SANTEK
WasteServices
650 25th Street, N.W., Suite 100
Cleveland, Tennessee 37311
(423) 303-7101

Email: mail@santekenviro.com
Internet: www.santekenviro.com

January 2, 2014

East TN Permit Program
Tennessee Department of Environment and Conservation
Division of Air Pollution Control
9th Floor, L&C Annex
401 Church Street
Nashville, TN 37243-1531

Re: NSPS Amended Design Capacity Report and
Tier 1 NMOC Emission Rate Report
Loudon County (Matlock Bend) Landfill – Loudon, TN
Solid Waste Permit #: SNL 53-103-0203

To Whom It May Concern:

In accordance with 40 CFR 60.757(a)(3) and (b), Santek Waste Services, Inc. (Santek) is submitting an Amended Design Capacity Report (ADCR) and Tier 1 NMOC Emission Rate Report for the Loudon County (Matlock Bend) Landfill (Landfill).

The site-specific average waste density of the active Phase II/IV (Subtitle D) Landfill was recalculated to1.32 yd^3/ton on October 21, 2013. Based on this recalculation, the ADCR indicates the Landfill's total design capacity is 4,479,694 cubic meters (m^3) or 3,764,868 megagrams (Mg) which exceeds the 2.5 million m^3 and 2.5 million Mg threshold for the New Source Performance Standard (NSPS) regulations as defined in 40 CFR 60.752(a)(2). The ADCR is based on the total design capacity of the active Phase II/IV (Subtitle D) landfill and the closed Phase I (non-Subtitle D) landfill. To comply with NSPS regulations, the Landfill must submit an ADCR and Tier 1 NMOC Emission Rate Report within 90 days of exceeding the NSPS design capacity threshold.

The U.S. EPA's LandGEM (version 3.02) model was utilized to prepare the Tier 1 NMOC Emission Rate Report by inputting the Landfill's design capacity, historic waste records and NSPS default values. The result of the Tier 1 NMOC Emission Rate Report, located in Appendix A, indicates that the Landfill is above the regulatory NMOC emission threshold of 50 Mg/year. Therefore, according to 40 CFR 60.752(b)(2)(ii), the Landfill will be required to install a landfill gas collection system or perform site-specific Tier 2 NMOC testing to determine the actual NMOC emissions.

Santek plans to perform the site-specific Tier 2 NMOC testing, as defined in 40 CFR 60.757(c)(1), within 180 days of the calculated NMOC exceedance of 50 Mg/year. Therefore, the results of the Tier 2 NMOC testing will be submitted to the TDEC (Division of Air Pollution Control) before June 2, 2014.

In accordance with 40 CFR 60.752 (c)(2) and the email correspondence from Mr. Travis Blake (TDEC – Division of Air Pollution Control) dated November 1, 2013, the Landfill will become subject to the Part 70 (Title V) Permit regulations 90 days after recalculating the site-specific average waste density. Therefore, the Landfill will become subject to the Part 70 (Title V) Permit regulations on January 19, 2014. According to 40 CFR 70.5(1), a Title V Permit application will be submitted to the TDEC (Division of Air Pollution Control) by January 19, 2015.

If you have any questions regarding this submittal, feel free to call at (423) 303-7101.

Sincerely,

Will Martin
Environmental Compliance Coordinator

Ron E. Vail, P.E.
V.P. of Engineering

Enclosure

cc: Travis Blake, Division of Air Pollution Control, TDEC
Steve Field, Chairman, LCSWDC
Robert D. Burnette, P.E., Executive V.P. of Engineering, Santek
Cheryl Dunson, Executive V.P. of Marketing, Santek
Matt Dillard, Executive V.P. of Operations, Santek
Levi Higdon, Facility Manager, Santek

LOUDON COUNTY (MATLOCK BEND) LANDFILL
AMENDED DESIGN CAPACITY REPORT AND TIER 1 NMOC EMISSION RATE REPORT

SOLID WASTE PERMIT NO. SNL 53-103-0203
SANTEK PROJECT NO. 200-1322.1

PREPARED BY:
SANTEK WASTE SERVICES, INC.
650 25TH STREET NW, SUITE 100
CLEVELAND, TN 37311

JANUARY 2014

TABLE OF CONTENTS

I. MSW AMENDED DESIGN CAPACITY REPORT & CALCULATIONS

IDENTIFYING INFORMATION

Name and Address of Landfill: Loudon County (Matlock Bend) Landfill
21712 Hwy 72 North
Loudon, TN 37774
(865) 458-2651

Landfill Owner:

Loudon County Solid Waste Disposal Commission
100 River Road, Box 109
Loudon, TN 37774

Landfill Operator:

Santek Waste Services, Inc.
21712 Hwy 72 North
Loudon, TN 37774
Project Contact: Will Martin
(423) 303-7101
Landfill Manager: Levi Higdon
(865) 458-2651

Is the Loudon County (Matlock Bend) Landfill subject to the New Source Performance Standards or Emission Guidelines? (Mark one)

X NSPS (Landfills that commenced construction, reconstruction, or modification after May 30, 1991)

EG (Existing landfills that commenced construction, modification, or reconstruction before May 30, 1991, and that have accepted waste at any time since November 8, 1987, or have additional capacity for future waste deposition)

DATES

Date this form is submitted: January 2, 2014

Date Solid Waste operating permit (SNL 53-103-0203) was issued: August 7, 1997

Date the landfill first accepted waste: Non-Subtitle D Landfill: 1987
Subtitle D Landfill: 1996

DESIGN CAPACITY INFORMATION

Landfill / Phase	Solid Waste Permit Number	Date First Received Waste	Date Last Received Waste	Maximum Waste Design Capacity (meters^3)	Maximum Waste Design Capacity (Mg)	Maximum Waste Design Capacity (Tons)	Maximum Waste Design Capacity (yards^3)
Matlock Bend Landfill - Phase I (Non-Subtitle D, Closed)	N/A	1987	1995	847,390	502,341	553,850	1,107,699
Matlock Bend Landfill - Phase II/IV (Subtitle D, Active)	SNL#53-103-0203	1996	Currently Active	3,632,304	3,262,527	3,597,053	4,748,110
			TOTALS:	**4,479,694**	**3,764,868**	**4,150,903**	**5,855,809**

Conversions:

1 yd^3 = 0.765 m^3

1 ton = 2,000 lbs

1 ton = 0.907 Mg

Waste Density:

2.0 yd^3/ton = 1,000lbs/yd^3 (Non Subtitle D, Phase I)

1.32yd^3/ton = 1,515 lbs/yd^3 (For Subtitle D, Phase II/IV)

Phase I Waste Design Capacity calculated by subtracting 4,748,110 CY (Permitted Airspace Phase II/IV) from 5,855,809 CY (Total CY from SCS Eng. letter 2/24/99).

Phase II/IV Waste Design Capacity from Santek Airspace Management Sheet (Year Ending 2013).

DESIGN CAPACITY CALCULATIONS

Non-Subtitle D Landfill (Phase I)

1. Design Capacity: 1,107,699 yd^3 = 847,390 m^3
   Design Capacity calculated by subtracting 4,748,110 yd^3 (Permitted Airspace Phase II/IV – Santek Airspace Management Sheet 2012) from 5,855,809 yd^3 (total yd^3 from SCS Engineer's letter dated 2/24/99).

