

STATEMENT OF BASIS

For the issuance of Draft Air Permit # 0189-AOP-R12 AFIN: 55-00017

1. PERMITTING AUTHORITY:

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

2. APPLICANT:

Resolute Glenwood LLC
229 South Spur 8
Glenwood, Arkansas 71943

3. PERMIT WRITER:

Jesse Smith

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
5/25/2022	Minor Mod	Addition of an air curtain burner

6. REVIEWER'S NOTES:

Resolute Glenwood LLC owns and operates a lumber sawmill located in Glenwood, Pike County, Arkansas (formerly Conifex Glenwood LLC). This modification adds an air curtain burner and an engine to power the burner (SN-20 and SN-21). Emissions increased as follows: 10 tpy PM/PM₁₀, 1.3 tpy SO₂, 8.6 tpy VOC, 21.8 tpy CO, 9.3 tpy NO_x, 3.79E-03 tpy Lead, and 3.07 tpy Total HAP.

7. COMPLIANCE STATUS:

The following summarizes the current compliance of the facility including active/pending enforcement actions and recent compliance activities and issues.

The facility was last inspected on July 12, 2022. There were no areas of concern noted at the time. The facility has no significant violations recorded on ECHO.

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? N

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

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

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

This permitting action does not include emissions increases above the significance level for any pollutants.

9. SOURCE AND POLLUTANT SPECIFIC REGULATORY APPLICABILITY:

Source	Pollutant	Regulation (NSPS, NESHAP or PSD)
04 & 04A	VOC	40 C.F.R. § 52.21 (PSD)
	HAPs	40 C.F.R. § 63, Subpart DDDD*
20	PM	40 C.F.R. § 60 Subpart CCCC
21	PM, NO _x , CO	40 C.F.R. § 60 Subpart IIII

10. UNCONSTRUCTED SOURCES:

Unconstructed Source	Permit Approval Date	Extension Requested Date	Extension Approval Date	If Greater than 18 Months without Approval, List Reason for Continued Inclusion in Permit
N/A				

11. PERMIT SHIELD – TITLE V PERMITS ONLY:

Did the facility request a permit shield in this application? Y

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

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

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
SN-04 and SN-04a	40 C.F.R. §63 Subpart DDDDD	The kilns at the facility are direct-fired, as the combustion gases from the fuel will directly contact the lumber during the drying process. Therefore, neither of the lumber kilns are considered to be process heaters, and Boiler MACT is not applicable to the units.
	40 C.F.R. §60 Subpart Dc	The direct-fired lumber kilns will operate with a natural gas burner. The burner does not generate steam, because the combustion gases from the fuel will directly contact the lumber during the drying process. Therefore, Subpart Dc is not applicable to the kiln burners.
Tanks in the Group A-3 Insignificant Activities List	40 C.F.R. §60 Subpart K	The capacity of the tanks are all less than 75 cubic meters (19,813 gal).
	40 C.F.R. §60 Subpart Ka	
	40 C.F.R. §60 Subpart Kb	
SN-05	40 C.F.R. §64 CAM	Pre-control emissions are under 100 tpy (45.1 tpy of PM ₁₀)

12. COMPLIANCE ASSURANCE MONITORING (CAM) – TITLE V PERMITS ONLY:

List sources potentially subject to CAM because they use a control device to achieve compliance and have pre-control emissions of at least 100 percent of the major source level. List the pollutant of concern and a brief summary of the CAM plan (temperature monitoring, CEMs, opacity monitoring, etc.) and frequency requirements of § 64.

Source	Pollutant Controlled	Cite Exemption or CAM Plan Monitoring and Frequency
N/A		

13. EMISSION CHANGES AND FEE CALCULATION:

See emission change and fee calculation spreadsheet in Appendix A.

14. 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 DEQ Air Permit Screening Modeling Instructions.

b) Non-Criteria Pollutants:

The non-criteria pollutants listed below were evaluated. Based on Division of Environmental Quality procedures for review of non-criteria pollutants, emissions of all other non-criteria pollutants are below thresholds of concern.

1st Tier Screening (PAER)

Estimated hourly emissions from the following sources were compared to the Presumptively Acceptable Emission Rate (PAER) for each compound. The Department has deemed the PAER to be the product, in lb/hr, of 0.11 and the Threshold Limit Value (mg/m^3), as listed by the American Conference of Governmental Industrial Hygienists (ACGIH).

