STATEMENT OF BASIS

For the issuance of Air Permit # 1994-AOP-R2 AFIN: 18-00094

1. PERMITTING AUTHORITY:

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

2. APPLICANT:

Crittenden County Landfill
1299 Kuhn Road West
West Memphis, Arkansas 72301

3. PERMIT WRITER:

Jimmy Do

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
7/12/2022	New	Due to the previous permit being voided, this is an initial permit for the facility.

6. REVIEWER'S NOTES:

Permit 1994-AOP-R1was voided by the landfill on October 12, 2009. Therefore, they have submitted for a new permit for the Crittenden County Landfill. Crittenden County Landfill had an expansion April 10, 2023, making them subject to 40 C.F.R. § 60, Subpart XXX. PM emissions have been set to 142.5 tpy, PM_{10} have been set to 36.8 tpy, VOC has been set to 10.2 tpy, single HAP has been set 2.32 tpy, and total HAP has been set 6.49 tpy.

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. There is no data available on ECHO.

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 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
None				

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 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*TLV	Proposed lb/hr	Pass?
1,1,1 - Trichloroethane (methyl chloroform)	1909.898	210.089	0.009	Y
1,1,2,2 - Tetrachloroethane	6.865	0.755	0.027	Y
1,1 - Dichloroethane (ethylidene dichloride)	404.785	44.526	0.034	Y
1,1 - Dichloroethene (vinylidene chloride)	13.096	1.441	0.003	Y

Pollutant	TLV (mg/m^3)	PAER (lb/hr) = 0.11*TLV	Proposed lb/hr	Pass?
1,2 - Dichloroethane (ethylene dichloride)	40.474	4.452	0.006	Y
1,2 - Dichloropropane (propylene dichloride)	46.213	5.083	0.003	Y
Acrylonitrile	4.339	0.477	0.049	Y
Benzene	1.536	0.169	0.022	Y
Carbon Disulfide	3.114	0.343	0.006	Y
Carbon Tetrachloride	31.460	3.461	0.0001	Y
Carbonyl Sulfide	12.286	1.351	0.004	Y
Chlorobenzene	46.037	5.064	0.004	Y
Chloroethane (ethyl chloride)	263.885	29.027	0.012	Y
Chloroform	48.826	5.371	0.001	Y
Chloromethane (methyl chloride)	103.252	11.358	0.003	Y
Dichloromethane (methylene chloride)	173.681	19.105	0.177	Y
Dichlorobenzene	60.127	6.614	0.005	Y
Ethylbenzene	86.838	9.552	0.071	Y
Ethylene dibromide	0.3	0.033	0.00003	Y
Hexane	176.196	19.382	0.083	Y
Mercury (total)	.205	0.023	0.00001	Y
Methyl Isobutyl Ketone	81.930	9.012	0.027	Y
Perchloroethylene (tetrachloroethylene)	172.597	18.986	0.090	Y
Toluene	75.370	8.291	0.529	Y
Trichloroethylene (trichloroethene)	53.742	5.912	0.054	Y

Pollutant	TLV (mg/m^3)	PAER (lb/hr) = 0.11*TLV	Proposed lb/hr	Pass?
Vinyl Chloride	2.556	0.281	0.067	Y
Xylenes	86.838	9.552	0.188	Y

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: N/A

Pollutant	Threshold value	Modeled Concentration (ppb)	Pass?
H_2S	20 parts per million (5-minute average*)	24.6133	Y
	80 parts per billion (8-hour average) residential area	8.4027	Y
	100 parts per billion (8-hour average) nonresidential area	8.4027	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

15. CALCULATIONS:

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
01	NMOC on-site	EPA-	None	n/a	EPA Tier II NMOC

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
	sample	LandGEM: 86.16 g/g-mol (hexane) 600 ppmv (hexane)			testing was performed at the facility in February 2022.
02	AP-42 Sections 13.2.1, 13.2.2, & 13.2.4.1	See AP-42	Water suppression as necessary	n/a	--

16. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

SN(s)	Pollutant	Test Method	Test Interval	Justification For Test Requirement
None				

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	Limit (as established in permit)	Frequency	Report (Y/N)
Facility	Incoming waste	5,403,77 cubic yard during lifetime of the	Monthly	Y

SN	Recorded Item	Limit (as established in permit)	Frequency	Report (Y/N)
		landfill		
Facility	NMOC	Less than 34 Mg/yr	Yearly	Y

19. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
01	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
02	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

