissions at inlet [tons/yr] - Formaldehyde emissions at inlet [tons/yr] - Methanol emissions at inlet [tons/yr]) x (1 - VOC control efficiency [%]) + Formaldehyde emissions at oulet [tons/yr] + Methanol emissions at oulet [tons/y

Notes:

(1) See Tables 7a - 7d and Table 9, *Non-detects were assumed at the detection level and are represented in italics*

(2) Provided by MET-PRO, biofilter manufacturer.
For conservacy, JELD-WEN is using 5% VOC control efficiency rather than the estimated 10% control efficiency provide by MET-PRO.

Table 7a

Press Vents Emissions TO BIOFILTER

JELD-WEN, inc., Wood Fiber Division - Craigsville, West Virginia

Pollutant	Emission Factor (lbs/MSF-1/8")		Maximum Uncontrolled Emissions **TO BIOFILTER**	
			lbs/hr [(a)]	tons/yr [(b)]
TSP / PM10	4.2E-02	(1)	7.24E-04	2.85E-03
VOC	1.5E-01	(2)	3.13	12.34
CO	5.7E-03	(4)	0.12	0.49
NOx	5.0E-03	(4)	0.11	0.43
Acetaldehyde	*7.01E-03*	(3)	*0.15*	*0.60*
Acrolein	*7.07E-03*	(3)	*0.15*	*0.60*
Formaldehyde	7.87E-03	(3)	0.17	0.67
Methanol	2.45E-02	(3)	0.53	2.08
Phenol	*2.45E-02*	(3)	*0.53*	*2.08*
Propionaldehyde	*7.07E-03*	(3)	*0.15*	*0.60*
MDI	2.53E-02	(3)	0.55	2.15
	Total HAP		2.23	8.80

Calculations:

(a) Maximum hourly emissions (lbs/hr) = (maximum hourly door skin production [MSF-1/8"/hr]) x (emission factor [lbs/MSF-1/8"]) x (1-baghouse TSP/PM10 control efficiency)

Maximum hourly door skin production [MSF-1/8"/hr] = 21.59 (5)

Press Vent baghouse TSP/PM10 control efficiency [%] = 99.92% (6)

(b) Maximum annual emissions (tons/yr) = (annual door skin production [MSF-1/8"/yr]) x (emission factor [lbs/MSF-1/8"]) x (1-baghouse TSP/PM10 control efficiency) / (2000 lbs/ton)

Maximum annual door skin production [MSF-1/8"/yr] = 170,226.8 (5)

Notes:

(1) Emission factors were taken from an engineering source test performed at the JELD-WEN, Wood Fiber Division - Craigsville, West Virginia facility in April 2003. Calculations assume that 100% of TSP is PM_{10}.

(2) Emission factors were taken from AP-42, Chapter 10.6.3, Table 10.6.3-6, Medium Density Fiberboard Manufacturing (expressed as VOC as methane). This factor includes the emissions of some HAPs, however, may not accurately estimate emissions of VOC.

(3) Emission factors were taken from a MACT source test performed at the JELD-WEN, inc., Wood Fiber Division - Craigsville, West Virginia facility in January 16-17, 2008. NCASI Method 105.01, Horizon Eng. testing company.
MDI was tested using EPA Conditional Test Method 031
Non-detects were assumed at the detection level and are represented in italics
The emission factors are equal to the average of the test values plus two standard deviations.

(4) Emission factors were taken from AP-42, Chapter 10.6.3, Medium Density Fiberboard (8/2002).

(5) See Table 1, Process Rates.

(6) See Table 9, Baghouse TSP/PM10 Emissions

Table 7b
Furnish Dryer HAP/VOC Emissions TO BIOFILTER
JELD-WEN, inc., Wood Fiber Division - Craigsville, West Virginia

Pollutant	Emission Factor (lbs/ODT)		Maximum Uncontrolled Emissions **TO BIOFILTER**			
			lbs/hr [(a)]		tons/yr [(b)]	
VOC	2.29	(1)	30.65	(a)	64.3	(b)
CO		(4)	1.74	(4)	6.9	(4)
NOx		(4)	2.04	(4)	8.0	(4)
Acetaldehyde	6.04E-02	(2)	0.87	(a)	1.96	(b)
Acrolein	*3.30E-02*	(2)	*0.55*	(a)	*1.34*	(b)
Benzene	*1.43E-03*	(3)	*0.02*	(a)	*3.2E-02*	(b)
Formaldehyde	5.22E-02	(2)	0.79	(a)	1.84	(b)
Methanol	1.01	(2)	12.62	(a)	24.81	(b)
Phenol	*1.15E-01*	(2)	*1.91*	(a)	*4.68*	(b)
Propionaldehyde	*3.30E-02*	(2)	*0.55*	(a)	*1.34*	(b)
MDI		(4)	*0.55*	(4)	*2.15*	(4)
	Total HAP		17.31		36.01	

Calculations:

(a) Maximum hourly emissions (lbs/hr) = ((maximum hourly dryer throughput [dry-lbs/hr]) / 2000 x (emission factor [lbs/ODT]) + Press Vent emissions (PV) + Dryer natural gas combustion emissions

Maximum hourly dryer throughput [dry-lbs/hr] = 23,942 (5)

(b) Maximum annual emissions (tons/yr) = ((maximum annual dryer throughput [BDT/yr]) x (emission factor [lbs/ODT]) / 2000 + Press Vent emissions (PV) + Dryer natural gas combustion emissions

Maximum annual dryer throughput [dry-tons/yr] one line = 45,000 (5)

Notes:

(1) Emission factors were taken from AP-42, Chapter 10.6.3, Table 10.6.3-3, Medium Density Fiberboard Manufacturing (expressed as VOC as methane). This factor includes the emissions of some HAPs, however, may not accurately estimate emissions of VOC.

(2) Emission factors were taken from a MACT source test performed at the JELD-WEN, inc., Wood Fiber Division - Craigsville, West Virginia facility on January 17, 2008 (Condition 1). Emission factors are equal to the average of the test values plus two standard deviations. The emission factors are equal to the average of the test values plus two standard deviations.

(3) Emission factor for benzene was taken from a MACT source test performed at the JELD-WEN, inc., Wood Fiber Division - Craigsville, West Virginia facility on March 20, 2007 and June 5, 2007 (DEECO, NC, Method 18)
Non-detected values were assumed to be at the detection level and are represented in italics

(4) See Table 7a, Press Vents Emissions TO BIOFILTER and Table 7d Furnish Dryer Natural Gas Combustion Criteria Pollutant Emissions TO BIOFILTER. Press Vent and Dryer natural gas combustions emissions are vented into the Dryer (D1) inlet.

(5) See Table 1, Production and Process Rates.

