



09 June 2004

Mr. Al Linero  
Division of Air Resources Management, MS 5505  
Florida Department of Environmental Protection  
2600 Blair Stone Road, M.S. 5505  
Tallahassee, Florida 32399-2400

**RECEIVED**

**JUN 10 2004**

**BUREAU OF AIR REGULATION**

Subject: Request for Modification of Air Construction Permit  
Construction Permit No. 0970079-001-AC  
Oak Hammock Disposal Facility (Facility ID # 0970079)  
Omni Waste of Osceola County, LLC *0970079-002-AC*

Dear Mr. Linero:

This letter forwards a request to modify the emission limits for criteria pollutants in the above mentioned air construction permit issued for Oak Hammock Disposal Facility (OHDF). OHDF is a new Class I municipal solid waste landfill near Holopaw, Osceola County, Florida. Omni Waste of Osceola County (Omni) owns and operates the OHDF landfill. GeoSyntec Consultants (GeoSyntec) is submitting this letter on behalf of Omni.

In April 2003, Florida Department of Environmental Protection (FDEP) issued the above mentioned air permit to construct the OHDF landfill. Item 6 in Section III of the permit establishes the emission limits for five criteria pollutants i.e., carbon monoxide (CO), sulfur dioxide (SO<sub>2</sub>), particulate matter (PM), volatile organic compound (VOC), and nitrogen oxides (NO<sub>x</sub>). Based on the current language in the permit, the maximum emission limit for each of these pollutants, after the installation of gas extraction and control system (GECS), is 57 pounds/hour or 250 tons/year. No emission limits have been established for the criteria pollutants prior to installation of the GECS.

Based on our conversation with Bruce Mitchell and Tom Cascio, Title V Section, Division of Air Resources Management, FDEP, it is our understanding that Title V annual emissions fee are assessed based on the emission limits outlined in the air permits. Based on the current language in the permit, after the installation of the GECS, the Title V annual emissions fee will be assessed for 1,000 tons every year (corresponding to 250 tons/year for each of the four criteria pollutants, excluding CO). Using a fee factor of \$25/ton for calendar year 2003, Omni would be required to pay \$25,000 every year towards Title V annual emissions fee after the installation of the GECS. It is our understanding that

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landfills similar to OHDF typically pay less than \$1,000 in Title V annual emissions fee. Further, we believe that the Title V annual emissions fee should be fairly assessed based on expected emissions at the landfill which are estimated using the best available information.

The mass emission rates for the criteria pollutants at the OHDF landfill were estimated using the methodology outlined in USEPA AP-42 for 30 years (i.e., for 12 years of operating life and for 18 years after closure of the OHDF landfill) and are presented in Table 1 and Figures 1 through 5. The methodology and assumptions used in estimating the emission rates are discussed in GeoSyntec report titled *Application for an Air Construction Permit, Oak Hammock Disposal Facility* dated January 2003, which was submitted to FDEP in support of the application for air construction permit. The mass emission rates presented assume a waste disposal rate of 4,000 tons/day, an operating life of 12.4 years for the OHDF landfill, and installation of the GECS in the third year of landfill operation (i.e., when the total quantity of waste disposed in the landfill reaches 2,750,000 tons).

Table 1 and Figures 1 through 5 present uncontrolled emissions (prior to installation of the GECS) and controlled emissions (after installation of the GECS) for waste disposal rate of 4,000 tons/day. Table 1 presents the uncontrolled emissions expected at the OHDF landfill for the first 5 years of operation in the event that a GECS is not installed in the third year of the landfill operation. This delay in the installation of the GECS is possible if the actual waste disposal rate at the landfill is considerably lower than the conservatively assumed waste disposal rate of 4,000 tons/day. It is noted that uncontrolled emissions are presented only for the first 5 years because a GECS must be installed in the first 5 years of operation in accordance with the Florida Administrative Code. As discussed in the GeoSyntec report dated January 2003, the waste disposal rate of 4,000 tons/day is conservative and, therefore, the estimated emission rates for the criteria pollutants are also conservative. However, if the average waste disposal rate exceeds 4,000 tons/day, GeoSyntec will update the mass emission rates expected at the OHDF landfill during permit renewal.

