

## STATEMENT OF BASIS

For the issuance of Air Permit # 2227-AR-2 AFIN: 69-00298

1. PERMITTING AUTHORITY:

Division of Environmental Quality  
5301 Northshore Drive  
North Little Rock, Arkansas 72118-5317

2. APPLICANT:

Fiber Energy Products AR LLC  
4004 Blue Collar Lane  
Mountain View, Arkansas 72560

3. PERMIT WRITER:

Alexander Sudibjo

4. NAICS DESCRIPTION AND CODE:

NAICS Description: Sawmills  
NAICS Code: 321113

5. ALL SUBMITTALS:

The following is a list of ALL permit applications included in this permit revision.

Date of Application	Type of Application (New, Renewal, Modification, Deminimis/Minor Mod, or Administrative Amendment)	Short Description of Any Changes That Would Be Considered New or Modified Emissions
7/15/2020	Deminimis	New Astraflame 15 burner to replace Webb burner and new dryer

6. REVIEWER'S NOTES:

With this deminimis modification, the facility is replacing the 12 MMBtu/hr wood-fired Webb burner with a 20 MMBtu/hr natural gas-fired Astraflame 15 burner and adding a second line equipped with a 20 MMBtu/hr natural gas-fired Astraflame 15 burner (SN-07) and new hammermill (SN-08). The wood-fired Webb burner will be kept on-site and only used when the Astraflame 15 burner is unable to operate. The facility's permitted annual emissions are increasing by 12.5 tpy PM, 4.2 tpy PM<sub>10</sub>, 0.1 tpy SO<sub>2</sub>, 13.8 tpy VOC, 7.4 tpy CO, 8.8 tpy NO<sub>x</sub>, 0.03 tpy acrolein, and 0.81 tpy total HAPs. •

7. COMPLIANCE STATUS:

As of July 15, 2020, there were no compliance issues.

8. PSD/GHG APPLICABILITY:

a) Did the facility undergo PSD review in this permit (i.e., BACT, Modeling, etc.)? N  
If yes, were GHG emission increases significant?

b) Is the facility categorized as a major source for PSD? N

- *Single pollutant  $\geq 100$  tpy and on the list of 28 or single pollutant  $\geq 250$  tpy and not on list*

If yes for 8(b), explain why this permit modification is not PSD.

9. SOURCE AND POLLUTANT SPECIFIC REGULATORY APPLICABILITY:

Source	Pollutant	Regulation (NSPS, NESHAP or PSD)
None identified.		

10. PERMIT SHIELD – TITLE V PERMITS ONLY:

Did the facility request a permit shield in this application? N/A

(Note - permit shields are not allowed to be added, but existing ones can remain, for minor modification applications or any Regulation 18 requirement.)

If yes, are applicable requirements included and specifically identified in the permit?

If not, explain why.

For any requested inapplicable regulation in the permit shield, explain the reason why it is not applicable in the table below.

Source	Inapplicable Regulation	Reason
N/A		

11. EMISSION CHANGES AND FEE CALCULATION:

See emission change and fee calculation spreadsheet in Appendix A.

12. AMBIENT AIR EVALUATIONS:

The following are results for ambient air evaluations or modeling.

## a) NAAQS

A NAAQS evaluation is not required under the Arkansas State Implementation Plan, National Ambient Air Quality Standards, Infrastructure SIPs and NAAQS SIP per Ark. Code Ann. § 8-4-318, dated March 2017 and the ADEQ Air Permit Screening Modeling Instructions.

## b) Non-Criteria Pollutants:

Based on Division of Environmental Quality procedures for review of non-criteria pollutants, emissions of non-criteria pollutants are below thresholds of concern.

c) H<sub>2</sub>S Modeling:

The facility does not have H<sub>2</sub>S emissions.

