Golder Associates Inc.

9428 Baymeadows Road, Suite 400 Jacksonville, FL USA 32256-7979 Telephone (904) 363-3430 Fax (904) 363-3445



VIA EMAIL ONLY

February 26, 2007

993-3928.62

Nassau County Board of County Commissioners 96160 Nassau Place Yulee, Florida 32097

Attention: Commissioner Jim B. Higginbotham, Chairman

RE: REQUEST FOR SIGNATURES

TITLE V AIR PERMIT ANNUAL REPORTS

WEST NASSAU LANDFILL NASSAU COUNTY, FLORIDA

Dear Commissioner Higginbotham:

Golder Associates Inc. (Golder) has prepared the Title V Air Permit annual reports for the West Nassau Landfill in Nassau County, Florida. These reports include the Annual Operating Report (AOR), the Statement of Compliance (SOC), and the Fee Statement. These annual reports are required by the site's Title V permit to be submitted to the Florida Department of Environmental Protection (FDEP) by March 1, 2007. Golder is requesting that the Chairman of the Nassau County Board of County Commissioners (Board), being designated as the Responsible Official under the site's Title V Permit, sign the appropriate pages in these reports; one signature in each report as shown by name and/or Responsible Official.

Golder apologizes for the lateness of this request. We have been working diligently on these reports as well as getting the landfill gas expansion system into compliance, and the requirement for your signatures was overlooked. If you have any questions regarding this request or the reports themselves, please do not hesitate to call.

Sincerely,

GOLDER ASSOCIATES INC.

Wendy D. Karably

Senior Consultant/Associate

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DATE Haylones:



Department of Environmental Protection

Division of Air Resources Management

ANNUAL OPERATING REPORT FOR AIR POLLUTANT EMITTING FACILITY

See Instructions for Form No. 62-210.900(5)

I. FACILITY REPORT

A. REPORT INFORMATION	Ī				
1. Year of Report 2006		2.	2. Number of Emissions Units in Report		
		ľ		2	
B. FACILITY INFORMATIO	N				
1. Facility ID	2. Facility	Status	3. Date of P	ermanent Facility Shutdown	
0890428	A	CTIVE			
4. Facility Owner/Company 1	Vame				
NASSAU CO. BOAR	D OF COUN	TY COMMISS	IONERS		
5. Site Name		•			
WEST NASSAU LAN	VDFILL				
6. Facility Location	######################################				
Street Address or Other Lo	cator:	46026 LANDFII	L ROAD		
City: CALLAHAN	C	County: NASS	AU Z	Zip Code: 32011	
7. Facility Compliance Track	ing Code	8. Governmenta	al Facility Code	9. Facility SIC(s)	
A			3	4953	
10. Facility Comment		J		j	
The facility is a Title	V facility by	EPA designation	on. However, p	otential emissions from the	
landfill gas flare are	greater than	Title V thresho	ld.		
		<u> </u>		·	
C. FACILITY HISTORY INF	ORMATION	I			
1. Change in Facility Owner/	Prev	ious Name		2. Date of Change	
Company Name During					
Year?					

DEP Form No. 62-210.900(5) - Form

Facility ID: 0890428

D. OWNER/CONTACT INFORMATION

1. Owner or Authorized Representative Name and Title JIM B. HIGGINBOTHAM CHAIRMAN OF COUNTY COMMISSIONERS Mailing Address Organization/Firm: NASSAU COUNTY BOARD OF COUNTY COMMISSIONERS Street Address: 96160 NASSAU PLACE City: YULEE State: FL Zip Code: 32097 Telephone: (904) 491-7380 Ext. Fax: (904) 321-5784 Email (optional): 2. Facility Contact Name and Title LEE PICKETT INTERIM SOLID WASTE DIRECTOR Mailing Address Organization/Firm: WEST NASSAU LANDFILL Street Address: 46026 LANDFILL ROAD City: CALLAHAN State: FL Zip Code: 32011 Telephone: (904) 879-6321 Fax: (904) 879-6323 Ext. Email (optional): lpickett@nassaucountyfl.com

E. OWNER OR AUTHORIZED REPRESENTATIVE STATEMENT

I hereby certify that the information given in this report is correct to the best of my knowledge.

Jing Dieston

2<u>-</u>26-07

Signature

Date



Facility ID: 0890428 Emissions Unit ID: 001

II. EMISSIONS UNIT REPORT

A. EMISSIONS UNIT INFORMATION

1. Emissions Unit Description		
Municipal Solid Waste Lai	ndfill	
2. Emissions Unit ID	3. Emissions Unit Classification	4. Operated During Year?
001	Regulated Emissions Unit	Y
5. DEP Permit or PPS Number 0890428005AV	6. Emissions Unit Status ACTIVE	7. Ozone SIP Base Year Emissions Unit?
8. Emissions Unit Startup Date January 01, 1974	9. Long-term Reserve Shutdown Date	10. Permanent Shutdown Date

B. EMISSION POINT/CONTROL INFORMATION

1. Emissions Point Type	
NO TRUE EMISSION POINT (FUGITIVE EMISSION)	
2a. Description of Control Equipment 'a'	
2b. Description of Control Equipment 'b'	

C. EMISSIONS UNIT OPERATING SCHEDULE INFORMATION

. Average Annual Operation				2. Total Operation During
hours/day 24	days/week 7			Year (hours/year) 8760
3. Percent Hours of Operation	by Season			
DJF: 25	MAM: 25	JJA:	25	SON: 25
4. Average Ozone Season Ope	eration (June 1 to Augu	ıst 31)		5. Total Operation During
hours/day 24	days/week 7			Ozone Season (days/season) 92

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Facility ID: 0890428 Emissions Unit ID: 001

D. EMISSIONS UNIT COMMENT

Emission estimates represent fugitive emissions of landfill gases based on an average landfill gas Collection and control system (GCCS) collection efficiency (LGCS) of 75% and 41% of coverage of the GCCS. To estimate landfill gas emissions, the US EPA LandGEM Model (Version 3.02) was used. All parameters werre default values a with the exception of the concentration of NMOCs. This value was taken from Tier 2 testing performed at the facility in 2004.

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SCC: 5-01-004-02

E. EMISSIONS INFORMATION BY PROCESS/FUEL

(1) PROCESS/FUEL INFORMATION

1. SCC	2. Description of Process or Type of Fuel	
5-01-004-02	Waste Disposal Solid Waste Disposal - Governme	Landfill Dump int Fugitive Emissions
3. Annual Process or Fuel Usage Rate 60	4. Ozone Season Daily Process or Fuel Usage Rate	5. SCC Unit Acre-Years Landfill Existing
6. Fuel Average % Sulfur	7. Fuel Average % Ash	8. Fuel Heat Content (mmBtu/SCC Unit)

(2) EMISSIONS INFORMATION

1 Pullistant	CACNI (20.00.0	f 1D-lThh-14
1. Pollutant CO	CAS No. 630-08-0	Below Threshold
Carbon Monoxide		[] Not Emitted
2. Annual Emissions (ton/year)	3. Ozone Season Daily Emissions (lb/day) 4. Emissions Method Code
1.9		3
5. Emissions Calculation (Show s	eparately both annual and daily emission	ons calculations)
1. Pollutant HAPS	CAS No.	[] Below Threshold
Total Hazardous Air Pollutan	ts	[] Not Emitted
2. Annual Emissions (ton/year)	3. Ozone Season Daily Emissions (lb/day) 4. Emissions Method Code
4.9		3
5. Emissions Calculation (Show s	eparately both annual and daily emission	ons calculations)
·	•	
1. Pollutant NMOC	CAS No.	I Below Threshold

1. Pollutant	NMOC	CAS No.	Below Threshold
Nonmethan	e Organic Compou	nds from MSW Landfill	Not Emitted
2. Annual Emis	ssions (ton/year)	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code
	24.8		3
5. Emissions C	Calculation (Show se	parately both annual and daily emissions calc	ulations)

^{*:} Pollutant subject to emissions limiting standard or emissions cap

Facility ID: 0890428

Emissions Unit ID: 001

SCC: 5-01-004-02

1. Pollutant Vo	OC CAS No.	[] Below Threshold
Volatile Organic Co	ompounds	[] Not Emitted
2. Annual Emissions (to	on/year) 3. Ozone Season Daily	Emissions (lb/day) 4. Emissions Method Code
7.7		3
5. Emissions Calculation	on (Show separately both annual and	laily emissions calculations)

*: Pollutant subject to emissions limiting standard or emissions cap

Facility ID: 0890428

Emissions Unit ID: 002

II. EMISSIONS UNIT REPORT

A. EMISSIONS UNIT INFORMATION

1. Emissions Unit Description LANDFILL GAS UTILITY	Z TEL A DEC	
2. Emissions Unit ID 002	3. Emissions Unit Classification Regulated Emissions Unit	4. Operated During Year?
5. DEP Permit or PPS Number 0890428005AV	6. Emissions Unit Status ACTIVE	7. Ozone SIP Base Year Emissions Unit?
8. Emissions Unit Startup Date February 28, 2002	9. Long-term Reserve Shutdown Date	10. Permanent Shutdown Date

B. EMISSION POINT/CONTROL INFORMATION

1. Emissions Point Type
SINGLE POINT SERVING A SINGLE EMISSIONS UNIT
2a. Description of Control Equipment 'a'
2b. Description of Control Equipment 'b'

C. EMISSIONS UNIT OPERATING SCHEDULE INFORMATION

1. Average Annual Operation				2. Total Operation During	
hours/day 24	days/week 7			Year (hours/year) 8760	
Percent Hours of Operation	on by Season				
DJF: 25	MAM: 25	JJA:	25	SON: 25	
Average Ozone Season O	peration (June 1 to Aug	ust 31)	<u></u>	5. Total Operation During	
hours/day 24	days/week 7	,		Ozone Season (days/season) 92	

DEP Form No. 62-210.900(5) - Form

^{*:} Pollutant subject to emissions limiting standard or emissions cap

D. EMISSIONS UNIT COMMENT

Fuel heat value for landfill gas burned by the flare represents an industry average as reported by the facility. Fuel heat value for propane represents an industry average as reported by the National Propane Gas Association. SCC 5-01-900-10 (flare auxilary fuel) description is considered to be an insignificant source of emissions due to the fact that it is only used during startup o the flare. The flare uses on average less than 200 lbs of propane per year, which would classufy this as exempt under 62-210.300(3)b.

*: Pollutant subject to emissions limiting standard or emissions cap

E. EMISSIONS INFORMATION BY PROCESS/FUEL

(1) PROCESS/FUEL INFORMATION

1. SCC	2. Description of Process or Type of Fuel	
5-01-004-10	Waste Disposal Solid Waste Disposal - Government	Landfill Dump nt Waste Gas Destruction: Waste
3. Annual Process or Fuel Usage Rate 435	Ozone Season Daily Process or Fuel Usage Rate 1.19	5. SCC Unit Million Cubic Feet Waste Gas Burned
6. Fuel Average % Sulfur	7. Fuel Average % Ash	8. Fuel Heat Content (mmBtu/SCC Unit) 500

(2) EMISSIONS INFORMATION

1. Pollutant CO	CAS No. 630-08-0	[] Below Threshold		
Carbon Monoxide		[] Not Emitted		
2. Annual Emissions (ton/year)	3. Ozone Season Daily Emissions	(lb/day) 4. Emissions Method Code		
163.2		3		
5. Emissions Calculation (Show separately both annual and daily emissions calculations)				
Emissions calculations presented in attached Table 2.				
Emission Factor Reference: AP-42 Table 2.4-5.				

1. Pollutant	HAPS	CAS No.	[X] Below Threshold
Total Hazard	ous Air Pollutants		[] Not Emitted
2. Annual Emiss	ions (ton/year)	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code
	0.05		3
5. Emissions Calculation (Show separately both annual and daily emissions calculations)			
Emissions calculations presented in attached Table 2.			