GeoSyntec requests that the emission limits established for criteria pollutants in Item 6 in Section III of the air construction permit be modified to allow a fair assessment of the Title V annual emissions fee for the OHDF landfill. GeoSyntec recommends that the emission rates presented in Table 1 be incorporated as part of the permit (as Table III-1) to establish the maximum emission limits for the criteria pollutants for each year of the OHDF landfill operation. It is noted that OHDF landfill began operations (i.e., waste deposition in the first cell at the landfill) on 26 January 2004.

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Based on our conversation with Syed Arif, Division of Air Resources Management, FDEP, GeoSyntec recommends the following modifications to Item 6 in Section III of the air permit:

6. Emission Limits: The following emission limits apply:

- Odor: *No change*
- Visible Emissions: *No change*
- Criteria Pollutants: Neither carbon monoxide (CO), sulfur dioxide (SO<sub>2</sub>), particulate matter (PM<sub>10</sub>), volatile organic compound (VOC), nor nitrogen oxides (NO<sub>x</sub>) emissions from the facility shall exceed the respective mass emission rates (in tons/year) indicated in Table III-1 for corresponding year of the landfill operation. Uncontrolled emission rates shall govern prior to installation of the GECS at the facility. Compliance measures shall be proposed by the applicant upon submittal of the GECS and flare design.

If you have any questions or need additional information, please contact either of the undersigned.

Sincerely,



Ayushman Gupta, P.E.  
Project Engineer



Kenneth W. Cargill, P.E.  
Principal

cc: Mr. Len Koslov, FDEP  
Mr. Jim Bradner, FDEP  
Mr. Lenny Marion, Omni Waste

Table 1

**MASS EMISSION RATES FOR CRITERIA POLLUTANTS (tons/yr) <sup>1</sup>**  
**(WASTE DISPOSAL RATE = 4,000 tons/day) <sup>2</sup>**

	Year No.	Calendar Year	GECS INSTALLED IN THIRD YEAR OF LANDFILL OPERATION					WITHOUT GECS (UNCONTROLLED EMISSIONS)				
			CO	TRS as S or SO <sub>2</sub>	PM	VOC	NO <sub>x</sub> as NO <sub>2</sub>	CO	TRS as S	PM	VOC	NO <sub>x</sub> as NO <sub>2</sub>
OPERATING LIFE	1	2004	1.3	0.5	NA <sup>3</sup>	6.1	NA <sup>3</sup>	1.3	0.5	NA <sup>3</sup>	6.1	NA <sup>3</sup>
	2	2005	2.6	1.0	NA <sup>3</sup>	11.9	NA <sup>3</sup>	2.6	1.0	NA <sup>3</sup>	11.9	NA <sup>3</sup>
	3	2006	117.4	2.9	2.6	4.5	6.3	3.8	1.4	NA <sup>3</sup>	17.6	NA <sup>3</sup>
	4	2007	153.4	3.8	3.4	5.9	8.2	5.0	1.9	NA <sup>3</sup>	23.0	NA <sup>3</sup>
	5	2008	188.1	4.6	4.2	7.2	10.1	6.1	2.3	NA <sup>3</sup>	28.2	NA <sup>3</sup>
	6	2009	221.4	5.5	4.9	8.5	11.9					
	7	2010	253.4	6.3	5.7	9.7	13.6					
	8	2011	284.2	7.0	6.3	10.9	15.3					
	9	2012	313.8	7.7	7.0	12.0	16.9					
	10	2013	342.1	8.4	7.6	13.1	18.4					
	11	2014	369.4	9.1	8.2	14.1	19.8					
	12	2015	395.6	9.8	8.8	15.1	21.3					
POST-CLOSURE	13	2016	396.2	9.8	8.8	15.2	21.3					
	14	2017	380.7	9.4	8.5	14.6	20.5					
	15	2018	365.7	9.0	8.2	14.0	19.7					
	16	2019	351.4	8.7	7.8	13.5	18.9					
	17	2020	337.6	8.3	7.5	12.9	18.1					
	18	2021	324.4	8.0	7.2	12.4	17.4					
	19	2022	311.7	7.7	7.0	11.9	16.7					
	20	2023	299.4	7.4	6.7	11.5	16.1					
	21	2024	287.7	7.1	6.4	11.0	15.5					
	22	2025	276.4	6.8	6.2	10.6	14.9					
	23	2026	265.6	6.6	5.9	10.2	14.3					
	24	2027	255.2	6.3	5.7	9.8	13.7					
	25	2028	245.2	6.0	5.5	9.4	13.2					
	26	2029	235.5	5.8	5.3	9.0	12.7					
	27	2030	226.3	5.6	5.1	8.7	12.2					
	28	2031	217.4	5.4	4.9	8.3	11.7					
	29	2032	208.9	5.2	4.7	8.0	11.2					
	30	2033	200.7	5.0	4.5	7.7	10.8					

