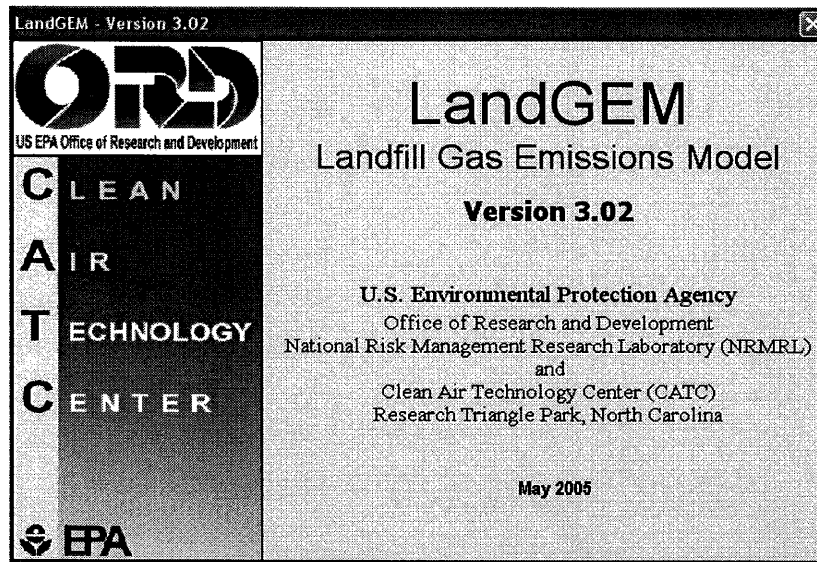

ANNEXE I – Fichiers de sortie du Modèle LANDGEM



Summary Report

Landfill Name or Identifier: Phase IIIA - LET de Ste-Sophie

Date: 26 avril, 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_{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 conventional 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 **1964**
 Landfill Closure Year (with 80-year limit) **1991**
 Actual Closure Year (without limit) **1991**
 Have Model Calculate Closure Year? **No**
 Waste Design Capacity **1 190 000** megagrams

MODEL PARAMETERS

Methane Generation Rate, k **0,040** year⁻¹
 Potential Methane Generation Capacity, L₀ **170** m³/Mg
 NMOC Concentration **600** 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)
1964	20 000	22 000	0	0
1965	20 000	22 000	20 000	22 000
1966	20 000	22 000	40 000	44 000
1967	20 000	22 000	60 000	66 000
1968	20 000	22 000	80 000	88 000
1969	20 000	22 000	100 000	110 000
1970	20 000	22 000	120 000	132 000
1971	20 000	22 000	140 000	154 000
1972	20 000	22 000	160 000	176 000
1973	20 000	22 000	180 000	198 000
1974	20 000	22 000	200 000	220 000
1975	20 000	22 000	220 000	242 000
1976	50 000	55 000	240 000	264 000
1977	50 000	55 000	290 000	319 000
1978	50 000	55 000	340 000	374 000
1979	50 000	55 000	390 000	429 000
1980	50 000	55 000	440 000	484 000
1981	50 000	55 000	490 000	539 000
1982	50 000	55 000	540 000	594 000
1983	50 000	55 000	590 000	649 000
1984	50 000	55 000	640 000	704 000
1985	50 000	55 000	690 000	759 000
1986	50 000	55 000	740 000	814 000
1987	50 000	55 000	790 000	869 000
1988	50 000	55 000	840 000	924 000
1989	100 000	110 000	890 000	979 000
1990	100 000	110 000	990 000	1 089 000
1991	100 000	110 000	1 090 000	1 199 000
1992	0	0	1 190 000	1 309 000
1993	0	0	1 190 000	1 309 000
1994	0	0	1 190 000	1 309 000
1995	0	0	1 190 000	1 309 000
1996	0	0	1 190 000	1 309 000
1997	0	0	1 190 000	1 309 000
1998	0	0	1 190 000	1 309 000
1999	0	0	1 190 000	1 309 000
2000	0	0	1 190 000	1 309 000
2001	0	0	1 190 000	1 309 000
2002	0	0	1 190 000	1 309 000
2003	0	0	1 190 000	1 309 000

WASTE ACCEPTANCE RATES (Continued)

Year	Waste Accepted		Waste-In-Place	
	(Mg/year)	(short tons/year)	(Mg)	(short tons)
2004	0	0	1 190 000	1 309 000
2005	0	0	1 190 000	1 309 000
2006	0	0	1 190 000	1 309 000
2007	0	0	1 190 000	1 309 000
2008	0	0	1 190 000	1 309 000
2009	0	0	1 190 000	1 309 000
2010	0	0	1 190 000	1 309 000
2011	0	0	1 190 000	1 309 000
2012	0	0	1 190 000	1 309 000
2013	0	0	1 190 000	1 309 000
2014	0	0	1 190 000	1 309 000
2015	0	0	1 190 000	1 309 000
2016	0	0	1 190 000	1 309 000
2017	0	0	1 190 000	1 309 000
2018	0	0	1 190 000	1 309 000
2019	0	0	1 190 000	1 309 000
2020	0	0	1 190 000	1 309 000
2021	0	0	1 190 000	1 309 000
2022	0	0	1 190 000	1 309 000
2023	0	0	1 190 000	1 309 000
2024	0	0	1 190 000	1 309 000
2025	0	0	1 190 000	1 309 000
2026	0	0	1 190 000	1 309 000
2027	0	0	1 190 000	1 309 000
2028	0	0	1 190 000	1 309 000
2029	0	0	1 190 000	1 309 000
2030	0	0	1 190 000	1 309 000
2031	0	0	1 190 000	1 309 000
2032	0	0	1 190 000	1 309 000
2033	0	0	1 190 000	1 309 000
2034	0	0	1 190 000	1 309 000
2035	0	0	1 190 000	1 309 000
2036	0	0	1 190 000	1 309 000
2037	0	0	1 190 000	1 309 000
2038	0	0	1 190 000	1 309 000
2039	0	0	1 190 000	1 309 000
2040	0	0	1 190 000	1 309 000
2041	0	0	1 190 000	1 309 000
2042	0	0	1 190 000	1 309 000
2043	0	0	1 190 000	1 309 000

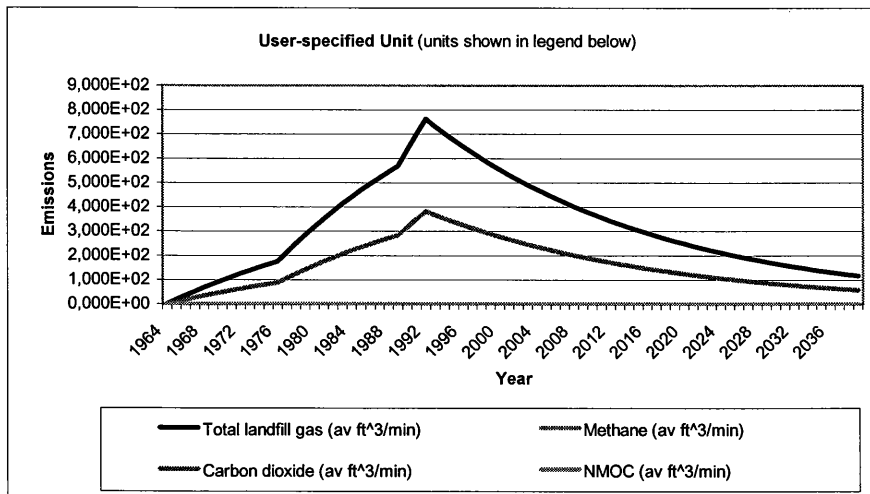
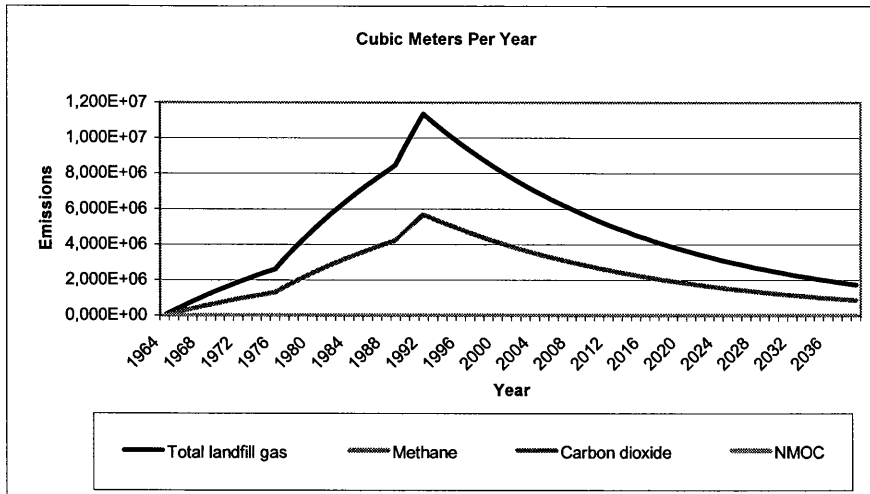
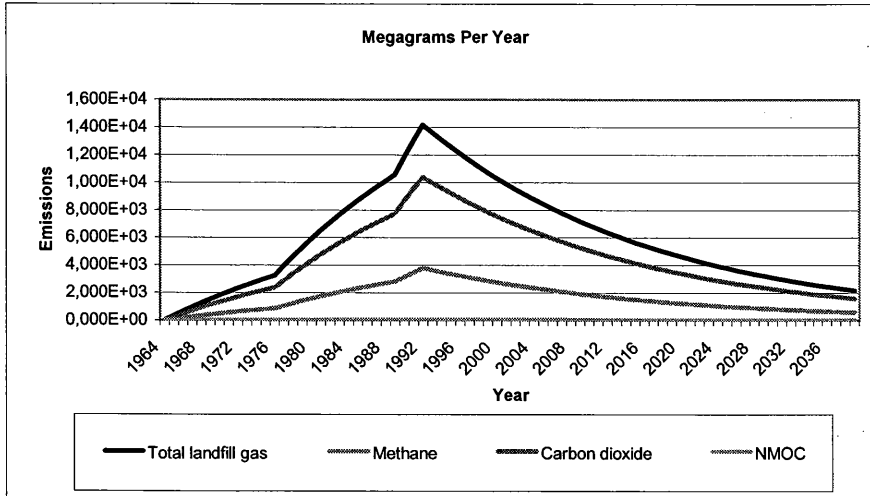
Pollutant Parameters

<i>Gas / Pollutant Default Parameters:</i>				<i>User-specified Pollutant Parameters:</i>	
	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



Results

Year	Total landfill gas			Methane		
	(Mg/year)	(m ³ /year)	(av ft ³ /min)	(Mg/year)	(m ³ /year)	(av ft ³ /min)
1964	0	0	0	0	0	0
1965	3,336E+02	2,672E+05	1,795E+01	8,912E+01	1,336E+05	8,975E+00
1966	6,542E+02	5,239E+05	3,520E+01	1,747E+02	2,619E+05	1,760E+01
1967	9,622E+02	7,705E+05	5,177E+01	2,570E+02	3,852E+05	2,588E+01
1968	1,258E+03	1,007E+06	6,769E+01	3,361E+02	5,037E+05	3,384E+01
1969	1,542E+03	1,235E+06	8,299E+01	4,120E+02	6,175E+05	4,149E+01
1970	1,816E+03	1,454E+06	9,768E+01	4,850E+02	7,269E+05	4,884E+01
1971	2,078E+03	1,664E+06	1,118E+02	5,551E+02	8,320E+05	5,590E+01
1972	2,330E+03	1,866E+06	1,254E+02	6,224E+02	9,330E+05	6,269E+01
1973	2,572E+03	2,060E+06	1,384E+02	6,871E+02	1,030E+06	6,920E+01
1974	2,805E+03	2,246E+06	1,509E+02	7,493E+02	1,123E+06	7,546E+01
1975	3,029E+03	2,425E+06	1,630E+02	8,090E+02	1,213E+06	8,148E+01
1976	3,244E+03	2,597E+06	1,745E+02	8,664E+02	1,299E+06	8,726E+01
1977	3,951E+03	3,164E+06	2,126E+02	1,055E+03	1,582E+06	1,063E+02
1978	4,630E+03	3,707E+06	2,491E+02	1,237E+03	1,854E+06	1,245E+02
1979	5,282E+03	4,230E+06	2,842E+02	1,411E+03	2,115E+06	1,421E+02
1980	5,909E+03	4,732E+06	3,179E+02	1,578E+03	2,366E+06	1,590E+02
1981	6,512E+03	5,214E+06	3,504E+02	1,739E+03	2,607E+06	1,752E+02
1982	7,091E+03	5,678E+06	3,815E+02	1,894E+03	2,839E+06	1,907E+02
1983	7,647E+03	6,123E+06	4,114E+02	2,043E+03	3,062E+06	2,057E+02
1984	8,181E+03	6,551E+06	4,402E+02	2,185E+03	3,275E+06	2,201E+02
1985	8,694E+03	6,962E+06	4,678E+02	2,322E+03	3,481E+06	2,339E+02
1986	9,187E+03	7,357E+06	4,943E+02	2,454E+03	3,678E+06	2,472E+02
1987	9,661E+03	7,736E+06	5,198E+02	2,581E+03	3,868E+06	2,599E+02
1988	1,012E+04	8,101E+06	5,443E+02	2,702E+03	4,050E+06	2,721E+02
1989	1,055E+04	8,451E+06	5,678E+02	2,819E+03	4,226E+06	2,839E+02
1990	1,181E+04	9,456E+06	6,353E+02	3,154E+03	4,728E+06	3,177E+02
1991	1,301E+04	1,042E+07	7,002E+02	3,476E+03	5,210E+06	3,501E+02
1992	1,417E+04	1,135E+07	7,625E+02	3,785E+03	5,674E+06	3,812E+02
1993	1,362E+04	1,090E+07	7,326E+02	3,637E+03	5,451E+06	3,663E+02
1994	1,308E+04	1,048E+07	7,038E+02	3,494E+03	5,238E+06	3,519E+02
1995	1,257E+04	1,006E+07	6,762E+02	3,357E+03	5,032E+06	3,381E+02
1996	1,208E+04	9,670E+06	6,497E+02	3,226E+03	4,835E+06	3,249E+02
1997	1,160E+04	9,291E+06	6,243E+02	3,099E+03	4,645E+06	3,121E+02
1998	1,115E+04	8,927E+06	5,998E+02	2,978E+03	4,463E+06	2,999E+02
1999	1,071E+04	8,577E+06	5,763E+02	2,861E+03	4,288E+06	2,881E+02
2000	1,029E+04	8,240E+06	5,537E+02	2,749E+03	4,120E+06	2,768E+02
2001	9,887E+03	7,917E+06	5,320E+02	2,641E+03	3,959E+06	2,660E+02
2002	9,499E+03	7,607E+06	5,111E+02	2,537E+03	3,803E+06	2,555E+02
2003	9,127E+03	7,308E+06	4,911E+02	2,438E+03	3,654E+06	2,455E+02
2004	8,769E+03	7,022E+06	4,718E+02	2,342E+03	3,511E+06	2,359E+02
2005	8,425E+03	6,747E+06	4,533E+02	2,250E+03	3,373E+06	2,267E+02
2006	8,095E+03	6,482E+06	4,355E+02	2,162E+03	3,241E+06	2,178E+02
2007	7,778E+03	6,228E+06	4,185E+02	2,077E+03	3,114E+06	2,092E+02
2008	7,473E+03	5,984E+06	4,020E+02	1,996E+03	2,992E+06	2,010E+02
2009	7,180E+03	5,749E+06	3,863E+02	1,918E+03	2,875E+06	1,931E+02
2010	6,898E+03	5,524E+06	3,711E+02	1,843E+03	2,762E+06	1,856E+02
2011	6,628E+03	5,307E+06	3,566E+02	1,770E+03	2,654E+06	1,783E+02
2012	6,368E+03	5,099E+06	3,426E+02	1,701E+03	2,549E+06	1,713E+02
2013	6,118E+03	4,899E+06	3,292E+02	1,634E+03	2,450E+06	1,646E+02

Results (Continued)