Design Capacity Conversions:

1,107,699 yd^3 / 2.0 yd^3/Ton = 553,850 Tons
553,850 Tons * 0.907 Mg/Ton = 502,341 Mg
1,107,699 yd^3 * 0.765 yd^3/ m^3 = 847,390 m^3

Subtitle D Landfill (Phase II/IV)

1. Design Capacity: 4,748,110 yd^3 = 3,632,304 m^3
   Design Capacity from Matlock Bend Landfill Airspace Management Year Ending 2013

2. Average Density: 1.32 yd^3/ton = 1,515 lbs/ yd^3
   Density from Matlock Bend Landfill Airspace Management Year Ending 2013

Design Capacity Conversions:

4,748,110 yd^3 / 1.32 yd^3/Ton = 3,597,053 Tons
3,597,053 Tons * 0.907 Mg/Ton = 3,262,527 Mg
4,748,110 yd^3 * 0.765 m^3/ yd^3 = 3,632,304 m^3

II. TIER 1 NMOC EMISSION RATE REPORT & LANDGEM MODEL

TIER 1 CALCULATION

Name and Address of Landfill:

Loudon County (Matlock Bend) Landfill
21712 Hwy 72 North
Loudon, TN 37774
Project Contact: Will Martin
(423) 303-7101

This report details the Tier 1 NMOC emission rate for the previously mentioned Landfill. The U.S. Environmental Protection Agency's (EPA) Landfill Gas Emissions Modeling (LandGEM – version 3.02) software was used to estimate the annual NMOC emissions for the Landfill. The following Clean Air Act (CAA) default parameters were used in the model:

- Refuse methane generation potential (L_o) = 170 m^3/Mg
- Methane generation rate constant (k) = 0.05 1/yr
- Concentration of NMOC (C_{NMOC}) = 4,000 ppm as hexane

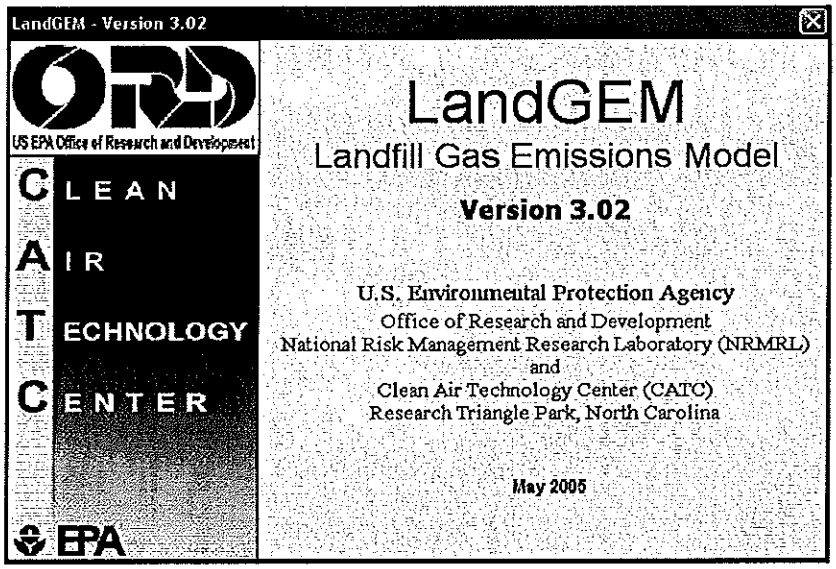
Annual waste filling projections and the design capacities of the Landfill (Phase I and Phase II/IV) were derived from the February 24, 1999 SCS Engineer's Letter and 2012 Airspace Management Sheet from Santek Waste Services, Inc. The projected (LandGEM results) Tier 1 landfill gas generation rates and NMOC emission rates for the Landfill are shown in the LandGEM results located in Appendix A.

I & II Completed by:

Will Martin
Santek Waste Services, Inc.

1/2/14
Date

APPENDIX A



Summary Report

Landfill Name or Identifier: Matlock Bend Landfill

Date: Friday, December 13, 2013

Description/Comments:
Waste Design Capacity: Phase 1 = 1,107,699 CY /2.0 CY/Ton = 553,850 Tons x 0.907 Mg/Ton = 502,341 Mg Phase II/IV = 4,748,110 CY / 1.32 CY/Ton = 3,597,053 Tons x 0.907 Mg/Ton = 3,262,527 Mg TOTAL: 3,764,868 Mg (2.0 CY/Ton is estimate for closed landfills; 1.32 CY/Ton is avg. denisty from Airspace Man. Sheet Yr Ending 2013) (Phase I design capacity is from subtracting Phase II/IV cap. from 5,855,809 CY(Total from SCS 2/24/99 ltr))

About LandGEM:

First-Order Decomposition Rate Equation:

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

Where,

Q_{CH_4} = 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_o = 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_i 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/landflpg.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	**1987**	
Landfill Closure Year (with 80-year limit)	**2020**	
Actual Closure Year (without limit)	***2020***	
Have Model Calculate Closure Year?	**Yes**	
Waste Design Capacity	**3,764,868**	*megagrams*

MODEL PARAMETERS

Methane Generation Rate, k	**0.050**	*year^{-1}*
Potential Methane Generation Capacity, L_o	**170**	*m^3/Mg*
NMOC Concentration	**4,000**	*ppmv as hexane*
Methane Content	**50**	*% by volume*

GASES / POLLUTANTS SELECTED

Gas / Pollutant #1:	**Total landfill gas**
Gas / Pollutant #2:	**Methane**
Gas / Pollutant #3:	**Carbon dioxide**
Gas / Pollutant #4:	**NMOC**

WASTE ACCEPTANCE RATES

Year	Waste Accepted		Waste-In-Place	
	(Mg/year)	*(short tons/year)*	*(Mg)*	*(short tons)*
1987	22,069	24,276	0	0
1988	50,897	55,987	22,069	24,276
1989	61,594	67,753	72,966	80,263
1990	66,674	73,341	134,560	148,016
1991	96,893	106,582	201,234	221,357
1992	87,734	96,507	298,127	327,940
1993	86,165	94,782	385,861	424,447
1994	121,935	134,129	472,026	519,229
1995	54,350	59,785	593,961	653,357
1996	37,141	40,855	648,311	713,142
1997	45,648	50,213	685,452	753,997
1998	47,842	52,626	731,100	804,210
1999	54,471	59,918	778,942	856,836
2000	50,066	55,073	833,413	916,754
2001	43,706	48,077	883,479	971,827
2002	40,984	45,082	927,185	1,019,904
2003	50,021	55,023	968,169	1,064,986
2004	61,955	68,151	1,018,190	1,120,009
2005	72,703	79,973	1,080,145	1,188,160
2006	81,768	89,945	1,152,848	1,268,133
2007	119,065	130,972	1,234,616	1,358,078
2008	152,040	167,244	1,353,681	1,489,049
2009	140,643	154,707	1,505,721	1,656,293
2010	118,624	130,486	1,646,364	1,811,000
2011	214,770	236,247	1,764,988	1,941,487
2012	215,592	237,151	1,979,758	2,177,734
2013	215,592	237,151	2,195,350	2,414,885
2014	215,592	237,151	2,410,942	2,652,036
2015	215,592	237,151	2,626,534	2,889,187
2016	215,592	237,151	2,842,126	3,126,339
2017	215,592	237,151	3,057,718	3,363,490
2018	215,592	237,151	3,273,310	3,600,641
2019	215,592	237,151	3,488,902	3,837,792
2020	60,374	66,411	3,704,494	4,074,943
2021	0	0	3,764,868	4,141,355
2022	0	0	3,764,868	4,141,355
2023	0	0	3,764,868	4,141,355
2024	0	0	3,764,868	4,141,355
2025	0	0	3,764,868	4,141,355
2026	0	0	3,764,868	4,141,355

