

STATEMENT OF BASIS

For the issuance of Draft Air Permit # 2248-AR-3 AFIN: 02-00317

1. PERMITTING AUTHORITY:

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

2. APPLICANT:

ALREZ Inc.
141 Mac McGoogan Drive
Crossett, Arkansas 71635

3. PERMIT WRITER:

Andrea Sandage

4. NAICS DESCRIPTION AND CODE:

NAICS Description: Cyclic Crude, Intermediate, and Gum and Wood Chemical
Manufacturing
NAICS Code: 325194

5. SUBMITTALS:

3/11/2014 5/22/2014

6. REVIEWER'S NOTES:

ALREZ Inc. operates a gum and wood chemical manufacturing facility located at 141 Mac McGoogan Drive, Crossett. This DeMinimis permit modification is being issued to allow storage of rosin or resin in the resin/rosin solution tank #1 and #2. The modification will allow greater flexibility for the rosin storage when needed. An Administrative Amendment added a natural gas fired boiler to the Insignificant Activities list. Permitted increased emissions are VOC 0.2 tpy.

Permanent Notes:

40 CFR 60 Subpart Kb does not apply to the tanks due to low vapor pressure of the liquids. 40 CFR 63 Subpart VVVVVV does not apply because the HAP used is not on the list of applicable HAPs in the subpart.

7. COMPLIANCE STATUS:

The following summarizes the current compliance of the facility including active/pending enforcement actions and recent compliance activities and issues. There are no active or pending enforcement actions at this time.

8. PSD APPLICABILITY:

a) Did the facility undergo PSD review in this permit (i.e., BACT, Modeling, etc.)? **N**

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

- Single pollutant ≥ 100 tpy and on the list of 28 or single pollutant ≥ 250 tpy and not on list, or
- CO_2e potential to emit $\geq 100,000$ tpy and ≥ 100 tpy/ ≥ 250 tpy of combined GHGs?

9. GHG STATUS:

Indicate one:

- Facility is classified as a major source for GHG and the permit includes this designation
- Facility does not have the physical potential to be a major GHG source
- Facility has restrictions on GHG or throughput rates that limit facility to a minor GHG source. Describe these restrictions: _____

10. SOURCE AND POLLUTANT SPECIFIC REGULATORY APPLICABILITY:

Source	Pollutant	Regulation (NSPS, NESHAP or PSD)
N/A		

11. EMISSION CHANGES AND FEE CALCULATION:

See emission change and fee calculation spreadsheet in Appendix A.

12. NAAQS EVALUATIONS AND NON-CRITERIA POLLUTANTS: no change

a) NAAQS:

Pursuant to Act 1302 of the Regular Session of the 89th General Assembly of the State of Arkansas, no dispersion modeling was performed by ADEQ because it was not voluntarily proposed and agreed to by the facility. No other information was submitted by the applicant. Criteria pollutants were not evaluated for impacts on the NAAQS.

b) Non-Criteria Pollutants:

The non-criteria pollutants listed below were evaluated. Based on Department 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/m³), as listed by the American Conference of Governmental Industrial Hygienists (ACGIH).

Pollutant	TLV (mg/m ³)	PAER (lb/hr) = 0.11 × TLV	Proposed lb/hr	Pass?
Maleic Anhydride	0.401	0.044	0.17	N

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?
Maleic Anhydride	4.01	1.355	Y

13. CALCULATIONS:

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
01	Permittee supplied data	0.149 lb/ ft ³ vapor ρ	Liquid seal vent outside	N/A	372M ft ³ /yr volume 1.0 mmHg vapor pressure 0.149 lb/ ft ³ vapor ρ resin solution tank #1 storing rosin 46K ft ³ /yr volume