1. Pollutant NMOC	CAS No.] Below Threshold		
Nonmethane Organic Compour	ds from MSW Landfill [] Not Emitted		
2. Annual Emissions (ton/year)	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code		
0.22		3		
5. Emissions Calculation (Show separately both annual and daily emissions calculations)				
Emissions calculations presented in attached Table 2.				

^{*:} Pollutant subject to emissions limiting standard or emissions cap

Facility ID: 0890428	Emissions Unit ID: 002	SCC: 5-01-004-10
1. Pollutant NOX Nitrogen Oxides	CAS No. 10102-44-0	Below Threshold Not Emitted
2. Annual Emissions (ton/year) 8.7	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code 3
Annual Emissions (Tons/Yea		bic Feet Waste Gas

AQM area and does not have the PTE of greater than or equal to 100 TPY of VOC or NOx.

1. Pollutant PM CAS No. [X] Below Threshold Particulate Matter - Total [] Not Emitted

2. Annual Emissions (ton/year) 3. Ozone Season Daily Emissions (lb/day) 4. Emissions Method Code 3.6975 3

5. Emissions Calculation (Show separately both annual and daily emissions calculations)

Ozone season calculations not required because the facility is not located within an ozone NA or

Annual Emissions (Tons/Year) 3.6975 = Emission Factor (Lbs/Million Cubic Feet Waste Gas Burned) 17 * Annual Process or Fuel Usage Rate (Million Cubic Feet Waste Gas Burned) 435 / 2000

Emissions calculations presented in attached Table 2.

Emission Factor Reference: AP-42 Table 2.4-5.

1. Pollutant PM10	CAS No.	X] Below Threshold	
Particulate Matter - PM10] Not Emitted	
2. Annual Emissions (ton/year)	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code	
3.6975		3	
5. Emissions Calculation (Show separately both annual and daily emissions calculations)			
PM10 emission is assumed to be the same as PM.			

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^{*:} Pollutant subject to emissions limiting standard or emissions cap

Facility ID: 0890428 Emissions Unit ID: 002 SCC: 5-01-004-10

Culfu.	nt SO2 Dioxide	CAS No. 7446-09-5	[X] Below Threshold [] Not Emitted
Sullur	Dioxide		[] Not Emitted
2. Annual	Emissions (ton/year)	3. Ozone Season Daily Emissions (l	lb/day) 4. Emissions Method Code
	1.2615		3
5. Emissions Calculation (Show separately both annual and daily emissions calculations) Annual Emissions (Tons/Year) 1.2615 = Emission Factor (Lbs/Million Cubic Feet Waste Gas Burned) 5.8 * Annual Process or Fuel Usage Rate (Million Cubic Feet Waste Gas Burned) 435 / 2000 Emissions calculations presented in attached Table 2.			Iillion Cubic Feet Waste Gas
Emis	ssion Factor Reference:	AP-42 Table 2.4-5.	

1. Pollutant	VOC	CAS No.	[X] Below Threshold
Volatile Org	anic Compounds		[] Not Emitted
2. Annual Emiss	sions (ton/year)	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code
	0.07		3
	•	ented in attached Table 2. on LandGem modeling estimates.	
or AQM a	rea and does not	ot required because the facility is not locat have the PTE of greater than or equal to 10 ented in attached Table 2.	
		not required because the facility is not locat we the PTE of greater than or equal to 100	

Effective: 2/11/99

DEP Form No. 62-210.900(5) - Form

^{*:} Pollutant subject to emissions limiting standard or emissions cap

Emissions Unit ID: 002

SCC: 5-01-900-10

E. EMISSIONS INFORMATION BY PROCESS/FUEL

(1) PROCESS/FUEL INFORMATION

1. SCC	2. Description of Process or Type of Fuel	
5-01-900-10	Waste Disposal - Governme	Auxillary Fuel/No Emissions nt Liquified Petroleum Gas (LPG)
3. Annual Process or Fuel Usage Rate 0.01	4. Ozone Season Daily Process or Fuel Usage Rate 0.0035	5. SCC Unit 1000 Gallons Liquified Petroleum Gas (LPG)
6. Fuel Average % Sulfur	7. Fuel Average % Ash	8. Fuel Heat Content (mmBtu/SCC Unit) 92

(2) EMISSIONS INFORMATION

1. Pollutant CO Carbon Monoxide	CAS No. 630-08-0	[X] Below Threshold [] Not Emitted
2. Annual Emissions (ton/year)	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code 3
5. Emissions Calculation (Show separately both annual and daily emissions calculations)		ulations)

1. Pollutant	HAPS	CAS No.	[X] Below Threshold
Total Hazardo	us Air Pollutant	S	[] Not Emitted
2. Annual Emission	ons (ton/year)	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code
			3
5. Emissions Calculation (Show separately both annual and daily emissions calculations)			

•	1. Pollutant	NMOC	CAS No.	[] Below Threshold
	Nonmethane (Organic Compou	nds from MSW Landfill	[x] Not Emitted
	2. Annual Emissi	ons (ton/year)	3. Ozone Season Daily Emis	ssions (lb/day) 4. Emissions Method Code
	5. Emissions Calculation (Show separately both annual and daily emissions calculations)			

DEP Form No. 62-210.900(5) - Form Effective: 2/11/99

^{*:} Pollutant subject to emissions limiting standard or emissions cap

Facility ID	:	0890428
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Emissions Unit ID: 002

SCC: 5-01-900-10

1. Pollutant NOX	CAS No. 10102-44-0	[X] Below Threshold
Nitrogen Oxides		[] Not Emitted
2. Annual Emissions (ton/year)	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code
		3
		3
5. Emissions Calculation (Show sep	parately both annual and daily emissions calc	culations)
L D II	0.007	DVID 1 TI . 1.11
1. Pollutant PM	CAS No.	[X] Below Threshold
Particulate Matter - Total		[] Not Emitted
2. Annual Emissions (ton/year)	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code
		3
5 Emissions Calculation (Show ser	parately both annual and daily emissions calc	ulations)
5. Emissions Calculation (Bhow sop	diatory both aimain and daily officions bare	
		•
l. Pollutant PM10	CAS No.	[X] Below Threshold
Particulate Matter - PM10		[] Not Emitted
2. Annual Emissions (ton/year)	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code
(0.11.0.1.11.11.11.11.11.11.11.11.11.11.1		
5. Emissions Calculation (Show seg	parately both annual and daily emissions calc	culations)
1. Pollutant SO2	CAS No. 7446-09-5	X Below Threshold
Sulfur Dioxide	CAS No. 7440-09-5	Not Emitted
2. Annual Emissions (ton/year)	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code
		3
5. Emissions Calculation (Show ser	parately both annual and daily emissions calc	culations)
The Elimentary Care was a		, , , , , , , , , , , , , , , , , , , ,
1. Pollutant VOC	CAS No.	Below Threshold
Volatile Organic Compounds		[X] Not Emitted
2. Annual Emissions (ton/year)	3. Ozone Season Daily Emissions (lb/day)	4. Emissions Method Code
	(10, 20,)	
	<u></u>	
5. Emissions Calculation (Show sep	parately both annual and daily emissions cale	culations)

DEP Form No. 62-210.900(5) - Form

^{*:} Pollutant subject to emissions limiting standard or emissions cap

TABLES

(Uploaded and Submitted with EAOR)

Revised Table 1 Summary of LANDGEM Model Results 2005 AOR

West Nassau Class I Landfill Facility Id. No. 0890428

Facility Id. No. 0890428						
Gas/Pollutant	2006 Emission Rate					
	(Mg/year)	(short tons/year)				
Total landfill gas	1.923E+04	2.116E+04				
Methane	5.137E+03	5.651E+03				
NMOC	3.259E+01	3.585E+01				
Carbon monoxide	2.512E+00	2.763E+00				
1,1,1-Trichloroethane (methyl chloroform) - HAP	4.102E-02	4.512E-02				
1,1,2,2-Tetrachloroethane - HAP/VOC	1.183E-01	1.301E-01				
1,1-Dichloroethane (ethylidene dichloride) - HAP/VOC	1.522E-01	1.674E-01				
1,1-Dichloroethene (vinylidene chloride) - HAP/VOC	1.242E-02	1.366E-02				
1,2-Dichloroethane (ethylene dichloride) - HAP/VOC	2.599E-02	2.859E-02				
1,2-Dichloropropane (propylene dichloride) - HAP/VOC	1.303E-02	1.433E-02				
2-Propanol (isopropyl alcohol) - VOC	1.925E+00	2.118E+00				
Acrylonitrile - HAP/VOC	2.141E-01	2.355E-01				
Benzene - No or Unknown Co-disposal - HAP/VOC	9.507E-02	1.046E-01				
Bromodichloromethane - VOC	3.253E-01	3.579E-01				
Butane - VOC	1.862E-01	2.048E-01				
Carbon disulfide - HAP/VOC	2.829E-02	3.111E-02				
Carbon tetrachloride - HAP/VOC	3.942E-04	4.336E-04				
Carbonyl sulfide - HAP/VOC	1.886E-02	2.074E-02				
Chlorobenzene - HAP/VOC	1.803E-02	1.983E-02				
Chloroethane (ethyl chloride) - HAP/VOC	5.373E-02	5.910E-02				
Chloroform - HAP/VOC	2.294E-03	2.524E-03				
Chloromethane - VOC	3.881E-02	4.269E-02				
Dichlorobenzene - (HAP for para isomer/VOC)	1.977E-02	2.175E-02				
Dichlorofluoromethane - VOC	1.714E-01	1.886E-01				
Dichloromethane (methylene chloride) - HAP	7.618E-01	8.379E-01				
Dimethyl sulfide (methyl sulfide) - VOC	3.104E-01	3.415E-01				
Ethanol - VOC	7.970E-01	8.767E-01				
Ethyl mercaptan (ethanethiol) - VOC	9.154E-02	1.007E-01				
Ethylbenzene - HAP/VOC	3.128E-01	3.441E-01				
Ethylene dibromide - HAP/VOC	1.204E-04	1.324E-04				
Fluorotrichloromethane - VOC	6.688E-02	7.357E-02				
Hexane - HAP/VOC	3.644E-01	4.008E-01				
Mercury (total) - HAP	3.727E-05	4.099E-05				
Methyl Ethyl Ketone - VOC	3.280E-01	3.608E-01				
Methyl isobutyl ketone - HAP/VOC	1.219E-01	1.341E-01				
Methyl mercaptan - VOC	7.705E-02	8.475E-02				
Pentane - VOC	1.525E-01	1.678E-01				
Perchloroethylene (tetrachloroethylene) - HAP	3.930E-01	4.323E-01				
Perchloroethylene (tetrachloroethylene) - HAP Propane - VOC	3.930E-01 3.107E-01	4.323E-01 3.417E-01				

Revised Table 1 Summary of LANDGEM Model Results 2005 AOR

West Nassau Class I Landfill Facility Id. No. 0890428

Car (Dallintant	2006 Еп	ission Rate
Gas/Pollutant	(Mg/year)	(short tons/year)
Toluene - No or Unknown Co-disposal - HAP/VOC	2.302E+00	2.532E+00
Trichloroethylene (trichloroethene) - HAP/VOC	2.357E-01	2.593E-01
Vinyl chloride - HAP/VOC	2.923E-01	3.215E-01
Xylenes - HAP/VOC	8.161E-01	8.977E-01
TOTAL UNCONTROLLED VOCs	10.2	11.2
TOTAL HAPs	6.4	7.1
TOTAL UNCONTROLLED NMOCs	32.6	35.9

Notes:

Default model parameters are as follows:

Lo-methane generation potential = 100 m³/Mg (AP-42, 2.4.4.1)

k-methane generation rate constant = 0.04/yr (AP-42, 2.4.4.1)

NMOC concentration = 590.4 ppmv (2004 Tier II test data)

VOC-Volatile Organic Compound

NMOC-Non-Methane Organic Compound

HAP-Hazardous Air Pollutant

¹Based on the EPA Landfill Gas Emissions (LandGEM) model version 3.02 results.

