

STATEMENT OF BASIS

For the issuance of Draft Air Permit # 2348-AOP-R1 AFIN: 70-00032

1. PERMITTING AUTHORITY:

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

2. APPLICANT:

Conifex El Dorado, Inc.
5482 Junction City Highway
El Dorado, Arkansas 71730

3. PERMIT WRITER:

Derrick Brown

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
10/17/2018	Modification	Revise tank sizes and emissions for SN-14, SN-15, and SN-16, add a 55- gallon gasoline tank, two (2) diesel tanks, and 11 oil tanks to the insignificant activities list, and replace emergency fire pump engine SN-10 with SN-10R.
05/24/2019	Addendum to October 17, 2018 application	

6. REVIEWER'S NOTES:

Conifex El Dorado, Inc. owns and operates a sawmill located at 5482 Junction city Highway, El Dorado, Union County, Arkansas 71730. This facility submitted a modification to revise SN-15 tank sizes and emissions, and to remove a 12,000 gallon

diesel tank, to correct the tank size and throughput for Oil Storage Tank SN-14, and update the size and throughput and contents for the Diesel Storage Tank, SN-16. The facility is replacing emergency fire pump engine SN-10 with SN-10R, a 175 Hp emergency fire water pump. The facility added a 550-gallon gasoline tank as a Group A-13 Insignificant Activity and added 1 diesel tank and 11 oil tanks, all at or under 500 gallons in size, as Group A-3 Insignificant Activities. This modification increases facility emissions by 0.1 tpy of CO, and decreases facility emissions by 0.6 tpy of NO_x, and 0.08 tpy of HAPs.

7. COMPLIANCE STATUS:

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

The most recent inspection performed 03/09/2018 cited the facility for failure to submit their semi-annual reports. Per the inspection report the facility submitted the reports on 03/07/18.

8. PSD/GHG APPLICABILITY:

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

The permittee had a PSD project that included eleven oil storage tanks (SN-14), three diesel storage tanks (SN-15), and a gasoline tank (SN-16). The storage tanks went through PSD for VOC emissions and had BACT installed. The tank sizes and through puts cited in 2348-AOP-R0 were not the actual tank sizes and through puts in use. This permit action corrects the tank sizes and through puts. The BACT for VOC will not change. Conifex El Dorado, Inc. will continue to use tank color as BACT for VOC from storage tanks SN-14, SN-15, and SN-16 ensuring all tanks storing organic liquids are light in color. The emission limit proposed for these tanks include this control factor.

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.

9. SOURCE AND POLLUTANT SPECIFIC REGULATORY APPLICABILITY:

Source	Pollutant	Regulation (NSPS, NESHAP or PSD)
01, 02, 03	Initial notification is only requirement.	NESHAP Subpart DDDD
10	HAPs	NESHAP Subpart ZZZZ

10. PERMIT SHIELD – TITLE V PERMITS ONLY:

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

(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? N/A

If not, explain why.

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 Department procedures for review of non-criteria pollutants, emissions of non-criteria pollutants are below thresholds of concern.

c) H₂S Modeling: N/A

13. CALCULATIONS:

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equip.	Control Equip. Eff.	Comments
01, 02, & 03	ADEQ Memo: <i>VOC emissions from Lumber Drying Kilns</i> from T Rheume dated 10/31/2014 AP-42 Tables 1.4-1, -2, -3 Natural Gas	BACT Limit: 3.8 lb VOC/MBF ¹ <u>EF lb/10⁶ scf</u> BACT PM: 7.6 SO ₂ : 0.6 CO: 84 NO _x : 50 Formaldehyde: 7.50E-02 Selenium: 2.40E-05 POM: 8.82E-05	None	N/A	3 kilns limited by throughput: 315 MMBF/yr Each Kiln 18.5 MBF/hr x 3.8 lb VOC/MBF = lb VOC/hr 45 MMBtu/hr Low NO _x Burners To convert from lb/10 ⁶ scf to lb/MMBtu divide by 1020.