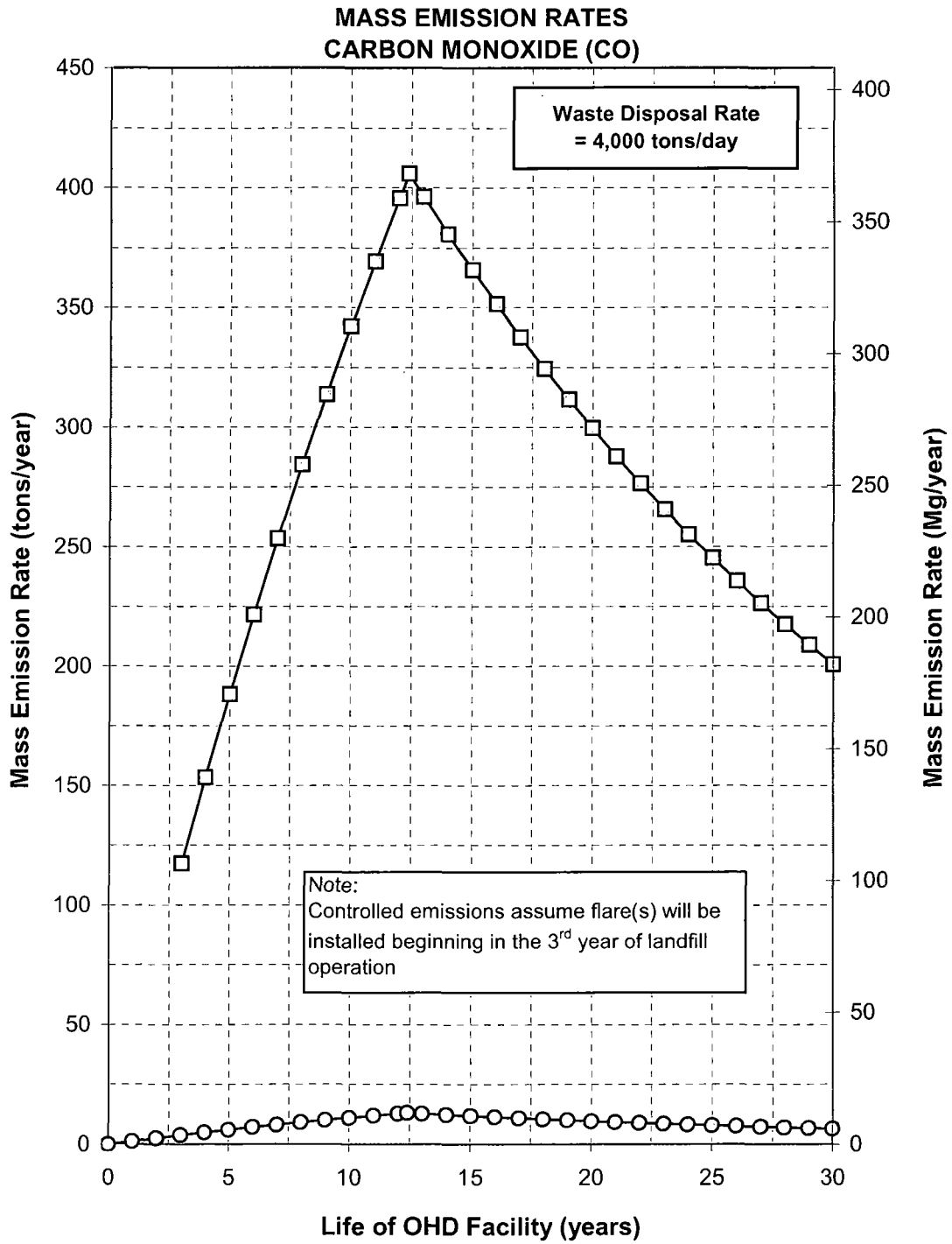
**Notes:**

<sup>1</sup> From GeoSyntec report dated January 2003, which was submitted to FDEP with the application for air construction permit.