JELD-WEN WINDOWS & DOORS

Table 7c

Furnish Dryer Natural Gas Combustion Criteria Pollutant Emissions TO BIOFILTER
JELD-WEN, inc., Wood Fiber Division - Craigsville, West Virginia

Pollutant	Emission Factor (lbs/MMscf)		Maximum Uncontrolled Emissions **TO BIOFILTER**	
			lbs/hr [(a)]	tons/yr [(b)]
TSP	7.6	(2)	7.3E-07	2.9E-06
PM10	7.6	(3)	7.3E-07	2.9E-06
SO2	0.6	(2)	1.16E-02	4.6E-02
CO	84	(2)	1.62	6.4
NOx	100	(2)	1.93	7.6
VOC	5.5	(2)	1.1E-01	4.2E-01
Lead	5.0E-04	(2)	9.7E-06	3.8E-05
N_2O	2.68E-04	(4)	5.36E-03	0.02
CH_4	2.68E-03	(4)	0.05	0.21
CO_2	142	(4)	2,840	11,195

Calculations:

(a) Maximum hourly emissions (lbs/hr) = (emission factor [lbs/MMscf]) x (maximum hourly dryer combustion [MMBtu/hr]) / (natural gas heating value [MMBtu/MMscf])

Maximum hourly dryer combustion [MMBtu/hr] = 20.0 (5)

Natural gas heating value [MMBtu/MMscf] = 1,036 (6)

(b) Maximum annual emissions (tons/yr) = (emission factor [lbs/MMscf]) x (maximum annual dryer combustion [MMBtu/yr]) / (natural gas heating value [MMBtu/MMscf]) / (2000 lbs/ton)

Maximum annual dryer combustion [MMBtu/yr] = 157,680 (5)

Natural gas heating value [MMBtu/MMscf] = 1,036 (6)

Notes:

(1) Emissions from the furnish dryer are controlled by baghouses. Since the control device is not included in the AP-42 emission factor, particulate emissions include the control effect of the baghouses and the dryer cyclone.

(2) Emission factors were taken from AP-42, Chapter 1.4, Natural Gas Combustion (7/1998).

(3) Calculations assume that 100% of TSP is PM_{10}.

(4) US EPA Mandatory GHG Reporting rule, Table C-1 (FR Vol. 74, No. 209, 30 Oct 2009).

(5) See Table 1, Production and Process Rates.

(6) Provided by Hope Natural Gas.

JELD-WEN WINDOWS & DOORS

Table 7d

Furnish Dryer Natural Gas Combustion HAP Emissions TO BIOFILTER
JELD-WEN, inc., Wood Fiber Division - Craigsville, West Virginia

HAP	Emission Factor (lbs/MMscf)		Maximum Uncontrolled Emissions **TO BIOFILTER**	
			lbs/hr [(a)]	tons/yr [(b)]
Acenaphthene	1.8E-06	(1)	3.5E-08	1.4E-07
Acenaphthylene	1.8E-06	(1)	3.5E-08	1.4E-07
Anthracene	2.4E-06	(1)	4.6E-08	1.8E-07
Arsenic	2.0E-04	(2)	3.9E-06	1.5E-05
Benz(a)anthracene	1.8E-06	(1)	3.5E-08	1.4E-07
Benzene	--	(3)	--	--
Benzo(a)pyrene	1.2E-06	(1)	2.3E-08	9.1E-08
Benzo(b)fluoranthene	1.8E-06	(1)	3.5E-08	1.4E-07
Benzo(g,h,i)perylene	1.2E-06	(1)	2.3E-08	9.1E-08
Benzo(k)fluoranthene	1.8E-06	(1)	3.5E-08	1.4E-07
Beryllium	1.2E-05	(2)	2.3E-07	9.1E-07
Cadmium	1.1E-03	(2)	2.1E-05	8.4E-05
Chromium (total)	1.4E-03	(2)	2.7E-05	1.1E-04
Chrysene	1.8E-06	(1)	3.5E-08	1.4E-07
Cobalt	8.4E-05	(2)	1.6E-06	6.4E-06
Dibenzo(a,h)anthracene	1.2E-06	(1)	2.3E-08	9.1E-08
Fluoranthene	3.0E-06	(1)	5.8E-08	2.3E-07
Fluorene	2.8E-06	(1)	5.4E-08	2.1E-07
Formaldehyde	--	(3)	--	--
Hexane	1.8E+00	(1)	3.5E-02	1.4E-01
Indeno(1,2,3,c,d)pyrene	1.8E-06	(1)	3.5E-08	1.4E-07
Manganese	3.8E-04	(2)	7.3E-06	2.9E-05
Mercury	2.6E-04	(2)	5.0E-06	2.0E-05
Naphthalene	6.1E-04	(1)	1.2E-05	4.6E-05
Nickel	2.1E-03	(2)	4.1E-05	1.6E-04
Phenanthrene	1.7E-05	(1)	3.3E-07	1.3E-06
Pyrene	5.0E-06	(1)	9.7E-08	3.8E-07
Selenium	2.4E-05	(2)	4.6E-07	1.8E-06

Table 7d
Furnish Dryer Natural Gas Combustion HAP Emissions TO BIOFILTER
JELD-WEN, inc., Wood Fiber Division - Craigsville, West Virginia

HAP	Emission Factor (lbs/MMscf)		Maximum Uncontrolled Emissions **TO BIOFILTER**	
			lbs/hr [(a)]	tons/yr [(b)]
Toluene	3.4E-03	(1)	6.6E-05	2.6E-04
2-Methylnaphthalene	2.4E-05	(1)	4.6E-07	1.8E-06
3-Methylchloranthrene	1.8E-06	(1)	3.5E-08	1.4E-07
Dichlorobenzene	1.2E-03	(1)	2.3E-05	9.1E-05
7,12-Dimethylbenz(a)anthracene	1.6E-05	(1)	3.1E-07	1.2E-06
	Total HAPs		0.03	0.14

Calculations:

(a) Maximum hourly emissions (lbs/hr) = (emission factor [lbs/MMscf]) x (maximum hourly dryer combustion [MMBtu/hr]) / (natural gas heating value [MMBtu/MMscf])

Maximum hourly dryer combustion [MMBtu/hr] = 20.0 (4)
Natural gas heating value [MMBtu/MMscf] = 1,036 (5)

(b) Maximum annual emissions (tons/yr) = (emission factor [lbs/MMscf]) x (maximum annual dryer combustion [MMBtu/yr]) / (natural gas heating value [MMBtu/MMscf]) / (2000 lbs/ton)

Maximum annual dryer combustion [MMBtu/yr] = 157,680 (4)
Natural gas heating value [MMBtu/MMscf] = 1,036 (5)

Notes:

(1) Emission factors were taken from AP-42, Chapter 1.4, Table 1.4-3, Emission Factors for Speciated Organic Compounds from Natural Gas Combustion (July 1998).

(2) Emission factors were taken from AP-42, Chapter 1.4, Table 1.4-4, Emission Factors for Metals from Natural Gas Combustion (July 1998).

(3) Benzene and formaldehyde emissions are included in Table 7 and were taken from source test data performed at the JELD-WEN, Wood Fiber Division, Craigsville, West Virginia facility.

(4) See Table 1, Production and Process Rates.

(5) Provided by Hope Natural Gas.