Table 2 Emission Calculations 2006 AOR

West Nassau Class I Landfill Facility ID No. 0890428

Parameter	NMOC	HAP	VOC	CO	NOx	PM	SO2	Units	Reference
Uncontrolled Emissions	35.85	7.05	11.19	2.76	N/A	N/A	N/A	ton/year	LandGEM model results, see Table 1
LGCS Area Coverage ³	41	41	41	41	N/A	N/A	N/A	%	Construction Drawings
LGCS Collection Efficiency	75	75	75	75	N/A	N/A	N/A	%	Average, EPA AP- 42, Chapter 2.4.4.2
Collected Emissions (to be burned by the flare)	11.0	2.2	3.4	0,8	N/A	N/A	N/A	ton/year	Calculated ¹
Total Fugitive Landfill Emissions (EU 001)	24.8	4.9	7.7	1.9	N/A	N/A	N/A	ton/year	Calculated ²
Flare Destruction Efficiency	98	98	98	98	N/A	N/A	N/A	%	Facility Data ³
Total Waste Gas Generated	N/A	N/A	N/A	435	435	435	435	10 ⁶ dscf	2006 Facility Data
Emission Factor	N/A	N/A	N/A	750	40	17	5.8	lb/10 ⁶ dscf	AP-42, Table 2.4-5 (CO, NOx, PM) EPA FIRE (SO ₂)
Total Flare Emissions (EU 002)	0.22	0.04	0.07	163.1	8.70	3.7	1.3	ton/year	Calculated ⁴

Notes:

Emissions associated with firing the flare with propane (auxiliary fuel) are considered negligible and not accounted for in the emission estimates.

VOC-Volatile Organic Compounds

NMOC-Non-Methane Organic Compounds

CO-Carbon Monoxide

NOx-Nitrogen Oxides

PM-Particulate Matter

SO2-Sulfur Dioxide

GCCS-Landfill Gas Collection and Control System

¹Controlled Emissions (to be burned by flare) = [GCCS area coverage * GCCS collection efficiency *uncontrolled emissions]

²Total Fugitive Landfill Emissions = [Uncontrolled Emissions - Controlled Emissions]

³HAPs are predominantly VOCs; therefore, 98% flare destruction efficiency was assumed to be reasonable.

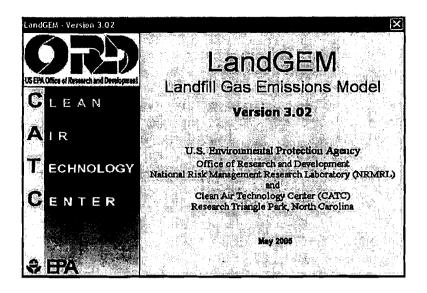
⁴Total (VOC, NMOC, HAP, CO) Flare Emissions = [controlled emissions * (1-flare destruction efficiency/100)]

⁴Total (CO, NOx, PM, SO₂) Flare Emissions = [(emission factor) * (waste gas generated) * (1 ton/2000 lb)]

⁵GCCS coverage is 21.5 acres. Site area with waste in place for ≥ 2 years is 53.5 acres, which yields 41% coverage.

ATTACHMENT A

2006 AOR Support Data LandGEM Modeling Results (Not Submitted with EAOR)



Summary Report

Landfill Name or Identifier: West Nassau Landfill

Date: Monday, February 26, 2007

Description/Comments:

About LandGEM:

First-Order Decomposition Rate Equation:

 $Q_{CH_4} = \sum_{i=1}^{n} \sum_{j=0.1}^{1} k L_o \left(\frac{M_i}{10} \right) e^{-kt_{ij}}$

Where

 Q_{CH4} = annual methane generation in the year of the calculation $(m^3/year)$ i = 1-year time increment

n = (year of the calculation) - (initial year of waste acceptance)

j = 0.1-year time increment

 $k = methane generation rate (year^{-1})$

 L_n = potential methane generation capacity (m^3/Mg)

 M_i = mass of waste accepted in the i^{th} year (Mg) t_{ij} = age of the j^{th} section of waste mass M accepted in the i^{th} year (decimal years, e.g., 3.2 years)

LandGEM is based on a first-order decomposition rate equation for quantifying emissions from the decomposition of landfilled waste in municipal solid waste (MSW) landfills. The software provides a relatively simple approach to estimating landfill gas emissions. Model defaults are based on empirical data from U.S. landfills. Field test data can also be used in place of model defaults when available. Further guidance on EPA test methods, Clean Air Act (CAA) regulations, and other guidance regarding landfill gas emissions and control technology requirements can be found at http://www.epa.gov/ttnatw01/landfill/landfilpg.html.

LandGEM is considered a screening tool— the better the input data, the better the estimates. Often, there are limitations with the available data regarding waste quantity and composition, variation in design and operating practices over time, and changes occurring over time that impact the emissions potential. Changes to landfill operation, such as operating under wet conditions through leachate recirculation or other liquid additions, will result in generating more gas at a faster rate. Defaults for estimating emissions for this type of operation are being developed to include in LandGEM along with defaults for convential landfills (no leachate or liquid additions) for developing emission inventories and determining CAA applicability. Refer to the Web site identified above for future updates.

Input Review

LANDFILL CHARACTERISTICS

Landfill Open Year 1974 Landfill Closure Year (with 80-year limit) 2016 Actual Closure Year (without limit) 2016 Have Model Calculate Closure Year? No

Waste Design Capacity megagrams

MODEL PARAMETERS

year-1 Methane Generation Rate, k 0.040 Potential Methane Generation Capacity, L 100 m³/Mg **NMOC Concentration** 590 ppmv as hexane % by volume Methane Content 50

GASES / POLLUTANTS SELECTED

Total landfill gas Gas / Pollutant #1:

Gas / Pollutant #2: Methane Gas / Pollutant #3: Carbon dioxide NMOC

Gas / Pollutant #4:

WASTE ACCEPTANCE RATES

Year	Waste Acc		Waste-In-Place			
	(Mg/year)	(short tons/year)	(Mg)	(short tons)		
1974	23,422	25,765	0			
1975	23,422	25,765	23,422	25,765		
1976	23,422	25,765	46,845	51,529		
1977	23,422	25,765	70,267	77,294		
1978	23,422	25,765	93,690	103,059		
1979	23,422	25,765	117,112	128,824		
1980	23,422	25,765	140,535	154,588		
1981	23,422	25,765	163,957	180,353		
1982	23,422	25,765	187,380	206,118		
1983	23,422	25,765	210,802	231,882		
1984	23,422	25,765	234,225			
1985	23,422	25,765	257,647	283,412		
1986	23,422	25,765	281,070	309,176		
1987	23,422	25,765	304,492			
1988	23,422	25,765	327,914	360,706		
1989	23,422	25,765	351,337	386,471		
1990	23,422	25,765	374,759	412,235		
1991	56,229	61,852	398,182	438,000		
1992	56,229	61,852	454,411	499,852		
1993	56,229	61,852	510,640			
1994	56,029	61,632	566,870	623,557		
1995	67,956	74,752	622,899	685,189		
1996	280,044	308,049	690,855	759,940		
1997	208,060	228,866	970,899	1,067,989		
1998	189,215	208,137	1,178,960	1,296,855		
1999	172,441	189,685	1,368,175	1,504,992		
2000	155,665	171,232	1,540,616	1,694,677		
2001	142,733	157,006	1,696,281	1,865,909		
2002	183,819	202,201	1,839,014	2,022,915		
2003	209,924	230,917	2,022,833			
2004	222,535	244,789	2,232,758	2,456,033		
2005	171,457	188,603	2,455,293	2,700,822		
2006	143,517	157,869	2,626,750	2,889,425		
2007	74,545	82,000	2,770,268	3,047,294		
2008	76,364	84,000	2,844,813			
2009	78,182	86,000	2,921,177			
2010	80,000	88,000	2,999,358			
2011	81,818	90,000	3,079,358			
2012	83,636	92,000	3,161,177	3,477,294		
2013	85,455	94,000				

WASTE ACCEPTANCE RATES (Continued)

Year	CCEPTANCE RATES Waste Acc		Waste-In-Place			
rear	(Mg/year)	(short tons/year)	(Mg)	(short tons)		
2014	87,273	96,000	3,330,268	3,663,294		
2015	89,091	98,000	3,417,540	3,759,294		
2016	26,364	29,000	3,506,631	3,857,294		
2017	0	0	3,532,995	3,886,294		
2018	0	0	3,532,995	3,886,294		
2019	0	O	3,532,995	3,886,294		
2020	0	0	3,532,995	3,886,294		
2021	0	O	3,532,995	3,886,294		
2022	0	O	3,532,995	3,886,294		
2023	0	O	3,532,995	3,886,294		
2024	0	O	3,532,995	3,886,294		
2025	0	0	3,532,995	3,886,294		
2026	0	O	3,532,995	3,886,294		
2027	0	0	3,532,995	3,886,294		
2028	0	0	3,532,995	3,886,294		
2029	0	0	3,532,995	3,886,294		
2030	0	0	3,532,995	3,886,294		
2031	0	0	3,532,995	3,886,294		
2032	0	0	3,532,995	3,886,294		
2033	0	0	3,532,995	3,886,294		
2034	0	0	3,532,995	3,886,294		
2035	0	0	3,532,995	3,886,294		
2036	0	O	3,532,995	3,886,294		
2037	0	0	3,532,995	3,886,294		
2038	0	0	3,532,995	3,886,294		
2039	0	0	3,532,995	3,886,294		
2040	0	0	3,532,995	3,886,294		
2041	0	0	3,532,995	3,886,294		
2042	0	0	3,532,995	3,886,294		
2043	0	Ō	3,532,995	3,886,294		
2044	0	0	3,532,995	3,886,294		
2045	0	O	3,532,995	3,886,294		
2046	0	0	3,532,995	3,886,294		
2047	0	0)	3,532,995	3,886,294		
2048	0	0	3,532,995	3,886,294		
2049	0	0	3,532,995	3,886,294		
2050	0	0	3,532,995	3,886,294		
2051	0	0	3,532,995	3,886,294		
2052	0	0	3,532,995	3,886,294		
2053	0	ō	3,532,995	3,886,294		

