

STATEMENT OF BASIS

For the issuance of Draft Air Permit # 1884-AOP-R1 AFIN: 72-00144

1. PERMITTING AUTHORITY:

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

2. APPLICANT:

Eco-Vista, LLC
2210 Waste Management Drive
Springdale, Arkansas 72762

3. PERMIT WRITER:

Patty Campbell, PE

4. PROCESS DESCRIPTION AND NAICS CODE:

NAICS Description: Municipal Solid Waste Landfill
NAICS Code: 562212

5. SUBMITTALS:

December 14, 2007 and completely revised March 31, 2008

6. REVIEWER'S NOTES:

Waste Management of Arkansas, Inc. (WM) owns and operates a municipal solid waste landfill (NAICS 562212), Eco-Vista, LLC, formerly Tontitown Landfill, LLC, (AFIN: 72-00144), located at 2210 Waste Management Drive, Springdale, Washington County, Arkansas 72762. Eco-Vista (EV) landfill (LF) requests renewal and modification of its Title V Operating Permit. This modification will allow EVLF to replace the existing 12-inch candlestick, single flare with dual 12-inch Parnel open candlestick flares (SN-02). EVLF is subject to and shall comply with applicable provisions of 40 CFR Part 60, Subpart WWW – *Standards of Performance for Municipal Solid Waste Landfills*. EVLF has a design fill capacity of 11,086,000 cubic yards. Potential annual emissions are permitted at: 271.0 tpy PM, 67.2 tpy PM₁₀, 19.7 tpy SO₂, 54.3 tpy VOC (NMOC), 221.4 tpy CO, 40.7 tpy NO_x, 0.311 tpy 1,1-Dichloroethane, 0.038 tpy 1,1-Dichloroethylene, 0.903 tpy Dichlorobenzene, 3.056 tpy Ethyl Benzene, 9.93 tpy Toluene, 0.184 tpy Vinyl Chloride, 7.465 tpy Xylenes, and 0.891 tpy Hydrogen Chloride.

The only operating scenario used is that surface emission limits presented for SN-01 are assumed to be 100% of the LFG and PCS. EVLF potential surface emission limits in the air permit are voluntarily confined to a not to exceed 49 Mg/yr NMOC (54.1 tons/year) and will be calculated annually based on actual acceptance rate and the latest site-specific NMOC concentrations. EVLF has stipulated that all VOC surface emissions are NMOCs.

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 air enforcement issues at this time.

8. PSD APPLICABILITY:

a. Did the facility undergo PSD review in this permit (i.e., BACT, Modeling, etc.)? 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?

9. SOURCE AND POLLUTANT SPECIFIC REGULATORY APPLICABILITY:

Source	Pollutant	Regulation (NSPS, NESHAP or PSD)
Facility	VOC (NMOC)	NSPS Part 60, Subpart WWW

10. EMISSION CHANGES AND FEE CALCULATION:

See emission change and fee calculation spreadsheet in Appendix A.

11. MODELING:

Criteria Pollutants

PM₁₀ emission was modeled over 5 years at the 6th High. The potential increases in PM₁₀ emissions do not exceed the primary standards of 150 mg/m³. North Little Rock background PM₁₀ was used (31/48, ANN/24HR). Fence line/natural boundary used.

Pollutant	Emission Rate (lb/hr)	NAAQS Standard ($\mu\text{g}/\text{m}^3$)	Averaging Time	Highest Concentration ($\mu\text{g}/\text{m}^3$)	% of NAAQS
PM ₁₀	31.1*	50	Annual	39.7**	79.4
		150	24-Hour	132.0***	88.0

* Includes SN-02 – Flare ONLY @ 2.3 lb/hr and SN-03 – Traffic @ 28.8 lb/hr = 31.1 lb/hr PM₁₀

** ANNUAL PM₁₀ ($\mu\text{g}/\text{m}^3$) - SN-02/ SN-03/Backgrd - 0.8741 + 7.76828 + 31.0 = 39.64 $\mu\text{g}/\text{m}^3$ PM₁₀

*** 24-Hour PM₁₀ ($\mu\text{g}/\text{m}^3$) - SN-02/ SN-03/Backgrd - 77.64381 + 6.33013 + 48.0 = 131.975 $\mu\text{g}/\text{m}^3$ PM₁₀

Non-Criteria Pollutants:

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) = $0.11 \times \text{TLV}$	Proposed lb/hr	Pass?
1, 1-Dichloroethane (Ethylidene dichloride, CAS 75-34-3)	404.8	44.528	0.071	PASS
1,1-Dichloroethylene (Vinylidene chloride, CAS 75-35-4)	19.82	2.1802	0.009	PASS
Dichlorobenzene (CAS 106-46-7)	60.13	6.614	0.206	PASS
Ethyl benzene	434.2	47.762	0.698	PASS
Toluene	75.36	8.2896	2.266	PASS
Vinyl Chloride	2.56	0.2816	0.042	PASS

Pollutant	TLV (mg/m ³)	PAER (lb/hr) = 0.11 × TLV	Proposed lb/hr	Pass?
Xylene	434.2	47.762	1.704	PASS
Hydrogen Chloride	2.984	0.328	0.203	PASS

12. 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	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 173 ppmv as hexane (Feb 2004)
01 – PCS**	Data provided by WM	50 ppm organic content	None	n/a	100% fuel evaporation highly conservative, assumed all organics would be emitted into air
02	AP-42 Table 2.4-5	Varies by Pollutant	Dual Flares	98.0%	New open candlestick flares, each 2250 scfm
03	AP-42 Section 13.2.2 Tables 13.2.1.3, 13.2.2-1,-2,-3	formula PM = 5.38 lb/VMT* PM10 = 1.45 lb/VMT*	Water suppression as necessary	None	Other means to suppress dust are allowed, speed limits, plastic cover instead of soil, etc.

