

STATEMENT OF BASIS

For the issuance of Draft Air Permit # 1855-AOP-R7 AFIN: 63-00155

1. PERMITTING AUTHORITY:

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

2. APPLICANT:

BFI-Waste System of Arkansas, LLC
18511 West Sardis Road
Bauxite, Arkansas 72011

3. PERMIT WRITER:

Jesse Smith

4. NAICS DESCRIPTION AND CODE:

NAICS Description: Solid Waste Landfill
NAICS Code: 562212

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
1/28/2025	Renewal	Small adjustments to VOC/HAP emissions from SN-01 Addition of SN-04

6. REVIEWER'S NOTES:

BFI Waste Systems of Arkansas operates a solid waste landfill located at 18511 West Sardis Road, Bauxite, AR. This permit is a renewal of their previous Title V permit. During this permitting action, the facility added a Gasoline Storage Tank to the permit and applicable conditions for NESHAP Subpart CCCCCC have also been added. The facility has also completed the expansion referenced in the previous renewal, and NSPS Subpart WWW has been removed as it is no longer applicable. Conditions relating to requirements from NSPS Subpart XXX and NESHAP Subpart AAAA have been added

and updated as the facility exceeds the 50 Mg/yr threshold. Emission increases as a result of this permitting action are as follows: 0.5 tpy VOC and 0.07 tpy single HAP, 2.09 tpy total HAP, and 0.24 tpy H₂S.

Facility is not subject to requirements under Arkansas Rule 19 Chapter 17 has commenced construction, reconstruction, or modification after July 17, 2014.

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 April 30, 2024. There were no areas of concern noted at this time.

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)
Landfill	NMOC	NSPS Subpart XXX
Landfill	HAP	NESHAP Subpart AAAA
SN-04	HAP	NESHAP Subpart CCCCCC

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? N

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

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 reviewed have not increased as a result of this permitting modification, therefore the previous PAER screening results were used for this permitting action.

The non-criteria pollutant listed below was evaluated. Based on Division 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 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?
Mercury	0.1	0.011	0.01	Y
HF	2.5	0.275	0.26	Y

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

If exempt, explain: _____

Pollutant	Threshold value	Modeled Concentration (ppb)	Pass?
H ₂ S	20 parts per million (5-minute average*)	0.22 ppm	Y
	80 parts per billion (8-hour average) residential area	52.37 ppb	Y
	100 parts per billion (8-hour average) nonresidential area	52.37 ppb	Y

*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

15. CALCULATIONS:

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
01	AP-42 Section 2.4	Equation 3 and 4 of Ap-42 2.4 Hexane content of 6,437,635 m ³ /yr	None	N/A	Emissions calculated using LandGEM 3.02 using default of 600 ppm NMOC
	AP-42 Table 11.9-1 AP-42 13.2.4	<u>Bulldozing and Compacting</u> S = 6.9%; M = 12%; PM – 2.29 lb/hr PM ₁₀ – 0.42 lb/hr PM _{2.5} – 0.24 lb/hr <u>Loading and Unloading</u> k _{PM} – 0.74 k _{PM₁₀} – 0.35 k _{PM_{2.5}} – 0.053 U – 10 mph M – 3.2% <u>Grading (lb/ton soil)</u> PM – 0.00302 PM ₁₀ – 0.00143 PM _{2.5} – 0.00022	Water suppression as necessary	None	Silt content from Table 11.9-3 Average moisture content from Table 13.2.4-1 Assumed 800,000 ton/yr of soil and 49,920 hours based on operating limits in permit.
02	Unpaved Roads AP-42, 13.2.2-, -2, -3	Silt(s) = 6.4%; 1 truck (25 ton) , 350 trucks/day, 3.0 miles, P = 100; PM = 5.95 lb/VMT; PM ₁₀ = 1.36 lb/VMT PM _{2.5} = 0.14 lb/VMT	Water suppression as necessary	None	Silt content for Arkansas, AP-42 Section 13.2.2
03 Flare	PM – AP-42 Table 2.4-5 footnote a (11/98)	PM = 17 lb/10 ⁶ dscf Methane (0.0010 lb/hr/dscfm)	Flare	VOC – 98% HAPs - 98.0%	Open candlestick flare 210-2200 scfm

