

STATEMENT OF BASIS

For the issuance of Air Permit # 1884-AOP-R8 AFIN: 72-00144

1. PERMITTING AUTHORITY:

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

2. APPLICANT:

Eco-Vista, LLC.—Waste Management of Arkansas, Inc.
2210 Waste Management Drive
Springdale, Arkansas 72762

3. PERMIT WRITER:

Kyle Crane

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
12/31/2020	Administrative Amendment	None

6. REVIEWER'S NOTES:

Waste Management of Arkansas, Inc. (WM) owns and operates a municipal solid waste landfill (NAICS 562212), Eco-Vista, LLC (EVLf), (AFIN: 72-00144), located at 2210 Waste Management Drive, Springdale, Washington County, Arkansas 72762. This administrative amendment adds an Ammonia Leachate Stripper as an A-13 Insignificant Activity. Annual permitted emissions do not change with this administrative amendment.

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 November 18, 2020 and was found to be in compliance.

EPA ECHO shows “No Violation Identified” for Clean Air Act compliance.

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)
Facility	VOC (NMOC)	40 C.F.R. § 60 Subpart XXX
04 through 08	VOC, CO, NO _x	40 C.F.R. § 60 Subpart JJJJ
04 through 08	HAPs	40 C.F.R. § 63 Subpart ZZZZ
Facility	HAPs	40 C.F.R. § 63 Subpart AAAA

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
09	January 11, 2021	-	-	-
10	January 11, 2021	-	-	-

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 Regulation 18 requirement.)

If yes, are applicable requirements included and specifically identified in the permit? N
 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
N/A		

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/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?
Acetaldehyde	45.04	4.954	0.338	Yes
Acrolein	0.229	0.0252	0.208	No
Benzene	1.597	0.176	0.337	No
Chloroform	48.83	5.371	0.0012	Yes
Ethylbenzene	86.838	9.552	0.1256	Yes
Formaldehyde	1.5	0.0405	3.756	No
Hydrogen Chloride	2.983	0.328	2.784	No
Methyl Isobutyl Ketone	81.93	9.012	0.016	Yes
Phenol	19.245	2.117	0.001	Yes
Styrene	85.202	9.372	0.001	Yes
Toluene	75.362	8.289	0.464	Yes
Vinyl Chloride	2.556	0.281	0.0213	Yes
Xylene	434.192	47.761	0.3123	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 Department to be one one-hundredth of the Threshold Limit Value as listed by the ACGIH.

Pollutant	PAIL (µg/m ³) = 1/100 of Threshold Limit Value	Modeled Concentration (µg/m ³)	Pass?
Acrolein	2.29	0.550	Yes
Benzene	15.97	1.099	Yes
Formaldehyde	15	5.649	Yes
Hydrogen Chloride	29.83	5.996	Yes

*Emissions of modeled pollutants did not change for Permit #1884-AOP-R8, so new modeling was not performed

a) 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 Y

If exempt, explain: This facility does not emit H₂S

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 – criteria WIAC* for HAPs * Trade Organization	Varies	None	n/a	Operating scenario: 100% of LFG is emitted uncontrolled over the landfill surface. Concentration of NMOC based on site specific Tier 2 test values of 239 ppmv as hexane (Mar 2009)
01 – PCS**	Data provided by WM ** Petroleum Contaminated Soil	50 ppm organic content	None	n/a	100% fuel evaporation highly conservative, assumed all organics would be emitted into air
02A/B Flares	<u>PM</u> – AP-42 2.4 Table 2.4-5 footnote a (11/98) <u>SO₂</u> – 4/2009 Test data 77 ppmv <u>NMOC</u> – AP-42 2.4 Table 2.4-2	<u>PM</u> = 17 lb/10-6 dscf Methane (0.00102 lb/hr/dscfm) <u>SO₂</u> = 400 ppmv Reduced S <u>NMOC</u> = 595 ppmv default	Flares	NMOC – 98% HAPs - 98.0%	6 Op Scenarios Open candlestick, dual Flares , variable each 225 to 2250 scfm = combined 450 to 4500 scfm max @8760 hr/yr @1012 BTU/scf Methane @55% Methane