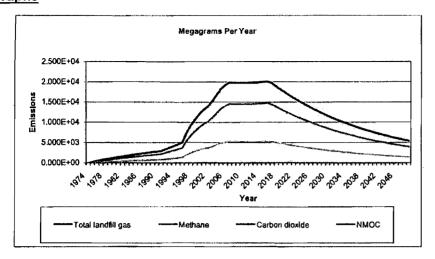
Pollutant Parameters

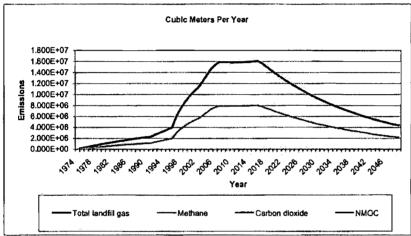
	Gas / Po	ilutant Default Param	eters:	User-specified Pollutant Parameters:		
		Concentration		Concentration		
<u></u>	Compound	(ppmv)	Molecular Weight	(ppmv)	Molecular Weight	
Ŋ	Total landfill gas		0.00	6.82		
Gases	Methane	740.004.005	16.04	144 TE		
ලී	Carbon dioxide		44.01	Section 18 and 18	4.55	
	NMOC	4,000	86.18			
	1,1,1-Trichloroethane (methyl chloroform) - HAP	0.48	133.41		materials and construction and construction of the construction of	
i .	1,1,2,2- Tetrachloroethane - HAP/VOC	1.1	167.85	**************************************	one in communication of the transmission	
	1,1-Dichloroethane (ethylidene dichloride) - НАР/VOC	2.4	98.97	an defension on the second of		
	1,1-Dichloroethene (vinylidene chloride) - HAP/VOC	0.20	96.94			
	1,2-Dichloroethane	·	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	A.A. AMINE ATT TO THE THEORY AND A COMMENTAL A	······································	
	(ethylene dichloride) - HAP/VOC 1,2-Dichloropropane	0.41	98.96	viimingivii viitii kaasaa k		
	(propylene dichloride) - HAP/VOC 2-Propanol (isopropyl	0.18	112.99	67 minimum ereken ereken betar in station of energia		
I	alcohol) - VOC	50	60.11			
l	Acetone	7.0	58.08	- Section 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1		
	Acrylonitrile - HAP/VOC	6.3	53.06	V V V V V V V V V V V V V V V V V V V		
	Benzene - No or Unknown Co-disposal - HAP/VOC	1.9	78.11			
ş l	Benzene - Co-disposal - HAP/VOC	11	78.11	The same code determines to report violations of control violations of the same code of the		
Pollutants	Bromodichloromethane -	,	400.00		ĺ	
≧	VOC	3.1	163.83	Marine en la comenciare de accessor	and the first of t	
l &	Butane - VOC	5.0	58.12		ene andrews and an arrangement of the same and	
	Carbon disulfide ~ HAP/VOC	0.58	76.13			
	Carbon monoxide	140	28.01		And a common of the second sec	
	Carbon tetrachloride - HAP/VOC	4.0E-03	153.84		**************************************	
	Carbonyl sulfide -	_				
	HAP/VOC	0.49	60.07			
	Chlorobenzene -					
	HAP/VOC	0.25	112.56	**************************************	material comments of the contraction of the contrac	
1	Chlorodifluoromethane	1.3	86.47	d.	er er en seme er mega-sme er i vir er i vir er en semenana er	
	chloride) - HAP/VOC	1.3	64.52			
1	Chloroform - HAP/VOC	0.03	119.39		warmen was sometiment	
1	Chloromethane - VOC	1.2	50.49		2000 19 AA 1 100 100 100 100 100 100 100 100 10	
	Dichlorobenzene - (HAP	Fig. 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990	10.943 		errenoraniero de gracorente de la companya de la co	
	for para Isomer/VOC)	0.21	147			
	Dichlorodifluoromethane	16	120.91	Autorit Nova and a superior of the superior NAME	of the second	
l	Dichlorofluoromethane -		400.00			
1	VOC	2.6	102.92	Assessment and the second seco	ALLES OF ALEXANDER MAN	
	Dichloromethane (methylene chloride) -					
1	(methylene chloride) -	14	84.94			
	Dimethyl sulfide (methyl		***************************************	Sond and an analysis of the second se	general recommendation of the second of the	
	sulfide) - VOC Ethane	7.8 890	62.13 30.07		4000° - 200° - 7,7%	
ļ	Ethanol - VOC	27	46.08			
F	Ichianoi - AOC	<u> </u>	40.00	J	j .	

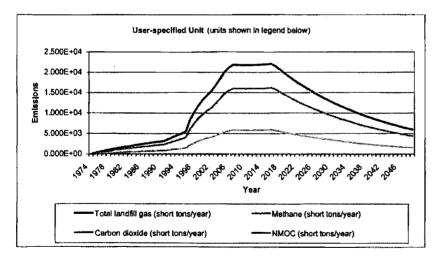
Pollutant Parameters (Continued)

Concentration	1	User-specified Po Concentration	
,	Molecular Weight	(ppmv)	Molecular Weight
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(A) (A) (A) (A) (A)	3.5		
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	Concentration (ppmv) 2.3 4.6 1.0E-03 0.76 6.6 36 2.9E-04 7.1 1.9 2.5 3.3 3.7 11 2.8 39 170 2.8 7.3	(ppmv) Molecular Weight 2.3 62.13 4.6 106.16 1.0E-03 187.88 0.76 137.38 6.6 86.18 36 34.08 2.9E-04 200.61 7.1 72.11 1.9 100.16 2.5 48.11 3.3 72.15 3.7 165.83 11 44.09 2.8 96.94 39 92.13 170 92.13 2.8 131.40 7.3 62.50	Concentration (ppmv) Molecular Weight Concentration (ppmv) 2.3 62.13 4.6 106.16 1.0E-03 187.88 0.76 137.38 6.6 86.18 36 34.08 2.9E-04 200.61 7.1 72.11 1.9 100.16 2.5 48.11 3.3 72.15 3.7 165.83 11 44.09 2.8 96.94 39 92.13 170 92.13 2.8 131.40 7.3 62.50

Graphs







<u>Results</u>

Year					Methane		
rear	(Mg/year)	(m³/year)	(short tons/year)	(Mg/year)	(m³/year)	(short tons/year)	
1974	0	0	0	0	0	0	
1975	2.298E+02	1.840E+05	2.528E+02	6.139E+01	9.202E+04	6.753E+01	
1976	4.507E+02	3.609E+05	4.957E+02	1.204E+02	1.804E+05	1.324E+02	
1977	6.629E+02	5.308E+05	7.291E+02	1.771E+02	2.654E+05	1.948E+02	
1978	8.667E+02	6.940E+05	9.534E+02	2.315E+02	3.470E+05	2.547E+02	
1979	1.063E+03	8.509E+05	1.169E+03	2.838E+02	4.254E+05	3.122E+02	
1980	1.251E+03	1.002E+06	1.376E+03	3.341E+02	5.008E+05	3.675E+02	
1981	1.432E+03	1.146E+06	1.575E+03	3.824E+02	5.732E+05	4.206E+02	
1982	1.605E+03	1.285E+06	1.766E+03	4.288E+02	6.427E+05	4.717E+02	
1983	1.772E+03	1.419E+06	1.949E+03	4.734E+02	7.095E+05	5.207E+02	
1984	1.933E+03	1.547E+06	2.126E+03	5.162E+02	7.737E+05	5.678E+02	
1985	2.087E+03	1.671E+06	2.295E+03	5.574E+02	8.354E+05	6.131E+02	
1986	2.235E+03	1.789E+06	2.458E+03	5.969E+02	8.947E+05	6.566E+02	
1987	2.377E+03	1.903E+06	2.615E+03	6.349E+02	9.516E+05	6.984E+02	
1988	2.513E+03	2.013E+06	2.765E+03	6.714E+02	1.006E+06	7.385E+02	
1989	2.645E+03	2.118E+06	2.909E+03	7.064E+02	1.059E+06	7.771E+02	
1990	2.771E+03	2.219E+06	3.048E+03	7.401E+02	1.109E+06	8.142E+02	
1991	2.892E+03	2.316E+06	3.181E+03	7.725E+02	1,158E+06	8.498E+02	
1992	3.330E+03	2.667E+06	3.664E+03	8.896E+02	1.333E+06	9.786E+02	
1993	3.752E+03	3.004E+06	4.127E+03	1.002E+03	1.502E+06	1.102E+03	
1994	4,156E+03	3.328E+06	4.572E+03	1.110E+03	1,664E+06	1,221E+03	
1995	4.543E+03	3.638E+06	4.998E+03	1.214E+03	1.819E+06	1.335E+03	
1996	5.032E+03	4.029E+06	5.535E+03	1.344E+03	2.015E+06	1,478E+03	
1997	7.583E+03	6.072E+06	8.341E+03	2.025E+03	3.036E+06	2.228E+03	
1998	9.327E+03	7.469E+06	1.026E+04	2.491E+03	3.734E+06	2.740E+03	
1999	1.082E+04	8.663E+06	1.190E+04	2.890E+03	4.331E+06	3.179E+03	
2000	1.209E+04	9.678E+06	1.329E+04	3.228E+03	4.839E+06	3.551E+03	
2001	1.314E+04	1.052E+07	1.445E+04	3.510E+03	5.261E+06	3.861E+03	
2002	1.403E+04	1.123E+07	1.543E+04	3.746E+03	5.615E+06	4.121E+03	
2003	1,528E+04	1.223E+07	1,681E+04	4.081E+03	6.117E+06	4.489E+03	
2004	1.674E+04	1.340E+07	1.841E+04	4.471E+03	6.702E+06	4,919E+03	
2005	1.827E+04	1.463E+07	2.009E+04	4.879E+03	7.314E+06	5.367E+03	
2006	1.923E+04	1.540E+07	2.116E+04	5.137E+03	7.701E+06	5.651E+03	
2007	1.989E+04	1.593E+07	2.188E+04	5.312E+03	7.963E+06	5.843E+03	
2008	1.984E+04	1.589E+07	2.182E+04	5.299E+03	7.943E+06	5.829E+03	
2009	1.981E+04	1.586E+07	2.179E+04	5.292E+03	7.932E+06	5.821E+03	
2010	1.980E+04	1.586E+07	2.178E+04	5.289E+03	7.928E+06	5.818E+03	
2011	1.981E+04	1.586E+07	2.179E+04	5.291E+03	7.931E+06	5.821E+03	
2012	1.984E+04	1.588E+07	2.182E+04	5.298E+03	7.942E+06	5.828E+03	
2013	1.988E+04	1.592E+07	2.187E+04	5.310E+03	7.959E+06	5.841E+03	
2014	1.994E+04	1.597E+07	2.193E+04	5.326E+03	7.983E+06	5.858E+03	
2015	2.001E+04	1.603E+07	2.201E+04	5.346E+03	8.013E+06	5.880E+03	
2016	2.010E+04	1.610E+07	2.201E+04	5.370E+03	8.048E+06	5.906E+03	
2017	1.957E+04	1.567E+07	2.153E+04	5.228E+03	7.836E+06	5.751E+03	
2018	1.881E+04	1.506E+07	2.069E+04	5.023E+03	7.529E+06	5.525E+03	
2019	1.807E+04	1.447E+07	1.987E+04	4.826E+03	7.234E+06	5.309E+03	
2020	1.736E+04	1.390E+07	1.910E+04	4.637E+03	6.950E+06	5.101E+03	
2020	1.736E+04	1.336E+07	1.835E+04	4.455E+03	6.678E+06	4.901E+03	
2022	1.602E+04	1.283E+07	1.763E+04				
2023	1.540E+04	1.283E+07	1.694E+04	4.280E+03 4.113E+03	6.416E+06 6.164E+06	4.708E+03 4.524E+03	