Year	Total landfill gas			Methane		
	(Mg/year)	(m ³ /year)	(av ft ³ /min)	(Mg/year)	(m ³ /year)	(av ft ³ /min)
2014	5,878E+03	4,707E+06	3,163E+02	1,570E+03	2,353E+06	1,581E+02
2015	5,648E+03	4,522E+06	3,039E+02	1,509E+03	2,261E+06	1,519E+02
2016	5,426E+03	4,345E+06	2,919E+02	1,449E+03	2,173E+06	1,460E+02
2017	5,213E+03	4,175E+06	2,805E+02	1,393E+03	2,087E+06	1,402E+02
2018	5,009E+03	4,011E+06	2,695E+02	1,338E+03	2,005E+06	1,347E+02
2019	4,813E+03	3,854E+06	2,589E+02	1,285E+03	1,927E+06	1,295E+02
2020	4,624E+03	3,703E+06	2,488E+02	1,235E+03	1,851E+06	1,244E+02
2021	4,443E+03	3,557E+06	2,390E+02	1,187E+03	1,779E+06	1,195E+02
2022	4,268E+03	3,418E+06	2,297E+02	1,140E+03	1,709E+06	1,148E+02
2023	4,101E+03	3,284E+06	2,206E+02	1,095E+03	1,642E+06	1,103E+02
2024	3,940E+03	3,155E+06	2,120E+02	1,052E+03	1,578E+06	1,060E+02
2025	3,786E+03	3,031E+06	2,037E+02	1,011E+03	1,516E+06	1,018E+02
2026	3,637E+03	2,913E+06	1,957E+02	9,716E+02	1,456E+06	9,785E+01
2027	3,495E+03	2,798E+06	1,880E+02	9,335E+02	1,399E+06	9,401E+01
2028	3,358E+03	2,689E+06	1,806E+02	8,969E+02	1,344E+06	9,032E+01
2029	3,226E+03	2,583E+06	1,736E+02	8,617E+02	1,292E+06	8,678E+01
2030	3,099E+03	2,482E+06	1,668E+02	8,279E+02	1,241E+06	8,338E+01
2031	2,978E+03	2,385E+06	1,602E+02	7,954E+02	1,192E+06	8,011E+01
2032	2,861E+03	2,291E+06	1,539E+02	7,643E+02	1,146E+06	7,697E+01
2033	2,749E+03	2,201E+06	1,479E+02	7,343E+02	1,101E+06	7,395E+01
2034	2,641E+03	2,115E+06	1,421E+02	7,055E+02	1,057E+06	7,105E+01
2035	2,538E+03	2,032E+06	1,365E+02	6,778E+02	1,016E+06	6,827E+01
2036	2,438E+03	1,952E+06	1,312E+02	6,513E+02	9,762E+05	6,559E+01
2037	2,343E+03	1,876E+06	1,260E+02	6,257E+02	9,379E+05	6,302E+01
2038	2,251E+03	1,802E+06	1,211E+02	6,012E+02	9,011E+05	6,055E+01
2039	2,162E+03	1,732E+06	1,163E+02	5,776E+02	8,658E+05	5,817E+01
2040	2,078E+03	1,664E+06	1,118E+02	5,550E+02	8,318E+05	5,589E+01
2041	1,996E+03	1,598E+06	1,074E+02	5,332E+02	7,992E+05	5,370E+01
2042	1,918E+03	1,536E+06	1,032E+02	5,123E+02	7,679E+05	5,159E+01
2043	1,843E+03	1,476E+06	9,914E+01	4,922E+02	7,378E+05	4,957E+01
2044	1,770E+03	1,418E+06	9,526E+01	4,729E+02	7,088E+05	4,763E+01
2045	1,701E+03	1,362E+06	9,152E+01	4,544E+02	6,811E+05	4,576E+01
2046	1,634E+03	1,309E+06	8,793E+01	4,365E+02	6,544E+05	4,397E+01
2047	1,570E+03	1,257E+06	8,448E+01	4,194E+02	6,287E+05	4,224E+01
2048	1,509E+03	1,208E+06	8,117E+01	4,030E+02	6,040E+05	4,059E+01
2049	1,450E+03	1,161E+06	7,799E+01	3,872E+02	5,804E+05	3,899E+01
2050	1,393E+03	1,115E+06	7,493E+01	3,720E+02	5,576E+05	3,747E+01
2051	1,338E+03	1,071E+06	7,199E+01	3,574E+02	5,357E+05	3,600E+01
2052	1,286E+03	1,029E+06	6,917E+01	3,434E+02	5,147E+05	3,458E+01
2053	1,235E+03	9,891E+05	6,646E+01	3,299E+02	4,945E+05	3,323E+01
2054	1,187E+03	9,503E+05	6,385E+01	3,170E+02	4,752E+05	3,193E+01
2055	1,140E+03	9,131E+05	6,135E+01	3,046E+02	4,565E+05	3,067E+01
2056	1,096E+03	8,772E+05	5,894E+01	2,926E+02	4,386E+05	2,947E+01
2057	1,053E+03	8,429E+05	5,663E+01	2,812E+02	4,214E+05	2,832E+01
2058	1,011E+03	8,098E+05	5,441E+01	2,701E+02	4,049E+05	2,721E+01
2059	9,716E+02	7,781E+05	5,228E+01	2,595E+02	3,890E+05	2,614E+01
2060	9,335E+02	7,475E+05	5,023E+01	2,494E+02	3,738E+05	2,511E+01
2061	8,969E+02	7,182E+05	4,826E+01	2,396E+02	3,591E+05	2,413E+01
2062	8,618E+02	6,901E+05	4,637E+01	2,302E+02	3,450E+05	2,318E+01
2063	8,280E+02	6,630E+05	4,455E+01	2,212E+02	3,315E+05	2,227E+01
2064	7,955E+02	6,370E+05	4,280E+01	2,125E+02	3,185E+05	2,140E+01

Results (Continued)

Year	Total landfill gas			Methane		
	(Mg/year)	(m ³ /year)	(av ft ³ /min)	(Mg/year)	(m ³ /year)	(av ft ³ /min)
2065	7,643E+02	6,120E+05	4,112E+01	2,042E+02	3,060E+05	2,056E+01
2066	7,344E+02	5,880E+05	3,951E+01	1,962E+02	2,940E+05	1,976E+01
2067	7,056E+02	5,650E+05	3,796E+01	1,885E+02	2,825E+05	1,898E+01
2068	6,779E+02	5,428E+05	3,647E+01	1,811E+02	2,714E+05	1,824E+01
2069	6,513E+02	5,215E+05	3,504E+01	1,740E+02	2,608E+05	1,752E+01
2070	6,258E+02	5,011E+05	3,367E+01	1,672E+02	2,505E+05	1,683E+01
2071	6,012E+02	4,814E+05	3,235E+01	1,606E+02	2,407E+05	1,617E+01
2072	5,777E+02	4,626E+05	3,108E+01	1,543E+02	2,313E+05	1,554E+01
2073	5,550E+02	4,444E+05	2,986E+01	1,483E+02	2,222E+05	1,493E+01
2074	5,333E+02	4,270E+05	2,869E+01	1,424E+02	2,135E+05	1,435E+01
2075	5,123E+02	4,103E+05	2,757E+01	1,369E+02	2,051E+05	1,378E+01
2076	4,923E+02	3,942E+05	2,648E+01	1,315E+02	1,971E+05	1,324E+01
2077	4,730E+02	3,787E+05	2,545E+01	1,263E+02	1,894E+05	1,272E+01
2078	4,544E+02	3,639E+05	2,445E+01	1,214E+02	1,819E+05	1,222E+01
2079	4,366E+02	3,496E+05	2,349E+01	1,166E+02	1,748E+05	1,174E+01
2080	4,195E+02	3,359E+05	2,257E+01	1,120E+02	1,679E+05	1,128E+01
2081	4,030E+02	3,227E+05	2,168E+01	1,077E+02	1,614E+05	1,084E+01
2082	3,872E+02	3,101E+05	2,083E+01	1,034E+02	1,550E+05	1,042E+01
2083	3,720E+02	2,979E+05	2,002E+01	9,938E+01	1,490E+05	1,001E+01
2084	3,574E+02	2,862E+05	1,923E+01	9,548E+01	1,431E+05	9,616E+00
2085	3,434E+02	2,750E+05	1,848E+01	9,173E+01	1,375E+05	9,239E+00
2086	3,300E+02	2,642E+05	1,775E+01	8,814E+01	1,321E+05	8,877E+00
2087	3,170E+02	2,539E+05	1,706E+01	8,468E+01	1,269E+05	8,528E+00
2088	3,046E+02	2,439E+05	1,639E+01	8,136E+01	1,220E+05	8,194E+00
2089	2,927E+02	2,343E+05	1,575E+01	7,817E+01	1,172E+05	7,873E+00
2090	2,812E+02	2,252E+05	1,513E+01	7,511E+01	1,126E+05	7,564E+00
2091	2,702E+02	2,163E+05	1,453E+01	7,216E+01	1,082E+05	7,267E+00
2092	2,596E+02	2,078E+05	1,397E+01	6,933E+01	1,039E+05	6,983E+00
2093	2,494E+02	1,997E+05	1,342E+01	6,661E+01	9,985E+04	6,709E+00
2094	2,396E+02	1,919E+05	1,289E+01	6,400E+01	9,593E+04	6,446E+00
2095	2,302E+02	1,843E+05	1,239E+01	6,149E+01	9,217E+04	6,193E+00
2096	2,212E+02	1,771E+05	1,190E+01	5,908E+01	8,856E+04	5,950E+00
2097	2,125E+02	1,702E+05	1,143E+01	5,676E+01	8,508E+04	5,717E+00
2098	2,042E+02	1,635E+05	1,099E+01	5,454E+01	8,175E+04	5,493E+00
2099	1,962E+02	1,571E+05	1,055E+01	5,240E+01	7,854E+04	5,277E+00
2100	1,885E+02	1,509E+05	1,014E+01	5,035E+01	7,546E+04	5,070E+00
2101	1,811E+02	1,450E+05	9,743E+00	4,837E+01	7,250E+04	4,872E+00
2102	1,740E+02	1,393E+05	9,361E+00	4,647E+01	6,966E+04	4,681E+00
2103	1,672E+02	1,339E+05	8,994E+00	4,465E+01	6,693E+04	4,497E+00
2104	1,606E+02	1,286E+05	8,641E+00	4,290E+01	6,431E+04	4,321E+00

Results (Continued)

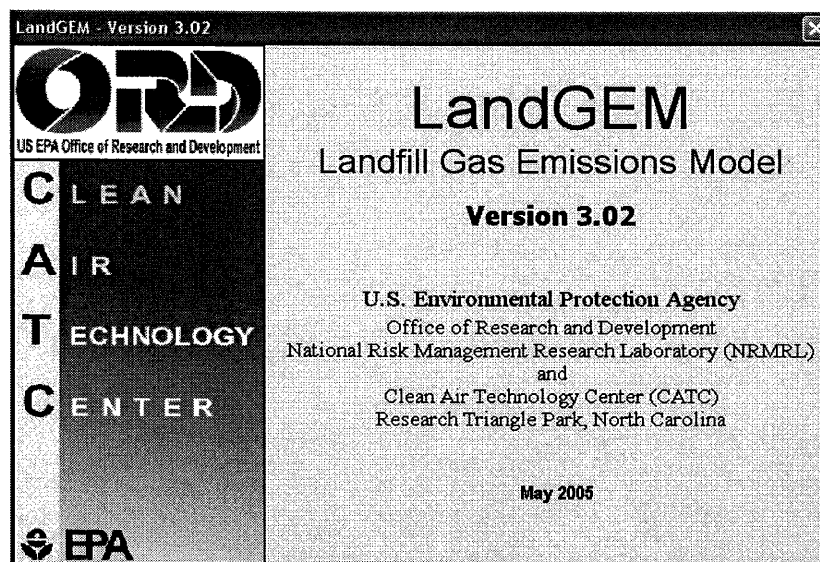
Year	Carbon dioxide			NMOC		
	(Mg/year)	(m ³ /year)	(av ft ³ /min)	(Mg/year)	(m ³ /year)	(av ft ³ /min)
1964	0	0	0	0	0	0
1965	2,445E+02	1,336E+05	8,975E+00	5,746E-01	1,603E+02	1,077E-02
1966	4,795E+02	2,619E+05	1,760E+01	1,127E+00	3,143E+02	2,112E-02
1967	7,052E+02	3,852E+05	2,588E+01	1,657E+00	4,623E+02	3,106E-02
1968	9,221E+02	5,037E+05	3,384E+01	2,167E+00	6,045E+02	4,061E-02
1969	1,130E+03	6,175E+05	4,149E+01	2,656E+00	7,411E+02	4,979E-02
1970	1,331E+03	7,269E+05	4,884E+01	3,127E+00	8,723E+02	5,861E-02
1971	1,523E+03	8,320E+05	5,590E+01	3,579E+00	9,984E+02	6,708E-02
1972	1,708E+03	9,330E+05	6,269E+01	4,013E+00	1,120E+03	7,522E-02
1973	1,885E+03	1,030E+06	6,920E+01	4,430E+00	1,236E+03	8,304E-02
1974	2,056E+03	1,123E+06	7,546E+01	4,831E+00	1,348E+03	9,056E-02
1975	2,220E+03	1,213E+06	8,148E+01	5,216E+00	1,455E+03	9,778E-02
1976	2,377E+03	1,299E+06	8,726E+01	5,586E+00	1,558E+03	1,047E-01
1977	2,895E+03	1,582E+06	1,063E+02	6,804E+00	1,898E+03	1,275E-01
1978	3,393E+03	1,854E+06	1,245E+02	7,973E+00	2,224E+03	1,495E-01
1979	3,871E+03	2,115E+06	1,421E+02	9,097E+00	2,538E+03	1,705E-01
1980	4,331E+03	2,366E+06	1,590E+02	1,018E+01	2,839E+03	1,908E-01
1981	4,772E+03	2,607E+06	1,752E+02	1,121E+01	3,129E+03	2,102E-01
1982	5,197E+03	2,839E+06	1,907E+02	1,221E+01	3,407E+03	2,289E-01
1983	5,604E+03	3,062E+06	2,057E+02	1,317E+01	3,674E+03	2,468E-01
1984	5,996E+03	3,275E+06	2,201E+02	1,409E+01	3,931E+03	2,641E-01
1985	6,372E+03	3,481E+06	2,339E+02	1,497E+01	4,177E+03	2,807E-01
1986	6,733E+03	3,678E+06	2,472E+02	1,582E+01	4,414E+03	2,966E-01
1987	7,081E+03	3,868E+06	2,599E+02	1,664E+01	4,642E+03	3,119E-01
1988	7,414E+03	4,050E+06	2,721E+02	1,742E+01	4,861E+03	3,266E-01
1989	7,735E+03	4,226E+06	2,839E+02	1,818E+01	5,071E+03	3,407E-01
1990	8,654E+03	4,728E+06	3,177E+02	2,034E+01	5,673E+03	3,812E-01
1991	9,538E+03	5,210E+06	3,501E+02	2,241E+01	6,252E+03	4,201E-01
1992	1,039E+04	5,674E+06	3,812E+02	2,441E+01	6,809E+03	4,575E-01
1993	9,979E+03	5,451E+06	3,663E+02	2,345E+01	6,542E+03	4,395E-01
1994	9,588E+03	5,238E+06	3,519E+02	2,253E+01	6,285E+03	4,223E-01
1995	9,212E+03	5,032E+06	3,381E+02	2,165E+01	6,039E+03	4,057E-01
1996	8,851E+03	4,835E+06	3,249E+02	2,080E+01	5,802E+03	3,898E-01
1997	8,503E+03	4,645E+06	3,121E+02	1,998E+01	5,575E+03	3,746E-01
1998	8,170E+03	4,463E+06	2,999E+02	1,920E+01	5,356E+03	3,599E-01
1999	7,850E+03	4,288E+06	2,881E+02	1,845E+01	5,146E+03	3,458E-01
2000	7,542E+03	4,120E+06	2,768E+02	1,772E+01	4,944E+03	3,322E-01
2001	7,246E+03	3,959E+06	2,660E+02	1,703E+01	4,750E+03	3,192E-01
2002	6,962E+03	3,803E+06	2,555E+02	1,636E+01	4,564E+03	3,067E-01
2003	6,689E+03	3,654E+06	2,455E+02	1,572E+01	4,385E+03	2,946E-01
2004	6,427E+03	3,511E+06	2,359E+02	1,510E+01	4,213E+03	2,831E-01
2005	6,175E+03	3,373E+06	2,267E+02	1,451E+01	4,048E+03	2,720E-01
2006	5,933E+03	3,241E+06	2,178E+02	1,394E+01	3,889E+03	2,613E-01
2007	5,700E+03	3,114E+06	2,092E+02	1,339E+01	3,737E+03	2,511E-01
2008	5,477E+03	2,992E+06	2,010E+02	1,287E+01	3,590E+03	2,412E-01
2009	5,262E+03	2,875E+06	1,931E+02	1,236E+01	3,449E+03	2,318E-01
2010	5,056E+03	2,762E+06	1,856E+02	1,188E+01	3,314E+03	2,227E-01
2011	4,857E+03	2,654E+06	1,783E+02	1,141E+01	3,184E+03	2,139E-01
2012	4,667E+03	2,549E+06	1,713E+02	1,097E+01	3,059E+03	2,056E-01
2013	4,484E+03	2,450E+06	1,646E+02	1,054E+01	2,939E+03	1,975E-01

Results (Continued)

Year	Carbon dioxide			NMOC		
	(Mg/year)	(m ³ /year)	(av ft ³ /min)	(Mg/year)	(m ³ /year)	(av ft ³ /min)
2014	4,308E+03	2,353E+06	1,581E+02	1,012E+01	2,824E+03	1,898E-01
2015	4,139E+03	2,261E+06	1,519E+02	9,726E+00	2,713E+03	1,823E-01
2016	3,977E+03	2,173E+06	1,460E+02	9,345E+00	2,607E+03	1,752E-01
2017	3,821E+03	2,087E+06	1,402E+02	8,978E+00	2,505E+03	1,683E-01
2018	3,671E+03	2,005E+06	1,347E+02	8,626E+00	2,407E+03	1,617E-01
2019	3,527E+03	1,927E+06	1,295E+02	8,288E+00	2,312E+03	1,554E-01
2020	3,389E+03	1,851E+06	1,244E+02	7,963E+00	2,222E+03	1,493E-01
2021	3,256E+03	1,779E+06	1,195E+02	7,651E+00	2,134E+03	1,434E-01
2022	3,128E+03	1,709E+06	1,148E+02	7,351E+00	2,051E+03	1,378E-01
2023	3,006E+03	1,642E+06	1,103E+02	7,063E+00	1,970E+03	1,324E-01
2024	2,888E+03	1,578E+06	1,060E+02	6,786E+00	1,893E+03	1,272E-01
2025	2,775E+03	1,516E+06	1,018E+02	6,520E+00	1,819E+03	1,222E-01
2026	2,666E+03	1,456E+06	9,785E+01	6,264E+00	1,748E+03	1,174E-01
2027	2,561E+03	1,399E+06	9,401E+01	6,018E+00	1,679E+03	1,128E-01
2028	2,461E+03	1,344E+06	9,032E+01	5,782E+00	1,613E+03	1,084E-01
2029	2,364E+03	1,292E+06	8,678E+01	5,556E+00	1,550E+03	1,041E-01
2030	2,272E+03	1,241E+06	8,338E+01	5,338E+00	1,489E+03	1,001E-01
2031	2,183E+03	1,192E+06	8,011E+01	5,129E+00	1,431E+03	9,613E-02
2032	2,097E+03	1,146E+06	7,697E+01	4,927E+00	1,375E+03	9,236E-02
2033	2,015E+03	1,101E+06	7,395E+01	4,734E+00	1,321E+03	8,874E-02
2034	1,936E+03	1,057E+06	7,105E+01	4,549E+00	1,269E+03	8,526E-02
2035	1,860E+03	1,016E+06	6,827E+01	4,370E+00	1,219E+03	8,192E-02
2036	1,787E+03	9,762E+05	6,559E+01	4,199E+00	1,171E+03	7,871E-02
2037	1,717E+03	9,379E+05	6,302E+01	4,034E+00	1,125E+03	7,562E-02
2038	1,650E+03	9,011E+05	6,055E+01	3,876E+00	1,081E+03	7,266E-02
2039	1,585E+03	8,658E+05	5,817E+01	3,724E+00	1,039E+03	6,981E-02
2040	1,523E+03	8,318E+05	5,589E+01	3,578E+00	9,982E+02	6,707E-02
2041	1,463E+03	7,992E+05	5,370E+01	3,438E+00	9,591E+02	6,444E-02
2042	1,406E+03	7,679E+05	5,159E+01	3,303E+00	9,215E+02	6,191E-02
2043	1,351E+03	7,378E+05	4,957E+01	3,173E+00	8,853E+02	5,949E-02
2044	1,298E+03	7,088E+05	4,763E+01	3,049E+00	8,506E+02	5,715E-02
2045	1,247E+03	6,811E+05	4,576E+01	2,929E+00	8,173E+02	5,491E-02
2046	1,198E+03	6,544E+05	4,397E+01	2,815E+00	7,852E+02	5,276E-02
2047	1,151E+03	6,287E+05	4,224E+01	2,704E+00	7,544E+02	5,069E-02
2048	1,106E+03	6,040E+05	4,059E+01	2,598E+00	7,249E+02	4,870E-02
2049	1,062E+03	5,804E+05	3,899E+01	2,496E+00	6,964E+02	4,679E-02
2050	1,021E+03	5,576E+05	3,747E+01	2,398E+00	6,691E+02	4,496E-02
2051	9,807E+02	5,357E+05	3,600E+01	2,304E+00	6,429E+02	4,320E-02
2052	9,422E+02	5,147E+05	3,458E+01	2,214E+00	6,177E+02	4,150E-02
2053	9,053E+02	4,945E+05	3,323E+01	2,127E+00	5,935E+02	3,987E-02
2054	8,698E+02	4,752E+05	3,193E+01	2,044E+00	5,702E+02	3,831E-02
2055	8,357E+02	4,565E+05	3,067E+01	1,964E+00	5,478E+02	3,681E-02
2056	8,029E+02	4,386E+05	2,947E+01	1,887E+00	5,263E+02	3,537E-02
2057	7,714E+02	4,214E+05	2,832E+01	1,813E+00	5,057E+02	3,398E-02
2058	7,412E+02	4,049E+05	2,721E+01	1,742E+00	4,859E+02	3,265E-02
2059	7,121E+02	3,890E+05	2,614E+01	1,673E+00	4,668E+02	3,137E-02
2060	6,842E+02	3,738E+05	2,511E+01	1,608E+00	4,485E+02	3,014E-02
2061	6,574E+02	3,591E+05	2,413E+01	1,545E+00	4,309E+02	2,895E-02
2062	6,316E+02	3,450E+05	2,318E+01	1,484E+00	4,140E+02	2,782E-02
2063	6,068E+02	3,315E+05	2,227E+01	1,426E+00	3,978E+02	2,673E-02
2064	5,830E+02	3,185E+05	2,140E+01	1,370E+00	3,822E+02	2,568E-02