SN	Emission Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
	(11/98) <u>CO & NO_x</u> – <u>Vendor/Flare</u> <u>Guarantee</u> HAPs – WIAC	<u>CO</u> = 0.370 lb/MMBtu <u>NO_x</u> = 0.068 lb/MMBtu Varies , see Table 2.4-1			Concentration for PM, SO ₂ & NO _x NMOC = 100% VOC
03	PM –AP-42 Section 13.2.2 Tables 13.2.1.3, 13.2.2-1,-2,-3 (11/06)	formula PM = 5.38 lb/ VMT* PM10 = 1.45 lb/VMT*	Water suppression, speed limits, etc., as necessary	None	Other means to suppress dust are allowed, speed limits, plastic cover instead of soil, etc.
04-08 IC Engines (LFG Fueled)	<u>PM</u> – AP-42, Table 2.4-5 (11/98) <u>SO₂</u> –4/2009 Test data 77 ppmv AP-42 2.4 Eq #3, 4, & 7 <u>VOC</u> = NMOC = <u>CO</u> & <u>NO_x</u> – based on Two Pine LF, Cat 3516 engines perf stack test dated 04/15/2008 <u>Formaldehyde</u> - Process knowledge	<u>PM</u> = 48 lb/10 ⁶ dscfm <u>SO₂</u> = 400 ppmv <u>VOC</u> = <u>CO</u> = 2.7 g/bhp-hr <u>NO_x</u> = 1.5 g/bhp-hr @max 313 scfm <u>Formaldehyde</u> = 453.59 g/lb	5 Cat Engines Lean Burn After cooled Filter treatment to remove PM10 prior to gas entering engines	n/a	New Engines to be installed in 2010 for LFGTE
04-08 IC Engines	AP-42 3.2 Table 3.3-2	<u>lb/MMBtu:</u> PM: 9.91E-03 PM ₁₀ : 7.71E-			

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
(Natural-gas Fueled)	Caterpillar 3516 Natural Gas Engine Spec.	05 SO ₂ : 5.88E-04 Total HAP: 7.17E-02 <u>g/BHP-hr:</u> NO _x : 2.00 CO: 2.230 VOC: 0.790			
09	AP-42 2.4.4.2 Manufacturer Specifications	PM/PM ₁₀ : 3.46 lb/hr SO ₂ : 10,935 kg/yr Total HAP: 1226 ppmv VOC: 276.69 lbmol LFG/hr <u>lb/MMBtu</u> NO _x : 0.068 CO: 0.31			98% destruction efficiency assumed from AP-42 13.5.2
10	AP-42 2.4.4.2 Manufacturer Specifications	PM/PM ₁₀ : 5.00 lb/MMscf of CH ₄ SO ₂ : 27,337 kg/yr Total HAP: 2452 ppmv VOC: 276.69 lbmol LFG/hr <u>lb/hr</u> NO _x : 3.50 CO: 3.00			98.0% Combustion Efficiency from Manufacturer

16. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

SN	Pollutants	Test Method	Test Interval	Justification
04-08	CO NO _x	EPA Methods 7E and 10	Within 180 Days of initial startup plus every 8760 op hours or 3 years whichever comes first	PWC #3 & Subpart JJJ, §60.4243(b)(2)(ii) & Reg.19.501
04-08	VOC	EPA Methods 25A & 18	Within 180 Days of initial startup plus every 8760 op hours or 3 years whichever comes first	NSPS – 40 C.F.R. Part 60, Subpart JJJJ & Reg.19.501
04-08 (One only)	Formaldehyde	EPA Method 320 or otherwise approved	One engine, initial test within 180 days of startup	Reg.18.1004 & Ark. Code Ann.