Year 2024 2025 2026 2027 2028 2030 2031 2032 2033 2034 2035	(Mg/year) 1.479E+04 1.421E+04 1.366E+04 1.312E+04 1.261E+04 1.211E+04 1.164E+04 1.118E+04 1.074E+04 1.032E+04 9.916E+03 9.527E+03	(m³/year) 1.185E+07 1.138E+07 1.093E+07 1.051E+07 1.009E+07 9.698E+06 9.318E+06 8.953E+06 8.601E+06 8.264E+06	(short tons/year) 1.627E+04 1.563E+04 1.502E+04 1.443E+04 1.387E+04 1.332E+04 1.280E+04 1.230E+04 1.182E+04	(Mg/year) 3.951E+03 3.796E+03 3.648E+03 3.504E+03 3.367E+03 3.235E+03 3.108E+03	(m ³ /year) 5.923E+06 5.690E+06 5.467E+06 5.253E+06 5.047E+06 4.849E+06	(short tons/year) 4.346E+03 4.176E+03 4.012E+03 3.855E+03 3.704E+03
2025 2026 2027 2028 2029 2030 2031 2032 2033 2034	1.479E+04 1.421E+04 1.366E+04 1.312E+04 1.261E+04 1.211E+04 1.164E+04 1.118E+04 1.074E+04 1.032E+04 9.916E+03 9.527E+03	1.185E+07 1.138E+07 1.093E+07 1.051E+07 1.009E+07 9.698E+06 9.318E+06 8.953E+06 8.601E+06 8.264E+06	1.627E+04 1.563E+04 1.502E+04 1.443E+04 1.387E+04 1.332E+04 1.280E+04 1.230E+04	3.951E+03 3.796E+03 3.648E+03 3.504E+03 3.367E+03 3.235E+03	5.923E+06 5.690E+06 5.467E+06 5.253E+06 5.047E+06 4.849E+06	4.346E+03 4.176E+03 4.012E+03 3.855E+03 3.704E+03
2026 2027 2028 2029 2030 2031 2032 2033 2034	1.421E+04 1.366E+04 1.312E+04 1.261E+04 1.211E+04 1.164E+04 1.118E+04 1.074E+04 1.032E+04 9.916E+03 9.527E+03	1.138E+07 1.093E+07 1.051E+07 1.009E+07 9.698E+06 9.318E+06 8.953E+06 8.601E+06 8.264E+06	1.563E+04 1.502E+04 1.443E+04 1.387E+04 1.332E+04 1.280E+04 1.230E+04	3.648E+03 3.504E+03 3.367E+03 3.235E+03	5.467E+06 5.253E+06 5.047E+06 4.849E+06	4.012E+03 3.855E+03 3.704E+03
2026 2027 2028 2029 2030 2031 2032 2033	1.312E+04 1.261E+04 1.211E+04 1.164E+04 1.118E+04 1.074E+04 1.032E+04 9.916E+03 9.527E+03	1.051E+07 1.009E+07 9.698E+06 9.318E+06 8.953E+06 8.601E+06 8.264E+06	1.443E+04 1.387E+04 1.332E+04 1.280E+04 1.230E+04	3.504E+03 3.367E+03 3.235E+03	5.253E+06 5.047E+06 4.849E+06	3.855E+03 3.704E+03
027 028 029 030 031 032 033 034	1.312E+04 1.261E+04 1.211E+04 1.164E+04 1.118E+04 1.074E+04 1.032E+04 9.916E+03 9.527E+03	1.051E+07 1.009E+07 9.698E+06 9.318E+06 8.953E+06 8.601E+06 8.264E+06	1.443E+04 1.387E+04 1.332E+04 1.280E+04 1.230E+04	3.504E+03 3.367E+03 3.235E+03	5.253E+06 5.047E+06 4.849E+06	3.855E+03 3.704E+03
028 029 030 031 032 033 034	1.261E+04 1.211E+04 1.164E+04 1.118E+04 1.074E+04 1.032E+04 9.916E+03 9.527E+03	1.009E+07 9.698E+06 9.318E+06 8.953E+06 8.601E+06 8.264E+06	1.387E+04 1.332E+04 1.280E+04 1.230E+04	3.367E+03 3.235E+03	5.047E+06 4.849E+06	3.704E+03
029 030 031 032 033 033	1.211E+04 1.164E+04 1.118E+04 1.074E+04 1.032E+04 9.916E+03 9.527E+03	9.698E+06 9.318E+06 8.953E+06 8.601E+06 8.264E+06	1.332E+04 1.280E+04 1.230E+04	3.235E+03		
030 031 032 033 033	1.164E+04 1.118E+04 1.074E+04 1.032E+04 9.916E+03 9.527E+03	9.318E+06 8.953E+06 8.601E+06 8.264E+06	1.280E+04 1.230E+04			3.559E+03
031 032 033 034	1.118E+04 1.074E+04 1.032E+04 9.916E+03 9.527E+03	8.953E+06 8.601E+06 8.264E+06	1.230E+04		4.659E+06	3.419E+03
032 033 034	1.074E+04 1.032E+04 9.916E+03 9.527E+03	8.601E+06 8.264E+06		2.986E+03	4.476E+06	3.285E+03
.033 .034	9.916E+03 9.527E+03	8.264E+06	1.10ZETU4	2.869E+03	4.301E+06	3.156E+03
2034	9.916E+03 9.527E+03	···	1.135E+04	2.757E+03	4.132E+06	3.032E+03
	9.527E+03	7.940E+06	1.091E+04	2.649E+03	3.970E+06	2.914E+03
		7.629E+06	1.048E+04	2.545E+03	3.814E+06	2.799E+03
036	9.154E+03	7.330E+06	1.007E+04	2.445E+03	3.665E+06	2.689E+03
037	8.795E+03	7.042E+06	9.674E+03	2.349E+03	3.521E+06	2.584E+03
038	8.450E+03	6.766E+06	9.295E+03	2.257E+03	3.383E+06	2.483E+03
039	8.118E+03	6.501E+06	8.930E+03	2.169E+03	3.250E+06	2.385E+03
040	7.800E+03	6.246E+06	8.580E+03	2.083E+03	3.123E+06	2.292E+03
041	7.494E+03	6.001E+06	8.244E+03	2.002E+03	3.001E+06	2.202E+03
042	7.200E+03	5.766E+06	7.920E+03	1.923E+03	2.883E+06	2.116E+03
043	6.918E+03	5.540E+06	7.610E+03	1.848E+03	2.770E+06	2.033E+03
044	6.647E+03	5.322E+06	7.311E+03	1.775E+03	2.661E+06	1.953E+03
045	6.386E+03	5.114E+06	7.025E+03	1.706E+03	2.557E+06	1.876E+03
046	6.136E+03	4.913E+06	6.749E+03	1,639E+03	2.457E+06	1,803E+03
047	5.895E+03	4.721E+06	6,485E+03	1.575E+03	2.360E+06	1.732E+03
048	5.664E+03	4.535E+06	6.230E+03	1.513E+03	2.268E+06	1.664E+03
049	5.442E+03	4.358E+06	5.986E+03	1.454E+03	2.179E+06	1.599E+03
050	5.229E+03	4.187E+06	5.751E+03	1.397E+03	2.093E+06	1.536E+03
051	5.024E+03	4.023E+06	5.526E+03	1.342E+03	2.011E+06	1.476E+03
052	4.827E+03	3.865E+06	5.309E+03	1.289E+03	1.932E+06	1.418E+03
053	4.637E+03	3.713E+06	5.101E+03	1.239E+03	1.857E+06	1.363E+03
054	4.455E+03	3.568E+06	4.901E+03	1.190E+03	1.784E+06	1.309E+03
055	4.281E+03	3.428E+06	4.709E+03	1.143E+03	1.714E+06	1.258E+03
056	4.113E+03	3.293E+06	4.524E+03	1.099E+03	1.647E+06	1.208E+03
057	3.952E+03	3.164E+06	4.347E+03	1.056E+03	1.582E+06	1.161E+03
058	3.797E+03	3.040E+06	4.176E+03	1.014E+03	1.520E+06	1.116E+03
059	3.648E+03	2.921E+06	4.013E+03	9.744E+02	1.461E+06	1.072E+03
060	3.505E+03	2.806E+06	3.855E+03	9.362E+02	1.403E+06	1.030E+03
061	3.367E+03	2.696E+06	3.704E+03	8.995E+02	1.348E+06	9.894E+02
062	3.235E+03	2.591E+06	3.559E+03	8.642E+02	1.295E+06	9.506E+02
063	3.108E+03	2.489E+06	3.419E+03	8.303E+02	1.245E+06	9.133E+02
064	2.987E+03	2.392E+06	3.285E+03	7.978E+02	1.196E+06	8.775E+02
065	2.869E+03	2.298E+06	3.156E+03	7.665E+02	1.149E+06	8.431E+02
066	2.757E+03	2.208E+06	3.033E+03	7.364E+02	1.104E+06	8.101E+02
067	2.649E+03	2.121E+06	2.914E+03	7.075E+02	1.061E+06	7.783E+02
068	2.545E+03	2.038E+06	2.800E+03	6.798E+02	1.019E+06	7.763E+02
069	2.445E+03	1.958E+06	2.690E+03	6.531E+02	9.790E+05	7.476E+02 7.185E+02
070	2.349E+03	1.881E+06	2.584E+03	6.275E+02	9.406E+05	6.903E+02
070	2.257E+03	1.807E+06	2.483E+03	6.029E+02	9.406E+05 9.037E+05	
071	2.257E+03 2.169E+03	1.737E+06	2.483E+03 2.386E+03	5.793E+02	9.037E+05 8.683E+05	6.632E+02 6.372E+02
073	n o formation fundamental management and the state of the			The same of the sa		
2074	2.084E+03 2.002E+03	1.669E+06 1.603E+06	2.292E+03 2.202E+03	5.566E+02 5.348E+02	8.343E+05 8.015E+05	6.122E+02 5.882E+02

Year	Total landfill gas			Methane			
rear	(Mg/year)	(m³/year)	(short tons/year)	(Mg/year)	(m³/year)	(short tons/year)	
2075	1.923E+03	1.540E+06	2.116E+03	5.138E+02	7.701E+05	5.652E+02	
2076	1.848E+03	1.480E+06	2.033E+03	4.936E+02	7.399E+05	5.430E+02	
2077	1.776E+03	1.422E+06	1.953E+03	4.743E+02	7.109E+05	5.217E+02	
2078	1.706E+03	1.366E+06	1.877E+03	4.557E+02	6.830E+05	5.013E+02	
2079	1.639E+03	1.313E+06	1.803E+03	4.378E+02	6.563E+05	4.816E+02	
2080	1.575E+03	1.261E+06	1.732E+03	4.206E+02	6.305E+05	4.627E+02	
2081	1.513E+03	1.212E+06	1.664E+03	4.042E+02	6.058E+05	4.446E+02	
2082	1.454E+03	1.164E+06	1.599E+03	3.883E+02	5.820E+05	4.271E+02	
2083	1.397E+03	1.118E+06	1.536E+03	3.731E+02	5.592E+05	4.104E+02	
2084	1.342E+03	1.075E+06	1.476E+03	3.585E+02	5.373E+05	3.943E+02	
2085	1.289E+03	1.032E+06	1.418E+03	3.444E+02	5.162E+05	3.788E+02	
2086	1.239E+03	9.920E+05	1.363E+03	3.309E+02	4.960E+05	3.640E+02	
2087	1.190E+03	9.531E+05	1.309E+03	3.179E+02	4.765E+05	3.497E+02	
2088	1.144E+03	9.157E+05	1.258E+03	3.055E+02	4.579E+05	3.360E+02	
2089	1.099E+03	8.798E+05	1.209E+03	2.935E+02	4.399E+05	3.228E+02	
2090	1.056E+03	8.453E+05	1.161E+03	2.820E+02	4.226E+05	3.102E+02	
2091	1.014E+03	8.122E+05	1.116E+03	2.709E+02	4.061E+05	2.980E+02	
2092	9.745E+02	7.803E+05	1.072E+03	2.603E+02	3.902E+05	2.863E+02	
2093	9.363E+02	7.497E+05	1.030E+03	2.501E+02	3.749E+05	2.751E+02	
2094	8.995E+02	7.203E+05	9.895E+02	2.403E+02	3.602E+05	2.643E+02	
2095	8.643E+02	6.921E+05	9.507E+02	2.309E+02	3.460E+05	2.539E+02	
2096	8.304E+02	6.649E+05	9.134E+02	2.218E+02	3.325E+05	2.440E+02	
2097	7.978E+02	6.389E+05	8.776E+02	2.131E+02	3.194E+05	2.344E+02	
2098	7.665E+02	6.138E+05	8.432E+02	2.048E+02	3.069E+05	2.252E+02	
2099	7.365E+02	5.897E+05	8.101E+02	1.967E+02	2.949E+05	2.164E+02	
2100	7.076E+02	5.666E+05	7.784E+02	1.890E+02	2.833E+05	2.079E+02	
2101	6.799E+02	5.444E+05	7.478E+02	1.816E+02	2.722E+05	1.998E+02	
2102	6.532E+02	5.231E+05	7.185E+02	1.745E+02	2.615E+05	1.919E+02	
2103	6.276E+02	5.025E+05	6.904E+02	1.676E+02	2.513E+05	1.844E+02	
2104	6.030E+02	4.828E+05	6.633E+02	1.611E+02	2.414E+05	1.772E+02	
2105	5.793E+02	4.639E+05	6.373E+02	1.547E+02	2.320E+05	1.702E+02	
2106	5.566E+02	4.457E+05	6.123E+02	1.487E+02	2.229E+05	1,635E+02	
2107	5.348E+02	4.282E+05	5.883E+02	1.429E+02	2.141E+05	1.571E+02	
2108	5.138E+02	4.115E+05	5.652E+02	1.372E+02	2.057E+05	1.510E+02	
2109	4.937E+02	3.953E+05	5.431E+02	1.319E+02	1.977E+05	1.451E+02	
2110	4.743E+02	3.798E+05	5.218E+02	1.267E+02	1.899E+05	1.394E+02	
2111	4.557E+02	3.649E+05	5.013E+02	1.217E+02	1.825E+05	1.339E+02	
2112	4.379E+02	3.506E+05	4.816E+02	1.170E+02	1.753E+05	1.287E+02	
2113	4.207E+02	3.369E+05	4.628E+02	1.124E+02	1.684E+05	1.236E+02	
2114	4.042E+02	3.237E+05	4.446E+02	1.080E+02	1.618E+05	1.188E+02	