Results (Continued)

Year	Carbon dioxide			NMOC		
	(Mg/year)	(m ³ /year)	(av ft ³ /min)	(Mg/year)	(m ³ /year)	(av ft ³ /min)
2065	5,602E+02	3,060E+05	2,056E+01	1,316E+00	3,672E+02	2,467E-02
2066	5,382E+02	2,940E+05	1,976E+01	1,265E+00	3,528E+02	2,371E-02
2067	5,171E+02	2,825E+05	1,898E+01	1,215E+00	3,390E+02	2,278E-02
2068	4,968E+02	2,714E+05	1,824E+01	1,167E+00	3,257E+02	2,188E-02
2069	4,773E+02	2,608E+05	1,752E+01	1,122E+00	3,129E+02	2,103E-02
2070	4,586E+02	2,505E+05	1,683E+01	1,078E+00	3,007E+02	2,020E-02
2071	4,406E+02	2,407E+05	1,617E+01	1,035E+00	2,889E+02	1,941E-02
2072	4,234E+02	2,313E+05	1,554E+01	9,948E-01	2,775E+02	1,865E-02
2073	4,068E+02	2,222E+05	1,493E+01	9,558E-01	2,667E+02	1,792E-02
2074	3,908E+02	2,135E+05	1,435E+01	9,183E-01	2,562E+02	1,721E-02
2075	3,755E+02	2,051E+05	1,378E+01	8,823E-01	2,462E+02	1,654E-02
2076	3,608E+02	1,971E+05	1,324E+01	8,477E-01	2,365E+02	1,589E-02
2077	3,466E+02	1,894E+05	1,272E+01	8,145E-01	2,272E+02	1,527E-02
2078	3,330E+02	1,819E+05	1,222E+01	7,826E-01	2,183E+02	1,467E-02
2079	3,200E+02	1,748E+05	1,174E+01	7,519E-01	2,098E+02	1,409E-02
2080	3,074E+02	1,679E+05	1,128E+01	7,224E-01	2,015E+02	1,354E-02
2081	2,954E+02	1,614E+05	1,084E+01	6,941E-01	1,936E+02	1,301E-02
2082	2,838E+02	1,550E+05	1,042E+01	6,669E-01	1,860E+02	1,250E-02
2083	2,727E+02	1,490E+05	1,001E+01	6,407E-01	1,787E+02	1,201E-02
2084	2,620E+02	1,431E+05	9,616E+00	6,156E-01	1,717E+02	1,154E-02
2085	2,517E+02	1,375E+05	9,239E+00	5,914E-01	1,650E+02	1,109E-02
2086	2,418E+02	1,321E+05	8,877E+00	5,683E-01	1,585E+02	1,065E-02
2087	2,323E+02	1,269E+05	8,528E+00	5,460E-01	1,523E+02	1,023E-02
2088	2,232E+02	1,220E+05	8,194E+00	5,246E-01	1,463E+02	9,833E-03
2089	2,145E+02	1,172E+05	7,873E+00	5,040E-01	1,406E+02	9,447E-03
2090	2,061E+02	1,126E+05	7,564E+00	4,842E-01	1,351E+02	9,077E-03
2091	1,980E+02	1,082E+05	7,267E+00	4,653E-01	1,298E+02	8,721E-03
2092	1,902E+02	1,039E+05	6,983E+00	4,470E-01	1,247E+02	8,379E-03
2093	1,828E+02	9,985E+04	6,709E+00	4,295E-01	1,198E+02	8,050E-03
2094	1,756E+02	9,593E+04	6,446E+00	4,126E-01	1,151E+02	7,735E-03
2095	1,687E+02	9,217E+04	6,193E+00	3,965E-01	1,106E+02	7,432E-03
2096	1,621E+02	8,856E+04	5,950E+00	3,809E-01	1,063E+02	7,140E-03
2097	1,557E+02	8,508E+04	5,717E+00	3,660E-01	1,021E+02	6,860E-03
2098	1,496E+02	8,175E+04	5,493E+00	3,516E-01	9,810E+01	6,591E-03
2099	1,438E+02	7,854E+04	5,277E+00	3,378E-01	9,425E+01	6,333E-03
2100	1,381E+02	7,546E+04	5,070E+00	3,246E-01	9,056E+01	6,084E-03
2101	1,327E+02	7,250E+04	4,872E+00	3,119E-01	8,700E+01	5,846E-03
2102	1,275E+02	6,966E+04	4,681E+00	2,996E-01	8,359E+01	5,617E-03
2103	1,225E+02	6,693E+04	4,497E+00	2,879E-01	8,032E+01	5,396E-03
2104	1,177E+02	6,431E+04	4,321E+00	2,766E-01	7,717E+01	5,185E-03



Summary Report

Landfill Name or Identifier: Phase IIA - LET de Ste-Sophie

Date: 26 avril, 2007

Description/Comments:

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 conventional 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	1992	
Landfill Closure Year (with 80-year limit)	2000	
Actual Closure Year (without limit)	2000	
Have Model Calculate Closure Year?	No	
Waste Design Capacity	4 501 990	<i>megagrams</i>

MODEL PARAMETERS

Methane Generation Rate, k	0,045	<i>year⁻¹</i>
Potential Methane Generation Capacity, L ₀	135	<i>m³/Mg</i>
NMOC Concentration	600	<i>ppmv as hexane</i>
Methane Content	50	<i>% by volume</i>

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)
1992	211 862	233 048	0	0
1993	247 526	272 279	211 862	233 048
1994	333 369	366 706	459 388	505 327
1995	348 574	383 431	792 757	872 033
1996	358 526	394 379	1 141 331	1 255 464
1997	460 137	506 151	1 499 857	1 649 843
1998	788 195	867 015	1 959 994	2 155 993
1999	864 323	950 755	2 748 189	3 023 008
2000	889 478	978 426	3 612 512	3 973 763
2001	0	0	4 501 990	4 952 189
2002	0	0	4 501 990	4 952 189
2003	0	0	4 501 990	4 952 189
2004	0	0	4 501 990	4 952 189
2005	0	0	4 501 990	4 952 189
2006	0	0	4 501 990	4 952 189
2007	0	0	4 501 990	4 952 189
2008	0	0	4 501 990	4 952 189
2009	0	0	4 501 990	4 952 189
2010	0	0	4 501 990	4 952 189
2011	0	0	4 501 990	4 952 189
2012	0	0	4 501 990	4 952 189
2013	0	0	4 501 990	4 952 189
2014	0	0	4 501 990	4 952 189
2015	0	0	4 501 990	4 952 189
2016	0	0	4 501 990	4 952 189
2017	0	0	4 501 990	4 952 189
2018	0	0	4 501 990	4 952 189
2019	0	0	4 501 990	4 952 189
2020	0	0	4 501 990	4 952 189
2021	0	0	4 501 990	4 952 189
2022	0	0	4 501 990	4 952 189
2023	0	0	4 501 990	4 952 189
2024	0	0	4 501 990	4 952 189
2025	0	0	4 501 990	4 952 189
2026	0	0	4 501 990	4 952 189
2027	0	0	4 501 990	4 952 189
2028	0	0	4 501 990	4 952 189
2029	0	0	4 501 990	4 952 189
2030	0	0	4 501 990	4 952 189
2031	0	0	4 501 990	4 952 189

WASTE ACCEPTANCE RATES (Continued)

Year	Waste Accepted		Waste-In-Place	
	(Mg/year)	(short tons/year)	(Mg)	(short tons)
2032	0	0	4 501 990	4 952 189
2033	0	0	4 501 990	4 952 189
2034	0	0	4 501 990	4 952 189
2035	0	0	4 501 990	4 952 189
2036	0	0	4 501 990	4 952 189
2037	0	0	4 501 990	4 952 189
2038	0	0	4 501 990	4 952 189
2039	0	0	4 501 990	4 952 189
2040	0	0	4 501 990	4 952 189
2041	0	0	4 501 990	4 952 189
2042	0	0	4 501 990	4 952 189
2043	0	0	4 501 990	4 952 189
2044	0	0	4 501 990	4 952 189
2045	0	0	4 501 990	4 952 189
2046	0	0	4 501 990	4 952 189
2047	0	0	4 501 990	4 952 189
2048	0	0	4 501 990	4 952 189
2049	0	0	4 501 990	4 952 189
2050	0	0	4 501 990	4 952 189
2051	0	0	4 501 990	4 952 189
2052	0	0	4 501 990	4 952 189
2053	0	0	4 501 990	4 952 189
2054	0	0	4 501 990	4 952 189
2055	0	0	4 501 990	4 952 189
2056	0	0	4 501 990	4 952 189
2057	0	0	4 501 990	4 952 189
2058	0	0	4 501 990	4 952 189
2059	0	0	4 501 990	4 952 189
2060	0	0	4 501 990	4 952 189
2061	0	0	4 501 990	4 952 189
2062	0	0	4 501 990	4 952 189
2063	0	0	4 501 990	4 952 189
2064	0	0	4 501 990	4 952 189
2065	0	0	4 501 990	4 952 189
2066	0	0	4 501 990	4 952 189
2067	0	0	4 501 990	4 952 189
2068	0	0	4 501 990	4 952 189
2069	0	0	4 501 990	4 952 189
2070	0	0	4 501 990	4 952 189
2071	0	0	4 501 990	4 952 189

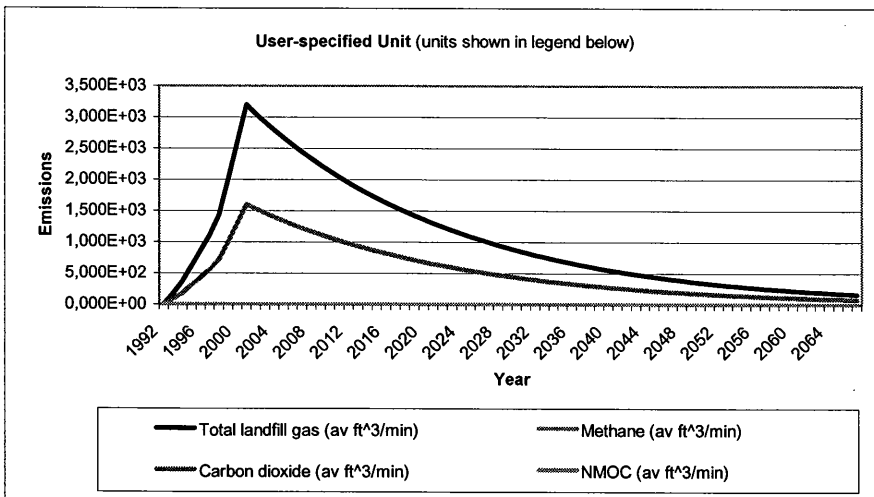
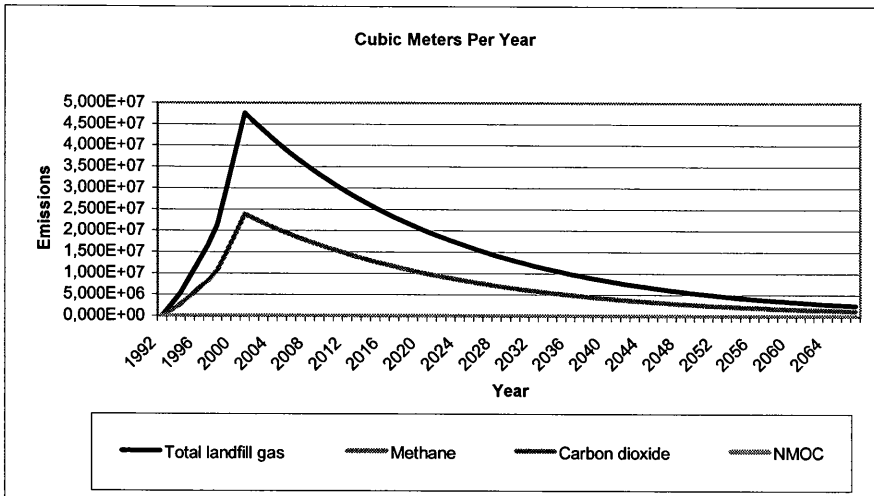
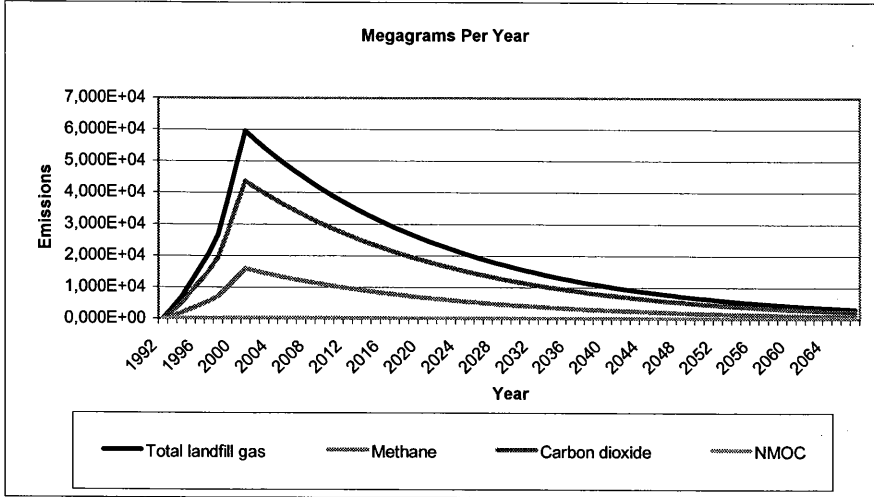
Pollutant Parameters

<i>Gas / Pollutant Default Parameters:</i>				<i>User-specified Pollutant Parameters:</i>	
	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)

<i>Gas / Pollutant Default Parameters:</i>				<i>User-specified Pollutant Parameters:</i>	
	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