Table 8

Rotary Valve (pre-refiner) VOC/HAP Emissions TO BIOFILTER

JELD-WEN, inc., Wood Fiber Division - Craigsville, West Virginia

Pollutant	Emission Factor (lbs/ODT)		Maximum Emissions			
			lbs/hr		tons/yr	
TSP	0.01% of Chip Cyclone Throughput	(1)	2.35	(a)	4.41	(b)
PM10	0.01% of Chip Cyclone Throughput	(1)	0.59	(a)	1.10	(b)
VOC	6.73E-02	(2)	0.81	(c)	1.5	(d)
Acetaldehyde	*3.32E-04*	(3)	*3.97E-03*	(c)	*7.5E-03*	(d)
Acrolein	1.09E-02	(3)	1.31E-01	(c)	2.5E-01	(d)
Formaldehyde	6.64E-04	(3)	7.94E-03	(c)	1.5E-02	(d)
Methanol	3.23E-02	(3)	3.86E-01	(c)	7.3E-01	(d)
Phenol	*3.32E-04*	(3)	*3.97E-03*	(c)	*7.5E-03*	(d)
Propionaldehyde	*3.32E-04*	(3)	*3.97E-03*	(c)	*7.5E-03*	(d)
	Total HAP		0.54		1.0	

Calculations:

(a) Maximum hourly TSP emissions (lbs/hr) = ((maximum hourly chip cyclone throughput [OD-lbs/hr]) x (Chip Cyclone Efficiency [%]) x 0.01%)

Maximum Hourly Chip Cyclone Throughput [OD-lbs/hr] = 23,944 (4)

Chip Cyclone Efficiency = 98% (5)

(b) Maximum annual emissions (tons/year) = ((maximum annual chip cyclone throughput [ODT/yr]) x (Chip Cyclone Efficiency [%]) x 0.01%)

Maximum Annual Chip Cleaning Cyclone Throughput [ODT/year] = 45,004 (4)

(c) Maximum hourly VOC/HAP emissions (lbs/hr) = ((maximum hourly chip cyclone throughput [OD-lbs/hr])/2000 x (emission factor [lbs/ODT])

(d) Maximum annual VOC/HAP emissions (tons/year) = ((maximum annual chip cyclone throughput [ODT/yr]) x (emission factor [lbs/ODT]) / (2000 [lbs/ton])

Notes:

(1) Engineering Judgment Provided by JELD-WEN Engineering.
The PM_{10} emissions were assumed to be 25% of the TSP emissions.

(2) VOC emission factor is based on sum of HAP emission factors times 1.5 safety factor. This factor is an estimation of VOCs from this emission point.

(3) Emission factors were taken from a MACT source test performed at the JELD-WEN, inc., Wood Fiber Division - Craigsville, West Virginia facility on March 20,2007.

Non-detects were assumed at the detection level and are represented in italics

(4) See Table 1, Production and Process Rates.

(5) See Table 8, Baghouse TSP/PM10 Emissions.

JELD-WEN WINDOWS & DOORS

Table 9
Baghouse TSP/PM_{10} Emissions
JELD-WEN, inc., Wood Fiber Division - Craigsville, West Virginia

Emission Unit	Source ID	Emission Point ID	Maximum Hourly Throughput (lbs/hr)	Maximum Annual Throughput (ODT/yr)	Control Efficiency (%)	Maximum Emissions (1)	
						lbs/hr (a)	tons/yr (b)
Dryer Cyclone	C1	E18	30,258 (2)	56,716 (2)	99.00% (12)	-- (17)	-- (17)
Dryer Baghouse #1	BH1a	E18	110.9 (3)	207.9 (3)	99.95% (13)	0.06 (21)	1.0E-01
Dryer Baghouse #2	BH1b	E18	110.9 (3)	207.9 (3)	99.95% (13)	0.06 (21)	1.0E-01
Dryer Baghouse #3	BH1c	E18	110.9 (3)	207.9 (3)	99.95% (13)	0.06 (21)	1.0E-01
Dryer BH Purge Cyclone	C8	E18	302.4 (20)	566.9 (20)	90.00% (15)	-- (17)	-- (17)
Former Baghouse	BH2	E10	917 (4)	1,699 (4)	99.92% (14)	0.73	1.4
Waste Baghouse	BH3	E4	374 (5)	684 (5)	99.92% (14)	0.30	5.5E-01
Recycle Cyclone	C2	E4	1,404 (6)	2,559 (6)	95.00% (15)	-- (17)	-- (17)
Waste Cyclone	C3	E4	3,037 (7)	5,564 (7)	90.00% (16)	-- (17)	-- (17)
Middle Reject Cyclone	C4	E4	1,404 (8)	2,559 (8)	95.00% (15)	-- (17)	-- (17)
Chip Cyclone	C6	E4	23,944 (9)	45,004 (9)	98.00% (15)	-- (17)	-- (17)
Sizer Baghouse	BH4	E12	12,522 (10)	8,410 (10)	99.95% (14)	6.26	4.2
Chip Cleaning Cyclone	C5	E12	2,667 (11)	1,459 (11)	95.00% (15)	-- (17)	-- (17)
Press Vent Baghouse	BH6	E18	3.6 (19)	8.8 (19)	99.92% (14)	2.86E-03 (22)	7.0E-03
Press Vent BH Purge Cyclone	C7	E18	3.2 (20)	8.1 (20)	90.00% (15)	-- (17)	-- (17)

Calculations:

(a) Maximum hourly emissions (lbs/hr) = (maximum hourly throughput [lbs/hr]) x (1 - control efficiency [%])

(b) Maximum annual emissions (tons/yr) = (maximum hourly throughput [ODT/yr]) x (1 - control efficiency [%])

Notes:

(1) JELD-WEN estimates the 29% of the particulate would actually be PM_{10} based on extrapolation of data provided the by the manufacturer on a similar product with larger particle size. For conservatism JELD-WEN's calculations assume that 100% of TSP is PM10.

(2) The dryer cyclone throughput is the sum of the refiner throughput plus the wax used for door skins and 20% of the shave off before the blender.

(3) The three dryer baghouses are equal to one-third of the dryer cyclone throughput after the cyclone control efficiency has been applied.

(4) The former baghouse throughput is equal to 1.5% of the former throughput plus exhaust from the chip cyclone.

(5) The waste baghouse throughput is equal to the waste and middle reject throughputs after the cyclone control efficiencies have been applied.

(6) The recycle cyclone throughput is equal to 5% of the material from the reject screw.

(7) The waste cyclone throughput is equal to the exhaust from the recycle cyclone and the fuel silos, 1.25% of the throughput of the shave off and trim, and material from the reject screw and former baghouse.

(8) The middle reject cyclone throughput is equal to the material from the reject screw.

(9) The chip cyclone throughput is equal to the throughput of the dryer plus the emissions of the rotary valve.

(10) The sizer baghouse throughput is equal to the exhaust from chip cleaning cyclone plus the material from skin sizer, 80% of the hogged skins, and the usage of sodium carbonate in the die cleaning process.