Year	Carbon dioxide			NMOC		
	(Mg/year)	(m³/year)	(short tons/year)	(Mg/year)	(m³/year)	(short tons/year)
1974	0	Ó	0	0	0	0
1975	1.685E+02	9.202E+04	1.853E+02	3.895E-01	1.087E+02	4.284E-01
1976	3.303E+02	1.804E+05	3.633E+02	7.637E-01	2.131E+02	8.401E-01
1977	4.858E+02	2.654E+05	5.344E+02	1.123E+00	3.134E+02	1.236E+00
1978	6.352E+02	3.470E+05	6.987E+02	1.469E+00	4.097E+02	1.616E+00
1979	7.787E+02	4.254E+05	8.566E+02	1.801E+00	5.023E+02	1.981E+00
1980	9.167E+02	5.008E+05	1.008E+03	2.120E+00	5.913E+02	2.331E+00
1981	1.049E+03	5.732E+05	1.154E+03	2.426E+00	6.768E+02	2.669E+00
1982	1.176E+03	6.427E+05	1.294E+03	2.720E+00	7.589E+02	2.992E+00
1983	1.299E+03	7.095E+05	1.429E+03	3.003E+00	8.378E+02	3.303E+00
1984	1.416E+03	7.737E+05	1.558E+03	3.275E+00	9.136E+02	3.602E+00
1985	1.529E+03	8.354E+05	1.682E+03	3.536E+00	9.865E+02	3.890E+00
1986	1.638E+03	8.947E+05	1.802E+03	3.787E+00	1.056E+03	4.165E+00
1987	1.742E+03	9.516E+05	1.916E+03	4.028E+00	1.124E+03	4.431E+00
1988	1.842E+03	1.006E+06	2.026E+03	4.259E+00	1.188E+03	4.685E+00
1989	1.938E+03	1.059E+06	2.132E+03	4.482E+00	1.250E+03	4.930E+00
1990	2.031E+03	1.109E+06	2.234E+03	4.696E+00	1.310E+03	5.165E+00
1991	2.120E+03	1.158E+06	2.332E+03	4.901E+00	1.367E+03	5.391E+00
1992	2.441E+03	1.333E+06	2.685E+03	5.644E+00	1.575E+03	6.208E+00
1993	2.750E+03	1.502E+06	3.025E+03	6.358E+00	1.774E+03	6.993E+00
1994	3.046E+03	1.664E+06	3.351E+03	7.043E+00	1.965E+03	7.748E+00
1995	3.330E+03	1.819E+06	3.663E+03	7.699E+00	2.148E+03	8.469E+00
1996	3.688E+03	2.015E+06	4.057E+03	8.527E+00	2.379E+03	9.380E+00
1997	5.557E+03	3.036E+06	6.113E+03	1.285E+01	3.585E+03	1.413E+01
1998	6.836E+03	3.734E+06	7.519E+03	1.581E+01	4.410E+03	1.739E+01
1999	7.928E+03	4.331E+06	8.721E+03	1.833E+01	5.114E+03	2.017E+01
2000	8.858E+03	4.839E+06	9.744E+03	2.048E+01	5.714E+03	2.253E+01
2001	9.630E+03	5.261E+06	1.059E+04	2,227E+01	6.212E+03	2.449E+01
2002	1.028E+04	5.615E+06	1,131E+04	2.377E+01	6.631E+03	2.614E+01
2003	1.120E+04	6.117E+06	1.232E+04	2.589E+01	7.223E+03	2.848E+01
2004	1.227E+04	6.702E+06	1.350E+04	2.837E+01	7.914E+03	3.120E+01
2005	1.339E+04	7.314E+06	1.473E+04	3.096E+01	8.636E+03	3.405E+01
2006	1.410E+04	7.701E+06	1.551E+04	3.259E+01	9.093E+03	3.585E+01
2007	1.458E+04	7.963E+06	1.603E+04	3.370E+01	9.402E+03	3.707E+01
2008	1.454E+04	7.943E+06	1.599E+04	3.362E+01	9.379E+03	3.698E+01
2009	1,452E+04	7.932E+06	1,597E+04	3.357E+01	9.366E+03	3.693E+01
2010	1.451E+04	7.928E+06	1.596E+04	3.356E+01	9.361E+03	3.691E+01
2011	1.452E+04	7.931E+06	1.597E+04	3.357E+01	9.365E+03	3.693E+01
2012	1,454E+04	7.942E+06	1.599E+04	3.361E+01	9.378E+03	3.698E+01
2013	1,457E+04	7.959E+06	1,603E+04	3.369E+01	9.398E+03	3.706E+01
2014	1.461E+04	7.983E+06	1.607E+04	3.379E+01	9.426E+03	3.717E+01
2015	1,467E+04	8.013E+06	1.613E+04	3.391E+01	9.461E+03	3.731E+01
2016	1.473E+04	8.048E+06	1.621E+04	3.407E+01	9.504E+03	3.747E+01
2017	1.434E+04	7.836E+06	1.578E+04	3.317E+01	9.253E+03	3.648E+01
2018	1.378E+04	7.529E+06	1.516E+04	3.187E+01	8.890E+03	3.505E+01
2019	1.324E+04	7.234E+06	1.457E+04	3.062E+01	8.542E+03	3.368E+01
2020	1.272E+04	6.950E+06	1.399E+04	2.942E+01	8.207E+03	3.236E+01
2021	1.222E+04	6.678E+06	1.345E+04	2.826E+01	7.885E+03	3,109E+01
2022	1.174E+04	6.416E+06	1.292E+04	2.716E+01	7.576E+03	2.987E+01
2023	1.128E+04	6.164E+06	1.241E+04	2.609E+01	7.279E+03	2.870E+01

Year	Carbon díoxide			NMOC		
rear	(Mg/year)	(m³/year)	(short tons/year)	(Mg/year)	(m³/year)	(short tons/year)
2024	1.084E+04	5.923E+06	1.193E+04	2.507E+01	6.993E+03	2.757E+01
2025	1.042E+04	5.690E+06	1.146E+04	2.409E+01	6.719E+03	2.649E+01
2026	1.001E+04	5.467E+06	1.101E+04	2.314E+01	6.456E+03	2.545E+01
2027	9.615E+03	5.253E+06	1.058E+04	2.223E+01	6.203E+03	2.446E+01
2028	9.238E+03	5.047E+06	1.016E+04	2.136E+01	5.959E+03	2.350E+01
2029	8.876E+03	4.849E+06	9.764E+03	2.052E+01	5.726E+03	2.258E+01
2030	8.528E+03	4.659E+06	9.381E+03	1.972E+01	5.501E+03	2.169E+01
2031	8.194E+03	4.476E+06	9.013E+03	1.895E+01	5.286E+03	2.084E+01
2032	7.873E+03	4.301E+06	8.660E+03	1.820E+01	5.078E+03	2.002E+01
2033	7.564E+03	4.132E+06	8.320E+03	1.749E+01	4.879E+03	1.924E+01
2034	7.267E+03	3.970E+06	7.994E+03	1.680E+01	4.688E+03	1.848E+01
2035	6.982E+03	3.814E+06	7.681E+03	1.614E+01	4.504E+03	1.776E+01
2036	6.709E+03	3.665E+06	7.379E+03	1.551E+01	4.327E+03	1.706E+01
2037	6.445E+03	3.521E+06	7.090E+03	1.490E+01	4.158E+03	1.639E+01
2038	6.193E+03	3.383E+06	6.812E+03	1.432E+01	3.995E+03	1.575E+01
2039	5.950E+03	3.250E+06	6.545E+03	1.376E+01	3.838E+03	1.513E+01
2040	5.717E+03	3.123E+06	6.288E+03	1,322E+01	3.688E+03	1.454E+01
2041	5.492E+03	3.001E+06	6.042E+03	1.270E+01	3.543E+03	1.397E+01
2042	5.277E+03	2.883E+06	5.805E+03	1.220E+01	3.404E+03	1.342E+01
2043	5.070E+03	2.770E+06	5.577E+03	1.172E+01	3.271E+03	1.290E+01
2044	4.871E+03	2.661E+06	5.359E+03	1.126E+01	3.142E+03	1.239E+01
2045	4.680E+03	2.557E+06	5.148E+03	1.082E+01	3.019E+03	1.190E+01
2046	4.497E+03	2.457E+06	4.947E+03	1.040E+01	2.901E+03	1.144E+01
2047	4.321E+03	2.360E+06	4.753E+03	9.990E+00	2.787E+03	1.099E+01
2048	4.151E+03	2.268E+06	4.753E+03	9.598E+00	2.678E+03	1.056E+01
2049	3.988E+03	2.266E+06	4.387E+03	9.222E+00	2.573E+03	1.014E+01
2050	3.832E+03	2.093E+06	4.215E+03	8.860E+00	2.472E+03	9.746E+00
2051	3.682E+03	2.093E+06 2.011E+06	4.050E+03	8.513E+00	2.472E+03 2.375E+03	9.364E+00
2052	3.537E+03	1.932E+06	3.891E+03	8.179E+00	2.282E+03	8.997E+00
2053	3.399E+03	1.857E+06	3.739E+03	7.858E+00	2.192E+03	8.644E+00
2054	3.265E+03	1.784E+06	3.739E+03	7.550E+00	2.192E+03 2.106E+03	8.305E+00
2055	3.137E+03	1.714E+06	3.451E+03	7.254E+00	2.024E+03	7.980E+00
2056	3.014E+03	1.647E+06	3.316E+03	6.970E+00	1.944E+03	7.667E+00
2057						
	2.896E+03 2.783E+03	1.582E+06 1.520E+06	3.186E+03 3.061E+03	6.697E+00 6.434E+00	1.868E+03 1.795E+03	7.366E+00 7.077E+00
2058 2059	The state of the s	CONTRACTOR			· /////	THE COLUMN TWO IS NOT THE OWNER OF THE OWNER OWNER OF THE OWNER
2060	2.673E+03	1.461E+06	2.941E+03	6.182E+00	1,725E+03	6.800E+00
2061	2.569E+03 2.468E+03	1.403E+06 1.348E+06	2.826E+03 2.715E+03	5.939E+00 5.706E+00	1.657E+03 1.592E+03	6.533E+00 6.277E+00
		The transfer of the second sec				
2062 2063	2.371E+03 2.278E+03	1.295E+06 1.245E+06	2.608E+03 2.506E+03	5.483E+00 5.268E+00	1.530E+03 1.470E+03	6.031E+00
2064	2.278E+03 2.189E+03	1.245E+06 1.196E+06	2.506E+03 2.408E+03	5.268E+00 5.061E+00		5.794E+00
2065	2.189E+03 2.103E+03	1.149E+06		*	1.412E+03 1.357E+03	5.567E+00
	2.103E+03 2.021E+03		2.313E+03	4.863E+00	and the second s	5.349E+00
2066 2067	1.941E+03	1.104E+06	2.223E+03 2.135E+03	4.672E+00	1.303E+03	5.139E+00
2068		1,061E+06		4.489E+00	1.252E+03	4.938E+00
2000	1.865E+03	1.019E+06	2.052E+03	4.313E+00	1.203E+03	4.744E+00
2069 2070	1.792E+03	9.790E+05	1.971E+03	4.144E+00	1.156E+03	4.558E+00
	1.722E+03	9.406E+05	1.894E+03	3.981E+00	1.111E+03	4.379E+00
2071	1.654E+03	9.037E+05	1.820E+03	3.825E+00	1.067E+03	4.208E+00
2072	1.589E+03	8.683E+05	1.748E+03	3.675E+00	1.025E+03	4.043E+00
2073	1.527E+03	8.343E+05	1.680E+03	3.531E+00	9.851E+02	3.884E+00
2074	1.467E+03	8.015E+05	1.614E+03	3.393E+00	9.465E+02	3.732E+00