Results

Year	Total landfill gas			Methane		
	(Mg/year)	(m ³ /year)	(av ft ³ /min)	(Mg/year)	(m ³ /year)	(av ft ³ /min)
1992	0	0	0	0	0	0
1993	3,150E+03	2,523E+06	1,695E+02	8,415E+02	1,261E+06	8,475E+01
1994	6,693E+03	5,359E+06	3,601E+02	1,788E+03	2,680E+06	1,800E+02
1995	1,136E+04	9,093E+06	6,109E+02	3,033E+03	4,546E+06	3,055E+02
1996	1,604E+04	1,284E+07	8,629E+02	4,284E+03	6,422E+06	4,315E+02
1997	2,066E+04	1,655E+07	1,112E+03	5,520E+03	8,274E+06	5,559E+02
1998	2,660E+04	2,130E+07	1,431E+03	7,105E+03	1,065E+07	7,155E+02
1999	3,715E+04	2,975E+07	1,999E+03	9,923E+03	1,487E+07	9,993E+02
2000	4,837E+04	3,873E+07	2,602E+03	1,292E+04	1,936E+07	1,301E+03
2001	5,946E+04	4,762E+07	3,199E+03	1,588E+04	2,381E+07	1,600E+03
2002	5,685E+04	4,552E+07	3,059E+03	1,518E+04	2,276E+07	1,529E+03
2003	5,435E+04	4,352E+07	2,924E+03	1,452E+04	2,176E+07	1,462E+03
2004	5,196E+04	4,160E+07	2,795E+03	1,388E+04	2,080E+07	1,398E+03
2005	4,967E+04	3,977E+07	2,672E+03	1,327E+04	1,989E+07	1,336E+03
2006	4,748E+04	3,802E+07	2,555E+03	1,268E+04	1,901E+07	1,277E+03
2007	4,539E+04	3,635E+07	2,442E+03	1,213E+04	1,817E+07	1,221E+03
2008	4,340E+04	3,475E+07	2,335E+03	1,159E+04	1,738E+07	1,167E+03
2009	4,149E+04	3,322E+07	2,232E+03	1,108E+04	1,661E+07	1,116E+03
2010	3,966E+04	3,176E+07	2,134E+03	1,059E+04	1,588E+07	1,067E+03
2011	3,792E+04	3,036E+07	2,040E+03	1,013E+04	1,518E+07	1,020E+03
2012	3,625E+04	2,903E+07	1,950E+03	9,682E+03	1,451E+07	9,751E+02
2013	3,465E+04	2,775E+07	1,864E+03	9,256E+03	1,387E+07	9,322E+02
2014	3,313E+04	2,653E+07	1,782E+03	8,849E+03	1,326E+07	8,912E+02
2015	3,167E+04	2,536E+07	1,704E+03	8,460E+03	1,268E+07	8,520E+02
2016	3,028E+04	2,424E+07	1,629E+03	8,087E+03	1,212E+07	8,145E+02
2017	2,894E+04	2,318E+07	1,557E+03	7,731E+03	1,159E+07	7,786E+02
2018	2,767E+04	2,216E+07	1,489E+03	7,391E+03	1,108E+07	7,444E+02
2019	2,645E+04	2,118E+07	1,423E+03	7,066E+03	1,059E+07	7,116E+02
2020	2,529E+04	2,025E+07	1,361E+03	6,755E+03	1,013E+07	6,803E+02
2021	2,418E+04	1,936E+07	1,301E+03	6,458E+03	9,680E+06	6,504E+02
2022	2,311E+04	1,851E+07	1,244E+03	6,174E+03	9,254E+06	6,218E+02
2023	2,210E+04	1,769E+07	1,189E+03	5,902E+03	8,847E+06	5,944E+02
2024	2,112E+04	1,691E+07	1,136E+03	5,642E+03	8,457E+06	5,682E+02
2025	2,019E+04	1,617E+07	1,086E+03	5,394E+03	8,085E+06	5,432E+02
2026	1,931E+04	1,546E+07	1,039E+03	5,157E+03	7,729E+06	5,193E+02
2027	1,846E+04	1,478E+07	9,930E+02	4,930E+03	7,389E+06	4,965E+02
2028	1,764E+04	1,413E+07	9,493E+02	4,713E+03	7,064E+06	4,746E+02
2029	1,687E+04	1,351E+07	9,075E+02	4,505E+03	6,753E+06	4,538E+02
2030	1,613E+04	1,291E+07	8,676E+02	4,307E+03	6,456E+06	4,338E+02
2031	1,542E+04	1,234E+07	8,294E+02	4,118E+03	6,172E+06	4,147E+02
2032	1,474E+04	1,180E+07	7,929E+02	3,937E+03	5,900E+06	3,965E+02
2033	1,409E+04	1,128E+07	7,580E+02	3,763E+03	5,641E+06	3,790E+02
2034	1,347E+04	1,079E+07	7,247E+02	3,598E+03	5,393E+06	3,623E+02
2035	1,288E+04	1,031E+07	6,928E+02	3,439E+03	5,155E+06	3,464E+02
2036	1,231E+04	9,857E+06	6,623E+02	3,288E+03	4,929E+06	3,311E+02
2037	1,177E+04	9,423E+06	6,331E+02	3,143E+03	4,712E+06	3,166E+02
2038	1,125E+04	9,009E+06	6,053E+02	3,005E+03	4,504E+06	3,026E+02
2039	1,076E+04	8,612E+06	5,787E+02	2,873E+03	4,306E+06	2,893E+02
2040	1,028E+04	8,233E+06	5,532E+02	2,746E+03	4,117E+06	2,766E+02
2041	9,829E+03	7,871E+06	5,289E+02	2,626E+03	3,935E+06	2,644E+02

Results (Continued)

Year	Total landfill gas			Methane		
	(Mg/year)	(m ³ /year)	(av ft ³ /min)	(Mg/year)	(m ³ /year)	(av ft ³ /min)
2042	9,397E+03	7,525E+06	5,056E+02	2,510E+03	3,762E+06	2,528E+02
2043	8,983E+03	7,194E+06	4,833E+02	2,400E+03	3,597E+06	2,417E+02
2044	8,588E+03	6,877E+06	4,621E+02	2,294E+03	3,438E+06	2,310E+02
2045	8,210E+03	6,574E+06	4,417E+02	2,193E+03	3,287E+06	2,209E+02
2046	7,849E+03	6,285E+06	4,223E+02	2,097E+03	3,143E+06	2,111E+02
2047	7,504E+03	6,009E+06	4,037E+02	2,004E+03	3,004E+06	2,019E+02
2048	7,173E+03	5,744E+06	3,859E+02	1,916E+03	2,872E+06	1,930E+02
2049	6,858E+03	5,491E+06	3,690E+02	1,832E+03	2,746E+06	1,845E+02
2050	6,556E+03	5,250E+06	3,527E+02	1,751E+03	2,625E+06	1,764E+02
2051	6,268E+03	5,019E+06	3,372E+02	1,674E+03	2,509E+06	1,686E+02
2052	5,992E+03	4,798E+06	3,224E+02	1,600E+03	2,399E+06	1,612E+02
2053	5,728E+03	4,587E+06	3,082E+02	1,530E+03	2,293E+06	1,541E+02
2054	5,476E+03	4,385E+06	2,946E+02	1,463E+03	2,192E+06	1,473E+02
2055	5,235E+03	4,192E+06	2,817E+02	1,398E+03	2,096E+06	1,408E+02
2056	5,005E+03	4,008E+06	2,693E+02	1,337E+03	2,004E+06	1,346E+02
2057	4,785E+03	3,831E+06	2,574E+02	1,278E+03	1,916E+06	1,287E+02
2058	4,574E+03	3,663E+06	2,461E+02	1,222E+03	1,831E+06	1,230E+02
2059	4,373E+03	3,501E+06	2,353E+02	1,168E+03	1,751E+06	1,176E+02
2060	4,180E+03	3,347E+06	2,249E+02	1,117E+03	1,674E+06	1,125E+02
2061	3,996E+03	3,200E+06	2,150E+02	1,067E+03	1,600E+06	1,075E+02
2062	3,821E+03	3,059E+06	2,056E+02	1,020E+03	1,530E+06	1,028E+02
2063	3,652E+03	2,925E+06	1,965E+02	9,756E+02	1,462E+06	9,825E+01
2064	3,492E+03	2,796E+06	1,879E+02	9,327E+02	1,398E+06	9,393E+01
2065	3,338E+03	2,673E+06	1,796E+02	8,916E+02	1,336E+06	8,980E+01
2066	3,191E+03	2,555E+06	1,717E+02	8,524E+02	1,278E+06	8,585E+01
2067	3,051E+03	2,443E+06	1,641E+02	8,149E+02	1,221E+06	8,207E+01
2068	2,917E+03	2,335E+06	1,569E+02	7,790E+02	1,168E+06	7,846E+01
2069	2,788E+03	2,233E+06	1,500E+02	7,447E+02	1,116E+06	7,501E+01
2070	2,665E+03	2,134E+06	1,434E+02	7,120E+02	1,067E+06	7,170E+01
2071	2,548E+03	2,040E+06	1,371E+02	6,806E+02	1,020E+06	6,855E+01
2072	2,436E+03	1,951E+06	1,311E+02	6,507E+02	9,753E+05	6,553E+01
2073	2,329E+03	1,865E+06	1,253E+02	6,221E+02	9,324E+05	6,265E+01
2074	2,226E+03	1,783E+06	1,198E+02	5,947E+02	8,914E+05	5,989E+01
2075	2,128E+03	1,704E+06	1,145E+02	5,685E+02	8,522E+05	5,726E+01
2076	2,035E+03	1,629E+06	1,095E+02	5,435E+02	8,147E+05	5,474E+01
2077	1,945E+03	1,558E+06	1,047E+02	5,196E+02	7,788E+05	5,233E+01
2078	1,860E+03	1,489E+06	1,001E+02	4,967E+02	7,446E+05	5,003E+01
2079	1,778E+03	1,424E+06	9,565E+01	4,749E+02	7,118E+05	4,783E+01
2080	1,700E+03	1,361E+06	9,144E+01	4,540E+02	6,805E+05	4,572E+01
2081	1,625E+03	1,301E+06	8,742E+01	4,340E+02	6,505E+05	4,371E+01
2082	1,553E+03	1,244E+06	8,357E+01	4,149E+02	6,219E+05	4,179E+01
2083	1,485E+03	1,189E+06	7,989E+01	3,966E+02	5,945E+05	3,995E+01
2084	1,420E+03	1,137E+06	7,638E+01	3,792E+02	5,684E+05	3,819E+01
2085	1,357E+03	1,087E+06	7,302E+01	3,625E+02	5,434E+05	3,651E+01
2086	1,297E+03	1,039E+06	6,980E+01	3,466E+02	5,195E+05	3,490E+01
2087	1,240E+03	9,932E+05	6,673E+01	3,313E+02	4,966E+05	3,337E+01
2088	1,186E+03	9,495E+05	6,380E+01	3,167E+02	4,748E+05	3,190E+01
2089	1,134E+03	9,077E+05	6,099E+01	3,028E+02	4,539E+05	3,049E+01
2090	1,084E+03	8,678E+05	5,831E+01	2,895E+02	4,339E+05	2,915E+01
2091	1,036E+03	8,296E+05	5,574E+01	2,767E+02	4,148E+05	2,787E+01
2092	9,904E+02	7,931E+05	5,329E+01	2,646E+02	3,965E+05	2,664E+01

Results (Continued)

Year	Total landfill gas			Methane		
	(Mg/year)	(m ³ /year)	(av ft ³ /min)	(Mg/year)	(m ³ /year)	(av ft ³ /min)
2093	9,468E+02	7,582E+05	5,094E+01	2,529E+02	3,791E+05	2,547E+01
2094	9,052E+02	7,248E+05	4,870E+01	2,418E+02	3,624E+05	2,435E+01
2095	8,654E+02	6,929E+05	4,656E+01	2,311E+02	3,465E+05	2,328E+01
2096	8,273E+02	6,624E+05	4,451E+01	2,210E+02	3,312E+05	2,225E+01
2097	7,909E+02	6,333E+05	4,255E+01	2,113E+02	3,166E+05	2,128E+01
2098	7,561E+02	6,054E+05	4,068E+01	2,020E+02	3,027E+05	2,034E+01
2099	7,228E+02	5,788E+05	3,889E+01	1,931E+02	2,894E+05	1,944E+01
2100	6,910E+02	5,533E+05	3,718E+01	1,846E+02	2,767E+05	1,859E+01
2101	6,606E+02	5,290E+05	3,554E+01	1,765E+02	2,645E+05	1,777E+01
2102	6,315E+02	5,057E+05	3,398E+01	1,687E+02	2,528E+05	1,699E+01
2103	6,037E+02	4,834E+05	3,248E+01	1,613E+02	2,417E+05	1,624E+01
2104	5,772E+02	4,622E+05	3,105E+01	1,542E+02	2,311E+05	1,553E+01
2105	5,518E+02	4,418E+05	2,969E+01	1,474E+02	2,209E+05	1,484E+01
2106	5,275E+02	4,224E+05	2,838E+01	1,409E+02	2,112E+05	1,419E+01
2107	5,043E+02	4,038E+05	2,713E+01	1,347E+02	2,019E+05	1,357E+01
2108	4,821E+02	3,860E+05	2,594E+01	1,288E+02	1,930E+05	1,297E+01
2109	4,609E+02	3,691E+05	2,480E+01	1,231E+02	1,845E+05	1,240E+01
2110	4,406E+02	3,528E+05	2,371E+01	1,177E+02	1,764E+05	1,185E+01
2111	4,212E+02	3,373E+05	2,266E+01	1,125E+02	1,686E+05	1,133E+01
2112	4,027E+02	3,224E+05	2,167E+01	1,076E+02	1,612E+05	1,083E+01
2113	3,850E+02	3,083E+05	2,071E+01	1,028E+02	1,541E+05	1,036E+01
2114	3,680E+02	2,947E+05	1,980E+01	9,830E+01	1,473E+05	9,900E+00
2115	3,518E+02	2,817E+05	1,893E+01	9,398E+01	1,409E+05	9,465E+00
2116	3,363E+02	2,693E+05	1,810E+01	8,984E+01	1,347E+05	9,048E+00
2117	3,215E+02	2,575E+05	1,730E+01	8,589E+01	1,287E+05	8,650E+00
2118	3,074E+02	2,461E+05	1,654E+01	8,211E+01	1,231E+05	8,269E+00
2119	2,939E+02	2,353E+05	1,581E+01	7,850E+01	1,177E+05	7,905E+00
2120	2,809E+02	2,250E+05	1,512E+01	7,504E+01	1,125E+05	7,558E+00
2121	2,686E+02	2,151E+05	1,445E+01	7,174E+01	1,075E+05	7,225E+00
2122	2,568E+02	2,056E+05	1,381E+01	6,858E+01	1,028E+05	6,907E+00
2123	2,455E+02	1,966E+05	1,321E+01	6,557E+01	9,828E+04	6,603E+00
2124	2,347E+02	1,879E+05	1,263E+01	6,268E+01	9,395E+04	6,313E+00
2125	2,243E+02	1,796E+05	1,207E+01	5,992E+01	8,982E+04	6,035E+00
2126	2,145E+02	1,717E+05	1,154E+01	5,729E+01	8,587E+04	5,769E+00
2127	2,050E+02	1,642E+05	1,103E+01	5,476E+01	8,209E+04	5,515E+00
2128	1,960E+02	1,570E+05	1,055E+01	5,236E+01	7,848E+04	5,273E+00
2129	1,874E+02	1,500E+05	1,008E+01	5,005E+01	7,502E+04	5,041E+00
2130	1,791E+02	1,434E+05	9,638E+00	4,785E+01	7,172E+04	4,819E+00
2131	1,713E+02	1,371E+05	9,214E+00	4,574E+01	6,857E+04	4,607E+00
2132	1,637E+02	1,311E+05	8,808E+00	4,373E+01	6,555E+04	4,404E+00

Results (Continued)

Year	Carbon dioxide			NMOC		
	(Mg/year)	(m ³ /year)	(av ft ³ /min)	(Mg/year)	(m ³ /year)	(av ft ³ /min)
1992	0	0	0	0	0	0
1993	2,309E+03	1,261E+06	8,475E+01	5,426E+00	1,514E+03	1,017E-01
1994	4,905E+03	2,680E+06	1,800E+02	1,153E+01	3,215E+03	2,160E-01
1995	8,322E+03	4,546E+06	3,055E+02	1,956E+01	5,456E+03	3,666E-01
1996	1,175E+04	6,422E+06	4,315E+02	2,762E+01	7,706E+03	5,178E-01
1997	1,514E+04	8,274E+06	5,559E+02	3,559E+01	9,928E+03	6,671E-01
1998	1,949E+04	1,065E+07	7,155E+02	4,581E+01	1,278E+04	8,586E-01
1999	2,723E+04	1,487E+07	9,993E+02	6,398E+01	1,785E+04	1,199E+00
2000	3,545E+04	1,936E+07	1,301E+03	8,329E+01	2,324E+04	1,561E+00
2001	4,358E+04	2,381E+07	1,600E+03	1,024E+02	2,857E+04	1,920E+00
2002	4,166E+04	2,276E+07	1,529E+03	9,790E+01	2,731E+04	1,835E+00
2003	3,983E+04	2,176E+07	1,462E+03	9,359E+01	2,611E+04	1,754E+00
2004	3,808E+04	2,080E+07	1,398E+03	8,948E+01	2,496E+04	1,677E+00
2005	3,640E+04	1,989E+07	1,336E+03	8,554E+01	2,386E+04	1,603E+00
2006	3,480E+04	1,901E+07	1,277E+03	8,177E+01	2,281E+04	1,533E+00
2007	3,327E+04	1,817E+07	1,221E+03	7,818E+01	2,181E+04	1,465E+00
2008	3,181E+04	1,738E+07	1,167E+03	7,474E+01	2,085E+04	1,401E+00
2009	3,041E+04	1,661E+07	1,116E+03	7,145E+01	1,993E+04	1,339E+00
2010	2,907E+04	1,588E+07	1,067E+03	6,830E+01	1,906E+04	1,280E+00
2011	2,779E+04	1,518E+07	1,020E+03	6,530E+01	1,822E+04	1,224E+00
2012	2,657E+04	1,451E+07	9,751E+02	6,243E+01	1,742E+04	1,170E+00
2013	2,540E+04	1,387E+07	9,322E+02	5,968E+01	1,665E+04	1,119E+00
2014	2,428E+04	1,326E+07	8,912E+02	5,705E+01	1,592E+04	1,069E+00
2015	2,321E+04	1,268E+07	8,520E+02	5,454E+01	1,522E+04	1,022E+00
2016	2,219E+04	1,212E+07	8,145E+02	5,214E+01	1,455E+04	9,774E-01
2017	2,121E+04	1,159E+07	7,786E+02	4,985E+01	1,391E+04	9,344E-01
2018	2,028E+04	1,108E+07	7,444E+02	4,765E+01	1,329E+04	8,933E-01
2019	1,939E+04	1,059E+07	7,116E+02	4,556E+01	1,271E+04	8,540E-01
2020	1,853E+04	1,013E+07	6,803E+02	4,355E+01	1,215E+04	8,164E-01
2021	1,772E+04	9,680E+06	6,504E+02	4,164E+01	1,162E+04	7,805E-01
2022	1,694E+04	9,254E+06	6,218E+02	3,980E+01	1,110E+04	7,461E-01
2023	1,619E+04	8,847E+06	5,944E+02	3,805E+01	1,062E+04	7,133E-01
2024	1,548E+04	8,457E+06	5,682E+02	3,638E+01	1,015E+04	6,819E-01
2025	1,480E+04	8,085E+06	5,432E+02	3,478E+01	9,702E+03	6,519E-01
2026	1,415E+04	7,729E+06	5,193E+02	3,325E+01	9,275E+03	6,232E-01
2027	1,353E+04	7,389E+06	4,965E+02	3,178E+01	8,867E+03	5,958E-01
2028	1,293E+04	7,064E+06	4,746E+02	3,039E+01	8,477E+03	5,696E-01
2029	1,236E+04	6,753E+06	4,538E+02	2,905E+01	8,104E+03	5,445E-01
2030	1,182E+04	6,456E+06	4,338E+02	2,777E+01	7,747E+03	5,205E-01
2031	1,130E+04	6,172E+06	4,147E+02	2,655E+01	7,406E+03	4,976E-01
2032	1,080E+04	5,900E+06	3,965E+02	2,538E+01	7,081E+03	4,757E-01
2033	1,033E+04	5,641E+06	3,790E+02	2,426E+01	6,769E+03	4,548E-01
2034	9,871E+03	5,393E+06	3,623E+02	2,320E+01	6,471E+03	4,348E-01
2035	9,437E+03	5,155E+06	3,464E+02	2,218E+01	6,186E+03	4,157E-01
2036	9,022E+03	4,929E+06	3,311E+02	2,120E+01	5,914E+03	3,974E-01
2037	8,625E+03	4,712E+06	3,166E+02	2,027E+01	5,654E+03	3,799E-01
2038	8,245E+03	4,504E+06	3,026E+02	1,937E+01	5,405E+03	3,632E-01
2039	7,882E+03	4,306E+06	2,893E+02	1,852E+01	5,167E+03	3,472E-01
2040	7,535E+03	4,117E+06	2,766E+02	1,771E+01	4,940E+03	3,319E-01
2041	7,204E+03	3,935E+06	2,644E+02	1,693E+01	4,723E+03	3,173E-01

