

STATEMENT OF BASIS

For the issuance of Draft Air Permit # 2122-AR-1 AFIN: 29-00505

1. PERMITTING AUTHORITY:

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

2. APPLICANT:

AmeriTies South, LLC
4359 Highway 278 West
Hope, Arkansas 71801

3. PERMIT WRITER:

Christopher Riley

4. NAICS DESCRIPTION AND CODE:

NAICS Description: Wood Preservation
NAICS Code: 321114

5. SUBMITTALS:

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
2/12/2014	Deminimis	Doubling black tie storage

6. REVIEWER'S NOTES:

This permit is to allow storage of 400,000 ties, up from 200,000 and to revise emission factors.

The total permissible emissions will change as follows: VOC -1.2 tpy, Naphthalene +0.6 tpy, Quinoline +0.02 tpy, Dibenzofuran +0.05 tpy, and POM -0.2 tpy.

7. COMPLIANCE STATUS:

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

Most recent inspection found no violations, no enforcement actions in effect

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*

If yes, explain why this permit modification is not PSD.

9. SOURCE AND POLLUTANT SPECIFIC REGULATORY APPLICABILITY:

Source	Pollutant	Regulation (NSPS, NESHAP or PSD)
SN-08	Natural gas usage	NSPS Subpart Dc

10. EMISSION CHANGES AND FEE CALCULATION:

See emission change and fee calculation spreadsheet in Appendix A.

11. AMBIENT AIR EVALUATIONS:

a) Reserved.

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/m^3), 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?
Naphthalene	52.43	5.767	2.71	Yes
Formaldehyde	1.5	0.165	0.1	Yes
Hexane	176.24	19.386	0.24	Yes
Dibenzofuran	0.2*	0.022	0.24	No
Quinoline	0.44	0.0484	0.14	No
POM*	0.2	0.022	3.32	No

*Department Guidance

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?
Dibenzofuran	2.0	0.91	Yes
Quinoline	4.4	2.648	Yes

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 N/A
 If exempt, explain: _____

Pollutant	Threshold value	Modeled Concentration (ppb)	Pass?
H ₂ S	20 parts per million		

Pollutant	Threshold value	Modeled Concentration (ppb)	Pass?
	(5-minute average*)		
	80 parts per billion (8-hour average) residential area		
	100 parts per billion (8-hour average) nonresidential area		

*To determine the 5-minute average use the following equation

$$C_p = C_m (t_m/t_p)^{0.2} \text{ where}$$

C_p = 5-minute average concentration

C_m = 1-hour average concentration

t_m = 60 minutes

t_p = 5 minutes

12. CALCULATIONS:

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
01	Tanks	67,898,709 gal/yr creosote @ 7% naphthalene	Vapor balancing line; venturi scrubber	50; 85	Controlled
02	Tanks	7,466,667 gal/yr creosote @ 7% naphthalene	Vapor balancing line; venturi scrubber	50; 85	Controlled
03	Tanks	7,466,667 gal/yr creosote @ 7% naphthalene	Venturi scrubber	85	Controlled
04	Tanks	3,733,333 gal/yr fuel oil	Venturi scrubber	85	Controlled
05	Balance	No of charges/yr*8.808 lbs/charge/5773 ft ³ *retort volume, ft ³	Venturi scrubber	85	Controlled

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
06	Balance	No. of charges/yr*(7.60E-5 lbs/ft ³ wood*ft ³ wood/charge)+(0.874 lbs/charge*(retort volume, ft ³ /5773 ft ³))	Venturi scrubber	85	Controlled
07	Tanks	7,466,667 gal/yr creosote @ 7% naphthalene	Venturi scrubber	85	Controlled
08	AP-42 Ch. 1.4 – natural gas combustion only	Natural Gas (lb/MMscf) 7.6 = PM/PM ₁₀ 84.0 = CO 100.0 = NO _x 0.6 = SO _x 5.5 = VOC	None	-----	-----
09	AP-42 10.4.3	AP-42, width of saw blade, tie dimensions, best engineering judgment	Cyclone	80%	Controlled
10	AP-42 10.4.3	AP-42, width of saw blade, tie dimensions, best engineering judgment	Cyclone	80%	Controlled
11	AP-42 for grain unloading	2.0E-2 lb PM/ton 2.0E-2 lb PM ₁₀ /ton	None	-----	-----
12	AP-42 13.2.2	See AP-42	Dust Suppressant	80%	Controlled
13	SOCMI & 1998 PI-1 application for the KMC LLC Texarkana facility	0.1 lb VOC/yr	None	-----	-----
14	SOCMI & 1998 PI-1 application for the KMC LLC Texarkana facility	0.1 lb VOC/yr	None	-----	-----
15	Testing at facilities in Feather River, CA & Grenada,	Lbs/naphthalene	None	-----	-----

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
	MS – and as presented to USEPA				

13. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

SN	Pollutants	Test Method	Test Interval	Justification
N/A				

14. 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				

15. 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, 02, 03 and 07	Creosote Usage	7,470,000 gallons/yr @ 10% naphthalene	Monthly	N
04	Fuel Oil Usage	3,740,000 gallons/yr	Monthly	N
05	Charges	770 charges/yr	Monthly	N
06 & 15	Charges	1540 charges/yr	Monthly	N
08	Natural Gas	267 MMscf of	Monthly	N

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
	Usage	natural gas per year		
9, 10 & 11	Ties Processed	2,260,000 “double end cut-off” ties/yr than 339,000 “double end cut-off” switch ties/yr	Monthly	N
14	Ties in Storage Yard Black Tie Stack Dimensions	400,000 ties (which is equivalent to approximately 741 stacks) stored on site at any given time/yr 17.5 feet tall and 6.75 feet wide and 8.87 feet long	Monthly	N
13	amount of equipment	See permit table	Yearly	N

16. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
SN-05 through SN-07, SN-09 through SN-12, and SN-14 and 15	20%	§19.503	Inspector’s Observation
08	5%	§18.501	Inspector’s observation

17. DELETED CONDITIONS:

Former SC	Justification for removal
N/A	

18. GROUP A INSIGNIFICANT ACTIVITIES:

Source Name	Group A Category	Emissions (tpy)						
		PM/PM ₁₀	SO ₂	VOC	CO	NO _x	HAPs	
							Single	Total
N/A								

19. VOIDED, SUPERSEDED, OR SUBSUMED PERMITS:

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

Permit #
2122-A

APPENDIX A – EMISSION CHANGES AND FEE CALCULATION

Fee Calculation for Minor Source

Revised 08-26-13

Facility Name: Amerities South LLC

Permit Number: 2122-AR-1

AFIN: 29-00505

			Old Permit		New Permit
\$/ton factor	23.42	Permit Predominant Air Contaminant	74.7		74.7
Minimum Fee \$	400	Net Predominant Air Contaminant Increase	0		
Minimum Initial Fee \$	500				
Check if Administrative Amendment	<input type="checkbox"/>	Permit Fee \$			400
		Annual Chargeable Emissions (tpy)			74.7

Pollutant (tpy)	Old Permit	New Permit	Change
PM	74.7	74.7	0
PM ₁₀	24.6	24.6	0
SO ₂	0.1	0.1	0
VOC	17	15.8	-1.2
CO	11.2	11.2	0
NO _x	13.4	13.4	0
Lead	0.01	0.01	0
Napthalene	6.98	7.58	0.6
Quinoline	0.28	0.3	0.02
Dibenzofuran	0.57	0.62	0.05
POM	8.9	8.7	-0.2
Formaldehyde	0.1	0.1	0
Hexane	0.24	0.24	0