STATEMENT OF BASIS

For the issuance of Draft Air Permit # 2069-AOP-R3 AFIN: 25-00028

1. PERMITTING AUTHORITY:

Arkansas Department 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:

Jeremy Antipolo

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
5/28/2019	Minor Mod	SN-02 Landfill Gas Surface Emissions increasing due to increase in design capacity of landfill

6. REVIEWER'S NOTES:

Cherokee Sanitary Landfill (CLF) is currently owned and operated by IESI – AR Landfill Corp. The Class I/Class IV Municipal Solid Waste Landfill (MSWLF) is located in Cherokee Village, Arkansas. The site consists of a Class I permitted area of approximately 126.78 acres and a Class IV permitted area of approximately 20 acres. In this Minor Modification, CLF is increasing the permitted design capacity from 8,578,341 cubic yards to 10,691,300 cubic yards, an approved capacity increase in Solid Waste

Permit #0299-S1-R1. The change will result in the following emission rate increases: 2.7 tpy VOC, 2.35 tpy Total HAPs and 0.62 Total Air Contaminants.

The "Total Other Pollutants" category listed in the permit was renamed to "Total Air Contaminants" for clarity and for fee purposes. Total Air Contaminants include acetone, chlorodifluoromethane, dichlorodifluoromethane, and hydrogen sulfide. Also for consistency with similar facilities, hydrogen sulfide is listed separately but is included in Total Air Contaminants total.

HAPs not included in VOC nor PM totals are also chargeable. Therefore, the fee sheet includes a "Total Chargeable HAPs" category. Chargeable HAPs for Cherokee Sanitary Landfill include 1,1,1-trichloroethane (methyl chloroform), dichloromethane (methylene chloride), hydrogen chloride and perchloroethylene (tetrachloroethylene). Previously, the "Total Chargeable Non-Criteria Pollutants" category included the sum of air contaminants and the chargeable portion of the HAP total. Category name changes were made for ease in future permit modifications.

Additionally, Cherokee Sanitary Landfill will remain an area source of HAPs with this permit modification. Therefore, tracking both the highest single HAP and the total HAPs at the facility is necessary. For future permitting applicability purposes, see the table below for the highest single HAP for each source in permit #2069-AOP-R3.

Source	Single HAP	Emission Rate (tpy)
SN-01	HCl	2.08
SN-02	Toluene	5.30
SN-04	HCl	0.15
SN-05	HCl	0.15
SN-06	HCl	0.15

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 current/pending enforcement issues for this facility.

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/A

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. 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 WWW
Facility	Asbestos	40 C.F.R. § 61 Subpart M

10. 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 Regulation 18 requirement.)

If yes, are applicable requirements included and specifically identified in the permit? N/A
If not, explain why.

11. EMISSION CHANGES AND FEE CALCULATION:

See emission change and fee calculation spreadsheet in Appendix A.

12. 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 ADEQ Air Permit Screening Modeling Instructions.

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?
1,1,1-Trichloroethane	0.442086	0.0486	0.0218	Y
Mercury	0.01	0.0011	0.0001	Y

1.77e-3, 4.72e-3, 1.89e-2

c) H_2S 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 H_2S Standards N
If exempt, explain:

Pollutant	Threshold value	Modeled Concentration (ppb)	Pass?
H_2S	20 parts per million (5-minute average*)	60	Y
	80 parts per billion (8-hour average) residential area	19.8	Y
	100 parts per billion (8-hour average) nonresidential area	19.8	Y

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

$Cp = Cm\ (t_m/t_p)^{0.2}$ where

Cp = 5-minute average concentration
Cm = 1-hour average concentration
t_m = 60 minutes
t_p = 5 minutes

13. 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 ft^3/min 8,760 hrs/yr 50% Methane
	AP-42 Section 2.4.4 Equations 3, 4, 8 and Table 2.4-1	SO_2: 46.9 ppmv			
	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%	
	AP-42 Table 13.5-2	CO: 0.31 lb/MMBtu		N/A	
	AP-42 Table 13.5-1	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 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	N/A	N/A	2,114 ft^3/min 8,760 hrs/yr
	AP-42 Section 2.4.4 Equations 3 and 4 and Table 2.4-1	HAPs: See 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	Hourly Emission Factors: PM: 8.935 lb/VMT PM_{10}: 2.412 lb/VMT Annual Emission Factors: PM: 6.242 lb/VMT PM_{10}: 1.685 lb/VMT	Water Truck	75%	Silt = 6.4% Vehicle Weight = 30.306 tons 270,696 VMT/yr assuming 24 hr/day operation Number of Days with Rain = 110
04, 05, 06	AP-42 Table 2.4-5	PM/PM_{10}: 17 lb/10^6 dscf methane	Flare		140 ft^3/min each 420 ft^3/min total 8,760 hrs/yr 50% Methane
	AP-42 Section 2.4.4 Equations 3	SO_2: 46.9 ppmv			
	Manufacturer Specified factor and formula	VOC: 4.6 ppmv		98%	