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equip.	Control Equip. Eff.	Comments
					¹ Includes natural gas VOC
01, 02, 03	Assume PM ₁₀ = PM NCDENR Wood Kiln Emission Calculation Factor Sheet for Softwood	<u>Lb/MBF</u> BACT Limit: PM/ PM ₁₀ : 0.022 Acrolein: 0.0075 Methanol: 0.199 Formaldehyde: 0.0183	None	N/A	Lumber Drying Kilns Max Annual Thruput = 315 MMBF/yr Max Hourly Thruput = 18.5 MBF/hr @ SN-01, 02, and 03
04	ADEQ Memo from CHurt to TRheume dated 08/22/2003 and NC-DENR ¹ TCEQ Wood Ind. EF, App A3	<u>lb/ton log Thruput</u> BACT Limit PM: 0.02 PM ₁₀ : 0.0004 (PM ₁₀ = 2% PM)	95% ¹	Enclosed Hood	1,417,500 tpy 405 tph max Log Thruput @ 4.5 tons/MBF
05	AP-42 Sec 10.3-1 ¹ TCEQ Wood Ind. EF, App A3	lb/ton log Throughput BACT Limit PM: 0.35 PM ₁₀ : 0.007 (PM ₁₀ = 2% PM)	90% ¹	Sawmill located in Building	1,455,300 tpy 378 tph max log Thruput @4.2 tons/MBF
06	Cyclone and Baghouse Air flow rates and outlet grain loading based on vendor [DYNA-MAC Felt] testing Appendix A11	Planer Mill - EF based on air flow = 44,000 CFM outlet = 0.00004 gr/scf PM ₁₀ = PM BACT PM: 0.004 gr/dscf = 0.0151 lb/hr, 0.0661 tpy PM ₁₀ : 0.0151 lb/hr, 0.0661 tpy	Cyclone + Baghouse Model #120 MCF 1120- 750with DYNA- MAC Felt bags only	99.99%	8760 hrs/yr TPY = lb/hr * 8760 hr/yr / 2000 lb/ton Lb/Hr = CFM * Outlet grain loading gr/scf * 60 min/hr / 7000 gr/lb
07	Cyclones Air flow rates and outlet grain loading based on stack test results from August 22 & 23,1996.	Yates (Hog) Mill - EF based on air flow = 9,9811 CFM outlet = 0.001 gr/scf BACT PM: 0.001 gr/dscf = 0.0841 lb/hr, 0.368 tpy PM ₁₀ : 0.0799 lb/hr, 0.350	Cyclone	N/A	
08	Retesting is being required because of age of test and equipment (20 years).	Truck Bin - EF based on air flow = 4,214 CFM outlet = 0.002 gr/scf PM: 0.0722 lb/hr, 0.316 tpy	Cyclone	N/A	