<sup>2</sup> Corresponding operating life of OHDF landfill is 12.4 years as indicated.

<sup>3</sup> Not Applicable. NO<sub>2</sub> and PM are not landfill gas constituents and are generated only by the flare(s).

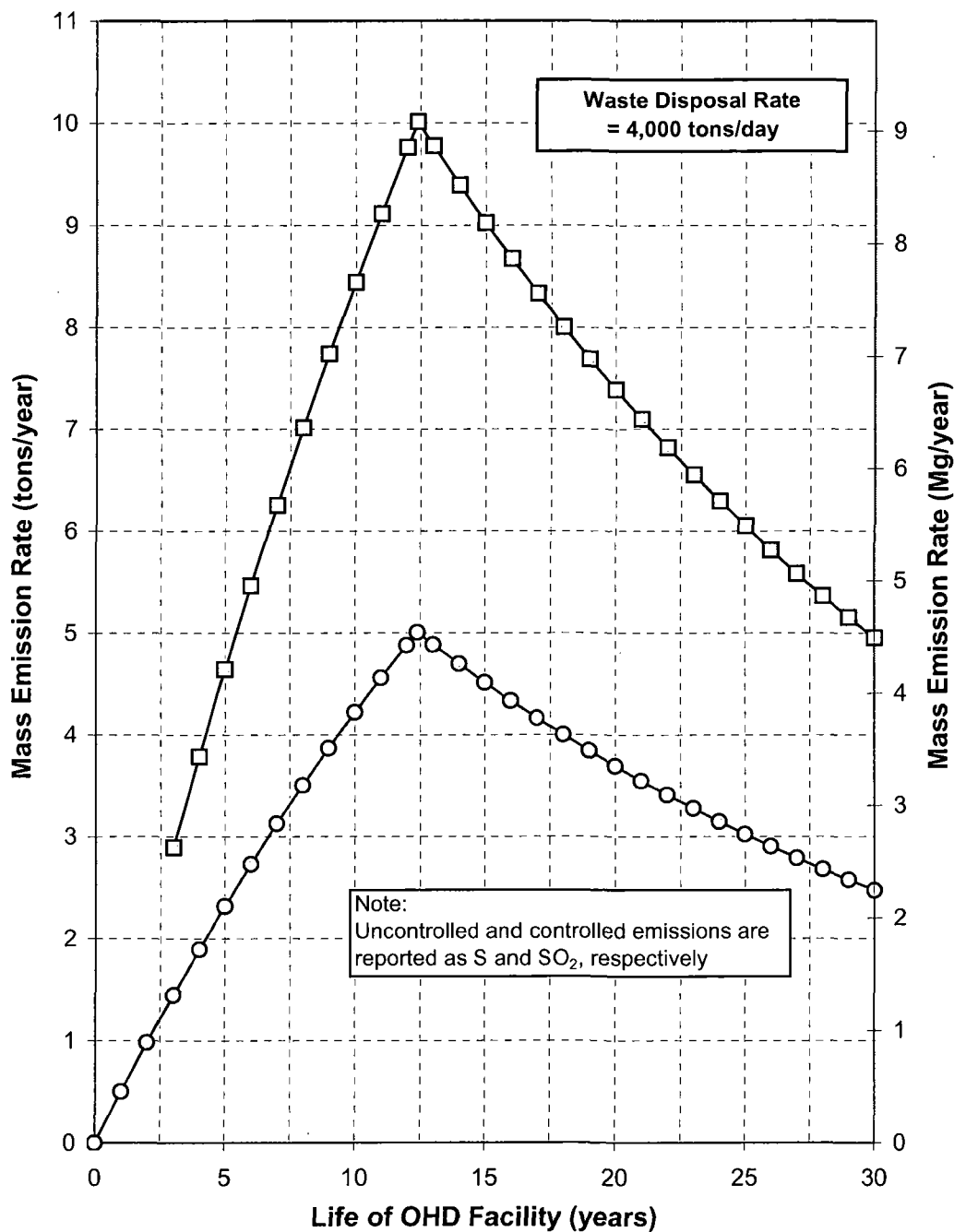
Figure 1



- Uncontrolled Emissions (without GECS)
- Controlled Emissions (with proposed GECS)