* WIAC – Waste Industry Air Coalition

** PCS – Petroleum Contaminated Soil

13. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

SN	Pollutants	Test Method	Test Interval	Justification
01	NMOC*	Tier 2	If NMOC is less than 50 Mg/yr (54.1 tpy), every 5 years, next test due before February 17, 2009	NSPS Subpart WWW
02	Performance Test of Flares	EPA Method 22	Within 180 Days of Initial Start-ups	New Flares Installation SC#5

* WM stipulated that 100% of VOCs are NMOCs.

14. MONITORING OR CEMS:

This facility has no CEMS or other monitoring equipment for air emissions.

15. 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 in-place Municipal Solid Waste	11,086,000 CY design capacity (Tons accepted are converted to CY)	Monthly	Y
Facility	Weigh Each Truck Load and Record Monthly & 12-month rolling Acceptance Rate	None	Monthly	N
Facility	Plot Map of collector system	None	On-going	N

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
Facility	Asbestos-containing or non-degradable waste: nature, date, quantity received & location	None	On-going	N
02	Opacity	0%	Weekly	N
03	Opacity	5%	Weekly	N

16. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
02	5%	Department Guidance & Reg. #18	Annual Inspection & Initial Performance Test, 60 days after [old] Flare flow 2,000 scfm reached and 60 days after 2,400 scfm reached.
02	0%	Department Guidance & Reg. #18	Weekly Observation & Initial Performance Test, 60 days after <i>new dual Flares</i> begin operating and/or 60 days after each flare reaches 2,250 scfm
03	5%	Department Guidance & Reg. #18	Weekly Observation

17. DELETED CONDITIONS:

There are no deleted conditions.

18. GROUP A INSIGNIFICANT ACTIVITIES:

Source Name	IA	Emissions (tpy)						
		PM/ PM ₁₀	SO ₂	VOC	CO	NO _x	HAPs	
							Single	Total
Ingersoll-Rand 30 HP, 185 Diesel Air Compressor	A-1	0.217	0.202	0.243	0.658	3.055	---	0.00261

Source Name	IA	Emissions (tpy)						
		PM/ PM ₁₀	SO ₂	VOC	CO	NO _x	HAPs	
							Single	Total
Kubota 18 HP, D905-E Diesel Light Plant	A-1	0.130	0.121	0.146	0.395	1.833	---	0.00247
Honda 5.5 HP Gasoline Motor	A-1	1.30E-02	0.0107	0.271	7.932	0.199	---	---
Two (2) Diesel Powered Shop Heaters	A-1	0.007	0.007	0.008	0.022	0.102	---	0.0000872
34 HP, 220 V Diesel Generator	A-1	0.246	0.229	0.276	0.746	3.462	--	0.00296
Summary of above	A-1	<10	<10	<10	<10	<10	<5	<5
Emission Summary using TANKS 4.0.9d for each of the seven (7) tanks.								
350 Gal Used Oil Tank	A-3	---	---	0.019	---	---	---	---
350 Gal Engine Oil Tank	A-3	---	---	0.013	---	---	---	---
350 Gal Transmission Oil Tank	A-3	---	---	0.009	---	---	---	---
350 Gallon Hydraulic Oil Tank	A-3	---	---	0.011	---	---	---	---
550 Gal Diesel Fuel Truck Tank	A-3	---	---	0.311	---	---	---	---
2,000 Gallon Diesel Fuel Tank	A-3	---	---	0.837	---	---	---	---
6 Tanks Summary of above	A-3	---	---	<5.0	---	---	---	---
550 Gallon Gasoline Fuel Tank	A-13	---	---	0.074	---	---	---	---
Leachate Collection System	A-13	Air emissions are water vapor. Leachate goes to sewer system for treatment.						

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19. VOIDED, SUPERSEDED, OR SUBSUMED PERMITS:

List all active permits voided/superseded/subsumed by the issuance of this permit.

Permit #
1884-AOP-R0

20. CONCURRENCE BY:

The following supervisor concurs with the permitting decision.



Paula Parker, P.E.

APPENDIX A – EMISSION CHANGES AND FEE CALCULATION

Fee Calculation for Major Source

Fee Calculation for Major Source						
Facility Name: Eco-Vista, LLC (formerly Tontitown (Landfill))						
Permit Number: 1884-AOP-R1						
AFIN: 72-00144						
\$/ton factor	22.07	Annual Chargeable Emission (tpy)			386.591	
Permit Type	Modification	Permit Fee \$			7340.5173	
Minor Modification Fee \$	500					
Minimum Modification Fee \$	1000					
Renewal with Minor Modification \$	500					
If Hold Active Permit, Amt of Last Annual Air Permit Invoice \$	0					
Total Permit Fee Chargeable Emissions (tpy)	332.6016					
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		11.5	271	259.5	259.5	271
PM ₁₀		11.5	67.2	55.7		
SO ₂		4.2	19.7	15.5	15.5	19.7
VOC		18.3	54.3	36	36	54.3
CO		97.3	221.4	124.1		
NO _x		17.9	40.7	22.8	22.8	40.7
1,1-Dichloroethane		0.1335	0.331	0.1975		
1,1-Dichloroethylene		0	0.038	0.038		
Dichlorobenzene		0	0.903	0.903		
Ethyl Benzene		1.3117	3.056	1.7443		
Toluene		6.2806	9.93	3.6494		
Vinyl Chloride		0.1225	0.184	0.0615		
Xylenes		3.023	7.465	4.442		
Hydrogen Chloride		2.0894	0.891	-1.1984	-1.1984	0.891