WASTE ACCEPTANCE RATES (Continued)

Year	Waste Accepted		Waste-In-Place	
	(Mg/year)	*(short tons/year)*	*(Mg)*	*(short tons)*
2027	0	0	3,764,868	4,141,355
2028	0	0	3,764,868	4,141,355
2029	0	0	3,764,868	4,141,355
2030	0	0	3,764,868	4,141,355
2031	0	0	3,764,868	4,141,355
2032	0	0	3,764,868	4,141,355
2033	0	0	3,764,868	4,141,355
2034	0	0	3,764,868	4,141,355
2035	0	0	3,764,868	4,141,355
2036	0	0	3,764,868	4,141,355
2037	0	0	3,764,868	4,141,355
2038	0	0	3,764,868	4,141,355
2039	0	0	3,764,868	4,141,355
2040	0	0	3,764,868	4,141,355
2041	0	0	3,764,868	4,141,355
2042	0	0	3,764,868	4,141,355
2043	0	0	3,764,868	4,141,355
2044	0	0	3,764,868	4,141,355
2045	0	0	3,764,868	4,141,355
2046	0	0	3,764,868	4,141,355
2047	0	0	3,764,868	4,141,355
2048	0	0	3,764,868	4,141,355
2049	0	0	3,764,868	4,141,355
2050	0	0	3,764,868	4,141,355
2051	0	0	3,764,868	4,141,355
2052	0	0	3,764,868	4,141,355
2053	0	0	3,764,868	4,141,355
2054	0	0	3,764,868	4,141,355
2055	0	0	3,764,868	4,141,355
2056	0	0	3,764,868	4,141,355
2057	0	0	3,764,868	4,141,355
2058	0	0	3,764,868	4,141,355
2059	0	0	3,764,868	4,141,355
2060	0	0	3,764,868	4,141,355
2061	0	0	3,764,868	4,141,355
2062	0	0	3,764,868	4,141,355
2063	0	0	3,764,868	4,141,355
2064	0	0	3,764,868	4,141,355
2065	0	0	3,764,868	4,141,355
2066	0	0	3,764,868	4,141,355

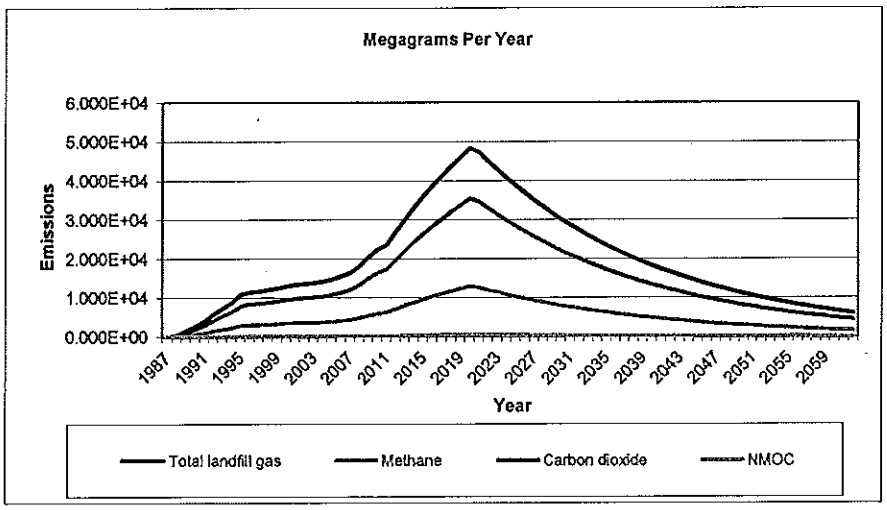
Pollutant Parameters

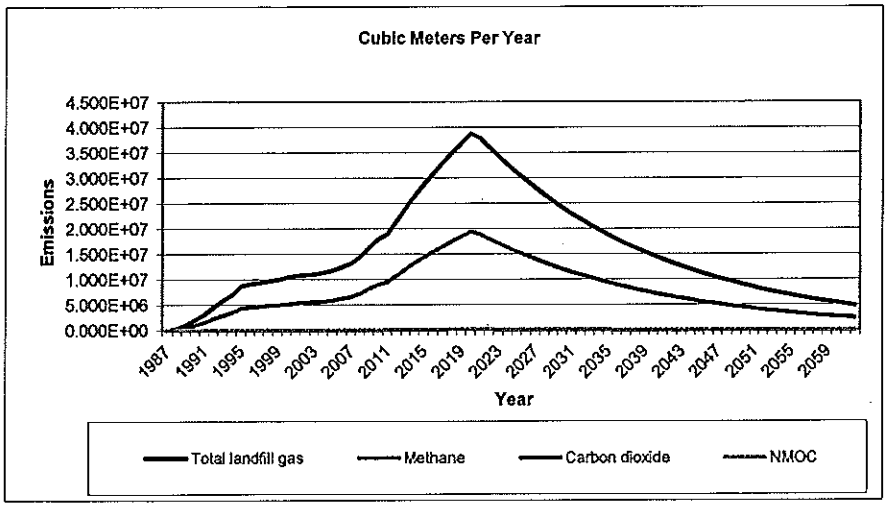
		Gas / Pollutant Default Parameters:		*User-specified Pollutant Parameters:*	
	Compound	Concentration (*ppmv*)	Molecular Weight	Concentration (*ppmv*)	Molecular Weight
Gases	Total landfill gas		0.00		
	Methane		16.04		
	Carbon dioxide		44.01		
	NMOC	4,000	86.18		
Pollutants	1,1,1-Trichloroethane (methyl chloroform) - HAP	0.48	133.41		
	1,1,2,2-Tetrachloroethane - HAP/VOC	1.1	167.85		
	1,1-Dichloroethane (ethylidene dichloride) - HAP/VOC	2.4	98.97		
	1,1-Dichloroethene (vinylidene chloride) - HAP/VOC	0.20	96.94		
	1,2-Dichloroethane (ethylene dichloride) - HAP/VOC	0.41	98.96		
	1,2-Dichloropropane (propylene dichloride) - HAP/VOC	0.18	112.99		
	2-Propanol (isopropyl alcohol) - VOC	50	60.11		
	Acetone	7.0	58.08		
	Acrylonitrile - HAP/VOC	6.3	53.06		
	Benzene - No or Unknown Co-disposal - HAP/VOC	1.9	78.11		
	Benzene - Co-disposal - HAP/VOC	11	78.11		
	Bromodichloromethane - VOC	3.1	163.83		
	Butane - VOC	5.0	58.12		
	Carbon disulfide - HAP/VOC	0.58	76.13		
	Carbon monoxide	140	28.01		
	Carbon tetrachloride - HAP/VOC	4.0E-03	153.84		
	Carbonyl sulfide - HAP/VOC	0.49	60.07		
	Chlorobenzene - HAP/VOC	0.25	112.56		
	Chlorodifluoromethane	1.3	86.47		
	Chloroethane (ethyl chloride) - HAP/VOC	1.3	64.52		
	Chloroform - HAP/VOC	0.03	119.39		
	Chloromethane - VOC	1.2	50.49		
	Dichlorobenzene - (HAP for para isomer/VOC)	0.21	147		
	Dichlorodifluoromethane	16	120.91		
	Dichlorofluoromethane - VOC	2.6	102.92		
	Dichloromethane (methylene chloride) - HAP	14	84.94		
	Dimethyl sulfide (methyl sulfide) - VOC	7.8	62.13		
	Ethane	890	30.07		
	Ethanol - VOC	27	46.08		