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equip.	Control Equip. Eff.	Comments
		PM ₁₀ : 0.0686 lb/hr, 0.301 tpy			
09	AP-42 13.2.2.2. Eq. 1a ¹ (11/06) and AP-42 13.2.2.1 Eq. 1 ² (1/11)	'Haul Roads' Unpaved ¹ s: 8.4 W: varies k: 4.9 (PM) k: 1.5 (PM ₁₀) k: 0.15 (PM _{2.5}) a: 0.70 (PM) a: 0.90 (PM _{10 & 2.5}) b: 0.45 and Paved Roads ² k: 0.011 (PM) k: 0.0022 (PM ₁₀) k: 0.00054 (PM _{2.5}) sL: 8.2 W: varies	Road Watering Plan	90%	$E = k (s/12)^a \times (W/3)^b$ Eq 1a UNPAVED where E = size-specific EF (lb/VMT) s = surface material silt content (%) W = mean vehicle wt. (tons) M = surface mat 'l moisture content (%) S = mean vehicle speed (mph) C = EF for 1980's vehicle fleet exhaust, brake and tire wear. $E = k (sL)0.91 \times (W)1.02$ Equation (1) PAVED where: E = PM emission factor (lb/VMT), k = particle size multiplier sL = road surface silt loading (g/m ²), and W = ave wt. (tons) of vehicles traveling road.
10R	AP-42, Table 3.3-1	BACT PM: 0.3 g/kw-hr PM ₁₀ : 0.2 g/kw-hr <u>lb/hp-hr</u> SO ₂ : 0.00205 BACT VOC: 0.0025 CO: 3.5 g/kw-hr NO _x : 4.0 g/kw-hr Acrolein: 9.25E-05 Formaldehyde: 1.18E-03	None	N/A	'Emergency Fire Pump' – CI RICE 175 HP (from engine plate) VOC = TOC 500 hrs/yr 7,000 Btu/hp-hr 0.77 MMBTU/hr 0.0015% sulfur Diesel Fuel
11	AP-42 10.3-1	<u>Lb/ton</u> BACT PM: 0.02 PM ₁₀ : 0.00044 (incl 10% safety factor)	None	N/A	'Material Processing' Fugitive emissions from Debarking and Chipping
12	Pile handling – AP-42 13.2.4 Wind erosion - AP-42 13.2.5	<u>Bark Pile PM (lb/hr)</u> Handling: 0.00015 <u>Sawdust Pile (lb/hr)</u> Handling: 0.00012 Wind Erosion: 1.89 Sawdust Total: 1.90 <u>Chip Pile PM (lb/hr)</u> Handling: 0.0015 Wind Erosion: 2.43	None	N/A	'Storage Piles' By-product sold as dry material
13	ADEQ Emission Factors outlined in 8/22/2003 memo from CHurt to TRheame	<u>Dried Shavings Lb/ton</u> <u>Storage</u> BACT PM: 0.0011 PM ₁₀ : 0.00009 <u>Loadout</u>	None	N/A	'Storage Bin' Based on permitted annual throughput Conservative estimate

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equip.	Control Equip. Eff.	Comments
		BACT PM: 0.0022 PM ₁₀ : 0.00018			75,000 tpy woodwaste generated
14	TANKS 4.0.9d	Oil	None	None	11 light color Tanks
15	TANKS 4.0.9d	Diesel fuel	None	None	2 light color Tanks
16	TANKS 4.0.9d HAP speciation factors from EPA document "Gasoline Distribution Industry.."	Gasoline HAPs to VOC ratio by wt. Total HAPs: 23%	None	None	1 light color Tank

14. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

SN	Pollutants	Test Method	Test Interval	Justification
06, 07, and 08	PM	Method 5	One time	§19.702

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)
Facility	Annual Lumber Throughput	Maximum 315 MMBF / rolling 12 months	Monthly	Yes
01, 02, 03	Combust only pipeline quality natural gas in burners	Maintain valid gas tariff, purchase contract, fuel analysis or other appropriate documentation, or perform periodic testing	On-going	No

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
01, 02, 03	Develop, maintain, and follow a routine and repair maintenance and housekeeping Plan BACT: Proper Maintenance and Operation	Record 1. Facility name and location. 2. Record the activity SN or description. 3. Date and time of maintenance or observation. 4. Maintenance activity performed, including replacement parts. 5. Name of person conducting the maintenance.	As performed	No
01, 02, 03	NESHAP Subpart DDDD	Initial Notification §63.9(b)	One-time	Yes
04	Annual Log Throughput BACT: Hood Enclosure	Maximum 1,417,500 tons / rolling 12 months	Monthly	Yes
05	Annual Log Throughput BACT: Building	Maximum 1,455,300 tons / rolling 12 months	Monthly	Yes
06	Performance Test with Baghouse	PM: 0.016 lb/hr or 0.004 gr/dscf	One-time	Yes
07	Performance Test with Cyclone	PM: 0.085 lb/hr or 0.002 gr/dscf	One-time	Yes
08	Performance Test with Cyclone	PM: 0.073 lb/hr or 0.002 gr/dscf	One-time	Yes
06, 07, 08	Manufacturers' Operating Manuals and Maintenance Logs BACT: Proper Maintenance and Operation	Must be operated and maintained in accordance with manufacturers' specs and good air pollution control and op practices for minimizing emissions. Must up-date maintenance logs on an as performed basis. Must operate at all times contiguous equipment is in operation.	Keep Manual for Life of Unit(s) On-going	No
09	Road Watering Plan	Maintain Road Watering Plan Records	On-going	No
09	Road Dust (PM/PM ₁₀)	Keep dust from extending beyond property boundary	On-going	No
09	If Dust Suppression Agent used, Maintain MSDS	Shall contain no VOC, no HAP, no air contaminants	Current, legible MSDS	No
10R	Total Operating Hours (emergency and non-emergency combined)	500 Total Hours per calendar year	Monthly	No