Results (Continued)

Year	Carbon dioxide			NMOC		
	(Mg/year)	(m ³ /year)	(av ft ³ /min)	(Mg/year)	(m ³ /year)	(av ft ³ /min)
2042	6,887E+03	3,762E+06	2,528E+02	1,618E+01	4,515E+03	3,033E-01
2043	6,584E+03	3,597E+06	2,417E+02	1,547E+01	4,316E+03	2,900E-01
2044	6,294E+03	3,438E+06	2,310E+02	1,479E+01	4,126E+03	2,772E-01
2045	6,017E+03	3,287E+06	2,209E+02	1,414E+01	3,945E+03	2,650E-01
2046	5,752E+03	3,143E+06	2,111E+02	1,352E+01	3,771E+03	2,534E-01
2047	5,499E+03	3,004E+06	2,019E+02	1,292E+01	3,605E+03	2,422E-01
2048	5,257E+03	2,872E+06	1,930E+02	1,235E+01	3,446E+03	2,316E-01
2049	5,026E+03	2,746E+06	1,845E+02	1,181E+01	3,295E+03	2,214E-01
2050	4,805E+03	2,625E+06	1,764E+02	1,129E+01	3,150E+03	2,116E-01
2051	4,593E+03	2,509E+06	1,686E+02	1,079E+01	3,011E+03	2,023E-01
2052	4,391E+03	2,399E+06	1,612E+02	1,032E+01	2,879E+03	1,934E-01
2053	4,198E+03	2,293E+06	1,541E+02	9,865E+00	2,752E+03	1,849E-01
2054	4,013E+03	2,192E+06	1,473E+02	9,431E+00	2,631E+03	1,768E-01
2055	3,837E+03	2,096E+06	1,408E+02	9,016E+00	2,515E+03	1,690E-01
2056	3,668E+03	2,004E+06	1,346E+02	8,619E+00	2,405E+03	1,616E-01
2057	3,507E+03	1,916E+06	1,287E+02	8,240E+00	2,299E+03	1,545E-01
2058	3,352E+03	1,831E+06	1,230E+02	7,877E+00	2,198E+03	1,477E-01
2059	3,205E+03	1,751E+06	1,176E+02	7,531E+00	2,101E+03	1,412E-01
2060	3,064E+03	1,674E+06	1,125E+02	7,199E+00	2,008E+03	1,349E-01
2061	2,929E+03	1,600E+06	1,075E+02	6,882E+00	1,920E+03	1,290E-01
2062	2,800E+03	1,530E+06	1,028E+02	6,580E+00	1,836E+03	1,233E-01
2063	2,677E+03	1,462E+06	9,825E+01	6,290E+00	1,755E+03	1,179E-01
2064	2,559E+03	1,398E+06	9,393E+01	6,013E+00	1,678E+03	1,127E-01
2065	2,446E+03	1,336E+06	8,980E+01	5,749E+00	1,604E+03	1,078E-01
2066	2,339E+03	1,278E+06	8,585E+01	5,496E+00	1,533E+03	1,030E-01
2067	2,236E+03	1,221E+06	8,207E+01	5,254E+00	1,466E+03	9,848E-02
2068	2,137E+03	1,168E+06	7,846E+01	5,023E+00	1,401E+03	9,415E-02
2069	2,043E+03	1,116E+06	7,501E+01	4,802E+00	1,340E+03	9,001E-02
2070	1,954E+03	1,067E+06	7,170E+01	4,590E+00	1,281E+03	8,605E-02
2071	1,868E+03	1,020E+06	6,855E+01	4,388E+00	1,224E+03	8,226E-02
2072	1,785E+03	9,753E+05	6,553E+01	4,195E+00	1,170E+03	7,864E-02
2073	1,707E+03	9,324E+05	6,265E+01	4,011E+00	1,119E+03	7,518E-02
2074	1,632E+03	8,914E+05	5,989E+01	3,834E+00	1,070E+03	7,187E-02
2075	1,560E+03	8,522E+05	5,726E+01	3,666E+00	1,023E+03	6,871E-02
2076	1,491E+03	8,147E+05	5,474E+01	3,504E+00	9,776E+02	6,569E-02
2077	1,426E+03	7,788E+05	5,233E+01	3,350E+00	9,346E+02	6,280E-02
2078	1,363E+03	7,446E+05	5,003E+01	3,203E+00	8,935E+02	6,003E-02
2079	1,303E+03	7,118E+05	4,783E+01	3,062E+00	8,542E+02	5,739E-02
2080	1,246E+03	6,805E+05	4,572E+01	2,927E+00	8,166E+02	5,487E-02
2081	1,191E+03	6,505E+05	4,371E+01	2,798E+00	7,806E+02	5,245E-02
2082	1,138E+03	6,219E+05	4,179E+01	2,675E+00	7,463E+02	5,014E-02
2083	1,088E+03	5,945E+05	3,995E+01	2,557E+00	7,134E+02	4,794E-02
2084	1,040E+03	5,684E+05	3,819E+01	2,445E+00	6,821E+02	4,583E-02
2085	9,946E+02	5,434E+05	3,651E+01	2,337E+00	6,520E+02	4,381E-02
2086	9,509E+02	5,195E+05	3,490E+01	2,234E+00	6,234E+02	4,188E-02
2087	9,090E+02	4,966E+05	3,337E+01	2,136E+00	5,959E+02	4,004E-02
2088	8,690E+02	4,748E+05	3,190E+01	2,042E+00	5,697E+02	3,828E-02
2089	8,308E+02	4,539E+05	3,049E+01	1,952E+00	5,446E+02	3,659E-02
2090	7,942E+02	4,339E+05	2,915E+01	1,866E+00	5,207E+02	3,498E-02
2091	7,593E+02	4,148E+05	2,787E+01	1,784E+00	4,978E+02	3,344E-02
2092	7,259E+02	3,965E+05	2,664E+01	1,706E+00	4,759E+02	3,197E-02

Results (Continued)

Year	Carbon dioxide			NMOC		
	(Mg/year)	(m ³ /year)	(av ft ³ /min)	(Mg/year)	(m ³ /year)	(av ft ³ /min)
2093	6,939E+02	3,791E+05	2,547E+01	1,631E+00	4,549E+02	3,057E-02
2094	6,634E+02	3,624E+05	2,435E+01	1,559E+00	4,349E+02	2,922E-02
2095	6,342E+02	3,465E+05	2,328E+01	1,490E+00	4,158E+02	2,793E-02
2096	6,063E+02	3,312E+05	2,225E+01	1,425E+00	3,975E+02	2,671E-02
2097	5,796E+02	3,166E+05	2,128E+01	1,362E+00	3,800E+02	2,553E-02
2098	5,541E+02	3,027E+05	2,034E+01	1,302E+00	3,633E+02	2,441E-02
2099	5,297E+02	2,894E+05	1,944E+01	1,245E+00	3,473E+02	2,333E-02
2100	5,064E+02	2,767E+05	1,859E+01	1,190E+00	3,320E+02	2,231E-02
2101	4,841E+02	2,645E+05	1,777E+01	1,138E+00	3,174E+02	2,132E-02
2102	4,628E+02	2,528E+05	1,699E+01	1,088E+00	3,034E+02	2,039E-02
2103	4,425E+02	2,417E+05	1,624E+01	1,040E+00	2,901E+02	1,949E-02
2104	4,230E+02	2,311E+05	1,553E+01	9,940E-01	2,773E+02	1,863E-02
2105	4,044E+02	2,209E+05	1,484E+01	9,502E-01	2,651E+02	1,781E-02
2106	3,866E+02	2,112E+05	1,419E+01	9,084E-01	2,534E+02	1,703E-02
2107	3,696E+02	2,019E+05	1,357E+01	8,685E-01	2,423E+02	1,628E-02
2108	3,533E+02	1,930E+05	1,297E+01	8,302E-01	2,316E+02	1,556E-02
2109	3,378E+02	1,845E+05	1,240E+01	7,937E-01	2,214E+02	1,488E-02
2110	3,229E+02	1,764E+05	1,185E+01	7,588E-01	2,117E+02	1,422E-02
2111	3,087E+02	1,686E+05	1,133E+01	7,254E-01	2,024E+02	1,360E-02
2112	2,951E+02	1,612E+05	1,083E+01	6,935E-01	1,935E+02	1,300E-02
2113	2,821E+02	1,541E+05	1,036E+01	6,630E-01	1,850E+02	1,243E-02
2114	2,697E+02	1,473E+05	9,900E+00	6,338E-01	1,768E+02	1,188E-02
2115	2,579E+02	1,409E+05	9,465E+00	6,059E-01	1,690E+02	1,136E-02
2116	2,465E+02	1,347E+05	9,048E+00	5,792E-01	1,616E+02	1,086E-02
2117	2,357E+02	1,287E+05	8,650E+00	5,538E-01	1,545E+02	1,038E-02
2118	2,253E+02	1,231E+05	8,269E+00	5,294E-01	1,477E+02	9,923E-03
2119	2,154E+02	1,177E+05	7,905E+00	5,061E-01	1,412E+02	9,487E-03
2120	2,059E+02	1,125E+05	7,558E+00	4,838E-01	1,350E+02	9,069E-03
2121	1,968E+02	1,075E+05	7,225E+00	4,625E-01	1,290E+02	8,670E-03
2122	1,882E+02	1,028E+05	6,907E+00	4,422E-01	1,234E+02	8,289E-03
2123	1,799E+02	9,828E+04	6,603E+00	4,227E-01	1,179E+02	7,924E-03
2124	1,720E+02	9,395E+04	6,313E+00	4,041E-01	1,127E+02	7,575E-03
2125	1,644E+02	8,982E+04	6,035E+00	3,863E-01	1,078E+02	7,242E-03
2126	1,572E+02	8,587E+04	5,769E+00	3,693E-01	1,030E+02	6,923E-03
2127	1,503E+02	8,209E+04	5,515E+00	3,531E-01	9,851E+01	6,619E-03
2128	1,436E+02	7,848E+04	5,273E+00	3,376E-01	9,417E+01	6,327E-03
2129	1,373E+02	7,502E+04	5,041E+00	3,227E-01	9,003E+01	6,049E-03
2130	1,313E+02	7,172E+04	4,819E+00	3,085E-01	8,607E+01	5,783E-03
2131	1,255E+02	6,857E+04	4,607E+00	2,949E-01	8,228E+01	5,528E-03
2132	1,200E+02	6,555E+04	4,404E+00	2,819E-01	7,866E+01	5,285E-03



Summary Report

Landfill Name or Identifier: Phase IA - LET de Ste-Sophie

Date: 11 mai, 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_{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 conventional 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	2001	
Landfill Closure Year (with 80-year limit)	2005	
Actual Closure Year (without limit)	2005	
Have Model Calculate Closure Year?	No	
Waste Design Capacity	3 814 840	<i>megagrams</i>

MODEL PARAMETERS

Methane Generation Rate, k	0,100	<i>year⁻¹</i>
Potential Methane Generation Capacity, L ₀	135	<i>m³/Mg</i>
NMOC Concentration	600	<i>ppmv as hexane</i>
Methane Content	50	<i>% by volume</i>

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)
2001	1 040 802	1 144 882	0	0
2002	961 992	1 058 191	1 040 802	1 144 882
2003	746 931	821 624	2 002 794	2 203 073
2004	792 896	872 186	2 749 725	3 024 698
2005	125 595	138 155	3 542 621	3 896 883
2006	0	0	3 668 216	4 035 038
2007	0	0	3 668 216	4 035 038
2008	0	0	3 668 216	4 035 038
2009	0	0	3 668 216	4 035 038
2010	0	0	3 668 216	4 035 038
2011	0	0	3 668 216	4 035 038
2012	0	0	3 668 216	4 035 038
2013	0	0	3 668 216	4 035 038
2014	0	0	3 668 216	4 035 038
2015	0	0	3 668 216	4 035 038
2016	0	0	3 668 216	4 035 038
2017	0	0	3 668 216	4 035 038
2018	0	0	3 668 216	4 035 038
2019	0	0	3 668 216	4 035 038
2020	0	0	3 668 216	4 035 038
2021	0	0	3 668 216	4 035 038
2022	0	0	3 668 216	4 035 038
2023	0	0	3 668 216	4 035 038
2024	0	0	3 668 216	4 035 038
2025	0	0	3 668 216	4 035 038
2026	0	0	3 668 216	4 035 038
2027	0	0	3 668 216	4 035 038
2028	0	0	3 668 216	4 035 038
2029	0	0	3 668 216	4 035 038
2030	0	0	3 668 216	4 035 038
2031	0	0	3 668 216	4 035 038
2032	0	0	3 668 216	4 035 038
2033	0	0	3 668 216	4 035 038
2034	0	0	3 668 216	4 035 038
2035	0	0	3 668 216	4 035 038
2036	0	0	3 668 216	4 035 038
2037	0	0	3 668 216	4 035 038
2038	0	0	3 668 216	4 035 038
2039	0	0	3 668 216	4 035 038
2040	0	0	3 668 216	4 035 038

WASTE ACCEPTANCE RATES (Continued)

Year	Waste Accepted		Waste-In-Place	
	(Mg/year)	(short tons/year)	(Mg)	(short tons)
2041	0	0	3 668 216	4 035 038
2042	0	0	3 668 216	4 035 038
2043	0	0	3 668 216	4 035 038
2044	0	0	3 668 216	4 035 038
2045	0	0	3 668 216	4 035 038
2046	0	0	3 668 216	4 035 038
2047	0	0	3 668 216	4 035 038
2048	0	0	3 668 216	4 035 038
2049	0	0	3 668 216	4 035 038
2050	0	0	3 668 216	4 035 038
2051	0	0	3 668 216	4 035 038
2052	0	0	3 668 216	4 035 038
2053	0	0	3 668 216	4 035 038
2054	0	0	3 668 216	4 035 038
2055	0	0	3 668 216	4 035 038
2056	0	0	3 668 216	4 035 038
2057	0	0	3 668 216	4 035 038
2058	0	0	3 668 216	4 035 038
2059	0	0	3 668 216	4 035 038
2060	0	0	3 668 216	4 035 038
2061	0	0	3 668 216	4 035 038
2062	0	0	3 668 216	4 035 038
2063	0	0	3 668 216	4 035 038
2064	0	0	3 668 216	4 035 038
2065	0	0	3 668 216	4 035 038
2066	0	0	3 668 216	4 035 038
2067	0	0	3 668 216	4 035 038
2068	0	0	3 668 216	4 035 038
2069	0	0	3 668 216	4 035 038
2070	0	0	3 668 216	4 035 038
2071	0	0	3 668 216	4 035 038
2072	0	0	3 668 216	4 035 038
2073	0	0	3 668 216	4 035 038
2074	0	0	3 668 216	4 035 038
2075	0	0	3 668 216	4 035 038
2076	0	0	3 668 216	4 035 038
2077	0	0	3 668 216	4 035 038
2078	0	0	3 668 216	4 035 038
2079	0	0	3 668 216	4 035 038
2080	0	0	3 668 216	4 035 038