## 13. CALCULATIONS:

SN	Emission Factor Source (AP-42, testing)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
01	ADEQ memo dated 08/22/2003 from CHurt to TRheume	Lb/ton wood waste processed (Green chips/green sawdust) PM: 0.011 lb/ton PM <sub>10</sub> : 0.00085 lb/ton	None	N/A	72,000 tons of Sawdust is unloaded, stored, and loaded.
02A	<u>Astraflame 15 Combustion</u> AP-42 1.4-1, 1.4-2, 1.4-3	<u>in lb/MMscf</u> PM: 7.6 PM <sub>10</sub> : 1.9 SO <sub>2</sub> : 0.6 VOC: 5.5 CO: 84 NOx: 100 MEOH: 2.3 Lead: 0.0005 Formaldehyde: 0.075 Benzene: 0.0021	None	N/A	20 MMBtu/hr 8 ton/hr capacity 16 hr/day  <u>Sawdust usage</u> 19,000 lb/MBF 72,000 tpy
	<u>Wood Drying</u> NCASI and 2003 ADEQ Memo	<u>in lb/MBF</u> VOC: 3.5 MEOH: 0.205 Formaldehyde: 0.016 Acrolein: 0.006 Acetaldehyde: 0.039			
02B	Wood burner @8000 Btu/lb  AP 42 (2/02) Tables 1.6-1 <sup>1</sup> , 1.6-	<u>12 MMBtu/hr</u> <u>Emission Factors</u> <u>lb/MMBtu</u> <sup>1</sup> PM – 0.40 <sup>1</sup> PM <sub>10</sub> – 0.36 <sup>2</sup> SO <sub>2</sub> – 0.025	Cyclone Heil 8' dia	unknown	<u>Wood fired (sawdust) Kilns</u> Sawdust Burner rated 12 MMBtu/hr limited to 8 ton/hr sawdust from Webb

SN	Emission Factor Source (AP-42, testing)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
	2 <sup>2</sup> , 1.6-3 <sup>3</sup> , & 1.6-4 <sup>4</sup> (9/03) for Dry Wood <sup>123</sup> (less than 20% moisture) No controls	<sup>3</sup> VOC – 0.017 <sup>2</sup> CO – 0.60 <sup>2</sup> NO <sub>x</sub> – 0.49 <sup>4</sup> Lead – 4.8 x 10 <sup>-5</sup> <sup>3</sup> Acetaldehyde 8.3 x 10 <sup>-4</sup> <sup>3</sup> Acetone – 1.9 x 10 <sup>-4</sup> <sup>3</sup> Acrolein – 1.9 x 10 <sup>-3</sup> <sup>3</sup> Benzene – 4.2 x 10 <sup>-3</sup> <sup>3</sup> Dichloromethane 2.9 x 10 <sup>-4</sup> <sup>3</sup> Formaldehyde – 4.4 x 10 <sup>-3</sup> <sup>3</sup> HCl – 1.9 x 10 <sup>-2</sup> <sup>3</sup> Methane – 2.1 x 10 <sup>-2</sup> <sup>3</sup> Styrene – 1.9 x 10 <sup>-3</sup> <sup>3</sup> toluene – 9.2 x 10 <sup>-4</sup>			Burner manual Based on 8,760 hrs/yr = 25,000 tpy sawdust total = 10,950 tons/hr unit MBF = 1000 BDF MBF x 1000 = MMBF Formaldehyde and methanol are naturally occurring wood HAPs <sup>4</sup> Lead was rounded to tenths, since it is criteria pollutant
02A/ B	Cyclone as product collector PM from Obsolete AP-42 factors Table 10.4.1 dated 2/1980 PM <sub>10</sub> =0.36*(PM)— Basis is FIRE version 6.23— SCC30700803. In this reference PM <sub>10</sub> is 36% of PM. Use this ratio and apply it to PM from AP-42	Grains/SCF PM—0.03 PM <sub>10</sub> —0.0108			12075 SCFM From Webb Burner Manual
03	AP-42 Table 10.4.1 (2/80) PM for Large Dia Cyclones in Woodworking Waste Collection Sys. PM <sub>10</sub> =0.36*(PM)— Basis is FIRE version 6.23—SCC30700803. In this reference PM <sub>10</sub> is 36% of PM. Use this ratio and apply it to PM from AP-42	PM: 2.0 lb/hr = 8.76 tpy PM <sub>10</sub> : 0.72 lb/hr = 3.16 tpy	Cyclone SN-02	Unknown	Two Hammermill Based on 8,760 hrs/yr No direct emissions from SN-03, captured at SN-02A/B
04	AP-42 Table 10.4.1 PM <sub>10</sub> =0.36*(PM)—	PM: 2.0 lb/hr PM <sub>10</sub> : 0.72 lb/hr	Cyclone	Unknown	Pellet Cooler & Shaker