Pollutant	TLV (mg/m^3)	PAER (lb/hr) = $0.11 \times \text{TLV}$	Proposed lb/hr	Pass?
Methanol	262.086	28.829	5.04	Yes
Formaldehyde	0.123	0.014	2.33	No
Acrolein	0.229	0.025	0.59	No
Chlorine	0.290	0.032	0.16	No
Lead	0.050	0.0055	0.01909	Yes
Pentachlorophenol	0.5	0.055	0.00000459	Yes
Antimony	0.5	0.055	0.000764	Yes
Arsenic	0.01	0.0011	0.004059	No
Beryllium	0.00005	0.0000055	0.0000202	No
Cadmium	0.01	0.0011	0.000373	Yes
Chromium	0.5	0.055	0.00190	Yes
Chromium Hexavalent	0.5	0.055	0.000317	Yes
Cobalt	0.02	0.0022	0.000645	Yes

Pollutant	TLV (mg/m ³)	PAER (lb/hr) = 0.11 × TLV	Proposed lb/hr	Pass?
Manganese	0.1	0.011	0.31	No
Mercury	0.01	0.0011	0.000316	Yes
Phosphorus	0.1	0.011	0.00252	Yes
Selenium	0.2	0.022	0.000259	Yes

2nd Tier Screening (PAIL)

AERMOD air dispersion modeling was performed on the estimated hourly emissions from the following sources, in order to predict ambient concentrations beyond the property boundary. The Presumptively Acceptable Impact Level (PAIL) for each compound has been deemed by the Department to be one one-hundredth of the Threshold Limit Value as listed by the ACGIH.

Pollutant	PAIL (µg/m ³) = 1/100 of Threshold Limit Value	Modeled Concentration (µg/m ³)	Pass?
Formaldehyde	15*	8.03345	Yes
Acrolein	2.293	0.431615	Yes
Chlorine	2.900	0.25809	Yes
Arsenic	0.1	0.00072	Yes
Beryllium	0.0005	0.00036	Yes
Manganese	1.0	0.52272	Yes

*ADEQ Alternate PAIL

c) H₂S Modeling:

A.C.A. §8-3-103 requires hydrogen sulfide emissions to meet specific ambient standards. Many sources are exempt from this regulation, refer to the Arkansas Code for details.

Is the facility exempt from the H₂S Standards Y

If exempt, explain: The facility does not emit H₂S

15. CALCULATIONS:

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
04	Wood Drying	0.14 lb _{PM} /MBF	None	N/A	

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
& 04A	NCASI and NCDENR Wood Kiln Memo	4.78 lb _{VOC} /MBF			
	EPA memo, "Development of a Provisional Emissions Calculations Tool for Inclusion in the PCWP ICR" dated June 30, 2017	0.18 lb _{Methanol} /MBF 0.01 lb _{Phenol} /MBF 0.065 lb _{Formaldehyde} /MBF 0.04 lb _{Acetaldehyde} /MBF 0.004 lb _{Acrolein} /MBF			
	Combustion AP-42 Tables 1.6-3 and 1.6-4	0.03 lb _{SO2} /MMBtu 0.28 lb _{NOX} /MBF 0.255 lb _{CO} /MMBtu	None	N/A	
05	AP-42, 10.4	PM/PM ₁₀ : 0.03 gr/ft ³	Baghouse	99%	
05A	ADEQ memo	0.0033 lb _{PM/PM10} /ton	None	N/A	
17	AP-42, 13.2	sL=8.2 g/m ² W= 27.5 tons P=105 N=365	None	N/A	<i>Paved and gravel roads</i>
18 & 19	AP-42, Section 1.6 (biomass) AP-42, Table 1.3-1 (diesel)	lb/MMBtu: 0.33 PM 0.29 PM ₁₀ 0.03 SO ₂ 0.22 NO _x 0.17 CO 0.017 VOC 0.000048 Lead lb/1000 gal: 3.3 PM 1.0 PM ₁₀ 7.1 SO ₂ 20 NO _x 5 CO 0.252 VOC 0.00151 Lead	None	N/A	Each abort stack: 240 hours of startup operation annually 1,200 gallons of diesel annual 2,000 lb of wood per hour
20	Vendor Specification	<u>Lb/ton feedstock</u> 1.3 PM/PM ₁₀ /PM _{2.5} 0.1 SO ₂ 0.9 VOC	None	N/A	

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
		2.6 CO 1.0 NO _x			
	AP-42 Table 1.6-3 and 1.6-4	0.000048 lb/MMBTu Lead Various HAP			
21	EPA Stationary Diesel Genset Emissions Limits and Timing	<u>Lb/kW-hr</u> 0.00007 PM/PM ₁₀ /PM _{2.5} 0.01036 NO _x 0.01213 CO 0.01036 VOC	None	N/A	
	AP-42 Table 3.3-1 and 3.3-2	0.00205 lb/hp-hr SO ₂ Various HAP			

16. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

SN	Pollutants	Test Method	Test Interval	Justification
04	PM	5 with 202	Initial Test	Department Guidance
	CO	10	Initial Test	

17. 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				

18. 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)
04, 04A, 18, & 19	Lumber Dried	185,000,000 board feet per rolling 12-	Monthly	Y