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 amount of waste-in-place	23,190,000 cubic yards	Annually	Yes
Facility	Plot Map of collector system	None	On-going	No
Facility	Asbestos- containing or non-degradable waste: nature,	None	On-going	No

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
	date, quantity received & location			
Facility	Total CO emissions and calculations	245.0 tons per rolling 12 month period	Monthly	Yes
04 thru 08	Maintenance Log	Maintain Good Operating Practices Maintain records	Monthly	No
40 C.F.R. § 60 Subpart JJJJ engines	Notification, documentation (tests) of meeting emissions	Maintain Good Operating Practices	On-going	Yes
Facility (04 thru 08)	List of Engines w/model date and purchase date	Keep for life of engine	Within 30 days of installation	No
04 thru 08	Operating Hours	Non-resettable Hourly Operating Meter	On-going	No
04 thru 08	Operating Scenario	N/A	As Needed/When Switching	No
02A, 02B, 04 thru 08, 09, 10	Gas flow in scfm	N/A – For CO Calculations	Every 15 minutes	No
01	NMOC SN-01	50 Mg/yr	Annually	Yes
04 thru 08	Performance Tests	Varies	Varies	Yes

19. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
Off-site	5%	Reg.18.501 & Ark. Code Ann.	Observation & Dust Suppression methods, NPDES permit required
04 through 08	5%	Reg.18.501 & Ark. Code Ann.	Landfill gas as the only fuel/Natural gas as the only fuel
09	5%	Reg.18.501 & Ark. Code Ann.	Post-treatment tail gas as the only fuel

20. DELETED CONDITIONS:

Former SC	Justification for removal
#12-13	Replacing operating scenarios with combined CO limit in Plantwide Conditions #9-10

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
500 Gallon Used Oil Tank	A-3			1.00E-05				1.00E-05
350 Gallon Engine Oil Tank	A-3			1.50E-05				1.50E-05
350 Gallon Transmission Oil Tank	A-3			1.50E-05				1.50E-05
350 Gallon Hydraulic Oil Tank	A-3			1.50E-05				1.50E-05
350 Gallon Hydraulic Oil Tank	A-3			1.50E-05				1.50E-05
550 Gallon Diesel Fuel Tank	A-3			2.41E-03				2.41E-03
2,000 Gallon Diesel Fuel Tank	A-3			4.73E-03				4.73E-03
Solidification Activities	A-13	2.55E-03						
Parts Washer	A-13	0.44		4.79			5.97E-06	2.98E-05
One (1) 100,000 Gallon Leachate Tank	A-13			5.82E-03				5.82E-03
Ten (10) 5,000 Gallon Leachate ASTs	A-13			5.69E-03				5.69E-03
550 Gallon Gasoline Fuel Tank	A-13			0.164				0.164
Ammonia Leachate Stripper	A-13			1.80E-03				

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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 #
1884-AOP-R7

APPENDIX A – EMISSION CHANGES AND FEE CALCULATION

Fee Calculation for Major Source

Revised 03-11-16

Facility Name: Eco-Vista, LLC.—Waste Management of
Arkansas, Inc.
Permit Number: 1884-AOP-R8
AFIN: 72-00144

\$/ton factor		23.93	Annual Chargeable Emissions (tpy)	739.7
Permit Type	AA		Permit Fee \$	0

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)	0
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		373.8	373.8	0	0	373.8
PM ₁₀		115.9	115.9	0		
PM _{2.5}		0	0	0		
SO ₂		120.9	120.9	0	0	120.9
VOC		65.6	65.6	0	0	65.6
CO		245	245	0		
NO _x		179.4	179.4	0	0	179.4
Single HAP	<input type="checkbox"/>	9.4	9.4	0		

Pollutant (tpy)	Check if Chargeable Emission	Old Permit	New Permit	Change in Emissions	Permit Fee Chargeable Emissions	Annual Chargeable Emissions
Total HAP	<input type="checkbox"/>	22.87	22.87	0		