Figure 2

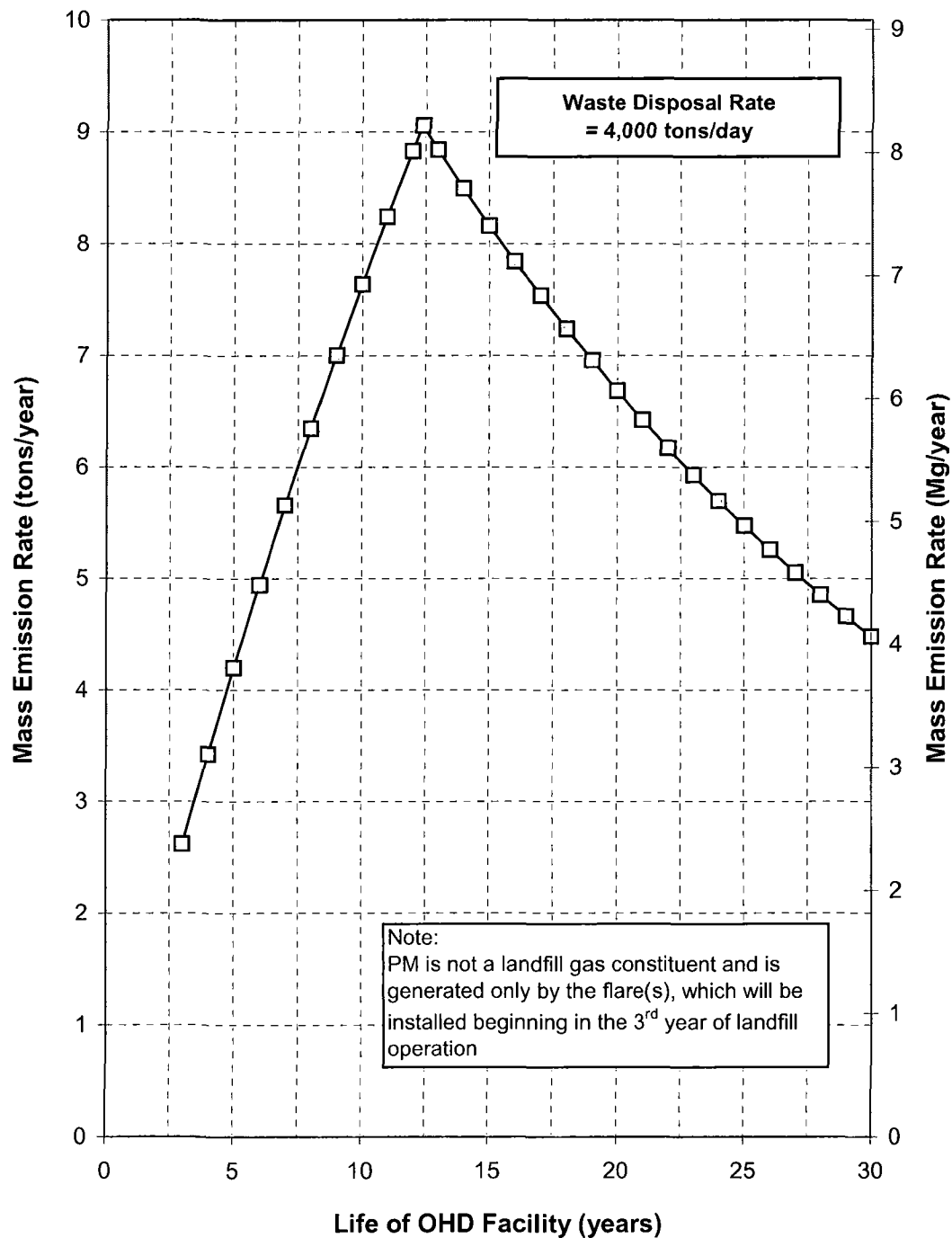
**MASS EMISSION RATES  
TOTAL REDUCED SULFUR (TRS as S or SO<sub>2</sub>)**