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
		CO: 0.168 lb/MMBtu			
	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%	

14. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

SN	Pollutants	Test Method	Test Interval	Justification
02	NMOC	25 or 25C	Every 5 Years	40 C.F.R. § 60 Subpart WWW

15. 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

16. 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

SN	Recorded Item	Permit Limit	Frequency	Report (Y/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	Landfill Emissions	1,866 scfm and <50 Mg/yr	Annually	Y
Facility	Records of Modifications	N/A	As Needed	N
Facility	NMOC Emission Rate Report: Total In-place Waste and Estimated Waste Acceptance Rate	8,578,341 cubic yards	Annually	Y
Facility	Design Capacity Report	N/A	As Needed	N
Facility	Plot Map of Collector System When Emission Rate ≥50 Mg/yr	N/A	As Needed	N
Facility	Nature, Date of Deposition, Amount, and Location of Asbestos-containing Waste, Non-Degradable Waste, and Nonproductive Areas Excluded From Collection When Emission Rate ≥50 Mg/yr	N/A	As Needed	N
Facility	Waste Shipment Record	N/A	As Needed	Y to generator
Facility	Location, Depth and Area, and Quantity of Asbestos-containing Waste	N/A	As Needed	Y upon closure of facility

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
	Material			

17. 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.	Weekly Observations
03	5% Off-site	Reg.18.501 and Ark. Code Ann.	Inspector Observation
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

18. DELETED CONDITIONS:

Former SC	Justification for removal
Not applicable	

19. 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
500 Gallon Diesel Tank	A-13			0.000805			0.000805	0.000805
3,000 Gallon Diesel Tank	A-13			0.00273			0.00273	0.00273
5,000 Gallon Diesel Tank	A-13			0.00439			0.00439	0.00439
150 Gallon Used Oil Tank	A-13			0.000005			0.000005	0.000005
1,000 Gallon Used Oil Tank	A-13			0.00001			0.00001	0.00001

Source Name	Group A Category	Emissions (tpy)						
		PM/PM_{10}	SO_2	VOC	CO	NO_x	HAPs	
							Single	Total
125 Gallon Drive Train Oil Tanks	A-13			0.000005			0.000005	0.000005
125 Gallon Drive Train Oil Tanks	A-13			0.000005			0.000005	0.000005
125 Gallon Engine Oil Tank	A-13			0.000005			0.000005	0.000005
150 Gallon Engine Oil Tank	A-13			0.000005			0.000005	0.000005
250 Gallon Engine Oil Tank	A-13			0.000005			0.000005	0.000005
125 Gallon Hydraulic Oil Tank	A-13			0.000005			0.000005	0.000005
150 Gallon Hydraulic Oil Tank	A-13			0.000005			0.000005	0.000005
250 Gallon Hydraulic Oil Tank	A-13			0.000005			0.000005	0.000005
120 Gallon Transmission Oil Tank	A-13			0.000005			0.000005	0.000005
150 Gallon Gear Oil Tank	A-13			0.000005			0.000005	0.000005
25,000 Gallon Leachate Tank	A-13			2.59			0.1	1.31
Solidification Emissions	A-13	0.1						
100,000 Gallon Leachate Tank				0.0586			0.0586	0.0586

Source Name	Group A Category	Emissions (tpy)						
		PM/PM_{10}	SO_2	VOC	CO	NO_x	HAPs	
							Single	Total
Totals for A-13		0.1		2.65659			0.16659	1.37659

20. 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-R2

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-R3
AFIN: 25-00028

$/ton factor	23.93	Annual Chargeable Emissions (tpy)	277.36
Permit Type	Minor Mod	Permit Fee $	500

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)	3.65
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	217	0	0	217
PM_{10}		62.8	62.8	0		
$PM_{2.5}$		0	0	0		
SO_2		4.7	4.7	0	0	4.7
VOC		21.5	24.2	2.7	2.7	24.2
CO		92.1	92.1	0		
NO_X		20.5	20.5	0	0	20.5
Single HAP -removed from permit, notes in SOB	☐	4.79	5.3	0.51		

Pollutant (tpy)	Check if Chargeable Emission	Old Permit	New Permit	Change in Emissions	Permit Fee Chargeable Emissions	Annual Chargeable Emissions
Total HAPs	☐	15.95	18.3	2.35		
Total Air Contaminants	☑	4.98	5.6	0.62	0.62	5.6
Hydrogen Sulfide	☐	0	1.85	1.85		
Total Chargeable HAPs	☑	5.03	5.36	0.33	0.33	5.36