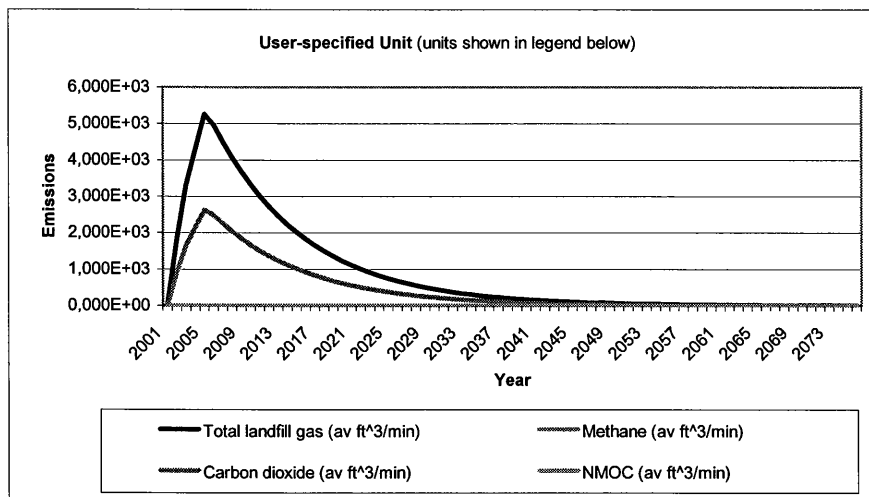
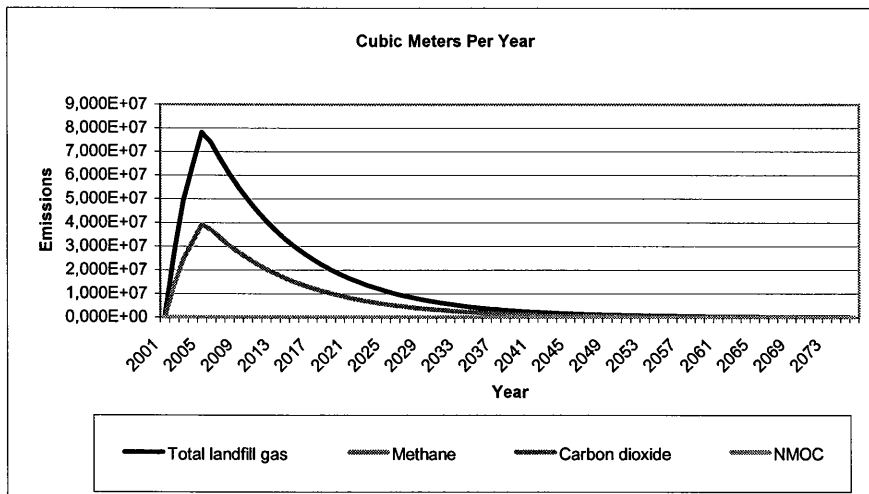
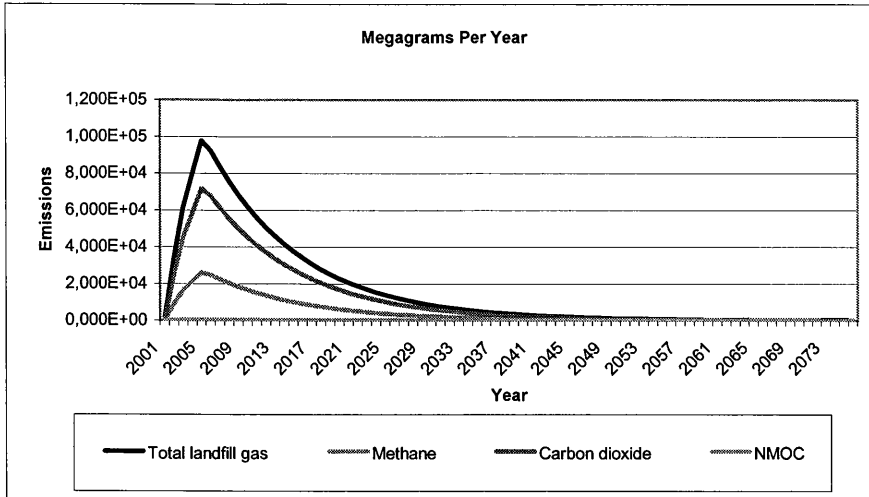
Pollutant Parameters

		Gas / Pollutant Default Parameters:		User-specified Pollutant Parameters:	
		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)

<i>Gas / Pollutant Default Parameters:</i>				<i>User-specified Pollutant Parameters:</i>	
	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		
	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



Results

Year	Total landfill gas			Methane		
	(Mg/year)	(m ³ /year)	(av ft ³ /min)	(Mg/year)	(m ³ /year)	(av ft ³ /min)
2001	0	0	0	0	0	0
2002	3,356E+04	2,688E+07	1,806E+03	8,965E+03	1,344E+07	9,029E+02
2003	6,139E+04	4,916E+07	3,303E+03	1,640E+04	2,458E+07	1,652E+03
2004	7,964E+04	6,377E+07	4,285E+03	2,127E+04	3,188E+07	2,142E+03
2005	9,763E+04	7,818E+07	5,253E+03	2,608E+04	3,909E+07	2,626E+03
2006	9,239E+04	7,398E+07	4,971E+03	2,468E+04	3,699E+07	2,485E+03
2007	8,360E+04	6,694E+07	4,498E+03	2,233E+04	3,347E+07	2,249E+03
2008	7,564E+04	6,057E+07	4,070E+03	2,020E+04	3,028E+07	2,035E+03
2009	6,844E+04	5,481E+07	3,682E+03	1,828E+04	2,740E+07	1,841E+03
2010	6,193E+04	4,959E+07	3,332E+03	1,654E+04	2,479E+07	1,666E+03
2011	5,604E+04	4,487E+07	3,015E+03	1,497E+04	2,244E+07	1,507E+03
2012	5,070E+04	4,060E+07	2,728E+03	1,354E+04	2,030E+07	1,364E+03
2013	4,588E+04	3,674E+07	2,468E+03	1,225E+04	1,837E+07	1,234E+03
2014	4,151E+04	3,324E+07	2,233E+03	1,109E+04	1,662E+07	1,117E+03
2015	3,756E+04	3,008E+07	2,021E+03	1,003E+04	1,504E+07	1,010E+03
2016	3,399E+04	2,722E+07	1,829E+03	9,078E+03	1,361E+07	9,143E+02
2017	3,075E+04	2,463E+07	1,655E+03	8,214E+03	1,231E+07	8,273E+02
2018	2,783E+04	2,228E+07	1,497E+03	7,433E+03	1,114E+07	7,486E+02
2019	2,518E+04	2,016E+07	1,355E+03	6,725E+03	1,008E+07	6,773E+02
2020	2,278E+04	1,824E+07	1,226E+03	6,085E+03	9,122E+06	6,129E+02
2021	2,061E+04	1,651E+07	1,109E+03	5,506E+03	8,253E+06	5,546E+02
2022	1,865E+04	1,494E+07	1,004E+03	4,982E+03	7,468E+06	5,018E+02
2023	1,688E+04	1,351E+07	9,081E+02	4,508E+03	6,757E+06	4,540E+02
2024	1,527E+04	1,223E+07	8,216E+02	4,079E+03	6,114E+06	4,108E+02
2025	1,382E+04	1,106E+07	7,435E+02	3,691E+03	5,532E+06	3,717E+02
2026	1,250E+04	1,001E+07	6,727E+02	3,340E+03	5,006E+06	3,364E+02
2027	1,131E+04	9,059E+06	6,087E+02	3,022E+03	4,530E+06	3,043E+02
2028	1,024E+04	8,197E+06	5,508E+02	2,734E+03	4,099E+06	2,754E+02
2029	9,263E+03	7,417E+06	4,984E+02	2,474E+03	3,709E+06	2,492E+02
2030	8,381E+03	6,711E+06	4,509E+02	2,239E+03	3,356E+06	2,255E+02
2031	7,584E+03	6,073E+06	4,080E+02	2,026E+03	3,036E+06	2,040E+02
2032	6,862E+03	5,495E+06	3,692E+02	1,833E+03	2,747E+06	1,846E+02
2033	6,209E+03	4,972E+06	3,341E+02	1,658E+03	2,486E+06	1,670E+02
2034	5,618E+03	4,499E+06	3,023E+02	1,501E+03	2,249E+06	1,511E+02
2035	5,083E+03	4,071E+06	2,735E+02	1,358E+03	2,035E+06	1,368E+02
2036	4,600E+03	3,683E+06	2,475E+02	1,229E+03	1,842E+06	1,237E+02
2037	4,162E+03	3,333E+06	2,239E+02	1,112E+03	1,666E+06	1,120E+02
2038	3,766E+03	3,016E+06	2,026E+02	1,006E+03	1,508E+06	1,013E+02
2039	3,408E+03	2,729E+06	1,833E+02	9,102E+02	1,364E+06	9,167E+01
2040	3,083E+03	2,469E+06	1,659E+02	8,236E+02	1,234E+06	8,294E+01
2041	2,790E+03	2,234E+06	1,501E+02	7,452E+02	1,117E+06	7,505E+01
2042	2,524E+03	2,021E+06	1,358E+02	6,743E+02	1,011E+06	6,791E+01
2043	2,284E+03	1,829E+06	1,229E+02	6,101E+02	9,145E+05	6,145E+01
2044	2,067E+03	1,655E+06	1,112E+02	5,521E+02	8,275E+05	5,560E+01
2045	1,870E+03	1,497E+06	1,006E+02	4,995E+02	7,487E+05	5,031E+01
2046	1,692E+03	1,355E+06	9,104E+01	4,520E+02	6,775E+05	4,552E+01
2047	1,531E+03	1,226E+06	8,238E+01	4,090E+02	6,130E+05	4,119E+01
2048	1,385E+03	1,109E+06	7,454E+01	3,701E+02	5,547E+05	3,727E+01
2049	1,254E+03	1,004E+06	6,744E+01	3,348E+02	5,019E+05	3,372E+01
2050	1,134E+03	9,083E+05	6,103E+01	3,030E+02	4,541E+05	3,051E+01

Results (Continued)

Year	Total landfill gas			Methane		
	(Mg/year)	(m ³ /year)	(av ft ³ /min)	(Mg/year)	(m ³ /year)	(av ft ³ /min)
2051	1,026E+03	8,218E+05	5,522E+01	2,741E+02	4,109E+05	2,761E+01
2052	9,287E+02	7,436E+05	4,996E+01	2,481E+02	3,718E+05	2,498E+01
2053	8,403E+02	6,729E+05	4,521E+01	2,244E+02	3,364E+05	2,260E+01
2054	7,603E+02	6,088E+05	4,091E+01	2,031E+02	3,044E+05	2,045E+01
2055	6,880E+02	5,509E+05	3,701E+01	1,838E+02	2,754E+05	1,851E+01
2056	6,225E+02	4,985E+05	3,349E+01	1,663E+02	2,492E+05	1,675E+01
2057	5,633E+02	4,510E+05	3,030E+01	1,505E+02	2,255E+05	1,515E+01
2058	5,097E+02	4,081E+05	2,742E+01	1,361E+02	2,041E+05	1,371E+01
2059	4,612E+02	3,693E+05	2,481E+01	1,232E+02	1,846E+05	1,241E+01
2060	4,173E+02	3,341E+05	2,245E+01	1,115E+02	1,671E+05	1,123E+01
2061	3,776E+02	3,023E+05	2,031E+01	1,009E+02	1,512E+05	1,016E+01
2062	3,416E+02	2,736E+05	1,838E+01	9,125E+01	1,368E+05	9,190E+00
2063	3,091E+02	2,475E+05	1,663E+01	8,257E+01	1,238E+05	8,316E+00
2064	2,797E+02	2,240E+05	1,505E+01	7,471E+01	1,120E+05	7,524E+00
2065	2,531E+02	2,027E+05	1,362E+01	6,760E+01	1,013E+05	6,808E+00
2066	2,290E+02	1,834E+05	1,232E+01	6,117E+01	9,169E+04	6,161E+00
2067	2,072E+02	1,659E+05	1,115E+01	5,535E+01	8,296E+04	5,574E+00
2068	1,875E+02	1,501E+05	1,009E+01	5,008E+01	7,507E+04	5,044E+00
2069	1,697E+02	1,358E+05	9,128E+00	4,532E+01	6,792E+04	4,564E+00
2070	1,535E+02	1,229E+05	8,259E+00	4,100E+01	6,146E+04	4,130E+00
2071	1,389E+02	1,112E+05	7,473E+00	3,710E+01	5,561E+04	3,737E+00
2072	1,257E+02	1,006E+05	6,762E+00	3,357E+01	5,032E+04	3,381E+00
2073	1,137E+02	9,106E+04	6,118E+00	3,038E+01	4,553E+04	3,059E+00
2074	1,029E+02	8,240E+04	5,536E+00	2,749E+01	4,120E+04	2,768E+00
2075	9,311E+01	7,456E+04	5,009E+00	2,487E+01	3,728E+04	2,505E+00
2076	8,425E+01	6,746E+04	4,533E+00	2,250E+01	3,373E+04	2,266E+00
2077	7,623E+01	6,104E+04	4,101E+00	2,036E+01	3,052E+04	2,051E+00
2078	6,897E+01	5,523E+04	3,711E+00	1,842E+01	2,762E+04	1,856E+00
2079	6,241E+01	4,998E+04	3,358E+00	1,667E+01	2,499E+04	1,679E+00
2080	5,647E+01	4,522E+04	3,038E+00	1,508E+01	2,261E+04	1,519E+00
2081	5,110E+01	4,092E+04	2,749E+00	1,365E+01	2,046E+04	1,375E+00
2082	4,624E+01	3,702E+04	2,488E+00	1,235E+01	1,851E+04	1,244E+00
2083	4,184E+01	3,350E+04	2,251E+00	1,117E+01	1,675E+04	1,125E+00
2084	3,785E+01	3,031E+04	2,037E+00	1,011E+01	1,516E+04	1,018E+00
2085	3,425E+01	2,743E+04	1,843E+00	9,149E+00	1,371E+04	9,214E-01
2086	3,099E+01	2,482E+04	1,667E+00	8,278E+00	1,241E+04	8,337E-01
2087	2,804E+01	2,246E+04	1,509E+00	7,491E+00	1,123E+04	7,544E-01
2088	2,537E+01	2,032E+04	1,365E+00	6,778E+00	1,016E+04	6,826E-01
2089	2,296E+01	1,839E+04	1,235E+00	6,133E+00	9,193E+03	6,176E-01
2090	2,077E+01	1,664E+04	1,118E+00	5,549E+00	8,318E+03	5,589E-01
2091	1,880E+01	1,505E+04	1,011E+00	5,021E+00	7,526E+03	5,057E-01
2092	1,701E+01	1,362E+04	9,151E-01	4,543E+00	6,810E+03	4,576E-01
2093	1,539E+01	1,232E+04	8,280E-01	4,111E+00	6,162E+03	4,140E-01
2094	1,393E+01	1,115E+04	7,492E-01	3,720E+00	5,576E+03	3,746E-01
2095	1,260E+01	1,009E+04	6,779E-01	3,366E+00	5,045E+03	3,390E-01
2096	1,140E+01	9,130E+03	6,134E-01	3,045E+00	4,565E+03	3,067E-01
2097	1,032E+01	8,261E+03	5,551E-01	2,756E+00	4,130E+03	2,775E-01
2098	9,335E+00	7,475E+03	5,022E-01	2,493E+00	3,737E+03	2,511E-01
2099	8,446E+00	6,763E+03	4,544E-01	2,256E+00	3,382E+03	2,272E-01
2100	7,643E+00	6,120E+03	4,112E-01	2,041E+00	3,060E+03	2,056E-01
2101	6,915E+00	5,537E+03	3,721E-01	1,847E+00	2,769E+03	1,860E-01

Results (Continued)

Year	Total landfill gas			Methane		
	(Mg/year)	(m ³ /year)	(av ft ³ /min)	(Mg/year)	(m ³ /year)	(av ft ³ /min)
2102	6,257E+00	5,011E+03	3,367E-01	1,671E+00	2,505E+03	1,683E-01
2103	5,662E+00	4,534E+03	3,046E-01	1,512E+00	2,267E+03	1,523E-01
2104	5,123E+00	4,102E+03	2,756E-01	1,368E+00	2,051E+03	1,378E-01
2105	4,635E+00	3,712E+03	2,494E-01	1,238E+00	1,856E+03	1,247E-01
2106	4,194E+00	3,359E+03	2,257E-01	1,120E+00	1,679E+03	1,128E-01
2107	3,795E+00	3,039E+03	2,042E-01	1,014E+00	1,520E+03	1,021E-01
2108	3,434E+00	2,750E+03	1,848E-01	9,173E-01	1,375E+03	9,238E-02
2109	3,107E+00	2,488E+03	1,672E-01	8,300E-01	1,244E+03	8,359E-02
2110	2,812E+00	2,251E+03	1,513E-01	7,510E-01	1,126E+03	7,563E-02
2111	2,544E+00	2,037E+03	1,369E-01	6,795E-01	1,019E+03	6,844E-02
2112	2,302E+00	1,843E+03	1,238E-01	6,149E-01	9,216E+02	6,192E-02
2113	2,083E+00	1,668E+03	1,121E-01	5,564E-01	8,339E+02	5,603E-02
2114	1,885E+00	1,509E+03	1,014E-01	5,034E-01	7,546E+02	5,070E-02
2115	1,705E+00	1,366E+03	9,175E-02	4,555E-01	6,828E+02	4,587E-02
2116	1,543E+00	1,236E+03	8,302E-02	4,122E-01	6,178E+02	4,151E-02
2117	1,396E+00	1,118E+03	7,512E-02	3,729E-01	5,590E+02	3,756E-02
2118	1,263E+00	1,012E+03	6,797E-02	3,374E-01	5,058E+02	3,398E-02
2119	1,143E+00	9,153E+02	6,150E-02	3,053E-01	4,577E+02	3,075E-02
2120	1,034E+00	8,282E+02	5,565E-02	2,763E-01	4,141E+02	2,782E-02
2121	9,359E-01	7,494E+02	5,035E-02	2,500E-01	3,747E+02	2,518E-02
2122	8,468E-01	6,781E+02	4,556E-02	2,262E-01	3,390E+02	2,278E-02
2123	7,662E-01	6,136E+02	4,123E-02	2,047E-01	3,068E+02	2,061E-02
2124	6,933E-01	5,552E+02	3,730E-02	1,852E-01	2,776E+02	1,865E-02
2125	6,273E-01	5,023E+02	3,375E-02	1,676E-01	2,512E+02	1,688E-02
2126	5,676E-01	4,545E+02	3,054E-02	1,516E-01	2,273E+02	1,527E-02
2127	5,136E-01	4,113E+02	2,763E-02	1,372E-01	2,056E+02	1,382E-02
2128	4,647E-01	3,721E+02	2,500E-02	1,241E-01	1,861E+02	1,250E-02
2129	4,205E-01	3,367E+02	2,263E-02	1,123E-01	1,684E+02	1,131E-02
2130	3,805E-01	3,047E+02	2,047E-02	1,016E-01	1,523E+02	1,024E-02
2131	3,443E-01	2,757E+02	1,852E-02	9,196E-02	1,378E+02	9,262E-03
2132	3,115E-01	2,495E+02	1,676E-02	8,321E-02	1,247E+02	8,381E-03
2133	2,819E-01	2,257E+02	1,517E-02	7,529E-02	1,129E+02	7,583E-03
2134	2,551E-01	2,042E+02	1,372E-02	6,813E-02	1,021E+02	6,861E-03
2135	2,308E-01	1,848E+02	1,242E-02	6,165E-02	9,240E+01	6,208E-03
2136	2,088E-01	1,672E+02	1,124E-02	5,578E-02	8,361E+01	5,618E-03
2137	1,890E-01	1,513E+02	1,017E-02	5,047E-02	7,565E+01	5,083E-03
2138	1,710E-01	1,369E+02	9,199E-03	4,567E-02	6,845E+01	4,599E-03
2139	1,547E-01	1,239E+02	8,323E-03	4,132E-02	6,194E+01	4,162E-03
2140	1,400E-01	1,121E+02	7,531E-03	3,739E-02	5,604E+01	3,766E-03
2141	1,267E-01	1,014E+02	6,815E-03	3,383E-02	5,071E+01	3,407E-03