20. DELETED CONDITIONS:

Former SC	Justification for removal
None	

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
Propane Pump	A-2	4.0E-06	3.3E-05	.001	.02	.23	.004	.004
25,000 Leachate Tanks	A-13	--	--	.30	--	--	--	--
25,000 Leachate Tanks	A-13	--	--	.30	--	--	--	--

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 #
N/A

APPENDIX A – EMISSION CHANGES AND FEE CALCULATION

Fee Calculation for Major Source

Revised 03-11-16

Facility Name: Crittenden County Landfill
Permit Number: 1994-AOP-R2
AFIN: 18-00094

$/ton factor	28.14	Annual Chargeable Emissions (tpy)	173.33004
Permit Type	Initial Permit	Permit Fee $	4877.5073

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)	173.33004
Initial Title V Permit Fee Chargeable Emissions (tpy)	173.33004

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		0	142.5	142.5	142.5	142.5
PM_{10}		0	36.8	36.8		
$PM_{2.5}$		0		0		
SO_2		0		0	0	0
VOC		0	10.2	10.2	10.2	10.2
CO		0		0		
NO_X		0		0	0	0
1,1,1 - Trichloroethane (methyl chloroform)	☑	0	0.04	0.04	0.04	0.04

Pollutant (tpy)	Check if Chargeable Emission	Old Permit	New Permit	Change in Emissions	Permit Fee Chargeable Emissions	Annual Chargeable Emissions
1,1,2,2 - Tetrachloroethane	☐	0	0.12	0.12		
1,1 - Dichloroethane (ethylidene dichloride)	☐	0	0.15	0.15		
1,1 - Dichloroethene (vinylidene chloride)	☐	0	0.01	0.01		
1,2 - Dichloroethane (ethylene dichloride)	☐	0	0.03	0.03		
1,2 - Dichloropropane (propylene dichloride)	☐	0	0.01	0.01		
2-Propanol (isopropyl alcohol)	☐	0	1.93	1.93		
Acetone	☑	0	0.26	0.26	0.26	0.26
Acrylonitrile	☐	0	0.21	0.21		
Bromodichloromethane	☐	0	0.33	0.33		
Butane	☐	0	0.19	0.19		
Benzene	☐	0	0.1	0.1		
Carbon Disulfide	☐	0	0.03	0.03		
Carbon Tetrachloride	☐	0	0.0004	0.0004		
Carbonyl Sulfide	☐	0	0.02	0.02		
Chlorobenzene	☐	0	0.02	0.02		
Chlorodifluromethane	☑	0	0.07	0.07	0.07	0.07
Chloroethane (ethyl chloride)	☐	0	0.05	0.05		
Chloroform	☐	0	0	0		
Chloromethane (methyl chloride)	☐	0	0.04	0.04		
Dichlorobenzene	☐	0	0.2	0.2		
Dichlorodifluoromethane	☑	0	1.21	1.21	1.21	1.21
Dichlorofluoromethane	☐	0	0.17	0.17		
Dichloromethane (methylene chloride)	☑	0	0.78	0.78	0.78	0.78
Dimethyl Sulfide (methyl sulfide)	☐	0	0.31	0.31		
Ethane	☑	0	17.1	17.1	17.1	17.1
Ethanol	☐	0	0.8	0.8		
Ethyl Mercaptan (ethanethiol)	☐	0	0.09	0.09		
Ethylbenzene	☐	0	0.31	0.31		

Pollutant (tpy)	Check if Chargeable Emission	Old Permit	New Permit	Change in Emissions	Permit Fee Chargeable Emissions	Annual Chargeable Emissions
Ethylene dibromide	☐	0	0.0001	0.0001		
Fluorotrichloromethane	☐	0	0.04	0.04		
Hexane	☐	0	0.36	0.36		
Mercury (total)	☑	0	0.00004	0.00004	0.00004	0.00004
Methyl Ethyl Ketone	☐	0	0.33	0.33		
Methyl Isobutyl Ketone	☐	0	0.12	0.12		
Methyl Mercaptan	☐	0	0.08	0.08		
Pentane	☐	0	0.15	0.15		
Perchloroethylene (tetrachloroethylene)	☑	0	0.4	0.4	0.4	0.4
Propane	☐	0	0.31	0.31		
t-1,2-Dichloroethene (1,2 dichloroethylene)	☐	0	0.18	0.18		
Toluene	☐	0	2.32	2.32		
Trichloroethylene (trichloroethene)	☐	0	0.24	0.24		
Vinyl Chloride	☐	0	0.29	0.29		
Xylenes	☐	0	0.82	0.82		
Hydrogen Sulfide (H2S)	☑	0	0.77	0.77	0.77	0.77