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
10R	During Extended Emergency Use <i>in excess</i> of 500 hours	No limit during Emergency	If occurs	Yes
10R	NESHAP Subpart ZZZZ	Must be in compliance upon startup	Monthly	No
10R	Diesel Fuel	Only ULSD fuel with the sulfur content no greater than 0.0015% sulfur by weight.	Keep legible MSDS	No
10R	Good Combustion Practices	Follow OEM manual	As occurs	No
Facility	Permit Renewal Submit at least 6 mos before expiration	Permit is valid for 5 years, beginning on date permit issued and ends five (5) years later, GP #3, unless renewal submitted 6 months prior to expiration date	Every 5 years	Yes
11	BACT: Wind barrier	Keep barrier to prevent wind erosion	On going	No
12	Storage Piles	Keep dust down by wet suppression	Daily, as needed	No
13	Storage Bin	Enclosed Bin for Transport	On going	No
14	Oil Tanks	Nte 14,788 gallons in 24-hours and nte 175,056 gallons of oil per rolling 12 months	On going	No
15	Diesel Tanks	Nte 1,000 gallons in 24-hours and nte 52,000 gallons of diesel per rolling 12 months	On going	No
16	Diesel Tank	Nte 9,000 gallons in 24-hours and nte 468,000 gallons of gasoline per rolling 12 months	On going	No

17. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
01, 02, 03	5%	§18.501 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311	Use natural gas fuel only

SN	Opacity	Justification for limit	Compliance Mechanism
04, 05, 06, 07, 08, 11, 12, 13	5%	§18.501 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311	Weekly Observation
09 offsite	0%	§18.501 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311	Annual ADEQ Observation
10	20%	§19.503 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311	Observation <i>if</i> fire pump runs 3 consecutive hours, otherwise none required

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 Cat.	Emissions (tpy)						
		PM/PM ₁₀	SO ₂	VOC	CO	NO _x	HAPs	
							Single	Total
500 Gallon Gasoline Tank	A-13			0.13				
Fire Pump Engine Diesel Tank – 260 Gallon	A-3			0.000135				
Hydraulic Oil – 350 Gallon	A-3			0.000135				
Hydraulic Oil – 275 Gallon	A-3			0.000135				
Hydraulic Oil – 340 Gallon	A-3			0.000135				
Hydraulic Oil – 370 Gallon	A-3			0.000135				
Compressor Oil – 130 Gallon	A-3			0.000135				
Hydraulic Oil – 60 Gallon	A-3			0.000135				
Hydraulic Oil – 100 Gallon	A-3			0.000135				
Hydraulic Oil – 160 Gallon	A-3			0.000135				
Hydraulic Oil – 130 Gallon	A-3			0.000135				
Lubricating Oil – 300 Gallon	A-3			0.000135				
Hydraulic Oil – 50 Gallon	A-3			0.00001				

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 #
2348-AOP-R0

APPENDIX A – EMISSION CHANGES AND FEE CALCULATION

Fee Calculation for Major Source

Revised 03-11-16

Facility Name: Conifex El Dorado, Inc.
 Permit Number: 2348-AOP-R1
 AFIN: 70-00032

\$/ton factor	23.93	Annual Chargeable Emissions (tpy)	685.4
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)	-0.6
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 condensible 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		56.3	56.3	0	0	56.3
PM ₁₀		14.6	14.6	0		
PM _{2.5}		0	0	0		
SO ₂		0.5	0.5	0	0	0.5
VOC		599.3	599.3	0	0	599.3
CO		48.8	48.9	0.1		
NO _x		29.9	29.3	-0.6	-0.6	29.3
Acrolein	<input type="checkbox"/>	1.2	1.2	0		