Results (Continued)

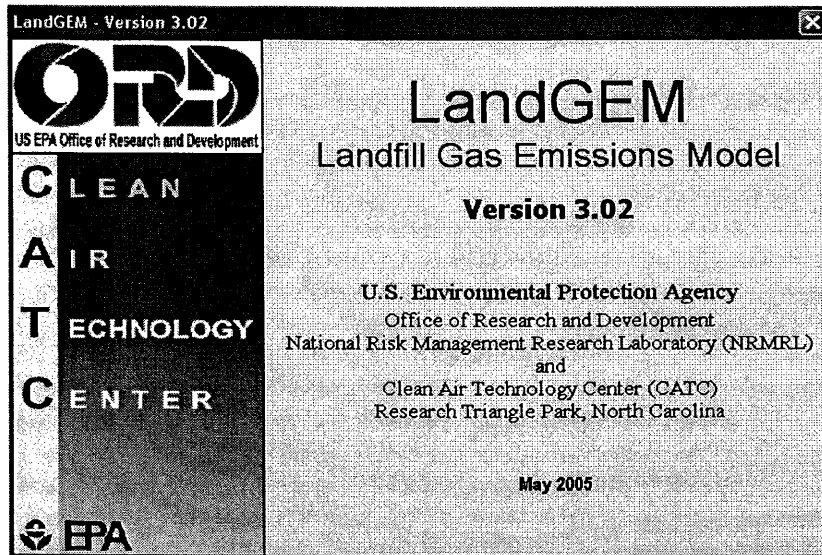
Year	Carbon dioxide			NMOC		
	(Mg/year)	(m ³ /year)	(av ft ³ /min)	(Mg/year)	(m ³ /year)	(av ft ³ /min)
2001	0	0	0	0	0	0
2002	2,460E+04	1,344E+07	9,029E+02	5,780E+01	1,613E+04	1,083E+00
2003	4,499E+04	2,458E+07	1,652E+03	1,057E+02	2,950E+04	1,982E+00
2004	5,836E+04	3,188E+07	2,142E+03	1,371E+02	3,826E+04	2,571E+00
2005	7,155E+04	3,909E+07	2,626E+03	1,681E+02	4,691E+04	3,152E+00
2006	6,771E+04	3,699E+07	2,485E+03	1,591E+02	4,439E+04	2,982E+00
2007	6,127E+04	3,347E+07	2,249E+03	1,440E+02	4,016E+04	2,699E+00
2008	5,544E+04	3,028E+07	2,035E+03	1,303E+02	3,634E+04	2,442E+00
2009	5,016E+04	2,740E+07	1,841E+03	1,179E+02	3,288E+04	2,209E+00
2010	4,539E+04	2,479E+07	1,666E+03	1,067E+02	2,975E+04	1,999E+00
2011	4,107E+04	2,244E+07	1,507E+03	9,650E+01	2,692E+04	1,809E+00
2012	3,716E+04	2,030E+07	1,364E+03	8,732E+01	2,436E+04	1,637E+00
2013	3,362E+04	1,837E+07	1,234E+03	7,901E+01	2,204E+04	1,481E+00
2014	3,042E+04	1,662E+07	1,117E+03	7,149E+01	1,994E+04	1,340E+00
2015	2,753E+04	1,504E+07	1,010E+03	6,469E+01	1,805E+04	1,213E+00
2016	2,491E+04	1,361E+07	9,143E+02	5,853E+01	1,633E+04	1,097E+00
2017	2,254E+04	1,231E+07	8,273E+02	5,296E+01	1,478E+04	9,928E-01
2018	2,039E+04	1,114E+07	7,486E+02	4,792E+01	1,337E+04	8,983E-01
2019	1,845E+04	1,008E+07	6,773E+02	4,336E+01	1,210E+04	8,128E-01
2020	1,670E+04	9,122E+06	6,129E+02	3,923E+01	1,095E+04	7,354E-01
2021	1,511E+04	8,253E+06	5,546E+02	3,550E+01	9,904E+03	6,655E-01
2022	1,367E+04	7,468E+06	5,018E+02	3,212E+01	8,962E+03	6,021E-01
2023	1,237E+04	6,757E+06	4,540E+02	2,907E+01	8,109E+03	5,448E-01
2024	1,119E+04	6,114E+06	4,108E+02	2,630E+01	7,337E+03	4,930E-01
2025	1,013E+04	5,532E+06	3,717E+02	2,380E+01	6,639E+03	4,461E-01
2026	9,163E+03	5,006E+06	3,364E+02	2,153E+01	6,007E+03	4,036E-01
2027	8,291E+03	4,530E+06	3,043E+02	1,948E+01	5,436E+03	3,652E-01
2028	7,502E+03	4,099E+06	2,754E+02	1,763E+01	4,918E+03	3,305E-01
2029	6,788E+03	3,709E+06	2,492E+02	1,595E+01	4,450E+03	2,990E-01
2030	6,142E+03	3,356E+06	2,255E+02	1,443E+01	4,027E+03	2,706E-01
2031	5,558E+03	3,036E+06	2,040E+02	1,306E+01	3,644E+03	2,448E-01
2032	5,029E+03	2,747E+06	1,846E+02	1,182E+01	3,297E+03	2,215E-01
2033	4,550E+03	2,486E+06	1,670E+02	1,069E+01	2,983E+03	2,004E-01
2034	4,117E+03	2,249E+06	1,511E+02	9,675E+00	2,699E+03	1,814E-01
2035	3,726E+03	2,035E+06	1,368E+02	8,755E+00	2,442E+03	1,641E-01
2036	3,371E+03	1,842E+06	1,237E+02	7,921E+00	2,210E+03	1,485E-01
2037	3,050E+03	1,666E+06	1,120E+02	7,168E+00	2,000E+03	1,344E-01
2038	2,760E+03	1,508E+06	1,013E+02	6,485E+00	1,809E+03	1,216E-01
2039	2,497E+03	1,364E+06	9,167E+01	5,868E+00	1,637E+03	1,100E-01
2040	2,260E+03	1,234E+06	8,294E+01	5,310E+00	1,481E+03	9,953E-02
2041	2,045E+03	1,117E+06	7,505E+01	4,805E+00	1,340E+03	9,006E-02
2042	1,850E+03	1,011E+06	6,791E+01	4,347E+00	1,213E+03	8,149E-02
2043	1,674E+03	9,145E+05	6,145E+01	3,934E+00	1,097E+03	7,374E-02
2044	1,515E+03	8,275E+05	5,560E+01	3,559E+00	9,930E+02	6,672E-02
2045	1,371E+03	7,487E+05	5,031E+01	3,221E+00	8,985E+02	6,037E-02
2046	1,240E+03	6,775E+05	4,552E+01	2,914E+00	8,130E+02	5,462E-02
2047	1,122E+03	6,130E+05	4,119E+01	2,637E+00	7,356E+02	4,943E-02
2048	1,015E+03	5,547E+05	3,727E+01	2,386E+00	6,656E+02	4,472E-02
2049	9,187E+02	5,019E+05	3,372E+01	2,159E+00	6,023E+02	4,047E-02
2050	8,313E+02	4,541E+05	3,051E+01	1,953E+00	5,450E+02	3,662E-02

Results (Continued)

Year	Carbon dioxide			NMOC		
	(Mg/year)	(m ³ /year)	(av ft ³ /min)	(Mg/year)	(m ³ /year)	(av ft ³ /min)
2051	7,522E+02	4,109E+05	2,761E+01	1,768E+00	4,931E+02	3,313E-02
2052	6,806E+02	3,718E+05	2,498E+01	1,599E+00	4,462E+02	2,998E-02
2053	6,158E+02	3,364E+05	2,260E+01	1,447E+00	4,037E+02	2,713E-02
2054	5,572E+02	3,044E+05	2,045E+01	1,309E+00	3,653E+02	2,454E-02
2055	5,042E+02	2,754E+05	1,851E+01	1,185E+00	3,305E+02	2,221E-02
2056	4,562E+02	2,492E+05	1,675E+01	1,072E+00	2,991E+02	2,010E-02
2057	4,128E+02	2,255E+05	1,515E+01	9,700E-01	2,706E+02	1,818E-02
2058	3,735E+02	2,041E+05	1,371E+01	8,777E-01	2,449E+02	1,645E-02
2059	3,380E+02	1,846E+05	1,241E+01	7,942E-01	2,216E+02	1,489E-02
2060	3,058E+02	1,671E+05	1,123E+01	7,186E-01	2,005E+02	1,347E-02
2061	2,767E+02	1,512E+05	1,016E+01	6,502E-01	1,814E+02	1,219E-02
2062	2,504E+02	1,368E+05	9,190E+00	5,884E-01	1,641E+02	1,103E-02
2063	2,266E+02	1,238E+05	8,316E+00	5,324E-01	1,485E+02	9,979E-03
2064	2,050E+02	1,120E+05	7,524E+00	4,817E-01	1,344E+02	9,029E-03
2065	1,855E+02	1,013E+05	6,808E+00	4,359E-01	1,216E+02	8,170E-03
2066	1,678E+02	9,169E+04	6,161E+00	3,944E-01	1,100E+02	7,393E-03
2067	1,519E+02	8,296E+04	5,574E+00	3,569E-01	9,956E+01	6,689E-03
2068	1,374E+02	7,507E+04	5,044E+00	3,229E-01	9,008E+01	6,053E-03
2069	1,243E+02	6,792E+04	4,564E+00	2,922E-01	8,151E+01	5,477E-03
2070	1,125E+02	6,146E+04	4,130E+00	2,644E-01	7,375E+01	4,955E-03
2071	1,018E+02	5,561E+04	3,737E+00	2,392E-01	6,673E+01	4,484E-03
2072	9,211E+01	5,032E+04	3,381E+00	2,164E-01	6,038E+01	4,057E-03
2073	8,334E+01	4,553E+04	3,059E+00	1,958E-01	5,464E+01	3,671E-03
2074	7,541E+01	4,120E+04	2,768E+00	1,772E-01	4,944E+01	3,322E-03
2075	6,824E+01	3,728E+04	2,505E+00	1,603E-01	4,473E+01	3,006E-03
2076	6,174E+01	3,373E+04	2,266E+00	1,451E-01	4,048E+01	2,720E-03
2077	5,587E+01	3,052E+04	2,051E+00	1,313E-01	3,662E+01	2,461E-03
2078	5,055E+01	2,762E+04	1,856E+00	1,188E-01	3,314E+01	2,227E-03
2079	4,574E+01	2,499E+04	1,679E+00	1,075E-01	2,999E+01	2,015E-03
2080	4,139E+01	2,261E+04	1,519E+00	9,725E-02	2,713E+01	1,823E-03
2081	3,745E+01	2,046E+04	1,375E+00	8,800E-02	2,455E+01	1,650E-03
2082	3,389E+01	1,851E+04	1,244E+00	7,962E-02	2,221E+01	1,493E-03
2083	3,066E+01	1,675E+04	1,125E+00	7,205E-02	2,010E+01	1,351E-03
2084	2,774E+01	1,516E+04	1,018E+00	6,519E-02	1,819E+01	1,222E-03
2085	2,510E+01	1,371E+04	9,214E-01	5,899E-02	1,646E+01	1,106E-03
2086	2,271E+01	1,241E+04	8,337E-01	5,337E-02	1,489E+01	1,000E-03
2087	2,055E+01	1,123E+04	7,544E-01	4,829E-02	1,347E+01	9,053E-04
2088	1,860E+01	1,016E+04	6,826E-01	4,370E-02	1,219E+01	8,191E-04
2089	1,683E+01	9,193E+03	6,176E-01	3,954E-02	1,103E+01	7,412E-04
2090	1,523E+01	8,318E+03	5,589E-01	3,578E-02	9,981E+00	6,706E-04
2091	1,378E+01	7,526E+03	5,057E-01	3,237E-02	9,031E+00	6,068E-04
2092	1,247E+01	6,810E+03	4,576E-01	2,929E-02	8,172E+00	5,491E-04
2093	1,128E+01	6,162E+03	4,140E-01	2,650E-02	7,394E+00	4,968E-04
2094	1,021E+01	5,576E+03	3,746E-01	2,398E-02	6,691E+00	4,495E-04
2095	9,235E+00	5,045E+03	3,390E-01	2,170E-02	6,054E+00	4,068E-04
2096	8,356E+00	4,565E+03	3,067E-01	1,964E-02	5,478E+00	3,681E-04
2097	7,561E+00	4,130E+03	2,775E-01	1,777E-02	4,957E+00	3,330E-04
2098	6,841E+00	3,737E+03	2,511E-01	1,608E-02	4,485E+00	3,013E-04
2099	6,190E+00	3,382E+03	2,272E-01	1,455E-02	4,058E+00	2,727E-04
2100	5,601E+00	3,060E+03	2,056E-01	1,316E-02	3,672E+00	2,467E-04
2101	5,068E+00	2,769E+03	1,860E-01	1,191E-02	3,322E+00	2,232E-04

Results (Continued)

Year	Carbon dioxide			NMOC		
	(Mg/year)	(m ³ /year)	(av ft ³ /min)	(Mg/year)	(m ³ /year)	(av ft ³ /min)
2102	4,586E+00	2,505E+03	1,683E-01	1,078E-02	3,006E+00	2,020E-04
2103	4,149E+00	2,267E+03	1,523E-01	9,751E-03	2,720E+00	1,828E-04
2104	3,755E+00	2,051E+03	1,378E-01	8,823E-03	2,461E+00	1,654E-04
2105	3,397E+00	1,856E+03	1,247E-01	7,983E-03	2,227E+00	1,496E-04
2106	3,074E+00	1,679E+03	1,128E-01	7,223E-03	2,015E+00	1,354E-04
2107	2,781E+00	1,520E+03	1,021E-01	6,536E-03	1,823E+00	1,225E-04
2108	2,517E+00	1,375E+03	9,238E-02	5,914E-03	1,650E+00	1,109E-04
2109	2,277E+00	1,244E+03	8,359E-02	5,351E-03	1,493E+00	1,003E-04
2110	2,061E+00	1,126E+03	7,563E-02	4,842E-03	1,351E+00	9,076E-05
2111	1,864E+00	1,019E+03	6,844E-02	4,381E-03	1,222E+00	8,212E-05
2112	1,687E+00	9,216E+02	6,192E-02	3,964E-03	1,106E+00	7,431E-05
2113	1,527E+00	8,339E+02	5,603E-02	3,587E-03	1,001E+00	6,724E-05
2114	1,381E+00	7,546E+02	5,070E-02	3,246E-03	9,055E-01	6,084E-05
2115	1,250E+00	6,828E+02	4,587E-02	2,937E-03	8,193E-01	5,505E-05
2116	1,131E+00	6,178E+02	4,151E-02	2,657E-03	7,413E-01	4,981E-05
2117	1,023E+00	5,590E+02	3,756E-02	2,404E-03	6,708E-01	4,507E-05
2118	9,259E-01	5,058E+02	3,398E-02	2,176E-03	6,070E-01	4,078E-05
2119	8,378E-01	4,577E+02	3,075E-02	1,969E-03	5,492E-01	3,690E-05
2120	7,580E-01	4,141E+02	2,782E-02	1,781E-03	4,969E-01	3,339E-05
2121	6,859E-01	3,747E+02	2,518E-02	1,612E-03	4,496E-01	3,021E-05
2122	6,206E-01	3,390E+02	2,278E-02	1,458E-03	4,069E-01	2,734E-05
2123	5,616E-01	3,068E+02	2,061E-02	1,320E-03	3,681E-01	2,474E-05
2124	5,081E-01	2,776E+02	1,865E-02	1,194E-03	3,331E-01	2,238E-05
2125	4,598E-01	2,512E+02	1,688E-02	1,080E-03	3,014E-01	2,025E-05
2126	4,160E-01	2,273E+02	1,527E-02	9,776E-04	2,727E-01	1,832E-05
2127	3,764E-01	2,056E+02	1,382E-02	8,845E-04	2,468E-01	1,658E-05
2128	3,406E-01	1,861E+02	1,250E-02	8,004E-04	2,233E-01	1,500E-05
2129	3,082E-01	1,684E+02	1,131E-02	7,242E-04	2,020E-01	1,358E-05
2130	2,789E-01	1,523E+02	1,024E-02	6,553E-04	1,828E-01	1,228E-05
2131	2,523E-01	1,378E+02	9,262E-03	5,929E-04	1,654E-01	1,111E-05
2132	2,283E-01	1,247E+02	8,381E-03	5,365E-04	1,497E-01	1,006E-05
2133	2,066E-01	1,129E+02	7,583E-03	4,855E-04	1,354E-01	9,100E-06
2134	1,869E-01	1,021E+02	6,861E-03	4,393E-04	1,225E-01	8,234E-06
2135	1,691E-01	9,240E+01	6,208E-03	3,975E-04	1,109E-01	7,450E-06
2136	1,530E-01	8,361E+01	5,618E-03	3,596E-04	1,003E-01	6,741E-06
2137	1,385E-01	7,565E+01	5,083E-03	3,254E-04	9,078E-02	6,100E-06
2138	1,253E-01	6,845E+01	4,599E-03	2,944E-04	8,214E-02	5,519E-06
2139	1,134E-01	6,194E+01	4,162E-03	2,664E-04	7,433E-02	4,994E-06
2140	1,026E-01	5,604E+01	3,766E-03	2,411E-04	6,725E-02	4,519E-06
2141	9,283E-02	5,071E+01	3,407E-03	2,181E-04	6,085E-02	4,089E-06



Summary Report

Landfill Name or Identifier: Zone 4 - LET de Ste-Sophie

Date: 26 avril, 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_{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/landfig.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 conventional 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	2005	
Landfill Closure Year (with 80-year limit)	2009	
Actual Closure Year (without limit)	2009	
Have Model Calculate Closure Year?	No	
Waste Design Capacity	4 257 900	<i>megagrams</i>

MODEL PARAMETERS

Methane Generation Rate, k	0,045	<i>year⁻¹</i>
Potential Methane Generation Capacity, L ₀	135	<i>m³/Mg</i>
NMOC Concentration	600	<i>ppmv as hexane</i>
Methane Content	50	<i>% by volume</i>