Vacal	Carbon dioxide				NMOC		
Year	(Mg/year)	(m³/year)	(short tons/year)	(Mg/year)	(m³/year)	(short tons/year)	
2075	1.410E+03	7.701E+05	1.551E+03	3.260E+00	9.094E+02	3.586E+00	
2076	1,354E+03	7.399E+05	1.490E+03	3.132E+00	8.737E+02	3.445E+00	
2077	1.301E+03	7.109E+05	1,431E+03	3.009E+00	8.394E+02	3.310E+00	
2078	1.250E+03	6.830E+05	1.375E+03	2.891E+00	8.065E+02	3.180E+00	
2079	1.201E+03	6.563E+05	1.321E+03	2.778E+00	7.749E+02	3.055E+00	
2080	1.154E+03	6.305E+05	1.270E+03	2.669E+00	7.445E+02	2.936E+00	
2081	1.109E+03	6.058E+05	1.220E+03	2.564E+00	7.153E+02	2.820E+00	
2082	1.065E+03	5.820E+05	1.172E+03	2.464E+00	6.873E+02	2.710E+00	
2083	1.024E+03	5.592E+05	1.126E+03	2.367E+00	6.603E+02	2.604E+00	
2084	9.835E+02	5.373E+05	1.082E+03	2.274E+00	6.344E+02	2.502E+00	
2085	9.449E+02	5.162E+05	1.039E+03	2.185E+00	6.096E+02	2.403E+00	
2086	9.079E+02	4.960E+05	9.987E+02	2.099E+00	5.857E+02	2.309E+00	
2087	8.723E+02	4.765E+05	9.595E+02	2.017E+00	5.627E+02	2.219E+00	
2088	8.381E+02	4.579E+05	9.219E+02	1.938E+00	5.406E+02	2.132E+00	
2089	8.052E+02	4.399E+05	8.858E+02	1.862E+00	5.194E+02	2.048E+00	
2090	7.737E+02	4.226E+05	8.510E+02	1.789E+00	4.991E+02	1.968E+00	
2091	7.433E+02	4.061E+05	8,177E+02	1.719E+00	4.795E+02	1.891E+00	
2092	7.142E+02	3.902E+05	7.856E+02	1.651E+00	4.607E+02	1.816E+00	
2093	6.862E+02	3.749E+05	7.548E+02	1.587E+00	4.426E+02	1.745E+00	
2094	6.593E+02	3.602E+05	7.252E+02	1.524E+00	4.253E+02	1.677E+00	
2095	6.334E+02	3.460E+05	6.968E+02	1.465E+00	4.086E+02	1.611E+00	
2096	6.086E+02	3.325E+05	6.694E+02	1.407E+00	3.926E+02	1.548E+00	
2097	5.847E+02	3.194E+05	6.432E+02	1.352E+00	3.772E+02	1.487E+00	
2098	5.618E+02	3.069E+05	6.180E+02	1.299E+00	3.624E+02	1.429E+00	
2099	5.398E+02	2.949E+05	5.937E+02	1.248E+00	3.482E+02	1.373E+00	
2100	5.186E+02	2.833E+05	5.705E+02	1.199E+00	3.345E+02	1.319E+00	
2101	4.983E+02	2.722E+05	5,481E+02	1.152E+00	3.214E+02	1.267E+00	
2102	4.787E+02	2.615E+05	5.266E+02	1.107E+00	3.088E+02	1.218E+00	
2103	4.600E+02	2.513E+05	5.060E+02	1.064E+00	2.967E+02	1.170E+00	
2104	4.419E+02	2.414E+05	4.861E+02	1.022E+00	2.851E+02	1.124E+00	
2105	4.246E+02	2.320E+05	4.671E+02	9.818E-01	2.739E+02	1.080E+00	
2106	4.079E+02	2.229E+05	4,487E+02	9.433E-01	2.632E+02	1.038E+00	
2107	3.919E+02	2.141E+05	4,311E+02	9.063E-01	2.528E+02	9.969E-01	
2108	3.766E+02	2.057E+05	4.142E+02	8.707E-01	2.429E+02	9.578E-01	
2109	3.618E+02	1.977E+05	3.980E+02	8.366E-01	2.334E+02	9.203E-01	
2110	3,476E+02	1.899E+05	3.824E+02	8.038E-01	2.242E+02	8.842E-01	
2111	3.340E+02	1.825E+05	3.674E+02	7.723E-01	2.155E+02	8.495E-01	
2112	3.209E+02	1.753E+05	3.530E+02	7.420E-01	2.070E+02	8.162E-01	
2113	3.083E+02	1.684E+05	3.391E+02	7.129E-01	1.989E+02	7.842E-01	
2114	2.962E+02	1.618E+05	3.259E+02	6.849E-01	1.911E+02	7.534E-01	

ATTACHMENT B

2006 AOR Support Data Facility Information (Not Submitted with EAOR) Data Provided Taken From Circular Charts And Information Provided By Becky Diden (2/21/2007)

2006 Waste Amount: 157,869.32 tons

Ozone Season Operation 1 season = 92 days (June 1-Aug 31)

2006	Hours/mo	flare hours of operation
Jan	744	730
Feb	672	668
Mar	744	742
Apr	720	705
May	744	720
Jun	720	709
Jul	744	744
Aug	744	738
Sep	720	709
Oct	744	620
Nov	720	720
Dec	744	744
total		8549

2191 Hr/season 23.8 Hr/day 6.9 days/week

Percent by Season				
	hours	% of operation		
DJF	2142	25		
MAM	2167	25		
JJA	2191	26		
SON	2049	24		
total	8549	100		

Dec Total	60247585	91490594	31243009	312430090 685929730		L	Avg Flov
Nov	56890441	60247585	3357144	33571440	33.57	901	
Oct	54217320	56890441	2673121	26731210	26.73	819	
Sep		54217320	54217320	542173200	542.17	850	
Aug	46944222		-46944222	-4.69E+08	-469.44	847	
Jul	43171087	46944222	3773135	37731350	37.73	869	
Jun	4002344	43171087	39168743	391687430	391.69	910	
May	37092984	4002344	-33090640	-3.31E+08	-330.91	829	
Apr	33743270	37092984	3349714	33497140	33.50	740	
Mar	30049092	33743270	3694178	36941780	36.94	864	
Feb	26890075	30049092	3159017	31590170	31.59	759	
Jan	22897621	26890075	3992454	39924540	39.92	969	
2006	log start	log end	scf*10	SCF	MMCF	scfm	
			flare gas flow	rate			

Flow Per Year scf MMscf 4.35E+08 435.10

Notes: There were several jumps in total flow recorded on the monitoring forms.

Average flow for the year was used to estimate total flow.

Verbally per Melissa Ransom (01/26/04) use Bob McIntyre's 2003 estimate: Propane fuel usage is 10 lb/month

Fuel Usage*				
lb/yr	1000 gal/yr	1000 gal/day/ozone season		
120	0.03	0.0071		
	unit operated 91 days du	uring ozone season		

Heating Value*	
Btu/gal	MMBtu/1000 gal
91,547	91.547

^{*}Source of propane characteristics: National Propane Gas Association based on propane density of 4.24 lb/gal

Golder Associates Inc.

8933 Western Way, Suite 12 Jacksonville, FL USA 32256 Telephone (904) 363-3430 Fax (904) 363-3445



February 28, 2007

993-3928.75

Florida Department of Environmental Protection Northeast District - District Air Program 7825 Baymeadows Way, Suite B200 Jacksonville, Florida 32256-7590

RE: 2006 STATEMENT OF COMPLIANCE
WEST NASSAU CLASS I LANDFILL
CALLAHAN, NASSAU COUNTY, FLORIDA
AIRS ID NUMBER 0890428
PERMIT NUMBER: 0890428-005-AV

On behalf of the Nassau County Board of County Commissioners, Golder Associates Inc. (Golder) has prepared the 2006 Statement of Compliance for the above referenced Title V facility. Please find attached two copies of the Florida Department of Environmental Protection (FDEP) Form No. 62-213.900(7) and attached compliance table.

Should you have any questions regarding this letter, please call the undersigned at (904) 363-3430.

Sincerely,

GOLDER ASSOCIATES INC.

Wendy D. Karably Senior Consultant/Associate

Attachments

US EPA Region 4, Air, Pesticides & Toxic Management Division, Operating Permits
 Section, 61 Forsyth Street, Atlanta, Georgia 30303 (404-562-9099)

 Mr. Jim B. Higginbotham -Chairman of the Board of County Commissioners

Mr. Lee Pickett - Interim Solid Waste Department Director

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Department of Environmental Protection

Division of Air Resource Management

STATEMENT OF COMPLIANCE - TITLE V SOURCE

REASON FOR SUBMISSION	(Check one to indicate why this s	tatement of compliance is being submitte	
× Annual Requirement	☐ Transfer of Permit	☐ Permanent Facility Shutdown	
REPO	RTING PERIOD*	REPORT DEADLINE**	
January 1 through Decem	March 1, 2007		
_	ere added, deleted, or changed throug	offect during the indicated reporting period th permit revision.	