- Uncontrolled Emissions (without GECS)
- Controlled Emissions (with proposed GECS)

Figure 3

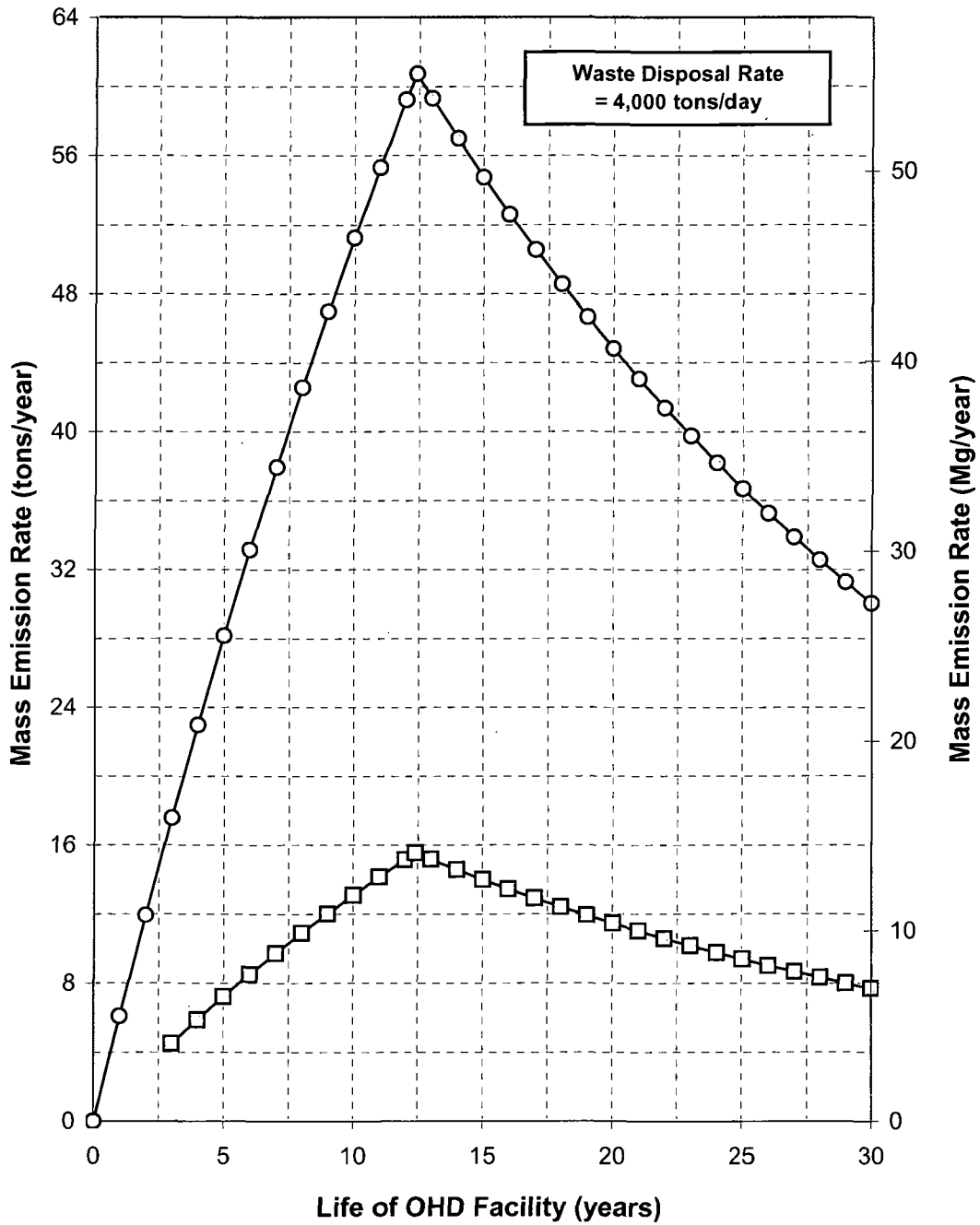
**MASS EMISSION RATES  
PARTICULATE MATTER (PM)**



—□— Controlled Emissions (with proposed GECS)

