STATEMENT OF BASIS

For the issuance of Draft Air Permit # 2087-AOP-R5 AFIN: 16-00199

1. PERMITTING AUTHORITY:

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

2. APPLICANT:

Craighead County Solid Waste Disposal Authority (SWDA)
238 County Road 476
Jonesboro, Arkansas 72404

3. PERMIT WRITER:

Thamoda Crossen

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
7/23/2025	Modification	Replace SN-04's current flow capacity from 750 scfm to 1,500 scfm

6. REVIEWER'S NOTES:

The facility submitted a modification application to replace the currently permitted 750 scfm flare with a 1,500 scfm utility flare (SN-04). Also, Regulation Subpart WWW*: Standards of Performance for Municipal Solid Waste Landfill* has been replaced with 8 CAR § Part 41 - *Requirements for Landfills.*

The permitted emission increases in this Title V modification include 0.1 tpy of PM/PM_{10}, 3.4 tpy of SO_2, 0.6 tpy of VOC, 56.6 tpy of CO, 6.1 tpy of NO_x and 1.73 tpy of Total HAPs.

7. COMPLIANCE STATUS:

The following summarizes the current compliance of the facility including active/pending enforcement actions and recent compliance activities and issues.

On August 5th 2025, an inspection was conducted, and there were no areas of concerns.

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?

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)
Facility	NMOC (VOC)	8 CAR § Part 41
SN-03	HAPs	40 C.F.R. § 63 Subpart ZZZZ
SN-03	HC, NO_x, CO & PM	40 C.F.R. § 60 Subpart IIII

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

If yes, are applicable requirements included and specifically identified in the permit? Y

If not, explain why.

For any requested inapplicable regulation in the permit shield, explain the reason why it is not applicable in the table below.

Source	Inapplicable Regulation	Reason
Facility	40 C.F.R. 52.21 – Prevention of Significant Deterioration of Air Quality	The landfill's potential to emit is less than the PSD major stationary source threshold of 250 tpy of any NSR pollutant.
Volatile Organic Liquid Storage Vessels	40 C.F.R. 60 Subpart Kb	None of the landfill's storage tanks have a storage capacity greater than 19,815 gallons (75 cubic meters)

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 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?
Acenaphthene	0.2	0.022	9.02E-08	Yes
Acenaphthylene	0.2	0.022	9.02E-08	Yes
Anthracene	0.2	0.022	1.20E-07	Yes
Acetone	2.38	0.2618	0.11	Yes
Benzene	3.19	0.3509	0.001	Yes
1,1,1 - Trichloroethane (methyl chloroform)	5.46	0.6006	0.0003	Yes
1,1 - Dichloroethane (ethylidene dichloride)	4.05	0.4455	0.001	Yes
1,2 - Dichloroethane (ethylene dichloride)	4.05	0.4455	0.0002	Yes
1,2 - Dichloropropane (propylene dichloride)	4.62	0.5082	0.0001	Yes
Carbon Disulfide	3.11	0.3421	0.0002	Yes
Chloroform	4.88	0.5368	0.00002	Yes
Hexane	3.53	0.3883	0.003	Yes
Toluene	3.77	0.4147	0.017	Yes
Chrysene	0.2	0.022	9.02E-08	Yes
Dibenzo(a,h)anthracene	0.2	0.022	6.01E-08	Yes
Hydrogen Chloride (HCl)	6.62	0.728	0.35	Yes
Hydrogen Fluoride (HF)	0.82	0.0902	0.17	Yes
Fluoranthene	0.2	0.022	1.50E-07	Yes
Fluorene	0.2	0.022	1.40E-07	Yes
Indeno(1,2,3-c,d)pyrene	0.2	0.022	9.02E-08	Yes
Lead	0.05	0.006	2.51E-05	Yes
Phenanthrene	0.2	0.022	8.52E-07	Yes
Pyrene	0.2	0.022	2.51E-07	Yes
Arsenic Compounds (inorganic including arsine)	0.01	0.001	1.00E-05	Yes
Beryllium Compounds	5.00E-05	5.50E-06	6.01E-07	Yes
Cadmium Compounds	0.01	0.001	5.51E-05	Yes

Pollutant	TLV (mg/m^3)	PAER (lb/hr) 0.11 × TLV	Proposed (lb/hr)	Pass?
Chromium Compounds (Trivalent, Total)	0.5	0.055	7.01E-05	Yes
Cobalt Compounds	0.02	0.002	4.21E-06	Yes
Manganese Compounds	0.1	0.011	1.90E-05	Yes
Mercury Compounds	0.025	0.003	1.30E-05	Yes
Selenium Compounds	0.2	0.022	1.20E-06	Yes