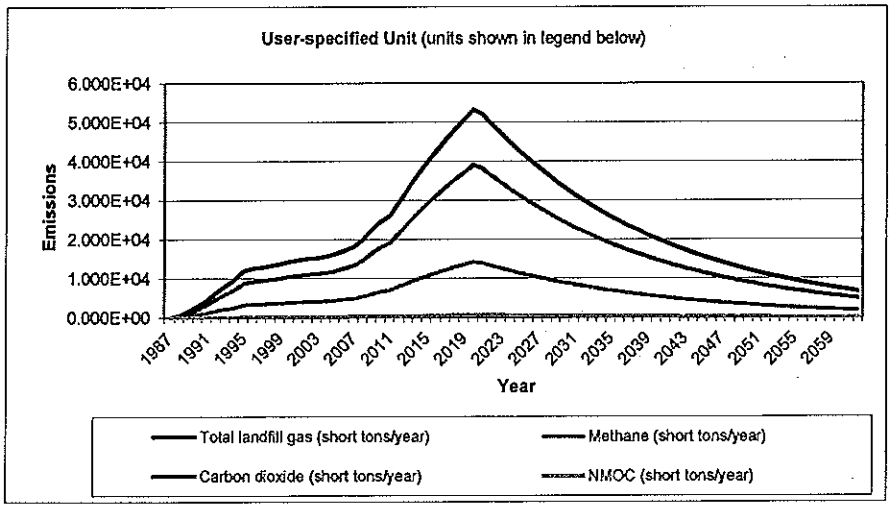
Pollutant Parameters (Continued)

		Gas / Pollutant Default Parameters:		*User-specified Pollutant Parameters:*	
	Compound	Concentration (*ppmv*)	Molecular Weight	Concentration (*ppmv*)	Molecular Weight
Pollutants	Ethyl mercaptan (ethanethiol) - VOC	2.3	62.13		
	Ethylbenzene - HAP/VOC	4.6	106.16		
	Ethylene dibromide - HAP/VOC	1.0E-03	187.88		
	Fluorotrichloromethane - VOC	0.76	137.38		
	Hexane - HAP/VOC	6.6	86.18		
	Hydrogen sulfide	36	34.08		
	Mercury (total) - HAP	2.9E-04	200.61		
	Methyl ethyl ketone - HAP/VOC	7.1	72.11		
	Methyl isobutyl ketone - HAP/VOC	1.9	100.16		
	Methyl mercaptan - VOC	2.5	48.11		
	Pentane - VOC	3.3	72.15		
	Perchloroethylene (tetrachloroethylene) - HAP	3.7	165.83		
	Propane - VOC	11	44.09		
	t-1,2-Dichloroethene - VOC	2.8	96.94		
	Toluene - No or Unknown Co-disposal - HAP/VOC	39	92.13		
	Toluene - Co-disposal - HAP/VOC	170	92.13		
	Trichloroethylene (trichloroethene) - HAP/VOC	2.8	131.40		
	Vinyl chloride - HAP/VOC	7.3	62.50		
	Xylenes - HAP/VOC	12	106.16		

Graphs


Megagrams Per Year
Emissions
6.000E+04
5.000E+04
4.000E+04
3.000E+04
2.000E+04
1.000E+04
0.000E+00
1987 1991 1995 1999 2003 2007 2011 2015 2019 2023 2027 2031 2035 2039 2043 2047 2051 2055 2059
Year
Total landfill gas
Methane
Carbon dioxide
NMOC


Cubic Meters Per Year
Emissions
4.500E+07
4.000E+07
3.500E+07
3.000E+07
2.500E+07
2.000E+07
1.500E+07
1.000E+07
5.000E+06
0.000E+00
1987 1991 1995 1999 2003 2007 2011 2015 2019 2023 2027 2031 2035 2039 2043 2047 2051 2055 2059
Year
Total landfill gas
Methane
Carbon dioxide
NMOC


User-specified Unit (units shown in legend below)
Emissions
6.000E+04
5.000E+04
4.000E+04
3.000E+04
2.000E+04
1.000E+04
0.000E+00
1987 1991 1995 1999 2003 2007 2011 2015 2019 2023 2027 2031 2035 2039 2043 2047 2051 2055 2059
Year
Total landfill gas (short tons/year)
Methane (short tons/year)
Carbon dioxide (short tons/year)
NMOC (short tons/year)

