

STATEMENT OF BASIS

For the issuance of Draft Air Permit # 2069-AOP-R4 AFIN: 25-00028

1. PERMITTING AUTHORITY:

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

2. APPLICANT:

Cherokee Sanitary Landfill Company
300 Landfill Road
Cherokee Village, Arkansas 72529

3. PERMIT WRITER:

John Mazurkiewicz

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
3/22/2021	Renewal/Modification	Permitted emission limits for PM/PM ₁₀ , SO ₂ , HAPs, and Air Contaminants were revised based on revised calculations.

6. REVIEWER'S NOTES:

- In addition to changes listed in the permit, formatting changes were made, process descriptions were revised, and Insignificant Activities were updated.

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 against the facility. The last inspection was conducted May 27, 2021. No areas of concern were identified. A review of ECHO revealed no CAA violations in the last 12 quarters.

8. PSD/GHG APPLICABILITY:

a) Did the facility undergo PSD review in this permit (i.e., BACT, Modeling, etc.)? No.
If yes, were GHG emission increases significant? N/A.

b) Is the facility categorized as a major source for PSD? No.

- *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. N/A.

9. SOURCE AND POLLUTANT SPECIFIC REGULATORY APPLICABILITY:

Source	Pollutant	Regulation (NSPS, NESHAP or PSD)
Facility	VOC (NMOC)	40 C.F.R. § 60 Subpart XXX
Facility	Asbestos	Regulation 21 and 40 C.F.R. § 61 Subpart M

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
SN-01*	N/A	N/A	N/A	The Open Flare is not required until necessary for compliance with Subpart XXX.

* See Specific Condition #9.

11. PERMIT SHIELD – TITLE V PERMITS ONLY:

Did the facility request a permit shield in this application? No.

(Note - permit shields are not allowed to be added, but existing ones can remain, for minor modification applications or any Regulation 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
None.		

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 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/m^3), as listed by the American Conference of Governmental Industrial Hygienists (ACGIH).

Pollutant	TLV (mg/m^3)	PAER (lb/hr) = $0.11 \times \text{TLV}$	Proposed lb/hr	Pass?
Mercury	0.01	0.0011	0.00002	Yes
1,1,1-Trichloroethane	0.4421	0.0486	0.0211	Yes

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?
N/A			

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? No.

If exempt, explain: N/A.

Pollutant	Threshold value	Modeled Concentration (ppb)	Pass?
H ₂ S	20 parts per million (5-minute average*)	77.8	Yes
	80 parts per billion (8-hour average) residential area	20.5	Yes
	100 parts per billion (8-hour average) nonresidential area	20.5	Yes

*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 Table 2.4-5	PM/PM ₁₀ : 17 lb/10 ⁶ dscf methane	Flare	N/A	2,000 scfm LFG
	AP-42 Section 2.4.4 Equations 3, 4, and 7	SO ₂ : 400 ppmv			8,760 hrs/yr

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
	AP-42 Section 2.4.4 Equations 3 and 4 and Table 2.4-1	VOC is the sum of the VOC pollutants in Table 2.4-1		98%	50% Methane
	Manufacturer Specified	CO: 0.31 lb/MMBtu		N/A	
	Manufacturer Specified	NO _x : 0.068 lb/MMBtu			
	AP-42 Section 2.4.4 Equations 3, 4, and 10	HCl: 42 ppmv Cl			
	AP-42 Section 2.4.4 Equations 3 and 4 and Table 2.4-1	HAPs: See Table 2.4-1		98%	
02	AP-42 Section 11.9	<u>Bulldozing/Compaction</u> PM: 2.2885 lb/hr PM ₁₀ : 0.4193 lb/hr			24,960 hr/yr dozer/compactor 360,000 tons/yr soil Truck Loading 360,000 tons/yr soil Truck Unloading 15,600 miles/yr
	AP-42 Section 13.2.4	Truck <u>Loading/Unloading</u> PM: 0.00302 lb/ton PM ₁₀ : 0.00143 lb/ton			
	AP-42 Section 11.9	<u>Grading</u> PM: 2.21 lb/VMT PM ₁₀ : 0.77 lb/VMT			
	AP-42 Section 2.4.4 Equations 3 and 4 and Table 2.4-1	VOC is the sum of the VOC pollutants in Table 2.4-1			
	AP-42 Section 2.4.4 Equations 3 and 4 and Table 2.4-1	HAPs: See Table 2.4-1	N/A	N/A	2,100 scfm LFG 8,760 hrs/yr 50% Methane
	AP-42 Section 2.4.4 Equations 3 and 4 and Table 2.4-1				
03	AP-42 Section 13.2.2 Equations 1a and 2 and Tables 13.2.2-1 and 13.2.2-2	Emission Factors: PM: 1.28 lb/VMT PM ₁₀ : 5.72 lb/VMT	Water Spray	90%	s = 6.4% W = 25 tons P = 110 d VMT = 140,400 miles/yr
04, 05,	AP-42 Table 2.4-5	PM/PM ₁₀ : 17 lb/10 ⁶ dscf methane	Flare	N/A	140 scfm LFG (each)

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
06	AP-42 Section 2.4.4 Equations 3, 4, and 7	SO ₂ : 400 ppmv			8,760 hrs/yr
	Manufacturer Specified	VOC: 4.6 ppmv		98%	50% Methane
	Manufacturer Specified	CO: 0.168 lb/MMBtu		N/A	
	AP-42 Table 2.4-5	NO _x : 40 lb/MMdscf CH ₄			
	AP-42 Section 2.4.4 Equations 3, 4, and 10	HCl: 42 ppmv Cl			
	AP-42 Section 2.4.4 Equations 3 and 4 and Table 2.4-1	HAPs: See Table 2.4-1		98%	

16. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

SN	Pollutants	Test Method	Test Interval	Justification
01 & 04-06	Visible Emissions	Method 22	Initial	40 C.F.R. § 60.18
Facility	NMOC	Method 3C 25 or 25C	Initial	40 C.F.R. § 60, Subpart XXX

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)
01	Flame Presence	Thermocouple, UV Sensor, or Equivalent	Continuously	N

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)
01	Opacity Records	0%	Weekly	N
01	Heating Value of Landfill Gas Calculations	≥ 200 Btu/scf	As Needed	N
01	Exit Velocity Calculations	<60 ft/sec	As Needed	N
03	Dust Control Plan Recordkeeping	N/A	N/A	N
04, 05, 06	Opacity Records	0%	Weekly	N
Facility	Design Capacity and Annual Average LFG	10,691,300 CY and 2,114 scfm	Annually	Y
Facility	Records of Modifications	N/A	As Needed	N
Facility	Subpart XXX Records	N/A	As Required	N
Facility	Waste Shipment Record	N/A	As Needed	Y to generator
Facility	Location, Depth and Area, and Quantity of Asbestos-containing Waste Material	N/A	As Needed	Y upon closure of facility

19. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
01	0%	Reg.18.501, 40 C.F.R. § 60.18(f)(1), and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311	Weekly Observations
03	5% Off-site	Reg.18.501 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311	Inspector Observation

SN	Opacity	Justification for limit	Compliance Mechanism
04, 05, 06	0%	Reg.18.501 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311	Weekly Observations

20. DELETED CONDITIONS:

Former Condition	Justification for removal
PWC #10 through #14	These conditions were requirements of 40 C.F.R. § 60, Subpart WWW, and were replaced by requirements of Subpart XXX as they are no longer applicable (40 C.F.R. § 60.750(d)(2)).

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
55 Gallon Transmission Oil Tank	A-2			-			-	-
125 Gallon Transmission Oil Tank	A-2			0.0001			0.0001	0.0001
170 Gallon Transmission Oil Tank	A-2			0.0001			0.0001	0.0001
165 Gallon Used Oil Tank	A-2			0.0001			0.0001	0.0001
170 Gallon Drive Train Oil Tank	A-2			0.0001			0.0001	0.0001
170 Gallon Motor Oil Tank	A-2			0.0001			0.0001	0.0001
170 Gallon Hydraulic Oil Tank	A-2			0.0001			0.0001	0.0001

Source Name	Group A Category	Emissions (tpy)						
		PM/PM ₁₀	SO ₂	VOC	CO	NO _x	HAPs	
							Single	Total
170 Gallon Engine Oil Tank	A-2			0.0001			0.0001	0.0001
30 Gallon Gear Oil Tank	A-2			-			-	-
55 Gallon Gear Oil Tank	A-2			-			-	-
Totals for A-2				0.0007			0.0007	0.0007
600 Gallon Diesel Tank	A-3			0.001			0.001	0.001
3,000 Gallon Diesel Tank	A-3			0.003			0.003	0.003
5,000 Gallon Diesel Tank	A-3			0.005			0.005	0.005
300 Gallon Motor Tank	A-3			0.002			0.002	0.002
300 Gallon Hydraulic Oil Tank	A-3			0.002			0.002	0.002
Totals for A-3				0.013			0.013	0.013
25,000 Gallon Leachate Tank	A-13	-	-	0.01	-	-	0.01	0.01
100,000 Gallon Leachate Tank	A-13							
Solidification Operations	A-13	0.02	-	-	-	-	-	-
Totals for A-13		0.02		0.01			0.01	0.01

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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 #
2069-AOP-R3

APPENDIX A – EMISSION CHANGES AND FEE CALCULATION

Fee Calculation for Major Source

Revised 03-11-16

Facility Name: Cherokee Sanitary Landfill Company
 Permit Number: 2069-AOP-R4
 AFIN: 25-00028

\$/ton factor	23.93	Annual Chargeable Emissions (tpy)	187.22
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)	-84.78
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		217	93	-124	-124	93
PM ₁₀		62.8	26.5	-36.3		
PM _{2.5}		0	0	0		
SO ₂		4.7	41.6	36.9	36.9	41.6
VOC		24.2	23.3	-0.9	-0.9	23.3
CO		92.1	92.1	0		
NO _x		20.5	20.5	0	0	20.5
Methyl Chloroform	<input checked="" type="checkbox"/>	0	0.09	0.09	0.09	0.09

Pollutant (tpy)	Check if Chargeable Emission	Old Permit	New Permit	Change in Emissions	Permit Fee Chargeable Emissions	Annual Chargeable Emissions
Methylene Chloride	<input checked="" type="checkbox"/>	0	1.75	1.75	1.75	1.75
Hydrogen Chloride	<input checked="" type="checkbox"/>	0	0.42	0.42	0.42	0.42
Tetrachloroethylene	<input checked="" type="checkbox"/>	0	1.29	1.29	1.29	1.29
Total HAPs	<input type="checkbox"/>	18.3	17.05	-1.25		
Total Air Contaminants	<input checked="" type="checkbox"/>	5.6	5.27	-0.33	-0.33	5.27