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
02	Permittee supplied data	0.149 lb/ ft ³ vapor ρ	Triple liquid seal	90%	Emissions when reactor fills, discharges, and during heating & reaction time. 301M ft ³ /yr fill volume 353 ft ³ /yr reactor discharge volume 50 mm Hg vapor pressure 0.149 lb/ ft ³ vapor ρ Heating/Reaction time— 43MM ft ³ /yr water generated; 90% efficiency @30 mm Hg VOC load.
03	AP-42 Chapter 11.19.2	PM ₁₀ =0.0024 lb/ton PM=0.0054 lb/ton	Takes place inside building	80%	25MM lbs/yr Scraping takes place inside building
04	ADEQ accepted factor	0.01 grains/DSCF	Dust Collector	Not Provided	10M SCFM blower 8760 hrs/yr.
05	ADEQ accepted factor	0.01 grains/DSCF	Dust Collector	Not Provided	25M SCFM blower 8760 hrs/yr
06	Tanks 4.0	Working loss=3.27 lb VOC/yr Breathing loss=8.36 lb/yr	None	N/A	Ink Oil Tanks
07	AP-42 Tables 1.4-1 and 1.4-2	In lb/MMscf PM/PM ₁₀ =7.6 SO _x =0.6 VOC=5.5 CO=84 NO _x =100 In lb/MM Btu PM/PM ₁₀ =0.008 SO _x =0.001 VOC=0.006 CO=0.084 NO _x =0.100	None	N/A	12.5MM Btu/hr natural gas fired Hot/Cold Oil Heater

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
08	AP-42 Table 13.4-1	PM/PM ₁₀ = 0.019 lb/Mgal	None	N/A	Water flow = 1000gpm

14. TESTING REQUIREMENTS: no change

The permit requires testing of the following sources.

SN	Pollutants	Test Method	Test Interval	Justification
08	PM/PM ₁₀	Conductivity	Weekly when SN-08 is operating	[Regulation No. 19 §19.705, §19.703, Regulation No. 18 §18.1004 §18.1003, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
08	PM/PM ₁₀	Total Dissolved Solids on Cooling Tower Water	Every Six Months when SN-08 is operating	[Regulation No. 19 §19.705, §19.703, Regulation No. 18 §18.1004 §18.1003, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

15. MONITORING OR CEMS: no change

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)
none				

16. RECORDKEEPING REQUIREMENTS: no change

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)
01-05	Product produced	25,000,000 pounds per rolling 12-month period.	Monthly	N
01-05	Maleic Anhydride Processed	600,000 kg per rolling 12-month period.	Monthly	N
06	Ink Oil processed	1,500,000 kg Ink Oil per rolling 12-month period	Monthly	No
08	Total Dissolved Solids (TDS)	12,000 parts/million (ppm)	Once every six months	N
08	Conductivity of cooling water	Value which correlates with 12,000 ppm TDS	Weekly	N

17. OPACITY: no change

SN	Opacity	Justification for limit	Compliance Mechanism
01, 02, 03, 04, 05, 06, 07	5%	[Regulation No. 18 §18.501 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]	Inspector Observation
08	20%	[Regulation No. 19 §19.503 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]	Inspector Observation

18. DELETED CONDITIONS: no change

Former SC	Justification for removal
none	

19. GROUP A INSIGNIFICANT ACTIVITIES:

Source Name	Group A Category	Emissions (tpy)						
		PM/PM ₁₀	SO ₂	VOC	CO	NO _x	HAPs	
							Single	Total
550 Gallon Diesel Storage Tank & Dispenser	A-3	0.00	0.00	0.01	0.00	0.00	0.00	0.00
Rosin Tank #1	A-13	0.00	0.00	0.24	0.00	0.00	0.00	0.00
Rosin Tank #2	A-13	0.00	0.00	0.24	0.00	0.00	0.00	0.00
Boiler 4.3 MMbtu/hr	A-1	0.142	0.012	0.102	2.77	3.37	0.036	0.036

20. VOIDED, SUPERSEDED, OR SUBSUMED PERMITS:

List all active permits voided/superseded/subsumed by the issuance of this permit.

Permit #
2248-AR-2

APPENDIX A – EMISSION CHANGES AND FEE CALCULATION

Fee Calculation for Minor Source

Revised 08-26-13

Facility Name: AREZ, LLC

Permit Number: 2248-AR-3

AFIN: 02-00317

			Old Permit	New Permit
\$/ton factor	23.42	Permit Predominant Air Contaminant	26.1	26.3
Minimum Fee \$	400	Net Predominant Air Contaminant Increase	0.2	
Minimum Initial Fee \$	500			
Check if Administrative Amendment	<input type="checkbox"/>	Permit Fee \$	400	
		Annual Chargeable Emissions (tpy)	26.3	

Pollutant (tpy)	Old Permit	New Permit	Change
PM	18.9	18.9	0
PM ₁₀	18.9	18.9	0
SO ₂	0.1	0.1	0
VOC	26.1	26.3	0.2
CO	4.6	4.6	0
NO _x	5.5	5.5	0
Maleic Anhydride	0.75	0.75	0