Results

Year	Total landfill gas			Methane		
	(Mg/year)	*(m^3/year)*	*(short tons/year)*	*(Mg/year)*	*(m^3/year)*	*(short tons/year)*
1987	0	0	0	0	0	0
1988	4.581E+02	3.669E+05	5.040E+02	1.224E+02	1.834E+05	1.346E+02
1989	1.492E+03	1.195E+06	1.642E+03	3.986E+02	5.975E+05	4.385E+02
1990	2.698E+03	2.161E+06	2.968E+03	7.207E+02	1.080E+06	7.928E+02
1991	3.951E+03	3.164E+06	4.346E+03	1.055E+03	1.582E+06	1.161E+03
1992	5.770E+03	4.620E+06	6.347E+03	1.541E+03	2.310E+06	1.695E+03
1993	7.310E+03	5.853E+06	8.041E+03	1.952E+03	2.927E+06	2.148E+03
1994	8.742E+03	7.000E+06	9.616E+03	2.335E+03	3.500E+06	2.569E+03
1995	1.085E+04	8.686E+06	1.193E+04	2.897E+03	4.343E+06	3.187E+03
1996	1.145E+04	9.166E+06	1.259E+04	3.057E+03	4.583E+06	3.363E+03
1997	1.166E+04	9.336E+06	1.282E+04	3.114E+03	4.668E+06	3.426E+03
1998	1.204E+04	9.639E+06	1.324E+04	3.215E+03	4.820E+06	3.537E+03
1999	1.244E+04	9.965E+06	1.369E+04	3.324E+03	4.982E+06	3.656E+03
2000	1.297E+04	1.038E+07	1.426E+04	3.464E+03	5.192E+06	3.810E+03
2001	1.337E+04	1.071E+07	1.471E+04	3.573E+03	5.355E+06	3.930E+03
2002	1.363E+04	1.091E+07	1.499E+04	3.641E+03	5.457E+06	4.005E+03
2003	1.382E+04	1.106E+07	1.520E+04	3.690E+03	5.532E+06	4.059E+03
2004	1.418E+04	1.136E+07	1.560E+04	3.788E+03	5.678E+06	4.167E+03
2005	1.478E+04	1.183E+07	1.625E+04	3.947E+03	5.916E+06	4.341E+03
2006	1.556E+04	1.246E+07	1.712E+04	4.157E+03	6.231E+06	4.573E+03
2007	1.650E+04	1.321E+07	1.815E+04	4.408E+03	6.607E+06	4.849E+03
2008	1.817E+04	1.455E+07	1.999E+04	4.853E+03	7.275E+06	5.339E+03
2009	2.044E+04	1.637E+07	2.248E+04	5.460E+03	8.183E+06	6.006E+03
2010	2.236E+04	1.791E+07	2.460E+04	5.973E+03	8.953E+06	6.571E+03
2011	2.373E+04	1.901E+07	2.611E+04	6.340E+03	9.503E+06	6.974E+03
2012	2.704E+04	2.165E+07	2.974E+04	7.221E+03	1.082E+07	7.944E+03
2013	3.019E+04	2.418E+07	3.321E+04	8.065E+03	1.209E+07	8.871E+03
2014	3.320E+04	2.658E+07	3.652E+04	8.867E+03	1.329E+07	9.754E+03
2015	3.605E+04	2.887E+07	3.966E+04	9.630E+03	1.443E+07	1.059E+04
2016	3.877E+04	3.104E+07	4.265E+04	1.036E+04	1.552E+07	1.139E+04
2017	4.135E+04	3.311E+07	4.549E+04	1.105E+04	1.656E+07	1.215E+04
2018	4.381E+04	3.508E+07	4.819E+04	1.170E+04	1.754E+07	1.287E+04
2019	4.615E+04	3.696E+07	5.077E+04	1.233E+04	1.848E+07	1.356E+04
2020	4.838E+04	3.874E+07	5.321E+04	1.292E+04	1.937E+07	1.421E+04
2021	4.727E+04	3.785E+07	5.200E+04	1.263E+04	1.893E+07	1.389E+04
2022	4.497E+04	3.601E+07	4.946E+04	1.201E+04	1.800E+07	1.321E+04
2023	4.277E+04	3.425E+07	4.705E+04	1.142E+04	1.713E+07	1.257E+04
2024	4.069E+04	3.258E+07	4.476E+04	1.087E+04	1.629E+07	1.195E+04
2025	3.870E+04	3.099E+07	4.257E+04	1.034E+04	1.550E+07	1.137E+04
2026	3.681E+04	2.948E+07	4.050E+04	9.834E+03	1.474E+07	1.082E+04
2027	3.502E+04	2.804E+07	3.852E+04	9.354E+03	1.402E+07	1.029E+04
2028	3.331E+04	2.667E+07	3.664E+04	8.898E+03	1.334E+07	9.788E+03
2029	3.169E+04	2.537E+07	3.486E+04	8.464E+03	1.269E+07	9.310E+03
2030	3.014E+04	2.414E+07	3.316E+04	8.051E+03	1.207E+07	8.856E+03
2031	2.867E+04	2.296E+07	3.154E+04	7.658E+03	1.148E+07	8.424E+03
2032	2.727E+04	2.184E+07	3.000E+04	7.285E+03	1.092E+07	8.013E+03
2033	2.594E+04	2.077E+07	2.854E+04	6.930E+03	1.039E+07	7.623E+03
2034	2.468E+04	1.976E+07	2.715E+04	6.592E+03	9.880E+06	7.251E+03
2035	2.347E+04	1.880E+07	2.582E+04	6.270E+03	9.398E+06	6.897E+03
2036	2.233E+04	1.788E+07	2.456E+04	5.964E+03	8.940E+06	6.561E+03

Results (Continued)

Year	Total landfill gas			Methane		
	(Mg/year)	*(m^3/year)*	*(short tons/year)*	*(Mg/year)*	*(m^3/year)*	*(short tons/year)*
2037	2.124E+04	1.701E+07	2.336E+04	5.673E+03	8.504E+06	6.241E+03
2038	2.020E+04	1.618E+07	2.222E+04	5.397E+03	8.089E+06	5.936E+03
2039	1.922E+04	1.539E+07	2.114E+04	5.134E+03	7.695E+06	5.647E+03
2040	1.828E+04	1.464E+07	2.011E+04	4.883E+03	7.320E+06	5.372E+03
2041	1.739E+04	1.393E+07	1.913E+04	4.645E+03	6.963E+06	5.110E+03
2042	1.654E+04	1.325E+07	1.820E+04	4.419E+03	6.623E+06	4.860E+03
2043	1.574E+04	1.260E+07	1.731E+04	4.203E+03	6.300E+06	4.623E+03
2044	1.497E+04	1.199E+07	1.646E+04	3.998E+03	5.993E+06	4.398E+03
2045	1.424E+04	1.140E+07	1.566E+04	3.803E+03	5.700E+06	4.183E+03
2046	1.354E+04	1.084E+07	1.490E+04	3.618E+03	5.422E+06	3.979E+03
2047	1.288E+04	1.032E+07	1.417E+04	3.441E+03	5.158E+06	3.785E+03
2048	1.225E+04	9.813E+06	1.348E+04	3.273E+03	4.906E+06	3.601E+03
2049	1.166E+04	9.334E+06	1.282E+04	3.114E+03	4.667E+06	3.425E+03
2050	1.109E+04	8.879E+06	1.220E+04	2.962E+03	4.440E+06	3.258E+03
2051	1.055E+04	8.446E+06	1.160E+04	2.817E+03	4.223E+06	3.099E+03
2052	1.003E+04	8.034E+06	1.104E+04	2.680E+03	4.017E+06	2.948E+03
2053	9.544E+03	7.642E+06	1.050E+04	2.549E+03	3.821E+06	2.804E+03
2054	9.078E+03	7.270E+06	9.986E+03	2.425E+03	3.635E+06	2.667E+03
2055	8.636E+03	6.915E+06	9.499E+03	2.307E+03	3.457E+06	2.537E+03
2056	8.214E+03	6.578E+06	9.036E+03	2.194E+03	3.289E+06	2.414E+03
2057	7.814E+03	6.257E+06	8.595E+03	2.087E+03	3.128E+06	2.296E+03
2058	7.433E+03	5.952E+06	8.176E+03	1.985E+03	2.976E+06	2.184E+03
2059	7.070E+03	5.662E+06	7.777E+03	1.889E+03	2.831E+06	2.077E+03
2060	6.725E+03	5.385E+06	7.398E+03	1.796E+03	2.693E+06	1.976E+03
2061	6.397E+03	5.123E+06	7.037E+03	1.709E+03	2.561E+06	1.880E+03
2062	6.085E+03	4.873E+06	6.694E+03	1.625E+03	2.436E+06	1.788E+03
2063	5.789E+03	4.635E+06	6.367E+03	1.546E+03	2.318E+06	1.701E+03
2064	5.506E+03	4.409E+06	6.057E+03	1.471E+03	2.205E+06	1.618E+03
2065	5.238E+03	4.194E+06	5.762E+03	1.399E+03	2.097E+06	1.539E+03
2066	4.982E+03	3.990E+06	5.481E+03	1.331E+03	1.995E+06	1.464E+03
2067	4.739E+03	3.795E+06	5.213E+03	1.266E+03	1.898E+06	1.393E+03
2068	4.508E+03	3.610E+06	4.959E+03	1.204E+03	1.805E+06	1.325E+03
2069	4.288E+03	3.434E+06	4.717E+03	1.145E+03	1.717E+06	1.260E+03
2070	4.079E+03	3.266E+06	4.487E+03	1.090E+03	1.633E+06	1.199E+03
2071	3.880E+03	3.107E+06	4.268E+03	1.036E+03	1.554E+06	1.140E+03
2072	3.691E+03	2.956E+06	4.060E+03	9.859E+02	1.478E+06	1.084E+03
2073	3.511E+03	2.811E+06	3.862E+03	9.378E+02	1.406E+06	1.032E+03
2074	3.340E+03	2.674E+06	3.674E+03	8.921E+02	1.337E+06	9.813E+02
2075	3.177E+03	2.544E+06	3.495E+03	8.486E+02	1.272E+06	9.334E+02
2076	3.022E+03	2.420E+06	3.324E+03	8.072E+02	1.210E+06	8.879E+02
2077	2.875E+03	2.302E+06	3.162E+03	7.678E+02	1.151E+06	8.446E+02
2078	2.734E+03	2.190E+06	3.008E+03	7.304E+02	1.095E+06	8.034E+02
2079	2.601E+03	2.083E+06	2.861E+03	6.948E+02	1.041E+06	7.642E+02
2080	2.474E+03	1.981E+06	2.722E+03	6.609E+02	9.906E+05	7.270E+02
2081	2.353E+03	1.885E+06	2.589E+03	6.286E+02	9.423E+05	6.915E+02
2082	2.239E+03	1.793E+06	2.463E+03	5.980E+02	8.963E+05	6.578E+02
2083	2.130E+03	1.705E+06	2.342E+03	5.688E+02	8.526E+05	6.257E+02
2084	2.026E+03	1.622E+06	2.228E+03	5.411E+02	8.110E+05	5.952E+02
2085	1.927E+03	1.543E+06	2.120E+03	5.147E+02	7.715E+05	5.662E+02
2086	1.833E+03	1.468E+06	2.016E+03	4.896E+02	7.338E+05	5.385E+02
2087	1.743E+03	1.396E+06	1.918E+03	4.657E+02	6.981E+05	5.123E+02

