

STATEMENT OF BASIS

For the issuance of Draft Air Permit # 0288-AR-18 AFIN: 66-00212

1. PERMITTING AUTHORITY:

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

2. APPLICANT:

GNB Fort Smith LLC
4115 South Zero Street
Fort Smith, Arkansas 72903

3. PERMIT WRITER:

Amanda Leamons

4. NAICS DESCRIPTION AND CODE:

NAICS Description: Storage Battery Manufacturing
NAICS Code: 335911

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
8/21/24	AA	Add a heat sealer to the IA list
9/25/2024	Deminimis	Add one lead pot to the IA list, the source is in the group controlled by SN-58 baghouse

6. REVIEWER'S NOTES:

GNB Fort Smith LLC owns and operates a lead-acid battery manufacturing facility in Fort Smith, Arkansas. This permit revision includes an administrative amendment to add a new heat sealer to the list of Insignificant Activities as a Group A-13 activity and a de minimis modification to allow the installation a new lead melting pot to the existing group of sources at SN-58. The new lead pot will be controlled by the existing baghouse and will generate controlled emission of 0.0008 tpy of PM/PM₁₀ and 0.0004

tpy of lead. However, the existing permit limits are set at levels that will accommodate the additional emissions and there will not be any permitted emissions increases due to this permit modification.

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 May 15, 2024 and was found to be in compliance. There are no active/pending enforcement actions and recent compliance activities and 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? 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 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)
01-04, 37, 51, 53, 56, 57	Lead	NSPS Subpart KK
58	Lead	NSPS Subpart KKa
58	Lead	NESHAP Subpart P P P P P

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: NA

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

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: *There were no increases in permitted emissions with R18 so the screening/modeling below was not revised with this permit review.*

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 Division of Environmental Quality 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?
H ₂ SO ₄	1	0.11	0.3	No

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 Division of Environmental Quality to be one one-hundredth of the Threshold Limit Value as listed by the ACGIH.

Pollutant	PAIL ($\mu\text{g}/\text{m}^3$) = 1/100 of Threshold Limit Value	Modeled Concentration ($\mu\text{g}/\text{m}^3$)	Pass?
H ₂ SO ₄	10*	2.0	Yes

*New modeling was not performed for permit #0288-AR-16 as there was not an increase of modeled pollutant emissions.

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 - Curing Ovens	AP-42	<u>lb/MMcf</u> PM/PM ₁₀ : 7.6 SO ₂ : 0.6 VOC: 5.5 CO: 84 NO _x : 94	Baghouse	99%	15 curing ovens @ .015 mmBTU/hr each
04 - Grid Casters & Ladle Burners	AP-42	<u>lb/MMcf</u> PM/PM ₁₀ : 7.6 SO ₂ : 0.6 VOC: 5.5 CO: 84 NO _x : 94	Baghouse	99%	Total Burner Rating = 0.1 mmBTU/hr (4 grid casters @ 0.025 mmBTU/hr each)
56 - 7 Grid Casters & Ladle Burners	AP-42	<u>lb/MMcf</u> PM/PM ₁₀ : 7.6 SO ₂ : 0.6 VOC: 5.5 CO: 84 NO _x : 94	Baghouse	99%	7 grid casters @ 0.025 mmBTU/hr each
56 - 5 Lead Pots & Emission Ducts	AP-42	<u>lb/MMcf</u> PM/PM ₁₀ : 7.6 SO ₂ : 0.6 VOC: 5.5 CO: 84	Baghouse	99%	5 casting pots @ 0.8 mmBTU/hr each

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
		NO _x : 100			
58	Facility Limit NSPS (lead)	0.0075 gr/dscfm PM/PM ₁₀ 0.00032 gr/dscfm lead	Baghouse	99%	60,000 actual cfm

16. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

SN	Pollutants	Test Method	Test Interval	Justification
01, 02, 03, 04, 37, 51, 53, 56, & 57	Lead	12 (KK)	5 years	NSPS KK & KKa And to demonstrate compliance with the permitted emission limits.
58	Lead	12 or 29 (KKa)	5 years	
01, 02, 03, 04, 37, 51, 53, 56, 57, & 58	PM/PM ₁₀	5 with back half	5 years	

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)
	Maintenance records	N/A	Monthly	N

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
01-04, 37, 51, 53, 56, 57, 58				
Facility	Pounds of VOC	34,584 lb/rolling 12 months	Monthly	N
SN-58 Fugitive Dust Mitigation	Lead oxide unloading and storage areas cleaning (See SC 20)	Must be cleaned at least once a month by the standards in SC 20.	Monthly	N*
	Spills in lead oxide unloading and storage areas & and cleanup (See SC 20)	Cleanup within 2 hours	As Occurs	N*
	Dust forming material storage	Sealed, leak-proof or total enclosure	As updated	N*

**Per NSPS KKa the Fugitive Dust Mitigation Plan must specify that records be maintained of all cleaning performed under 60.372a (c)(2)(i) and (ii).*

19. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
01-04, 37, 51, 53	0%	Opacity limit from last permit.	Baghouse-Annual Compliance Test Reference Method 12 for lead Reference Method 5 for PM/PM ₁₀
11, 55	5%	Department guidance. Natural gas fired.	EPA Reference Method 9
47, 48, 54	0%	Opacity limit from last permit.	EPA Reference Method 9
56, 57, 58	0%	NSPS Subpart KK & KKa	Baghouse-Annual Compliance Test Reference Method 12 for lead Reference Method 5 for PM/PM ₁₀

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
20 Lead Pots (NG fired at 0.8 MM BTU/hr each)	A-1							
2 Linburg ovens (0.5 MM Btu/hr each)	A-1							
Milling machine, drill press, grinder, sander at electrical test lab	A-5							
23 Battery Chargers Area	A-5							
Induction Welding	A-7							0.1
Sink Station	A-13							
Heat Sealer	A-13							
Helium Leak Tester	A-13						0.5 He	
Finishing and Pack Operation	A-13							
Shop Size Glass Bead Blaster	A-13							
Milling and Sawing of Post at Casting Operation	A-13							
Plasticizing	A-13			0.1			0.1	0.1

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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 #
0288-AR-17

APPENDIX A – EMISSION CHANGES AND FEE CALCULATION

Fee Calculation for Minor Source

Revised 03-11-16

Facility Name: GNB Fort Smith LLC

Permit Number: 288-AR-18

AFIN: 66-00212

			Old Permit	New Permit
\$/ton factor	28.14	Permit Predominant Air Contaminant	84.34	84.34
Minimum Fee \$	400	Net Predominant Air Contaminant Increase	0	
Minimum Initial Fee \$	500			
		Permit Fee \$	400	
Check if Administrative Amendment	<input type="checkbox"/>	Annual Chargeable Emissions (tpy)	84.34	

Pollutant (tpy)	Old Permit	New Permit	Change
PM	84.34	84.34	0
PM ₁₀	84.34	84.34	0
PM _{2.5}	0	0	0
SO ₂	0.6	0.6	0
VOC	18.2	18.2	0
CO	9.1	9.1	0
NO _x	11.5	11.5	0
Lead	3.91	3.91	0
H2SO4	0.8	0.8	0