Figure 4

**MASS EMISSION RATES  
TOTAL VOLATILE ORGANIC COMPOUNDS (VOC)**

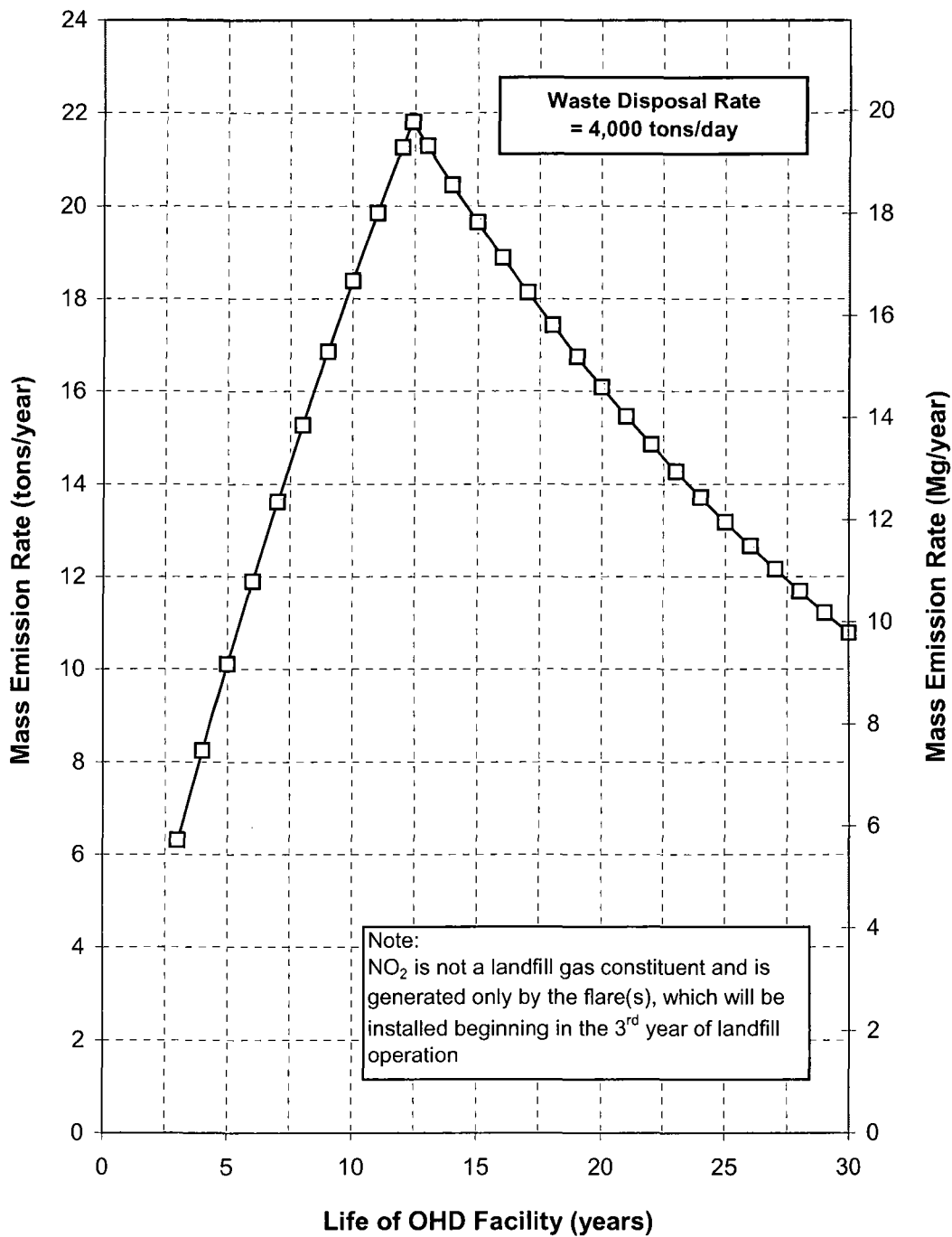


- Uncontrolled Emissions (without GECS)
- Controlled Emissions (with proposed GECS)



Figure 5

**MASS EMISSION RATES  
NITROGEN DIOXIDE (NO<sub>x</sub> as NO<sub>2</sub>)**



—□— Controlled Emissions (with proposed GECS)