Results (Continued)

Year	Total landfill gas			Methane		
	(Mg/year)	*(m^3/year)*	*(short tons/year)*	*(Mg/year)*	*(m^3/year)*	*(short tons/year)*
2088	1.658E+03	1.328E+06	1.824E+03	4.430E+02	6.640E+05	4.873E+02
2089	1.578E+03	1.263E+06	1.735E+03	4.214E+02	6.316E+05	4.635E+02
2090	1.501E+03	1.202E+06	1.651E+03	4.008E+02	6.008E+05	4.409E+02
2091	1.427E+03	1.143E+06	1.570E+03	3.813E+02	5.715E+05	4.194E+02
2092	1.358E+03	1.087E+06	1.494E+03	3.627E+02	5.436E+05	3.990E+02
2093	1.292E+03	1.034E+06	1.421E+03	3.450E+02	5.171E+05	3.795E+02
2094	1.229E+03	9.838E+05	1.351E+03	3.282E+02	4.919E+05	3.610E+02
2095	1.169E+03	9.358E+05	1.286E+03	3.122E+02	4.679E+05	3.434E+02
2096	1.112E+03	8.902E+05	1.223E+03	2.969E+02	4.451E+05	3.266E+02
2097	1.057E+03	8.468E+05	1.163E+03	2.825E+02	4.234E+05	3.107E+02
2098	1.006E+03	8.055E+05	1.107E+03	2.687E+02	4.027E+05	2.956E+02
2099	9.569E+02	7.662E+05	1.053E+03	2.556E+02	3.831E+05	2.811E+02
2100	9.102E+02	7.288E+05	1.001E+03	2.431E+02	3.644E+05	2.674E+02
2101	8.658E+02	6.933E+05	9.524E+02	2.313E+02	3.466E+05	2.544E+02
2102	8.236E+02	6.595E+05	9.059E+02	2.200E+02	3.297E+05	2.420E+02
2103	7.834E+02	6.273E+05	8.617E+02	2.093E+02	3.137E+05	2.302E+02
2104	7.452E+02	5.967E+05	8.197E+02	1.991E+02	2.984E+05	2.190E+02
2105	7.089E+02	5.676E+05	7.797E+02	1.893E+02	2.838E+05	2.083E+02
2106	6.743E+02	5.399E+05	7.417E+02	1.801E+02	2.700E+05	1.981E+02
2107	6.414E+02	5.136E+05	7.055E+02	1.713E+02	2.568E+05	1.885E+02
2108	6.101E+02	4.886E+05	6.711E+02	1.630E+02	2.443E+05	1.793E+02
2109	5.804E+02	4.647E+05	6.384E+02	1.550E+02	2.324E+05	1.705E+02
2110	5.521E+02	4.421E+05	6.073E+02	1.475E+02	2.210E+05	1.622E+02
2111	5.251E+02	4.205E+05	5.776E+02	1.403E+02	2.103E+05	1.543E+02
2112	4.995E+02	4.000E+05	5.495E+02	1.334E+02	2.000E+05	1.468E+02
2113	4.752E+02	3.805E+05	5.227E+02	1.269E+02	1.902E+05	1.396E+02
2114	4.520E+02	3.619E+05	4.972E+02	1.207E+02	1.810E+05	1.328E+02
2115	4.299E+02	3.443E+05	4.729E+02	1.148E+02	1.721E+05	1.263E+02
2116	4.090E+02	3.275E+05	4.499E+02	1.092E+02	1.637E+05	1.202E+02
2117	3.890E+02	3.115E+05	4.279E+02	1.039E+02	1.558E+05	1.143E+02
2118	3.701E+02	2.963E+05	4.071E+02	9.885E+01	1.482E+05	1.087E+02
2119	3.520E+02	2.819E+05	3.872E+02	9.402E+01	1.409E+05	1.034E+02
2120	3.348E+02	2.681E+05	3.683E+02	8.944E+01	1.341E+05	9.838E+01
2121	3.185E+02	2.550E+05	3.504E+02	8.508E+01	1.275E+05	9.358E+01
2122	3.030E+02	2.426E+05	3.333E+02	8.093E+01	1.213E+05	8.902E+01
2123	2.882E+02	2.308E+05	3.170E+02	7.698E+01	1.154E+05	8.468E+01
2124	2.741E+02	2.195E+05	3.016E+02	7.323E+01	1.098E+05	8.055E+01
2125	2.608E+02	2.088E+05	2.869E+02	6.966E+01	1.044E+05	7.662E+01
2126	2.481E+02	1.986E+05	2.729E+02	6.626E+01	9.932E+04	7.288E+01
2127	2.360E+02	1.889E+05	2.596E+02	6.303E+01	9.447E+04	6.933E+01

Results (Continued)