Soda Blasting (lbs/hr)=	120	(18)
Soda Blasting (ODT/yr)=	22	(18)

(11) The chip cleaning cyclone throughput is equal to 20% of the hogged skins.

(12) Conservative engineering judgment; manufacturer predicted efficiency is 99.468%.

(13) Based on data provided by Westec.

(14) Conservative engineering judgment; manufacturer predicted efficiency is 99.9964%.

(15) Conservative engineering judgment for large wood particles and fiber in cyclone.

(16) Conservative engineering judgment for large wood particles and fiber in cyclone, with some fines.

(17) All cyclones at the facility vent to a baghouse. Cyclone emissions are included in the applicable baghouse emissions.

(18) Soda blasting estimates based on once daily cleaning of eight dies. Each die can require up to 15 lbs of sodium bicarbonate per cleaning event.

(19) press vent baghouse (BH6) throughput is equal to the press vent (PV) emissions + rotary valve emissions + press vent cyclone emissions

(20) The press vent cyclone throughput is equal to the press vent baghouse (BH6) throughput - press vent baghouse (BH6) emissions.

(21) Particulate emissions form the dryer baghouses (BH1a, BH1b, & BH1c) are vented to the biofilter (BF, E18)

(22) Particulate emissions form press vent baghouse (BH6) vent to the dryer (D1) air inlet which eventually vents to the biofilter (BF, E18)

Table 10
Baghouse VOC/HAP Emissions
JELD-WEN, inc., Wood Fiber Division - Craigsville, West Virginia

Emission Unit	Source ID	Emission Point ID	Maximum Hourly Throughput	Maximum Annual Throughput	Pollutant	Emission Factor [1] (lbs/SF-1/8")	Maximum Emissions lbs/hr [a]	Maximum Emissions tons/yr [b]
Former Baghouse	BH2	E10	21,591 [2] (SF-1/8"/hr)	170,226,823 [2] (SF-1/8"/year)	Formaldehyde	3.5E-06 lbs/SF-1/8"	0.08	0.30
					Methanol	6.0E-06 lbs/SF-1/8"	0.13	0.51
Waste Baghouse	BH3	E4	21,591 [2] (SF-1/8"/hr)	170,226,823 [2] (SF-1/8"/year)	Formaldehyde	9.2E-06 lbs/SF-1/8"	0.20	0.78
Sizer Baghouse	BH4	E12	12,522 [3] (lbs/hr)	8,410 [3] (ODT/year)	Formaldehyde	1.9E-05 lbs/lb-waste	0.24	0.16
						Total VOC/HAP [4]	0.64	1.7

Calculations:

(a) Maximum hourly emissions (lbs/hr) = (maximum hourly throughput [units/hr]) x (emission factor [lbs/unit])

(b) Maximum annual emissions (tons/yr) = (maximum annual throughput [SF-$^{1}/_{8}$"/year]) x (emission factor [lbs/SF-$^{1}/_{8}$"]) / 2000
or Maximum annual emissions (tons/yr) = (maximum annual throughput [ODT/yr]) x (emission factor [lbs/lb-waste])

Notes:

(1) Emission factors were taken from a MACT source test performed at the JELD-WEN, inc., Wood Fiber Division - Craigsville, West Virginia facility on March and June 2007. All other pollutants were reported as non-detects.

(2) The former and waste baghouse throughputs have been conservatively assumed to equal the maximum press throughput.

(3) See Table 9, Baghouse Particulate Emissions.

(4) Total VOCs are the sum of the individual HAPs.

JELD-WEN WINDOWS & DOORS

Table 11a

Primeline Ovens (PL - E13) Natural Gas Combustion Criteria Pollutant Emissions
JELD-WEN, inc., Wood Fiber Division - Craigsville, West Virginia

Pollutant	Emission Factor (lbs/MMscf)		Maximum Emissions	
			lbs/hr [(a)]	tons/yr [(b)]
TSP	7.6	(1)	0.03	0.11
PM10	7.6	(2)	0.03	0.11
SO2	0.6	(1)	0.002	0.01
CO	84	(1)	0.31	1.21
NOx	100	(1)	0.37	1.45
VOC	5.5	(1)	0.02	0.08
Lead	5.0E-04	(1)	1.8E-06	7.2E-06
N_2O	2.68E-04	(3)	1.0E-03	4.0E-03
CH_4	2.68E-03	(3)	0.01	0.04
CO_2	142	(3)	540	2,127

Calculations:

(a) Maximum hourly emissions (lbs/hr) = (emission factor [lbs/MMscf]) x (maximum hourly oven combustion [MMBtu/hr]) / (natural gas heating value [MMBtu/MMscf])

Maximum hourly oven combustion [MMBtu/hr] = 3.8 (4)

Natural gas heating value [MMBtu/MMscf] = 1,036 (5)

(b) Maximum annual emissions (tons/yr) = (emission factor [lbs/MMscf]) x (maximum annual oven combustion [MMBtu/yr]) / (natural gas heating value [MMBtu/MMscf]) / (2000 lbs/ton)

Maximum annual oven combustion [MMBtu/yr] = 29,959 (4)

Natural gas heating value [MMBtu/MMscf] = 1,036 (5)

Notes:

(1) Emission factors were taken from AP-42, Chapter 1.4, Natural Gas Combustion (7/1998).

(2) Calculations assume that 100% of TSP is PM_{10}.

(3) US EPA Mandatory GHG Reporting rule, Table C-1 (FR Vol. 74, No. 209, 30 Oct 2009).

(4) See Table 1, Production and Process Rates (sum of Oven #1 and Oven #3; Oven #2 is steam-heated).

(5) Provided by Hope Natural Gas.

Table 11b
Primeline Ovens (PL - E13) Natural Gas Combustion HAP Emissions
JELD-WEN, inc., Wood Fiber Division - Craigsville, West Virginia

