

STATEMENT OF BASIS

for the issuance of Draft Air Permit # 1884-AOP-R0

1. PERMITTING AUTHORITY:

Arkansas Department of Environmental Quality
8001 National Drive
Post Office Box 8913
Little Rock, Arkansas 72219-8913

2. APPLICANT:

Waste Management Tontitown Sanitary Landfill, LLC
18200 Stutts Road
Springdale, Arkansas 72765

3. PERMIT WRITER:

Paul Osmon

4. PROCESS DESCRIPTION AND NAICS CODE:

NAICS Description: Solid Waste Landfill
NAICS Code: 562212

5. SUBMITTALS:

June 23, 2003

6. REVIEWER'S NOTES:

The facility has an operating landfill gas gathering system and flare, but it is not a requirement of their compliance with 40 CFR 60, Subpart WWW since their predicted emissions of NMOC does not exceed 50 Megagrams per year. NMOC content of the landfill gas is 298.1ppmv based on Tier II testing in May, 1999. Landfill gas volumes are based on modeling using U.S. EPA's LANGEM system. Predicted concentrations of HAPS in the landfill gas are based on the *Waste Industry Air Coalition comparison of Recent Landfill Gas Analysis*.

7. COMPLIANCE STATUS:

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

There are no know active/pending actions or recent compliance activities related to this facility.

8. APPLICABLE REGULATIONS:

PSD Applicability

Did the facility undergo PSD review in this permit (i.e., BACT, Modeling, et cetera)? Y/N N

Has this facility undergone PSD review in the past? Y/N Permit# N

Is this facility categorized as a major source for PSD? Y/N N

\$ 100 tpy and on the list of 28 (100 tpy)? Y/N N

\$ 250 tpy all other Y/N N

PSD Netting

Was netting performed to avoid PSD review in this permit? Y/N N

Source and Pollutant Specific Regulatory Applicability

Source	Pollutant	Regulation [NSPS, NESHAP (Part 61 & Part 63), or PSD only]
Facility	VOC (NMOC)	40 CFR 60, Subpart WWW

9. EMISSION CHANGES:

The following table summarizes plant wide emission changes associated with this permitting action.

Plant Wide Permitted Emissions (ton/yr)			
Pollutant	Air Permit #1884-AR-2	Air Permit #1994-AOP-R0	Change
PM/PM ₁₀	4.4	11.5	7.1
SO ₂			0

Plant Wide Permitted Emissions (ton/yr)			
Pollutant	Air Permit #1884-AR-2	Air Permit #1994-AOP-R0	Change
	0.1	0.1	
VOC	18.4	18.4	0
CO	97.3	97.3	0
NO _x	17.9	17.9	0
1,1 - Dichloroethane	0.1335	0.1335	0
Benzene	1.4751	1.4751	0
Ethylbenzene	1.3117	1.3117	0
Methyl Ethyl Ketone	1.6660	1.6660	0
Toluene	6.2806	6.2806	0
Vinyl Chloride	0.1225	0.1225	0
Xylene	3.0239	3.023	0
			0

Plant Wide Permitted Emissions (ton/yr)			
Pollutant	Air Permit #1884-AR-2	Air Permit #1994-AOP-R0	Change
Hydrochloric Acid	2.0894	2.0894	

10. MODELING:

Criteria Pollutants

Examination of the source type, location, plot plan, land use, emission parameters, and other available information indicate that modeling is not warranted at this time.

11. 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 deemed 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?
1,1 - Dichloroethane	40	4.4	0.0305	Y
Benzene	1.6	0.176	0.3368	N
Ethylbenzene	434	47.74	0.2995	Y
Methyl Ethyl Ketone	590	64.9	0.3804	Y

Pollutant	TLV (mg/m ³)	PAER (lb/hr) = 0.11*TLV	Proposed lb/hr	Pass?
Toluene	188	20.68	1.4339	Y
Vinyl Chloride	13	0.143	0.0280	Y
Xylene	434	47.74	0.7315	Y
Hydrochloric Acid	-	-	-	-

2nd Tier Screening (PAIL)

ISCST3 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 was 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?
Benzene	16.0	16.0	Y