Year	Carbon dioxide			NMOC		
	(Mg/year)	*(m^3/year)*	*(short tons/year)*	*(Mg/year)*	*(m^3/year)*	*(short tons/year)*
1987	0	0	0	0	0	0
1988	3.358E+02	1.834E+05	3.693E+02	5.260E+00	1.467E+03	5.786E+00
1989	1.094E+03	5.975E+05	1.203E+03	1.713E+01	4.780E+03	1.885E+01
1990	1.978E+03	1.080E+06	2.175E+03	3.098E+01	8.643E+03	3.408E+01
1991	2.896E+03	1.582E+06	3.185E+03	4.536E+01	1.265E+04	4.990E+01
1992	4.229E+03	2.310E+06	4.651E+03	6.624E+01	1.848E+04	7.287E+01
1993	5.357E+03	2.927E+06	5.893E+03	8.392E+01	2.341E+04	9.231E+01
1994	6.407E+03	3.500E+06	7.048E+03	1.004E+02	2.800E+04	1.104E+02
1995	7.950E+03	4.343E+06	8.745E+03	1.245E+02	3.474E+04	1.370E+02
1996	8.389E+03	4.583E+06	9.228E+03	1.314E+02	3.666E+04	1.446E+02
1997	8.545E+03	4.668E+06	9.399E+03	1.339E+02	3.734E+04	1.472E+02
1998	8.823E+03	4.820E+06	9.705E+03	1.382E+02	3.856E+04	1.520E+02
1999	9.120E+03	4.982E+06	1.003E+04	1.429E+02	3.986E+04	1.572E+02
2000	9.504E+03	5.192E+06	1.045E+04	1.489E+02	4.154E+04	1.638E+02
2001	9.802E+03	5.355E+06	1.078E+04	1.536E+02	4.284E+04	1.689E+02
2002	9.989E+03	5.457E+06	1.099E+04	1.565E+02	4.366E+04	1.721E+02
2003	1.013E+04	5.532E+06	1.114E+04	1.586E+02	4.425E+04	1.745E+02
2004	1.039E+04	5.678E+06	1.143E+04	1.628E+02	4.542E+04	1.791E+02
2005	1.083E+04	5.916E+06	1.191E+04	1.696E+02	4.733E+04	1.866E+02
2006	1.141E+04	6.231E+06	1.255E+04	1.787E+02	4.985E+04	1.966E+02
2007	1.209E+04	6.607E+06	1.330E+04	1.895E+02	5.286E+04	2.084E+02
2008	1.332E+04	7.275E+06	1.465E+04	2.086E+02	5.820E+04	2.295E+02
2009	1.498E+04	8.183E+06	1.648E+04	2.347E+02	6.547E+04	2.581E+02
2010	1.639E+04	8.953E+06	1.803E+04	2.567E+02	7.163E+04	2.824E+02
2011	1.739E+04	9.503E+06	1.913E+04	2.725E+02	7.602E+04	2.997E+02
2012	1.981E+04	1.082E+07	2.180E+04	3.104E+02	8.659E+04	3.414E+02
2013	2.213E+04	1.209E+07	2.434E+04	3.466E+02	9.671E+04	3.813E+02
2014	2.433E+04	1.329E+07	2.676E+04	3.811E+02	1.063E+05	4.192E+02
2015	2.642E+04	1.443E+07	2.906E+04	4.139E+02	1.155E+05	4.553E+02
2016	2.841E+04	1.552E+07	3.126E+04	4.451E+02	1.242E+05	4.896E+02
2017	3.031E+04	1.656E+07	3.334E+04	4.748E+02	1.325E+05	5.223E+02
2018	3.211E+04	1.754E+07	3.532E+04	5.030E+02	1.403E+05	5.533E+02
2019	3.382E+04	1.848E+07	3.721E+04	5.299E+02	1.478E+05	5.829E+02
2020	3.545E+04	1.937E+07	3.900E+04	5.554E+02	1.550E+05	6.110E+02
2021	3.464E+04	1.893E+07	3.811E+04	5.427E+02	1.514E+05	5.970E+02
2022	3.295E+04	1.800E+07	3.625E+04	5.163E+02	1.440E+05	5.679E+02
2023	3.135E+04	1.713E+07	3.448E+04	4.911E+02	1.370E+05	5.402E+02
2024	2.982E+04	1.629E+07	3.280E+04	4.671E+02	1.303E+05	5.138E+02
2025	2.836E+04	1.550E+07	3.120E+04	4.443E+02	1.240E+05	4.888E+02
2026	2.698E+04	1.474E+07	2.968E+04	4.227E+02	1.179E+05	4.649E+02
2027	2.567E+04	1.402E+07	2.823E+04	4.021E+02	1.122E+05	4.423E+02
2028	2.441E+04	1.334E+07	2.685E+04	3.824E+02	1.067E+05	4.207E+02
2029	2.322E+04	1.269E+07	2.555E+04	3.638E+02	1.015E+05	4.002E+02
2030	2.209E+04	1.207E+07	2.430E+04	3.461E+02	9.654E+04	3.807E+02
2031	2.101E+04	1.148E+07	2.311E+04	3.292E+02	9.183E+04	3.621E+02
2032	1.999E+04	1.092E+07	2.199E+04	3.131E+02	8.736E+04	3.444E+02
2033	1.901E+04	1.039E+07	2.091E+04	2.979E+02	8.310E+04	3.276E+02
2034	1.809E+04	9.880E+06	1.989E+04	2.833E+02	7.904E+04	3.117E+02
2035	1.720E+04	9.398E+06	1.892E+04	2.695E+02	7.519E+04	2.965E+02
2036	1.636E+04	8.940E+06	1.800E+04	2.564E+02	7.152E+04	2.820E+02

Results (Continued)

Year	Carbon dioxide			NMOC		
	(Mg/year)	(m^3/year)	(short tons/year)	(Mg/year)	(m^3/year)	(short tons/year)
2037	1.557E+04	8.504E+06	1.712E+04	2.439E+02	6.803E+04	2.682E+02
2038	1.481E+04	8.089E+06	1.629E+04	2.320E+02	6.471E+04	2.552E+02
2039	1.409E+04	7.695E+06	1.549E+04	2.207E+02	6.156E+04	2.427E+02
2040	1.340E+04	7.320E+06	1.474E+04	2.099E+02	5.856E+04	2.309E+02
2041	1.274E+04	6.963E+06	1.402E+04	1.997E+02	5.570E+04	2.196E+02
2042	1.212E+04	6.623E+06	1.334E+04	1.899E+02	5.298E+04	2.089E+02
2043	1.153E+04	6.300E+06	1.269E+04	1.807E+02	5.040E+04	1.987E+02
2044	1.097E+04	5.993E+06	1.207E+04	1.718E+02	4.794E+04	1.890E+02
2045	1.043E+04	5.700E+06	1.148E+04	1.635E+02	4.560E+04	1.798E+02
2046	9.926E+03	5.422E+06	1.092E+04	1.555E+02	4.338E+04	1.710E+02
2047	9.442E+03	5.158E+06	1.039E+04	1.479E+02	4.126E+04	1.627E+02
2048	8.981E+03	4.906E+06	9.879E+03	1.407E+02	3.925E+04	1.548E+02
2049	8.543E+03	4.667E+06	9.397E+03	1.338E+02	3.734E+04	1.472E+02
2050	8.127E+03	4.440E+06	8.939E+03	1.273E+02	3.552E+04	1.400E+02
2051	7.730E+03	4.223E+06	8.503E+03	1.211E+02	3.378E+04	1.332E+02
2052	7.353E+03	4.017E+06	8.089E+03	1.152E+02	3.214E+04	1.267E+02
2053	6.995E+03	3.821E+06	7.694E+03	1.096E+02	3.057E+04	1.205E+02
2054	6.653E+03	3.635E+06	7.319E+03	1.042E+02	2.908E+04	1.147E+02
2055	6.329E+03	3.457E+06	6.962E+03	9.915E+01	2.766E+04	1.091E+02
2056	6.020E+03	3.289E+06	6.622E+03	9.431E+01	2.631E+04	1.037E+02
2057	5.727E+03	3.128E+06	6.299E+03	8.971E+01	2.503E+04	9.868E+01
2058	5.447E+03	2.976E+06	5.992E+03	8.534E+01	2.381E+04	9.387E+01
2059	5.182E+03	2.831E+06	5.700E+03	8.117E+01	2.265E+04	8.929E+01
2060	4.929E+03	2.693E+06	5.422E+03	7.722E+01	2.154E+04	8.494E+01
2061	4.689E+03	2.561E+06	5.157E+03	7.345E+01	2.049E+04	8.079E+01
2062	4.460E+03	2.436E+06	4.906E+03	6.987E+01	1.949E+04	7.685E+01
2063	4.242E+03	2.318E+06	4.667E+03	6.646E+01	1.854E+04	7.311E+01
2064	4.036E+03	2.205E+06	4.439E+03	6.322E+01	1.764E+04	6.954E+01
2065	3.839E+03	2.097E+06	4.223E+03	6.014E+01	1.678E+04	6.615E+01
2066	3.651E+03	1.995E+06	4.017E+03	5.720E+01	1.596E+04	6.292E+01
2067	3.473E+03	1.898E+06	3.821E+03	5.441E+01	1.518E+04	5.985E+01
2068	3.304E+03	1.805E+06	3.634E+03	5.176E+01	1.444E+04	5.693E+01
2069	3.143E+03	1.717E+06	3.457E+03	4.923E+01	1.374E+04	5.416E+01
2070	2.990E+03	1.633E+06	3.289E+03	4.683E+01	1.307E+04	5.152E+01
2071	2.844E+03	1.554E+06	3.128E+03	4.455E+01	1.243E+04	4.900E+01
2072	2.705E+03	1.478E+06	2.976E+03	4.238E+01	1.182E+04	4.661E+01
2073	2.573E+03	1.406E+06	2.830E+03	4.031E+01	1.125E+04	4.434E+01
2074	2.448E+03	1.337E+06	2.692E+03	3.834E+01	1.070E+04	4.218E+01
2075	2.328E+03	1.272E+06	2.561E+03	3.647E+01	1.018E+04	4.012E+01
2076	2.215E+03	1.210E+06	2.436E+03	3.470E+01	9.679E+03	3.816E+01
2077	2.107E+03	1.151E+06	2.317E+03	3.300E+01	9.207E+03	3.630E+01
2078	2.004E+03	1.095E+06	2.204E+03	3.139E+01	8.758E+03	3.453E+01
2079	1.906E+03	1.041E+06	2.097E+03	2.986E+01	8.331E+03	3.285E+01
2080	1.813E+03	9.906E+05	1.995E+03	2.841E+01	7.925E+03	3.125E+01
2081	1.725E+03	9.423E+05	1.897E+03	2.702E+01	7.538E+03	2.972E+01
2082	1.641E+03	8.963E+05	1.805E+03	2.570E+01	7.171E+03	2.827E+01
2083	1.561E+03	8.526E+05	1.717E+03	2.445E+01	6.821E+03	2.689E+01
2084	1.485E+03	8.110E+05	1.633E+03	2.326E+01	6.488E+03	2.558E+01
2085	1.412E+03	7.715E+05	1.553E+03	2.212E+01	6.172E+03	2.433E+01
2086	1.343E+03	7.338E+05	1.478E+03	2.104E+01	5.871E+03	2.315E+01
2087	1.278E+03	6.981E+05	1.406E+03	2.002E+01	5.584E+03	2.202E+01