HAP	Emission Factor (lbs/MMscf)		Maximum Emissions	
			lbs/hr [a]	tons/yr [b]
Acenaphthene	1.8E-06	(1)	6.6E-09	2.6E-08
Acenaphthylene	1.8E-06	(1)	6.6E-09	2.6E-08
Anthracene	2.4E-06	(1)	8.8E-09	3.5E-08
Arsenic	2.0E-04	(2)	7.3E-07	2.9E-06
Benz(a)anthracene	1.8E-06	(1)	6.6E-09	2.6E-08
Benzene	2.1E-03	(1)	7.7E-06	3.0E-05
Benzo(a)pyrene	1.2E-06	(1)	4.4E-09	1.7E-08
Benzo(b)fluoranthene	1.8E-06	(1)	6.6E-09	2.6E-08
Benzo(g,h,i)perylene	1.2E-06	(1)	4.4E-09	1.7E-08
Benzo(k)fluoranthene	1.8E-06	(1)	6.6E-09	2.6E-08
Beryllium	1.2E-05	(2)	4.4E-08	1.7E-07
Cadmium	1.1E-03	(2)	4.0E-06	1.6E-05
Chromium (total)	1.4E-03	(2)	5.1E-06	2.0E-05
Chrysene	1.8E-06	(1)	6.6E-09	2.6E-08
Cobalt	8.4E-05	(2)	3.1E-07	1.2E-06
Dibenzo(a,h)anthracene	1.2E-06	(1)	4.4E-09	1.7E-08
Fluoranthene	3.0E-06	(1)	1.1E-08	4.3E-08
Fluorene	2.8E-06	(1)	1.0E-08	4.0E-08
Formaldehyde	7.5E-02	(1)	2.8E-04	1.1E-03
Hexane	1.8E+00	(1)	6.6E-03	2.6E-02
Indeno(1,2,3,c,d)pyrene	1.8E-06	(1)	6.6E-09	2.6E-08
Manganese	3.8E-04	(2)	1.4E-06	5.5E-06
Mercury	2.6E-04	(2)	9.5E-07	3.8E-06
Naphthalene	6.1E-04	(1)	2.2E-06	8.8E-06
Nickel	2.1E-03	(2)	7.7E-06	3.0E-05
Phenanthrene	1.7E-05	(1)	6.2E-08	2.5E-07
Pyrene	5.0E-06	(1)	1.8E-08	7.2E-08
Selenium	2.4E-05	(2)	8.8E-08	3.5E-07

Table 11b
Primeline Ovens (PL - E13) Natural Gas Combustion HAP Emissions
JELD-WEN, inc., Wood Fiber Division - Craigsville, West Virginia

HAP	Emission Factor (lbs/MMscf)		Maximum Emissions	
			lbs/hr [a]	tons/yr [b]
Toluene	3.4E-03	(1)	1.2E-05	4.9E-05
2-Methylnaphthalene	2.4E-05	(1)	8.8E-08	3.5E-07
3-Methylchloranthrene	1.8E-06	(1)	6.6E-09	2.6E-08
Dichlorobenzene	1.2E-03	(1)	4.4E-06	1.7E-05
7,12-Dimethylbenz(a)anthracene	1.6E-05	(1)	5.9E-08	2.3E-07
	Total HAPs		0.01	0.03

Calculations:

(a) Maximum hourly emissions (lbs/hr) = (emission factor [lbs/MMscf]) x (maximum hourly ovens combustion [MMBtu/hr]) / (natural gas heating value [MMBtu/MMscf])

Maximum hourly oven combustion [MMBtu/hr] = 3.8 (3)

Natural gas heating value [MMBtu/MMscf] = 1,036 (4)

(b) Maximum annual emissions (tons/yr) = (emission factor [lbs/MMscf]) x (maximum annual ovens combustion [MMBtu/yr]) / (natural gas heating value [MMBtu/MMscf]) / (2000 lbs/ton)

Maximum annual ovens combustion [MMBtu/yr] = 29,959 (3)

Natural gas heating value [MMBtu/MMscf] = 1,036 (4)

Notes:

(1) Emission factors were taken from AP-42, Chapter 1.4, Table 1.4-3, Emission Factors for Speciated Organic Compounds from Natural Gas Combustion (July 1998).

(2) Emission factors were taken from AP-42, Chapter 1.4, Table 1.4-4, Emission Factors for Metals from Natural Gas Combustion (July 1998).

(3) See Table 1, Production and Process Rates (sum of Oven #1 and Oven #3; Oven #2 is steam-heated).

(4) Provided by Hope Natural Gas.

Table 12

Primeline Paint Booth (PL - E14) VOC, HAP, and Particulate Emissions

JELD-WEN, inc., Wood Fiber Division - Craigsville, West Virginia

Material [1]	Pollutant	Maximum Emissions			
		lbs/hr		tons/yr	
Interior Primers JELD-WEN	Total VOC	21.31	(a)	75.96	(b)
	Total HAPs	1.8E-01	(a)	0.63	(b)
	Xylene	7.6E-03	(a)	0.03	(b)
	Styrene	2.5E-02	(a)	0.09	(b)
	Methyl Methacrylate	5.0E-03	(a)	0.02	(b)
	Formaldehyde	9.7E-03	(a)	0.03	(b)
	Glycol Ether	1.3E-01	(a)	0.46	(b)
	PM/PM_{10} [1]	0.6	(c)	2.11	(d)

Maximum hourly primer usage [gals/hr] =	71.0	(2)
Maximum annual primer usage [gals/yr] =	506,425	(2)
Percent interior primer usage [%] =	100.0%	(3)
Interior primer VOC content [lbs/gal] =	3.0E-01	(4)
Interior primer HAP content [lbs/gal] =	2.5E-03	(4)
Xylene content [lbs/gal] =	1.1E-04	(4)
Styrene content [lbs/gal] =	3.6E-04	(4)
Methyl Methacrylate content [lbs/gal] =	7.1E-05	(4)
Formaldehyde content [lbs/gal] =	1.4E-04	(4)
Glycol Ether content [lbs/gal] =	1.8E-03	(4)
Interior primer density [lbs/gal] =	13.86	(4)
Interior primer solids content [wt %] =	69.0%	(4)

Calculations:

(a) Maximum hourly VOC/HAP emissions (lbs/hr) = (maximum hourly primer usage [gals/hr]) x (percent primer usage [%]) x (VOC/HAP content [lbs/gal])

(b) Maximum annual VOC emissions (tons/yr) = (maximum annual primer usage [gals/yr]) x (percent primer usage [%]) x (VOC content [lbs/gal]) / (2000 lbs/ton)

(c) Maximum hourly PM emissions (lbs/hr) = (maximum hourly primer usage [gals/hr]) x (percent primer usage [%]) x (PM Emission Factor [lbs/gal])

(d) Maximum annual PM emissions (tons/yr) = (maximum annual primer usage [gals/yr]) x (percent primer usage [%]) x (PM Emission Factor [lbs/gal])/2000

Notes:

(1) PM Calculations assume that 100% of PM is PM_{10}. Paint booth PM emission factor based on source test done at facility in March 2007. The emission factor is equal to the average of the test values plus two standard deviations.

PM Emission Factor [lbs/gal] = 0.0083

(2) See Table 1, Production and Process Rates.

(3) Provided by JELD-WEN Wood Fiber Division - West Virginia.

(4) From vendor MSDS sheet, product information sheet, or telephone conversation with the vendor.