12. CALCULATIONS:

SN	Emission Factor Source (AP-42, Testing, etc)	Emission Factor and units (lbs/ton, lbs/hr, etc)	Control Equipment Type (if any)	Control Equipment Efficiency	Comments (Emission factor controlled/uncontrolled, etc)
01	NMOC – Testing	NMOC is 298.1 ppmv based on test	Flare (not required by the permit)	75% capture 98% destruction	Emission factor is uncontrolled.
01	HAPs	-	-	-	Content values based on data from the Waste Industry Air Coalition Comparison of Recent Landfill Gas Analyses except for HCl.
01	AP-42	HCL	-	-	AP-42 Section 2.4.2
02	AP-42	PM – 0.001 lb/hr-dscfm methane	-	-	50% methane content assumed in the LFG
02	AP-42	SO ₂	None	NA	Emission limits assume the sulfur compound concentrations listed in Table 2.4-1 are oxidized to sulfur dioxide.
02	Testing of prototype flare	CO - 0.37 lb/MMBtu	None	NA	

SN	Emission Source (AP-42, Testing, etc)	Emission Factor and units (lbs/ton, lbs/hr, etc)	Control Equipment Type (if any)	Control Equipment Efficiency	Comments (Emission factor controlled/uncontrolled, etc)
02	Testing of prototype flare	NO _x – 0.068 lb/MMBtu	None	NA	
03	AP-42	PM	-	-	Construction vehicle emissions based on AP-42 Fig.13.2.2-1 for unpaved roads
03	AP-42	PM	-	-	Refuse vehicle emissions based on AP-42 Fig. 13.2.1 for paved roads
03	AP-42	PM	-	-	Cover soil excavation based on AP-42, Table 13.2.4-1

13. TESTING REQUIREMENTS:

This permit requires stack testing of the following sources.

SN(s)	Pollutant	Test Method	Test Interval	Justification for Test Requirements
Flare Intake	HAPs	To be determined	Initial Only	Necessary to determine if any HAPS concentrations around the facility exceed the Non-Criteria Pollutant Strategy
				There is a site specific NMOC concentration in the land fill gases test required every 5 years.

14. MONITORING OR CEMS

The permittee must monitor the following parameters with CEMs or other monitoring equipment (temperature, pressure differential, etc), frequency of recording and the need for records included in any annual, semiannual or other reports.

SN	Parameter or Pollutant to be Monitored	Method of Monitoring (CEM, Pressure Gauge, etc)	Frequency*	Report (Y/N)**
02	Flame Presence	Ultra-Violet Sensor	Continuously	N

* Indicate frequency of recording required for the parameter (Continuously, hourly, daily, etc.)

** Indicates whether the parameter needs to be included in reports.

15. RECORD KEEPING REQUIREMENTS

The following are items (such as throughput, fuel usage, VOC content of coating, etc) that must be tracked and recorded, frequency of recording and whether records are needed to be included in any annual, semiannual or other reports.

SN	Recorded Item	Limit (as established in permit)	Frequency*	Report (Y/N)**
Facility	refuse received after 1/1/2000	5.336 million tons	monthly	N
Facility	projected annual and 5 year NMOC emissions	No limit but at 50 tpy control equipment (landfill gas gathering system and flare) becomes subject to the NSPS	Yearly	Y

* Indicate frequency of recording required for the item (Continuously, hourly, daily, etc.)

** Indicates whether the item needs to be included in reports

16. OPACITY

SN	Opacity %	Justification (NSPS limit, Dept. Guidance, etc)	Compliance Mechanism (daily observation, weekly, control equipment operation, etc)
02	0 except for 5 minutes every 2 hours	Future NSPS potential limit if emissions exceed 50 tpy NMOC	not necessary

17. DELETED CONDITIONS:

The previous permit contained the following deleted Specific Conditions.

Former SC	Justification for removal
	None

18. VOIDED, SUPERSEDED OR SUBSUMED PERMITS

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

Permit #
1884-AR-2

19. CONCURRENCE BY:

The following supervisor concurs with the permitting decision:

 Thomas Rheume, P.E.