Results (Continued)

Year	Carbon dioxide			NMOC		
	(Mg/year)	(m^3/year)	(short tons/year)	(Mg/year)	(m^3/year)	(short tons/year)
2088	1.215E+03	6.640E+05	1.337E+03	1.904E+01	5.312E+03	2.095E+01
2089	1.156E+03	6.316E+05	1.272E+03	1.811E+01	5.053E+03	1.992E+01
2090	1.100E+03	6.008E+05	1.210E+03	1.723E+01	4.807E+03	1.895E+01
2091	1.046E+03	5.715E+05	1.151E+03	1.639E+01	4.572E+03	1.803E+01
2092	9.951E+02	5.436E+05	1.095E+03	1.559E+01	4.349E+03	1.715E+01
2093	9.466E+02	5.171E+05	1.041E+03	1.483E+01	4.137E+03	1.631E+01
2094	9.004E+02	4.919E+05	9.905E+02	1.411E+01	3.935E+03	1.552E+01
2095	8.565E+02	4.679E+05	9.422E+02	1.342E+01	3.743E+03	1.476E+01
2096	8.148E+02	4.451E+05	8.962E+02	1.276E+01	3.561E+03	1.404E+01
2097	7.750E+02	4.234E+05	8.525E+02	1.214E+01	3.387E+03	1.336E+01
2098	7.372E+02	4.027E+05	8.109E+02	1.155E+01	3.222E+03	1.270E+01
2099	7.013E+02	3.831E+05	7.714E+02	1.099E+01	3.065E+03	1.208E+01
2100	6.671E+02	3.644E+05	7.338E+02	1.045E+01	2.915E+03	1.149E+01
2101	6.345E+02	3.466E+05	6.980E+02	9.940E+00	2.773E+03	1.093E+01
2102	6.036E+02	3.297E+05	6.639E+02	9.455E+00	2.638E+03	1.040E+01
2103	5.741E+02	3.137E+05	6.316E+02	8.994E+00	2.509E+03	9.894E+00
2104	5.461E+02	2.984E+05	6.008E+02	8.556E+00	2.387E+03	9.411E+00
2105	5.195E+02	2.838E+05	5.715E+02	8.138E+00	2.270E+03	8.952E+00
2106	4.942E+02	2.700E+05	5.436E+02	7.742E+00	2.160E+03	8.516E+00
2107	4.701E+02	2.568E+05	5.171E+02	7.364E+00	2.054E+03	8.100E+00
2108	4.471E+02	2.443E+05	4.919E+02	7.005E+00	1.954E+03	7.705E+00
2109	4.253E+02	2.324E+05	4.679E+02	6.663E+00	1.859E+03	7.329E+00
2110	4.046E+02	2.210E+05	4.451E+02	6.338E+00	1.768E+03	6.972E+00
2111	3.849E+02	2.103E+05	4.233E+02	6.029E+00	1.682E+03	6.632E+00
2112	3.661E+02	2.000E+05	4.027E+02	5.735E+00	1.600E+03	6.309E+00
2113	3.482E+02	1.902E+05	3.831E+02	5.455E+00	1.522E+03	6.001E+00
2114	3.313E+02	1.810E+05	3.644E+02	5.189E+00	1.448E+03	5.708E+00
2115	3.151E+02	1.721E+05	3.466E+02	4.936E+00	1.377E+03	5.430E+00
2116	2.997E+02	1.637E+05	3.297E+02	4.695E+00	1.310E+03	5.165E+00
2117	2.851E+02	1.558E+05	3.136E+02	4.466E+00	1.246E+03	4.913E+00
2118	2.712E+02	1.482E+05	2.983E+02	4.249E+00	1,185E+03	4.673E+00
2119	2.580E+02	1.409E+05	2.838E+02	4.041E+00	1.127E+03	4.446E+00
2120	2.454E+02	1.341E+05	2.699E+02	3.844E+00	1.072E+03	4.229E+00
2121	2.334E+02	1.275E+05	2.568E+02	3.657E+00	1.020E+03	4.023E+00
2122	2.220E+02	1.213E+05	2.443E+02	3.478E+00	9.704E+02	3.826E+00
2123	2.112E+02	1.154E+05	2.323E+02	3.309E+00	9.231E+02	3.640E+00
2124	2.009E+02	1.098E+05	2.210E+02	3.147E+00	8.781E+02	3.462E+00
2125	1.911E+02	1.044E+05	2.102E+02	2.994E+00	8.353E+02	3.293E+00
2126	1.818E+02	9.932E+04	2.000E+02	2.848E+00	7.945E+02	3.133E+00
2127	1.729E+02	9.447E+04	1.902E+02	2.709E+00	7.558E+02	2.980E+00