JELD-WEN WINDOWS & DOORS

Table 13

Material Handling Conveyors Particulate Emissions

JELD-WEN, inc., Wood Fiber Division - Craigsville, West Virginia

Emission Unit	Maximum Hourly Throughput (1) (tons/hr)	Pollutant	Maximum Emissions	
			lbs/hr (a)	tons/yr (b)
Truck Dump to Rotary Classifier (CV1) - Furnish	19.0	PM	0.47	1.85
		PM10	0.22	0.88
Rotary Classifier to Metal Detector (CV2) - Furnish	19.0	PM	0.47	1.85
		PM10	0.22	0.88
Metal Detector to Furnish Silo (CV3) - Furnish	19.0	PM	0.47	1.85
		PM10	0.22	0.88
Furnish Storage Silo to Refiner (CV4) - Furnish	12.0	PM	0.30	1.17
		PM10	0.14	0.55
Fuel Storage Silo to Boiler (CV5) - Hogged Fuel	3.9	PM	1.96	7.73
		PM10	0.93	3.66
		Total TSP	3.67	14.45
		Total PM10	1.73	6.84

Calculations:

(a) Maximum hourly emissions (lbs/hr) = (maximum hourly throughput [tons/hr]) x (emission factor [lbs/ton])

Furnish PM emission factor (lbs/ton) =	0.02	(c)
Hogged Fuel PM emission factor (lbs/ton) =	0.50	(c)
Furnish PM10 emission factor (lbs/ton) =	0.01	(c)
Hogged Fuel PM10 emission factor (lbs/ton) =	0.24	(c)

(b) Maximum annual emissions (tons/yr) = (maximum hourly emissions [tons/yr]) x (truck dump hours of operation [hrs/yr[) / (2000 lbs/ton)

Truck dump hours of operation [hrs/yr] =	7,884	(2)

(c) Emission factor (lbs/ton) = (particle size multiplier) x (0.0032) x (((wind speed [mph] / 5)^1.3) / ((moisture content [wt%] / 2)^1.4))

PM Particle size multiplier =	0.74	(3)
PM10 Particle size multiplier =	0.35	(3)
Wind speed (mph) =	5.8	(4)
Furnish moisture content [%] =	43%	(5)
Hogged fuel moisture content [%] =	5%	(5)

Notes:

(1) Hourly capacities based on maximum hourly furnish truck dump throughput (BD-lbs/hr) = (number of trucks per hour [trucks/hr]) x (weight of truck load [wet-lbs/hr]) x (1 - moisture content [%])

Number of trucks per hour [trucks/hr] =	1.33	(5)
Weight per truck load [wet-lbs/truck] =	50,195	(5)
Moisture content [%] =	43%	(5)

Maximum hourly fuel truck dump throughput (BD-lbs/hr) = (maximum wood fuel purchased [lbs/hr]) x (1 - moisture content [%])

Maximum wood fuel purchased [lbs/hr] =	4,700	(6)
Moisture content [%] =	43%	(5)

(2) See Table 1, Production and Process Rates.

(3) Emission factor equation and constants were taken from AP-42, Chapter 13.4.2, Aggregate Handling and Storage Piles (1/1995).

(4) A 57 year annual average wind speed for Charleston, WV take from the Comparative Climatic Data for the United States through 2004 from the National Climatic Data Center Website.

(5) Provided by JELD-WEN Wood Fiber Division - West Virginia.

(6) An estimate of fuel required, in addition to fuel from production operations, in order to operate the boiler at rated capacity.

Table 14
Paint Manufacturing (DC2 - E15) VOC/HAP Emissions
JELD-WEN, inc., Wood Fiber Division - Craigsville, West Virginia

Raw Material		Pollutant	VOC/HAP Content [1]		Maximum Annual Usage [2] (gals/yr)	Maximum Emissions	
Material	Density [1] (lbs/gal)					lbs/hr [a]	tons/yr [c]
Dispersing Agent	8.97	Total VOC	70	wt %	3,000	1.7E-02	3.1E-02
Fungicide	8.85	Total VOC	6.56	lbs/gal	600	3.6E-03	6.5E-03
		Glycol Ether	40	wt %		1.9E-03	3.5E-03
Preservative	9.26	Total VOC	0.15	lbs/gal	2,400	3.3E-04	5.9E-04
		Formaldehyde	1.5	wt %		3.1E-04	5.5E-04
Polymer	8.8	Total VOC	0.014	lbs/gal	296,400	3.7E-03	6.7E-03
		Glycol Ether	0.090	wt %		2.2E-03	3.9E-03
		Xylene	0.010	wt %		2.4E-04	4.3E-04
Polymer	8.8	Total VOC	0.014	lbs/gal	197,400	2.5E-03	4.5E-03
		Styrene	0.050	wt %		8.0E-04	1.4E-03
		Methyl Methacrylate	0.010	wt %		1.6E-04	2.9E-04
Defoamer	7.34	Total VOC	0.22	lbs/gal	11,400	2.3E-03	4.1E-03
					Total VOC	0.03	0.05
					Total HAP	5.6E-03	1.0E-02

Calculations:

(a) Maximum hourly emissions (lbs/hr) = (maximum annual emissions [tons/yr]) x (2000 lbs/ton) / (paint manufacturing hours of operation [hrs/yr])

Paint manufacturing hours of operation [hrs/yr] = 3,600 (b)

(b) Paint manufacturing hours of operation (hrs/yr) = (maximum annual batch rate [batch/yr]) x (hourly batch rate [hrs/batch])

Maximum annual batch rate [batch/yr] = 600 (2)

Hourly batch rate [hrs/batch] = 6 (2)

(c) Maximum annual emissions (tons/yr) = (maximum annual product usage [gals/yr]) x (density [lbs/gal]) x (VOC/HAP content [wt %]) x (percent VOC/HAP

Maximum annual emissions (tons/yr) = (maximum annual product usage [gals/yr]) x (VOC/HAP content [lbs/gal]) x (percent VOC/HAP loss [%]) / (2000 ll

Percent VOC/HAP loss [%] = 0.33% (3)

Notes:

(1) From vendor MSDS sheet, product information sheet, or telephone conversation with the vendor.

(2) Provided by JELD-WEN Wood Fiber Division - West Virginia.

(3) JELD-WEN laboratory testing under actual process conditions, excluding water.

Table 15
Paint Manufacturing (DC2, BH5 - E15) Particulate Emissions
JELD-WEN, inc., Wood Fiber Division - Craigsville, West Virginia

Emission Unit	Maximum Annual Usage [1] (tons/yr)	Annual Throughput (Before Baghouse) [a] (tons/yr)	Maximum Emissions [2]	
			lbs/hr [b]	tons/yr [c]
Titanium Dioxide	600	0.94	5.2E-04	9.4E-04
Calcium Carbonate Slurry	5,504	8.64	4.8E-03	8.6E-03
Talc	1800	2.83	1.6E-03	2.8E-03
Pigment	7.50	0.01	6.5E-06	1.2E-05
Calcium Carbonate Pigment	1,800	2.83	1.6E-03	2.8E-03
Various KLN Clays	120.0	0.19	1.0E-04	1.9E-04
		Total TSP	0.01	0.02

Calculations:

(a) Maximum annual throughput before baghouse (tons/yr) = (maximum annual usage [tons/yr]) x (dust generation factor [lbs/ton]) / (2000 lbs/ton)

Dust generation factor [lbs/ton] = 3.14 (3)

(b) Maximum hourly emissions (lbs/hr) = (maximum annual emissions [tons/yr]) x (2000 lbs/ton) / (paint manufacturing hours of operation [hrs/yr])

Paint manufacturing hours of operation [hrs/yr] = 3,600 (4)

(c) Maximum annual emissions (tons/yr) = (maximum annual throughput before baghouse [ton/yr]) x (1 - baghouse control efficiency [%])

Baghouse control efficiency (%) = 99.9% (1)

Notes:

(1) Provided by JELD-WEN Wood Fiber Division - West Virginia.