SN	Emission Factor Source (AP-42, testing)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
	Basis is FIRE version 6.23—SCC30700803. In this reference PM <sub>10</sub> is 36% of PM. Use this ratio and apply it to PM from AP-42				
05	ADEQ memo dated 08/22/2003 from CHurt to TRheume	<u>Lb/ton wood waste processed</u> Storage PM: 0.0011 Loading PM: 0.0022 Storage PM <sub>10</sub> : 0.00009 Loading PM <sub>10</sub> : 0.00018	None	N/A	Pellet Packaging, Storage and Loading
07	<u>Astraflame 15 Combustion</u> AP-42 1.4-1, 1.4-2, 1.4-3	<u>in lb/MMscf</u> PM: 7.6 PM <sub>10</sub> : 1.9 SO <sub>2</sub> : 0.6 VOC: 5.5 CO: 84 NOx: 100 MEOH: 2.3 Lead: 0.0005 Formaldehyde: 0.075 Benzene: 0.0021	None	N/A	20 MMBtu/hr 8 ton/hr capacity 16 hr/day  <u>Sawdust usage</u> 19,000 lb/MBF 72,000 tpy
	<u>Wood Drying</u> NCASI and 2003 ADEQ Memo	<u>in lb/MBF</u> VOC: 3.5 MEOH: 0.205 Formaldehyde: 0.016 Acrolein: 0.006 Acetaldehyde: 0.039			
08	AP-42 Table 10.4.1 (2/80) PM for Large Dia Cyclones in Woodworking Waste Collection Sys. PM <sub>10</sub> =0.36*(PM)— Basis is FIRE version 6.23—SCC30700803. In this reference PM <sub>10</sub> is 36% of PM. Use this ratio and apply it to PM from AP-42	PM: 2.0 lb/hr = 8.76 tpy PM <sub>10</sub> : 0.72 lb/hr = 3.16 tpy	Cyclone SN-02	Unknown	Two Hammermill Based on 8,760 hrs/yr  No direct emissions from SN-08, captured at SN-07.

## 14. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

SN	Pollutants	Test Method	Test Interval	Justification
SN-02A	VOC	25A	Initial	Emission verification
SN-07	VOC	25A	Initial	Emission verification

## 15. MONITORING OR CEMS:

The permittee must monitor the following parameters with CEMS or other monitoring equipment (temperature, pressure differential, etc.)

SN	Parameter or Pollutant to be Monitored	Method (CEM, Pressure Gauge, etc.)	Frequency	Report (Y/N)
N/A				

## 16. RECORDKEEPING REQUIREMENTS:

The following are items (such as throughput, fuel usage, VOC content, etc.) that must be tracked and recorded.

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
01	Tons of raw green hardwood Sawdust	72,000 tons per rolling twelve month period	Monthly	No
02A/B	Date and time when SN-02A is unable to operate, duration of downtime, and cause of the downtime	Only one of the burner (Webb burner or Astraflame 15 burner) able to operate at any one time	Monthly	No

## 17. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
01, 02A, 02B, 04, 07	20%	Reg.19.503	Annual Inspection
05	5%	Reg.18.501	Annual Inspection

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18. DELETED CONDITIONS:

Former SC	Justification for removal
N/A	

19. GROUP A INSIGNIFICANT ACTIVITIES:

The following is a list of Insignificant Activities including revisions by this permit.

Source Name	Group A Category	Emissions (tpy)						
		PM/PM <sub>10</sub>	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	HAPs	
							Single	Total
None identified by the facility.								

20. VOIDED, SUPERSEDED, OR SUBSUMED PERMITS:

The following is a list of all active permits voided/superseded/subsumed by the issuance of this permit.

Permit #
2227-AR-1





## APPENDIX A – EMISSION CHANGES AND FEE CALCULATION

## Revised 03-11-16

Old Permit	New Permit
52.8	65.3
12.5	
400	
65.3	

[illegible]