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
		months		
18	Diesel usage	1,200 gallons per rolling 12-months	Monthly	Y
	Wood usage	2000 lb of wood per hour	Monthly	Y
	Hours of startup operation	240 hours per rolling 12-months	Monthly	Y
19	Diesel usage	1,200 gallons per rolling 12-months	Monthly	Y
	Wood usage	2000 lb of wood per hour	Monthly	Y
	Hours of startup operation	240 hours per rolling 12-months	Monthly	Y
05A	Wood residue loadout	50,000 tons per rolling 12-months	Monthly	Y
20	Throughput Hours of Operation for throughput calculation	15,200 tons per rolling 12-months	Monthly	Y
21	NSPS III Conditions	Varies	Varies	Y

19. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
04 & 04A	20%	Reg.19.503	Weekly observations
05	5%	Reg.18.501	Weekly observations
05A	20%	Reg.19.503	Weekly observations
18 & 19	20%	Reg.19.503	Observations during startup
SN-20 and SN-21	10%	Rule 19.304 and 40 C.F.R. § 60.2250 (a)	Initial then Annual Opacity tests
SN-20 and SN-21 During Startup	35%	Rule 19.304 and 40 C.F.R. § 60.2250 (a)	Initial then Annual Opacity tests

20. DELETED CONDITIONS:

Former SC	Justification for removal
	N/A

21. 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 ₁₀	SO ₂	VOC	CO	NO _x	HAPs		
							Single	Total	
(2) Diesel Fuel (Off-Road) Storage Tanks	A-3			0.028					
(9) Oil Storage Tanks	A-3			0.128					
(31) Oil Drums	A-3			0.441					
(4) Oil Totes	A-3			0.014					
A-3 Total			0.654						
Chip Bins	A-13	0.015							
Sawdust Bin	A-13	0.042							
Storage Piles	A-13	0.39							
Kiln Fuel Shed	A-13	0.12							
Kiln #3 Fuel Bin	A-13	0.058							
Kiln #4 Fuel Bin	A-13	0.058							
Chip Conveyance	A-13	0.054							
Bark Conveyance	A-13	0.13							
Sawdust Conveyance	A-13	0.011							
Shavings Conveyance	A-13	0.054							

Sawmill	A-13	2.24						
Log Process Debarking	A-13	0.42						
Chippers	A-13	0.15						
Log Bucking	A-13	0.10						
A-13 Total	3.98							

22. VOIDED, SUPERSEDED, OR SUBSUMED PERMITS:

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

Permit #
0189-AOP-R11

APPENDIX A – EMISSION CHANGES AND FEE CALCULATION

Fee Calculation for Major Source

Revised 03-11-16

Resolute Glenwood LLC
 Permit #: 0189-AOP-R12
 AFIN: 55-00017

\$/ton factor	27.27	Annual Chargeable Emissions (tpy)	480.03909
Permit Type	Modification	Permit Fee \$	1000

Minor Modification Fee \$	500
Minimum Modification Fee \$	1000
Renewal with Minor Modification \$	500
Check if Facility Holds an Active Minor Source or Minor Source General Permit	<input type="checkbox"/>
If Hold Active Permit, Amt of Last Annual Air Permit Invoice \$	0
Total Permit Fee Chargeable Emissions (tpy)	29.37379
Initial Title V Permit Fee Chargeable Emissions (tpy)	

HAPs not included in VOC or PM: Chlorine, Hydrazine, HCl, HF, Methyl Chloroform, Methylene Chloride, Phosphine, Tetrachloroethylene, Titanium Tetrachloride

Air Contaminants: All air contaminants are chargeable unless they are included in other totals (e.g., H2SO4 in condensable PM, H2S in TRS, etc.)

Pollutant (tpy)	Check if Chargeable Emission	Old Permit	New Permit	Change in Emissions	Permit Fee Chargeable Emissions	Annual Chargeable Emissions
PM		64	74	10	10	74
PM ₁₀		24.6	34.6	10		
PM _{2.5}		0	0	0		
SO ₂		8.1	9.4	1.3	1.3	9.4
VOC		351.7	360.3	8.6	8.6	360.3
CO		80.9	102.7	21.8		
NO _x		26.5	35.8	9.3	9.3	35.8
Lead	<input checked="" type="checkbox"/>	0.0153	0.01909	0.00379	0.00379	0.01909

Pollutant (tpy)	Check if Chargeable Emission	Old Permit	New Permit	Change in Emissions	Permit Fee Chargeable Emissions	Annual Chargeable Emissions
Methanol	<input type="checkbox"/>	16.65	16.65	0		
Formaldehyde	<input type="checkbox"/>	6.04	6.4	0.36		
Acrolein	<input type="checkbox"/>	0.38	0.72	0.34		
Chlorine	<input checked="" type="checkbox"/>	0.27	0.34	0.07	0.07	0.34
Arsenic	<input type="checkbox"/>	0.00699	0.008729	0.001739		
Beryllium	<input type="checkbox"/>	0.00035	0.000437	0.000087		
Manganese	<input type="checkbox"/>	0.53	0.66	0.13		
Total HAP	<input type="checkbox"/>	37.4	40.47	3.07		
Acetone	<input checked="" type="checkbox"/>	0.08	0.18	0.1	0.1	0.18