(2) Calculations assume that 100% of TSP is PM_{10}.

(3) From AP-42, Chapter 11.12, Table 11.12-2, Total Particulate Matter Emission Factor for Uncontrolled Cement Unloading to an Elevated Storage Silo (10/2001).

(4) See Table 20, Paint Manufacturing VOC/HAP Emissions.

JELD-WEN WINDOWS & DOORS

Table 16

Die Coating (DC-E17) Emissions

JELD-WEN, inc., Wood Fiber Division - Craigsville, West Virginia

Raw Material [1]			Hourly PTE Usage (gal)[2]	Annual PTE Usage (gal)[3]	Raw Material Components [1]			Estimated PTE [3]					
Product	Density (lbs/gal)	Solids Content (wt %)			Name	Amount in Product	Units	VOC [a] (lbs/hr)	VOC [b] (tons/yr)	HAP [a] (lbs/hr)	HAP [b] (tons/yr)	TSP/PM10 [c,4] (lbs/hr)	TSP/PM10 [c,4] (tons/yr)
Cleaner Degreaser (wipe-on cleaner)	8.85		0.50	500	Total VOC	3.98	wt%	0.18	0.1				
					Diethylene glycol monbutyl ether	3	wt%			1.33E-01	6.6E-02		
Isopropyl Alcohol (wipe-on cleaner)	6.59		0.22	216	Total VOC	100	wt%	1.42	0.7				
Die Coating	10.85	63.5	0.10	97	Total VOC	46	wt%	0.48	0.2			9.98E-03	5.0E-03
					Methanol	8	wt%			8.39E-02	4.2E-02		
					Silane	28	wt%						
					Isopropyl Alcohol	5	wt%						
					Ethyl Alcohol	5	wt%						
					Totals			2.08	1.0	0.22	0.1	1.0E-02	5.0E-03

Calculations:

(a) Hourly PTE emissions [lbs/hr] = (hourly PTE usage [gals/hr]) x (density [lbs/gal]) x (VOC/HAP content [wt%])

(b) Annual PTE VOC/HAP emissions [tons/yr] = (annual PTE usage [gals/yr]) x (density [lbs/gal]) x (VOC/HAP content [wt%]) / (2000 [lbs/ton])

(c) Annual PTE TSP emissions [tons/yr] = (annual PTE usage [gal/yr]) x (density [lbs/gal]) x (1 - spray transfer efficiency [%]) / 100) x (solids content [wt %] / 100) x (1 - spray booth filter efficiency [%]) / 100)) / 2000 [lbs/ton]

Spray Transfer Efficiency [%] = 70 (5)

Filter Efficiency [%] = 95 (5)

Notes:

(1) Based on maximum from manufacturer's product MSDS.

(2) Hourly product usage conservatively estimated based on several months of product trials at JELD-WEN Wood Fiber of Oregon.

(3) Annual product usage conservatively estimated based on the volume required to clean and coat dies for each press opening once every seven days of production. JELD-WEN Engineering estimates dies will be coated a maximum of once every 14 days of production based on several months of product trials at JELD-WEN Wood Fiber Division - Oregon.

(4) 100% of PM is assumed to be PM_{10}.

(5) Conservative engineering estimate.

Table 17
Maximum Annual Emissions Summary
JELD-WEN, inc., Wood Fiber Division - Craigsville, West Virginia

Emission Point	Emission Point ID #	Maximum Annual Emissions (tons/yr)									
		TSP	PM10	SO_2	CO	NOx	VOC	Lead	N_2O	CH_4	CO_2
Wood Boiler (B1)	E5	4.05	4.05	6.16	79.8	131.0	4.27	1.2E-02	2.28	17.38	50,949
Natural Gas Boiler (B2)	E6	1.09	1.09	0.09	0.10	24.4	0.79	7.2E-05	0.04	0.40	21,103
Truck Dump (TD)	E1	4.72	1.18	--	--	--	--	--	--	--	--
East Furnish Silo (FSE)	E2a,b,c,d,e	1.91	0.48	--	--	--	--	--	--	--	--
West Furnish Silo (FSW)	E3a,b,c,d,e	1.91	0.48	--	--	--	--	--	--	--	--
Former Baghouse (BH2)	E10	1.36	1.36	--	--	--	0.30	--	--	--	--
Waste Baghouse (BH3)	E4	0.55	0.55	--	--	--	0.78	--	--	--	--
Sizer Baghouse (BH4)	E12	4.20	4.20	--	--	--	0.16	--	--	--	--
Primeline - Ovens (PL)	E13	0.11	0.11	0.01	1.21	1.45	0.08	7.2E-06	4.01E-03	4.01E-02	2,127
Primeline Paint Booth (PL)	E14	2.11	2.11	--	--	--	76.0	--	--	--	--
Facility-Wide VOCs (FWVOC)	FWVOC	--	--	--	--	--	--	--	--	--	--
Conveyors (CV1 - CV5)	Fugitive	14.45	6.84	--	--	--	--	--	--	--	--
Paint Manufacturing (DC2)	E15	0.02	0.02	--	--	--	0.05	--	--	--	--
Rotary Valve (RV)	E16	4.41	1.10	--	--	--	1.51	--	--	--	--
Die Coating Paint Booth (DC)	E17	4.99E-03	4.99E-03	--	--	--	1.04	--	--	--	--
Biofilter (BF)	E18	0.32	0.32	0.05	6.88	8.04	38.42	3.8E-05	0.02	0.21	11,195
Pollutant Total		41.2	23.9	6.3	88.0	165.0	123.4	1.2E-02	2.3	18.0	85,374

Table 18

Maximum HAP Emissions Summary

JELD-WEN, inc., Wood Fiber Division - Craigsville, West Virginia

Emission Point	Maximum Emissions	
	Hourly (lbs/hr)	Annual (tons/yr)
Total Formaldehyde (excluding NG combustion)	0.87	2.5
Total Methanol	1.39	3.0
Total HAPs from Hogged-Fuel Boiler (B1)	2.42	9.5
Total HAPs from Natural Gas Boiler (B2)	0.07	0.3
Total HAPs from Fiber Dryer (D1), & Press (PV)	5.82	14.3
Total HAPs from Rotary Valve (RV)	0.54	1.0
Total HAPs from Baghouses (B2, B3, B4)	0.64	1.7
Total HAPs from Primeline (PL)	6.4E-01	6.6E-01
Total HAPs from Paint Manufacturing (DC2)	5.6E-03	1.0E-02
Total HAPs from Die Coating (DC)	2.2E-01	1.1E-01
Total HAP	**10.3**	**27.6**

JELD-WEN WINDOWS & DOORS

Table 19
Maximum HAP Emissions Detailed Summary
JELD-WEN, inc., Wood Fiber Division - Craigsville, West Virginia