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
	SO ₂ – AP-42 2.4.4.2	SO ₂ = 400 ppmv Assumed all sulfur to SO ₂			Gas composition 30%-50% methane.
	CO & NO _x – AP-42 13.5-1	CO = 0.370 lb/MMBtu NO _x = 0.068 lb/MMBtu			Minimum methane content of 30% required for 98% destruction efficiency
	HCl – AP-42 2.4.2.2	C _{Cl} = 42.0 ppmv			
	VOC and HAPs – AP-42 2.4.3	Varies , see Table 2.4-1			
04	AP-42 Chapter 7	Tanks calculation for gasoline	-	-	

16. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

SN	Pollutants	Test Method	Test Interval	Justification
Landfill	Methane	40 C.F.R § 63.1960(d)	Quarterly	40 C.F.R. § 63.1958(d)
03	Visible Emissions	Method 22	Within 180 days of startup	[Reg.19.304 and 40 C.F.R. 60.18(f) and A.C.A.]

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)
Facility	Total in-place Municipal Solid Waste	14,444,615 CY design capacity (Tons accepted converted to CY)	Monthly	Y
Facility	Weigh Each Truck Load and Record Monthly & 12-month rolling Acceptance Rate	None	Monthly	N
Facility	Plot Map of collector system	None	On-going	N
Facility	Asbestos-containing or non-degradable waste: nature, date, quantity received & location	None	On-going	N
Facility	Records of control device vendor specifications	None	On-going	N
02	Maintenance Log	Maintain Good Operating Practices Maintain records	Monthly	N
01	Operating Hours	12 hours per day	On-going	No
03	scfm	Varies with Oss	Monthly	No
04	Gasoline Throughput	6,000 gallons per rolling twelve months	Monthly	N

19. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
01, 02, & off-site	5%	Rule 18.501 and Ark. Code Ann. § 8-4-203 as referenced by §§ 8-4-304 and 8-4-311	Observation & dust suppression methods, NNPDES permit required
03	0%	Rule 18.501 and Ark. Code Ann. § 8-4-203 as referenced by §§ 8-4-304 and 8-4-311	Monthly Observation

20. DELETED CONDITIONS:

Former SC	Justification for removal
PW # 11, 12, 14, 15	Facility no longer subject to NSPS WWW, now subject to NSPS XXX

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
Tank 001— 500 Gallon Diesel Storage Tank 001	A-3			0.002				
Diesel—1— 10,000 gallon horizontal diesel storage tank	A-3			0.008				
700 gallon used oil tank	A-3			0.00004				
Solidification Basins	A-13	0.11		1.19			0.37	0.80
Torit Dust Collector Model 90-3	A-13	0.1						

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225,000 Gallon Leachate Tank	A-13			0.19			0.19	0.19
225,000 Gallon Leachate Tank	A-13			0.19			0.19	0.19

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 #
1855-AOP-R6

APPENDIX A – EMISSION CHANGES AND FEE CALCULATION

Fee Calculation for Major Source

Revised 03-11-16

Facility Name: BFI - Waste System of Arkansas, LLC
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\$/ton factor	28.14	Annual Chargeable Emissions (tpy)	312.474
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 ☐

If Hold Active Permit, Amt of Last Annual Air Permit Invoice \$ 0

Total Permit Fee Chargeable Emissions (tpy) 0.74

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		232.9	232.9	0	0	232.9
PM ₁₀		59.3	59.3	0		
PM _{2.5}		0	0	0		
SO ₂		37.8	37.8	0	0	37.8
VOC		9.8	10.3	0.5	0.5	10.3
CO		107	107	0		
NO _x		19.7	19.7	0	0	19.7
Single HAP	☐	4.32	4.39	0.07		

Pollutant (tpy)	Check if Chargeable Emission	Old Permit	New Permit	Change in Emissions	Permit Fee Chargeable Emissions	Annual Chargeable Emissions
Total HAPs	☐	8.4	10.49	2.09		
Perchloroethylene (tetrachloroethylene)	☒	0.377	0.377	0	0	0.377
Methyl Chloroform	☒	0.039	0.039	0	0	0.039
Dichloromethane (Methylene chloride)	☒	0.741	0.741	0	0	0.741
Hydrochloric Acid (HCl)	☒	2.217	2.217	0	0	2.217
Hydrogen Sulfide (H2S)	☒	7.91	8.15	0.24	0.24	8.15
Acetone	☒	0.25	0.25	0	0	0.25