COMPLIANCE STATEMENT (Check only one of the following three options)

Facility Owner/Company Name: Nassau County Board of County Commissioners

Site Name: West Nassau Class I Landfill Facility ID No. 0890428 County: Nassau

- X A. This facility was in compliance with all terms and conditions of the Title V Air Operation Permit and, if applicable, the Acid Rain Part, and there were no reportable incidents of deviations from applicable requirements associated with any malfunction or breakdown of process, fuel burning or emission control equipment, or monitoring systems during the reporting period identified above.
 - B. This facility was in compliance with all terms and conditions of the Title V Air Operation Permit and, if applicable, the Acid Rain Part; however, there were one or more reportable incidents of deviations from applicable requirements associated with malfunctions or breakdowns of process, fuel burning or emission control equipment, or monitoring systems during the reporting period identified above, which were reported to the Department. For each incident of deviation, the following information is included:
 - 1. Date of report previously submitted identifying the incident of deviation.
 - 2. Description of the incident.
 - C. This facility was in compliance with all terms and conditions of the Title V Air Operation Permit and, if applicable, the Acid Rain Part, EXCEPT those identified in the pages attached to this report and any reportable incidents of deviations from applicable requirements associated with malfunctions or breakdowns of process, fuel burning or emission control equipment, or monitoring systems during the reporting period identified above, which were reported to the Department. For each item of noncompliance, the following information is included:
 - 1. Emissions unit identification number.
 - 2. Specific permit condition number (note whether the permit condition has been added, deleted, or changed during certification period).
 - 3. Description of the requirement of the permit condition.
 - 4. Basis for the determination of noncompliance (for monitored parameters, indicate whether monitoring was continuous, i.e., recorded at least every 15 minutes, or intermittent).
 - 5. Beginning and ending dates of periods of noncompliance.
 - Identification of the probable cause of noncompliance and description of corrective action or preventative measures implemented.
 - 7. Dates of any reports previously submitted identifying this incident of noncompliance.

For each incident of deviation, as described in paragraph B. above, the following information is included:

- 1. Date of report previously submitted identifying the incident of deviation.
- 2. Description of the incident.

DEP Form No. 62-213.900(7)

Effective: 6-02-02

STATEMENT OF COMPLIANCE - TITLE V SOURCE

RESPONSIBLE OFFICIAL CERTIFICATION

I, the undersigned, am a responsible official (Title V air permit application or responsible official notification form on file with the Department) of the Title V source for which this document is being submitted. With respect to all matters other than Acid Rain program requirements, I hereby certify, based on the information and belief formed after reasonable inquiry, that the statements made and data contained in this document are true, accurate, and complete.



in & Siever	2-26-07
(Signature of Title V Source Responsible Official)	(Date)

Name: Mr. Jim B Higginbotham Title: Chairman of Nassau County Board of
County Commissioners

DESIGNATED REPRESENTATIVE CERTIFICATION (only applicable to Acid Rain source)

I, the undersigned, am authorized to make this submission on behalf of the owners and operators of the Acid Rain source or Acid Rain units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment.

(Signature of Acid Rain Source Designated Representative)		(Date)
Name:	Title:	TTEL HANGELLE TRANSPORT

{Note: Attachments, if required, are created by a responsible official or designated representative, as appropriate, and should consist of the information specified and any supporting records. Additional information may also be attached by a responsible official or designated representative when elaboration is required for clarity. This report is to be submitted to both the compliance authority (DEP district or local air program) and the U.S. Environmental Protection Agency(EPA) (U.S. EPA Region 4, Air and EPCRA Enforcement Branch, 61 Forsyth Street, Atlanta GA 30303).}

DEP Form No. 62-213.900(7)

Effective: 6-02-02

Golder Associates Inc.

8933 Western Way, Suite 12 Jacksonville, FL USA 32256 Telephone (904) 363-3430 Fax (904) 363-3445



February 28, 2007

993-3928.75

Florida Department of Environmental Protection Division of Air Resources Management Major Air Pollution Source Annual Emissions Fee P.O. Box 3070 Tallahassee, Florida 32315-3070

RE: 2006 MAJOR AIR POLLUTION SOURCE ANNUAL EMISSIONS FEE

WEST NASSAU CLASS I LANDFILL

CALLAHAN, NASSAU COUNTY, FLORIDA

AIRS ID NUMBER 0890428

PERMIT NUMBER: 0890428-005-AV

On behalf of the Nassau County Board of County Commissioners, Golder Associates Inc. (Golder) has prepared this 2006 Major Air Pollution Source Annual Emissions Fee Form for the above referenced Permit.

The facility's existing permit does not establish specific permit conditions for regulated air pollutants; therefore, the facility is not subject to the fee factor of \$25/ton of emissions. However, the facility is subject to the minimum fee of \$250.00. A check in the amount of \$250.00 is attached.

Should you have any questions regarding this letter, please call the undersigned at (904) 363-3430.

Sincerely,

GOLDER ASSOCIATES INC.

Wendy D. Karably Senior Consultant/Associate

Attachments

cc: Mr. Jim B. Higginbotham - Chairman, Nassau County Board of County Commissioners
Mr. Lee Pickett - Interim Solid Waste Department Director

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Department of **Environmental Protection**

	DOC No.
	Postmark Date / //
ı	MSD//
L	Org.: 37550101000 EO: A7
	Fund: 20-2-035001
Γ	Payment No.:
M	Remittance No.:

DIVISION OF AIR RESOURCES MANAGEMEN'

MAJOR AIR POLLUTION SOURCE ANNUAL EMISSIONS FEE FOR

Please read the instructions for this form and print or type all information.

(Filled in by DEP)

CALENDAR YEAR EMISSIONS REPORTED: 2006

Fee payment is due between January 15th and March 1st of following year. If the Department has not received the fee payment by March 1st, the Department shall impose, in addition to the fee, a penalty of 50 percent of the amount of the unpaid fee, plus interest on such amount computed in accordance with s. 220.807, Florida Statutes, except as provided at Rule 62-213.205, F.A.C. The Department may revoke any major air pollution source operation permit if it finds that the permit holder has failed to pay timely any required annual emissions fee, penalty or interest.

FACILITY INFORMATION						
1. Facility owner/company name			2. Facility ID Number			
Nassau County Board of Cour	nty Commissioners		0890428			
3. Facility name/street address or loc	ation description					
West Nassau Class I Landfill /						
4. Facility city	Facility city Zip code		County			
Callahan	32011	1	Nassau			
 Name of person to be contacted if information submitted Mr. Lee Pickett 	there are questions about		6. Contact's telephone number (904) 879-6321			
7. Total Fee Amount from Page C			\$ 250			
8. One-time fee credit (if applicable	from Page D)	N/A	\$			
9a. Penalty (if applicable)	9b. Interest (if applicable)		9c. Penalty + Interest (9a.+ 9b.)			
\$	\$		\$			
10. Total payment remitted			\$ 250			

I, the undersigned, arm the responsible official as defined in Chapter 62-213, F.A.C., of the Title V source for which this
document is being submitted. I hereby certify, based on the information and belief formed after reasonable inquiry, that
be statements made and data contained in this document are true, accurate, and complete.
wirk. Siria Assa
Signature

Mr. Jim B. Higginbotham

RESPONSIBLE OFFICIAL CERTIFICATION

Chair, Board of Nassau Co. Comm. Title

2-26-07

Name

Submit check, draft, or money order, made payable to Florida DEP. Send payment & completed form to:

Major Air Pollution Source Annual Emissions Fee P.O. Box 3070 Tallahassee, Florida 32315-3070

DEP Form No. 62-213.900(1)

MAJOR AIR POLLUTION SOURCE ANNUAL EMISSIONS FEE FORM EMISSIONS UNIT INFORMATION SHEET

Facility Name: West Nassau Class I Landfill

Regulated Air pollutant(s) allowed to be emitted by specific permit condition for	allowal rate (fil	limiting maximum able pollutant emission fill in one column only ach pollutant)			III. Operating conditions - Maximum allowed by permit per year		IV. Operating conditions - Actual documented for reported calendar year		V. Annual emissions to which fees apply		
this emissions unit or group of emissions units (excluding carbon monoxide)	pounds per hour	tons per year	tons per of material input or of duct outp	or heat pro- put	hours of operation	amount of material or heat input or product output [in units speci- fied in column (e)]	hours of operation	amount of material or heat input or product output [in units speci- fied in column (e)]	calculated annual tons of pollutant emissions	actual tons recorded annual emissions using C.E.M. or other DEP- approved method	COC (Se Instr tion
(a)	(b)	(c)	(tons) (d)	(units) (e)	(f)	(g)	(h)	(i)	(i)	(k)	(
N/A (no pollutant emission limitations)											

No._1 of_2 total Emissions Unit Information Sheets (Page B's) submitted for this facility. List all permitted emissions units, even if not operated during the reported year.

DEP Form No. 62-213.900(1)

MAJOR AIR POLLUTION SOURCE ANNUAL EMISSIONS FEE FORM EMISSIONS UNIT INFORMATION SHEET

Facility Name: West Nassau Class I Landfill

Regulated Air pollutant(s) allowed to be emitted by specific permit condition for	Most limiting maximum allowable pollutant emission rate (fill in one column only for each pollutant)			III. Operating conditions - Maximum allowed by permit per year		IV. Operating conditions - Actual documented for reported calendar year		V. Annual emissions to which fees apply			
this emissions unit or group of emissions units (excluding carbon monoxide)	pounds per hour	tons per year	tons per material input or duct out	or heat pro- out	hours of operation	amount of material or heat input or product output [in units speci- fied in column (e)]	hours of operation	amount of material or heat input or product output [in units speci- fied in column (e)]	calculated annual tons of pollutant emissions	actual tons recorded annual emissions using C.E.M. or other DEP-approved method	cod (See Instru
(a)	(b)	(c)	(tons) (d)	(units) (e)	<u>(f)</u>	(g)	(h)	(i)	(j)	(k)	(1)
N/A (no pollutant emission limitations)											

No. 2 of 2 total Emissions Unit Information Sheets (Page B's) submitted for this facility. List all permitted emissions units, even if not operated during the reported year.

DEP Form No. 62-213.900(1)

MAJOR AIR POLLUTION SOURCE ANNUAL EMISSIONS FEE FORM FEE PAYMENT CALCULATION SHEET

Facility Name: West Nassau Class I Landfill

Regulated Air pollutant(s) allowed to be emitted by specific permit conditions for this facility (excluding carbon monoxide).	Total facility annual emissions for each pollutant listed in column (a). [Sum of column entries (j) and/or (k) for pollutant on Page(s) B for all emissions units at facility]	If amount in column (b) is less than 4000 tons, enter amount in column (c). If the amount in column (b) is equal to or greater than 4000 tons, enter 4000 in column (c).	Multiply amount in column (c) by the applicable fee factor pursuant to Rule 62-213.205, F.A.C. and enter dollar amount in column (d).
(a)	(b)	(c)	(d)
N/A	N/A		N/A
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DEP Form No. 62-213.900(1)

ELECTRONIC ANNUAL OPERATING REPORT

Emission Report by Facility

Facility ID:

0890428

of Emission Units: 2

2

Owner/Company Name:

NASSAU CO. BOARD OF COUNTY COMMISSIONERS

Site Name:

WEST NASSAU LANDFILL

	2006	2005
Pollutant	Actual (TPY)	Actual (TPY)
CO	165.100000	208.100000
HAPS	4.950000	11.420000
NMOC	25.020000	22.530000
NOX	8.700000	11.000000
PM	3.697500	4.675000
PM10	3.697500	4.675000
SO2	1.261500	1.595000
VOC	7.770000	27.080000

ELECTRONIC ANNUAL OPERATING REPORT

Emission Report by EU

Facility ID:

0890428

Owner/Company Name: NASSAU CO. BOARD OF COUNTY

Site Name:

WEST NASSAU LANDFILL

			2006	2005
EU ID	EU Description	Pollutant	Actual (TPY)	Actual (TPY)
001	Municipal Solid Waste Landfill			
		CO	1.9	1.7
		HAPS	4.9	11.3
		NMOC	24.8	22.3
		VOC	7.7	26.8
002	LANDFILL GAS UTILITY FLARE			
		CO	163.2	206.4
		HAPS	0.05	0.12
		NMOC	0.22	0.23
		NOX	8.7	11
		PM	3.6975	4.675
		PM10	3.6975	4.675
		SO2	1.2615	1.595
		VOC	0.07	0.28