HAP	Wood-Fired Boiler (tons/yr)	Natural Gas- Fired Boiler (tons/yr)	Rotary Valve (tons/yr)	Biofilter Outlet (tons/yr)	Baghouses (tons/yr)	Paint Manufacturing (tons/yr)	Prime Line (tons/yr)	Die Coating (tons/yr)	Potential Emissions (tons/yr)
Acenaphthene	2.2E-04	2.6E-07		1.4E-07			2.6E-08		**2.2E-04**
Acenaphthylene	1.2E-03	2.6E-07		1.4E-07			2.6E-08		**1.2E-03**
Acetaldehyde	2.0E-01		7.5E-03	2.0					**2.2E+00**
Acetophenone	7.9E-07								**7.9E-07**
Acrolein	9.9E-01		2.5E-01	1.3					**2.6E+00**
Anthracene	7.4E-04	3.4E-07		1.8E-07			3.5E-08		**7.4E-04**
Antimony	1.9E-03								**1.9E-03**
Arsenic	5.4E-03	2.9E-05		1.5E-05			2.9E-06		**5.5E-03**
Benzene	1.0	3.0E-04		3.2E-02			3.0E-05		**1.1E+00**
Benzo(a)anthracene	1.6E-05	2.6E-07		1.4E-07			2.6E-08		**1.6E-05**
Benzo(a)pyrene	6.4E-04	1.7E-07		9.1E-08			1.7E-08		**6.4E-04**
Benzo(b)fluoranthene	2.5E-05	2.6E-07		1.4E-07			2.6E-08		**2.5E-05**
Benzo(g,h,i)perylene	2.3E-05	1.7E-07		9.1E-08			1.7E-08		**2.3E-05**
Benzo(k)fluoranthene	8.9E-06	2.6E-07		1.4E-07			2.6E-08		**9.3E-06**
Beryllium	2.7E-04	1.7E-06		9.1E-07			1.7E-07		**2.7E-04**
bis(2-Ethylhexyl)phthalate	1.2E-05								**1.2E-05**
Bromomethane (Methyl Bromide)	3.7E-03								**3.7E-03**
Cadmium	1.0E-03	1.6E-04		8.4E-05			1.6E-05		**1.3E-03**
Carbon tetrachloride	1.1E-02								**1.1E-02**
Chlorine	1.9E-01								**1.9E-01**
Chlorobenzene	8.1E-03								**8.1E-03**
Chloroform	6.9E-03								**6.9E-03**
Chloromethane (Methyl Chloride)	5.7E-03								**5.7E-03**
Chromium (Total)	5.2E-03	2.0E-04		1.1E-04			2.0E-05		**5.5E-03**
Chrysene	9.4E-06	2.6E-07		1.4E-07			2.6E-08		**9.8E-06**
Cobalt	1.6E-03	1.2E-05		6.4E-06			1.2E-06		**1.6E-03**
Dibenzo(a,h)anthracene	2.2E-06	1.7E-07		9.1E-08			1.7E-08		**2.5E-06**
Dichlorobenzene		1.7E-04		9.1E-05			1.7E-05		**2.8E-04**
1,2-Dichloroethane (Ethylene dichloride)	7.1E-03								**7.1E-03**
Dichloromethane (Methylene Chloride)	7.1E-02								**7.1E-02**
1,2-Dichloropropane (Propylene dichloride)	8.1E-03								**8.1E-03**
7,12-Dimethylbenz(a)anthracene		2.3E-06		1.2E-06			2.3E-07		**3.7E-06**
2,4-Dinitrophenol	4.4E-05								**4.4E-05**
Ethylbenzene	7.6E-03								**7.6E-03**
Fluoranthene	3.9E-04	4.3E-07		2.3E-07			4.3E-08		**3.9E-04**
Fluorene	8.4E-04	4.0E-07		2.1E-07			4.0E-08		**8.4E-04**
Formaldehyde	1.1	1.1E-02	1.5E-02	0.2	1.2	5.5E-04	3.6E-02		**2.6E+00**
Glycol ethers						7.4E-03	4.6E-01	6.6E-02	**5.4E-01**
Hexane		2.6E-01		1.4E-01			2.6E-02		**4.2E-01**
Hydrogen chloride	4.7								**4.7E+00**
Indeno(1,2,3,c,d)pyrene	2.1E-05	2.6E-07		1.4E-07			2.6E-08		**2.2E-05**
Lead	1.2E-02	7.2E-05		3.8E-05			7.2E-06		**1.2E-02**
Manganese	3.9E-01	5.5E-05		2.9E-05			5.5E-06		**3.9E-01**
Mercury	8.6E-04	3.7E-05		2.0E-05			3.8E-06		**9.2E-04**
Methanol			7.3E-01	2.5	0.5			4.2E-02	**3.8E+00**
Methyl Methacrylate						2.9E-04	1.8E-02		**1.8E-02**
Methylene Diphenyl Diisocyanate (MDI)				2.2					**2.2E+00**
2-Methylnaphthalene		3.4E-06		1.8E-06			3.5E-07		**5.6E-06**
3-Methylchloranthrene		2.6E-07		1.4E-07			2.6E-08		**4.2E-07**
Naphthalene	2.4E-02	8.8E-05		4.6E-05			8.8E-06		**2.4E-02**
Nickel	8.1E-03	3.0E-04		1.6E-04			3.0E-05		**8.6E-03**
4-Nitrophenol	2.7E-05								**2.7E-05**
Pentachlorophenol (PCP)	1.3E-05								**1.3E-05**
Phenanthrene	1.7E-03	2.4E-06		1.3E-06			2.5E-07		**1.7E-03**
Phenol	1.3E-02		7.5E-03	4.7					**4.7E+00**
Polychlorinated Biphenyls	2.0E-06								**2.0E-06**
Polychlorinated dibenzo-p-dioxins	4.1E-04								**4.1E-04**
Polychlorinated dibenzo-p-furans	4.6E-07								**4.6E-07**
Propionaldehyde	1.5E-02		7.5E-03	1.3E+00					**1.4E+00**
Pyrene	9.1E-04	7.2E-07		3.8E-07			7.2E-08		**9.1E-04**
Selenium	6.9E-04	3.4E-06		1.8E-06			3.5E-07		**7.0E-04**
Styrene	4.7E-01					1.4E-03	9.0E-02		**5.6E-01**
Tetrachloroethene	9.4E-03								**9.4E-03**
Toluene	2.3E-01	4.9E-04		2.6E-04			4.9E-05		**2.3E-01**
Trichloroethene	7.4E-03								**7.4E-03**
1,1,1-trichloroethylene (Methyl Chloroform)	7.6E-03								**7.6E-03**
Vinyl chloride	4.4E-03								**4.4E-03**
Xylene	6.2E-03					4.3E-04	2.7E-02		**3.4E-02**
Totals	**9.52**	**2.71E-01**	**1.01**	**14.31**	**1.74**	**1.01E-02**	**6.60E-01**	**1.08E-01**	**27.6**