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*)	0.0313 ppm 26.48 $\mu g/m^3$ (1-hr)	Y
	80 parts per billion (8-hour average) residential area	7.3983 ppb 10.3129 $\mu g/m^3$ (8-hr)	Y
	100 parts per billion (8-hour average) nonresidential area	7.3983 ppb 10.3129 $\mu g/m^3$ (8-hr)	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	US EPA LandGEM Software, Version 3.02	See Subpart WWW For the decomposition formula 40 C.F.R. §60.754	N/A	N/A	Waste Design Capacity 4,298,687 Mg
02a & 02b	AP-42 Sections 13.2.1 and 13.2.2 Table 13.2.2-2 Table 13-2.1-1	<u>Unpaved Roads</u> <u>0.53 miles roundtrip</u> k = 4.9 for PM a = 0.7 for PM b = 0.45 for PM k = 1.5 for PM_{10} a = 0.9 for PM_{10} b = 0.45 for PM_{10} W = 20 tons s = 6.4% 100 trucks/day	Watering truck	75% for unpaved roads	
03	Cummins: Exhaust Emission Data Sheet AP-42 Table 3.3-2	<u>g/hp-hr</u> PM = 0.04 PM_{10} = 0.04 VOC = 0.046 NOx = 3.42 SO_2 = 0.115 CO = 0.77 <u>lb/MMBtu</u> Benzene = 9.33E-04 Toluene = 4.09E-04 Xylene = 2.85E-04 1,3 Butadiene = 3.91E-05 Formaldehyde = 1.18E-03 Acetaldehyde = 7.67E-04 Acrolein = 9.25E-05 PAH = 1.68E-04	none	none	Diesel Emergency Generator 382 HP
04	EPA AP-42 (08/24)	<u>lb/MMBTU</u> CO = 0.31 NO_x = 0.068	Utility Flare	98%	1,500 scfm landfill gas 11,162,501 m^3/yr of CH_4

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
	AP-42 Table : 2.4-3, 1.4-3 and 1.4-4	$PM_{10}/PM_{2.5}$ = 0.001 lb/hr/scfm methane lb/hr PM/PM_{10} = 0.8 SO_2 = 1.38 VOC = 0.22 Acetone = 0.002 Benzene = 0.001 Chlorodifluoromethane = 0.001 Dichlorodifluoromethane = 0.009 Methyl Chloroform = 0.03 Methylene Chloride = 0.01 Tetrachloroethylene = 0.01 Hydrogen Chloride (HCl) = 0.35 Hydrogen Fluoride (HF) = 0.17 Hydrogen Sulfide (H_2S) = 0.015 Total HAPs = 0.39			Maximum, operating hours = 8,760 Fuel Heat: 49.09 MMBTU/hr

16. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

SN	Pollutants	Test Method	Test Interval	Justification
01	NMOC	Tier 2 test Procedure	5-year	40 C.F.R. § 60 Subpart WWW

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	NMOC Emissions	≤ 50 MG/yr	Annually	Y
01	Solid waste	4,299,687 Mg	Monthly	Y
03	Hours of operation	500 hrs/ yr	Monthly	Y

19. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
03	20%	Reg.19.503	Daily Observations when Operating
04	0%	Reg.18.501	Initial

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
250 gallon Lube Oil Tank	A-2			<0.01				<0.01
Used Lube Oil Tank	A-2			<0.01				<0.01
6,500 gallon Leachate Tank	A-3			<0.1				
9,000 gallon Leachate Tank	A-3			<0.1				
10,000 gallon Leachate Tank	A-3			<0.1				
12,000 gallon Diesel Storage Tank	A-13			1.26E-03				
Cover Material Truck Loading and Dumping	A-13	<0.1						

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 #
2087-AOP-R4

APPENDIX A – EMISSION CHANGES AND FEE CALCULATION

Fee Calculation for Major Source

Revised 03-11-16

Facility Name: Craighead County Solid Waste Disposal Authority
Permit Number: 2087-AOP-R5
AFIN: 16-00199

$/ton factor	28.14	Annual Chargeable Emissions (tpy)	119.79
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)	12.84
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		61.8	61.9	0.1	0.1	61.9
PM_{10}		16.4	16.5	0.1		
$PM_{2.5}$		0	0	0		
SO_2		2.8	6.2	3.4	3.4	6.2
VOC		16.7	17.3	0.6	0.6	17.3
CO		14.3	70.9	56.6		
NO_X		9.4	15.5	6.1	6.1	15.5
Acetone	☑	0.41	0.42	0.01	0.01	0.42

Pollutant (tpy)	Check if Chargeable Emission	Old Permit	New Permit	Change in Emissions	Permit Fee Chargeable Emissions	Annual Chargeable Emissions
Hydrogen sulfide	☑	1.25	1.31	0.06	0.06	1.31
Chlorodifluoromethane	☑	0.11	0.12	0.01	0.01	0.12
Dichlorodifluoromethane	☑	1.97	2.01	0.04	0.04	2.01
Methyl Chloroform	☑	0.07	0.08	0.01	0.01	0.08
Dichloromethane (methylene chloride)	☑	1.21	1.22	0.01	0.01	1.22
Tetrachloroethylene	☑	0.62	0.64	0.02	0.02	0.64
Total HAPs	☑	10.61	13.09	2.48	2.48	13.09
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