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)
2005	668 268	735 095	0	0
2006	872 554	959 809	668 268	735 095
2007	905 693	996 262	1 540 822	1 694 904
2008	905 693	996 262	2 446 515	2 691 167
2009	905 692	996 261	3 352 208	3 687 429
2010	0	0	4 257 900	4 683 690
2011	0	0	4 257 900	4 683 690
2012	0	0	4 257 900	4 683 690
2013	0	0	4 257 900	4 683 690
2014	0	0	4 257 900	4 683 690
2015	0	0	4 257 900	4 683 690
2016	0	0	4 257 900	4 683 690
2017	0	0	4 257 900	4 683 690
2018	0	0	4 257 900	4 683 690
2019	0	0	4 257 900	4 683 690
2020	0	0	4 257 900	4 683 690
2021	0	0	4 257 900	4 683 690
2022	0	0	4 257 900	4 683 690
2023	0	0	4 257 900	4 683 690
2024	0	0	4 257 900	4 683 690
2025	0	0	4 257 900	4 683 690
2026	0	0	4 257 900	4 683 690
2027	0	0	4 257 900	4 683 690
2028	0	0	4 257 900	4 683 690
2029	0	0	4 257 900	4 683 690
2030	0	0	4 257 900	4 683 690
2031	0	0	4 257 900	4 683 690
2032	0	0	4 257 900	4 683 690
2033	0	0	4 257 900	4 683 690
2034	0	0	4 257 900	4 683 690
2035	0	0	4 257 900	4 683 690
2036	0	0	4 257 900	4 683 690
2037	0	0	4 257 900	4 683 690
2038	0	0	4 257 900	4 683 690
2039	0	0	4 257 900	4 683 690
2040	0	0	4 257 900	4 683 690
2041	0	0	4 257 900	4 683 690
2042	0	0	4 257 900	4 683 690
2043	0	0	4 257 900	4 683 690
2044	0	0	4 257 900	4 683 690

WASTE ACCEPTANCE RATES (Continued)

Year	Waste Accepted		Waste-In-Place	
	(Mg/year)	(short tons/year)	(Mg)	(short tons)
2045	0	0	4 257 900	4 683 690
2046	0	0	4 257 900	4 683 690
2047	0	0	4 257 900	4 683 690
2048	0	0	4 257 900	4 683 690
2049	0	0	4 257 900	4 683 690
2050	0	0	4 257 900	4 683 690
2051	0	0	4 257 900	4 683 690
2052	0	0	4 257 900	4 683 690
2053	0	0	4 257 900	4 683 690
2054	0	0	4 257 900	4 683 690
2055	0	0	4 257 900	4 683 690
2056	0	0	4 257 900	4 683 690
2057	0	0	4 257 900	4 683 690
2058	0	0	4 257 900	4 683 690
2059	0	0	4 257 900	4 683 690
2060	0	0	4 257 900	4 683 690
2061	0	0	4 257 900	4 683 690
2062	0	0	4 257 900	4 683 690
2063	0	0	4 257 900	4 683 690
2064	0	0	4 257 900	4 683 690
2065	0	0	4 257 900	4 683 690
2066	0	0	4 257 900	4 683 690
2067	0	0	4 257 900	4 683 690
2068	0	0	4 257 900	4 683 690
2069	0	0	4 257 900	4 683 690
2070	0	0	4 257 900	4 683 690
2071	0	0	4 257 900	4 683 690
2072	0	0	4 257 900	4 683 690
2073	0	0	4 257 900	4 683 690
2074	0	0	4 257 900	4 683 690
2075	0	0	4 257 900	4 683 690
2076	0	0	4 257 900	4 683 690
2077	0	0	4 257 900	4 683 690
2078	0	0	4 257 900	4 683 690
2079	0	0	4 257 900	4 683 690
2080	0	0	4 257 900	4 683 690
2081	0	0	4 257 900	4 683 690
2082	0	0	4 257 900	4 683 690
2083	0	0	4 257 900	4 683 690
2084	0	0	4 257 900	4 683 690

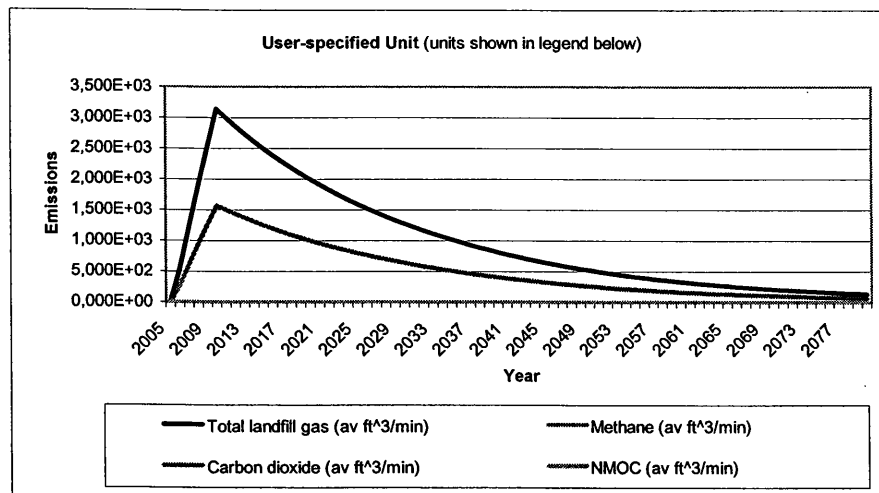
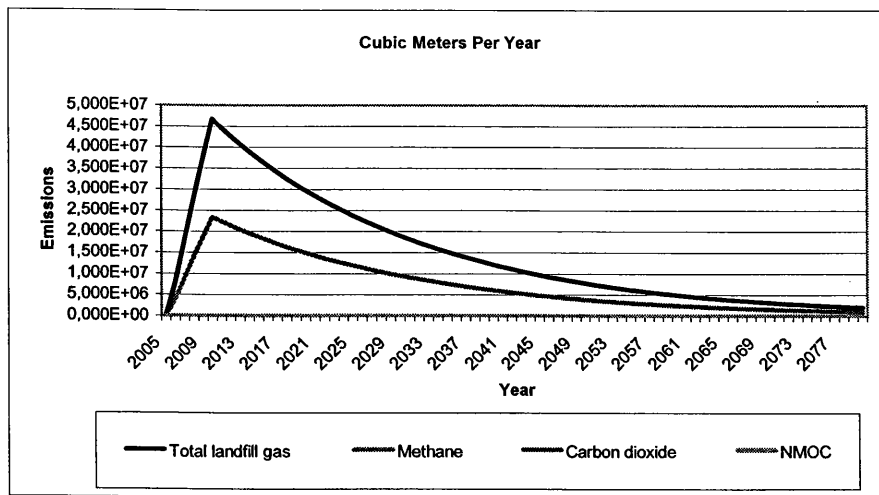
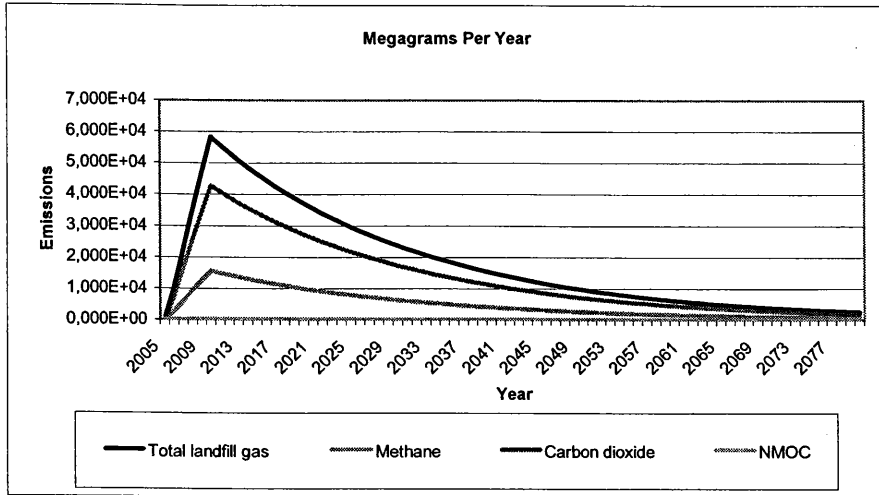
Pollutant Parameters

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		
	1,1,1,2,2-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



Results

Year	Total landfill gas			Methane		
	(Mg/year)	(m ³ /year)	(av ft ³ /min)	(Mg/year)	(m ³ /year)	(av ft ³ /min)
2005	0	0	0	0	0	0
2006	9,937E+03	7,957E+06	5,347E+02	2,654E+03	3,979E+06	2,673E+02
2007	2,248E+04	1,800E+07	1,209E+03	6,003E+03	8,999E+06	6,046E+02
2008	3,495E+04	2,799E+07	1,881E+03	9,337E+03	1,399E+07	9,403E+02
2009	4,688E+04	3,754E+07	2,522E+03	1,252E+04	1,877E+07	1,261E+03
2010	5,829E+04	4,668E+07	3,136E+03	1,557E+04	2,334E+07	1,568E+03
2011	5,572E+04	4,462E+07	2,998E+03	1,488E+04	2,231E+07	1,499E+03
2012	5,327E+04	4,266E+07	2,866E+03	1,423E+04	2,133E+07	1,433E+03
2013	5,093E+04	4,078E+07	2,740E+03	1,360E+04	2,039E+07	1,370E+03
2014	4,869E+04	3,899E+07	2,619E+03	1,300E+04	1,949E+07	1,310E+03
2015	4,654E+04	3,727E+07	2,504E+03	1,243E+04	1,864E+07	1,252E+03
2016	4,450E+04	3,563E+07	2,394E+03	1,189E+04	1,782E+07	1,197E+03
2017	4,254E+04	3,406E+07	2,289E+03	1,136E+04	1,703E+07	1,144E+03
2018	4,067E+04	3,256E+07	2,188E+03	1,086E+04	1,628E+07	1,094E+03
2019	3,888E+04	3,113E+07	2,092E+03	1,038E+04	1,557E+07	1,046E+03
2020	3,717E+04	2,976E+07	2,000E+03	9,928E+03	1,488E+07	9,998E+02
2021	3,553E+04	2,845E+07	1,912E+03	9,491E+03	1,423E+07	9,558E+02
2022	3,397E+04	2,720E+07	1,828E+03	9,073E+03	1,360E+07	9,138E+02
2023	3,247E+04	2,600E+07	1,747E+03	8,674E+03	1,300E+07	8,736E+02
2024	3,104E+04	2,486E+07	1,670E+03	8,292E+03	1,243E+07	8,351E+02
2025	2,968E+04	2,376E+07	1,597E+03	7,927E+03	1,188E+07	7,984E+02
2026	2,837E+04	2,272E+07	1,526E+03	7,579E+03	1,136E+07	7,632E+02
2027	2,712E+04	2,172E+07	1,459E+03	7,245E+03	1,086E+07	7,297E+02
2028	2,593E+04	2,076E+07	1,395E+03	6,926E+03	1,038E+07	6,976E+02
2029	2,479E+04	1,985E+07	1,334E+03	6,621E+03	9,925E+06	6,669E+02
2030	2,370E+04	1,898E+07	1,275E+03	6,330E+03	9,488E+06	6,375E+02
2031	2,266E+04	1,814E+07	1,219E+03	6,052E+03	9,071E+06	6,095E+02
2032	2,166E+04	1,734E+07	1,165E+03	5,785E+03	8,672E+06	5,826E+02
2033	2,071E+04	1,658E+07	1,114E+03	5,531E+03	8,290E+06	5,570E+02
2034	1,979E+04	1,585E+07	1,065E+03	5,287E+03	7,925E+06	5,325E+02
2035	1,892E+04	1,515E+07	1,018E+03	5,055E+03	7,577E+06	5,091E+02
2036	1,809E+04	1,449E+07	9,733E+02	4,832E+03	7,243E+06	4,867E+02
2037	1,729E+04	1,385E+07	9,305E+02	4,620E+03	6,924E+06	4,653E+02
2038	1,653E+04	1,324E+07	8,896E+02	4,416E+03	6,620E+06	4,448E+02
2039	1,581E+04	1,266E+07	8,504E+02	4,222E+03	6,328E+06	4,252E+02
2040	1,511E+04	1,210E+07	8,130E+02	4,036E+03	6,050E+06	4,065E+02
2041	1,445E+04	1,157E+07	7,772E+02	3,859E+03	5,784E+06	3,886E+02
2042	1,381E+04	1,106E+07	7,430E+02	3,689E+03	5,529E+06	3,715E+02
2043	1,320E+04	1,057E+07	7,103E+02	3,527E+03	5,286E+06	3,552E+02
2044	1,262E+04	1,011E+07	6,791E+02	3,371E+03	5,053E+06	3,395E+02
2045	1,207E+04	9,662E+06	6,492E+02	3,223E+03	4,831E+06	3,246E+02
2046	1,154E+04	9,237E+06	6,206E+02	3,081E+03	4,618E+06	3,103E+02
2047	1,103E+04	8,830E+06	5,933E+02	2,946E+03	4,415E+06	2,967E+02
2048	1,054E+04	8,442E+06	5,672E+02	2,816E+03	4,221E+06	2,836E+02
2049	1,008E+04	8,070E+06	5,423E+02	2,692E+03	4,035E+06	2,711E+02
2050	9,635E+03	7,715E+06	5,184E+02	2,574E+03	3,858E+06	2,592E+02
2051	9,211E+03	7,376E+06	4,956E+02	2,460E+03	3,688E+06	2,478E+02
2052	8,806E+03	7,051E+06	4,738E+02	2,352E+03	3,526E+06	2,369E+02
2053	8,418E+03	6,741E+06	4,529E+02	2,249E+03	3,371E+06	2,265E+02
2054	8,048E+03	6,444E+06	4,330E+02	2,150E+03	3,222E+06	2,165E+02

Results (Continued)

Year	Total landfill gas			Methane		
	(Mg/year)	(m ³ /year)	(av ft ³ /min)	(Mg/year)	(m ³ /year)	(av ft ³ /min)
2055	7,694E+03	6,161E+06	4,139E+02	2,055E+03	3,080E+06	2,070E+02
2056	7,355E+03	5,890E+06	3,957E+02	1,965E+03	2,945E+06	1,979E+02
2057	7,032E+03	5,631E+06	3,783E+02	1,878E+03	2,815E+06	1,892E+02
2058	6,722E+03	5,383E+06	3,617E+02	1,796E+03	2,691E+06	1,808E+02
2059	6,426E+03	5,146E+06	3,458E+02	1,717E+03	2,573E+06	1,729E+02
2060	6,144E+03	4,920E+06	3,305E+02	1,641E+03	2,460E+06	1,653E+02
2061	5,873E+03	4,703E+06	3,160E+02	1,569E+03	2,352E+06	1,580E+02
2062	5,615E+03	4,496E+06	3,021E+02	1,500E+03	2,248E+06	1,510E+02
2063	5,368E+03	4,298E+06	2,888E+02	1,434E+03	2,149E+06	1,444E+02
2064	5,132E+03	4,109E+06	2,761E+02	1,371E+03	2,055E+06	1,380E+02
2065	4,906E+03	3,928E+06	2,639E+02	1,310E+03	1,964E+06	1,320E+02
2066	4,690E+03	3,755E+06	2,523E+02	1,253E+03	1,878E+06	1,262E+02
2067	4,484E+03	3,590E+06	2,412E+02	1,198E+03	1,795E+06	1,206E+02
2068	4,286E+03	3,432E+06	2,306E+02	1,145E+03	1,716E+06	1,153E+02
2069	4,098E+03	3,281E+06	2,205E+02	1,095E+03	1,641E+06	1,102E+02
2070	3,917E+03	3,137E+06	2,108E+02	1,046E+03	1,568E+06	1,054E+02
2071	3,745E+03	2,999E+06	2,015E+02	1,000E+03	1,499E+06	1,007E+02
2072	3,580E+03	2,867E+06	1,926E+02	9,563E+02	1,433E+06	9,631E+01
2073	3,423E+03	2,741E+06	1,841E+02	9,142E+02	1,370E+06	9,207E+01
2074	3,272E+03	2,620E+06	1,760E+02	8,740E+02	1,310E+06	8,802E+01
2075	3,128E+03	2,505E+06	1,683E+02	8,355E+02	1,252E+06	8,415E+01
2076	2,990E+03	2,395E+06	1,609E+02	7,988E+02	1,197E+06	8,045E+01
2077	2,859E+03	2,289E+06	1,538E+02	7,636E+02	1,145E+06	7,691E+01
2078	2,733E+03	2,188E+06	1,470E+02	7,300E+02	1,094E+06	7,352E+01
2079	2,613E+03	2,092E+06	1,406E+02	6,979E+02	1,046E+06	7,029E+01
2080	2,498E+03	2,000E+06	1,344E+02	6,672E+02	1,000E+06	6,719E+01
2081	2,388E+03	1,912E+06	1,285E+02	6,378E+02	9,561E+05	6,424E+01
2082	2,283E+03	1,828E+06	1,228E+02	6,098E+02	9,140E+05	6,141E+01
2083	2,182E+03	1,748E+06	1,174E+02	5,829E+02	8,738E+05	5,871E+01
2084	2,086E+03	1,671E+06	1,123E+02	5,573E+02	8,353E+05	5,613E+01
2085	1,995E+03	1,597E+06	1,073E+02	5,328E+02	7,986E+05	5,366E+01
2086	1,907E+03	1,527E+06	1,026E+02	5,093E+02	7,634E+05	5,129E+01
2087	1,823E+03	1,460E+06	9,807E+01	4,869E+02	7,298E+05	4,904E+01
2088	1,743E+03	1,395E+06	9,376E+01	4,655E+02	6,977E+05	4,688E+01
2089	1,666E+03	1,334E+06	8,963E+01	4,450E+02	6,670E+05	4,482E+01
2090	1,593E+03	1,275E+06	8,569E+01	4,254E+02	6,377E+05	4,284E+01
2091	1,523E+03	1,219E+06	8,192E+01	4,067E+02	6,096E+05	4,096E+01
2092	1,456E+03	1,166E+06	7,831E+01	3,888E+02	5,828E+05	3,916E+01
2093	1,392E+03	1,114E+06	7,487E+01	3,717E+02	5,571E+05	3,743E+01
2094	1,330E+03	1,065E+06	7,157E+01	3,553E+02	5,326E+05	3,579E+01
2095	1,272E+03	1,018E+06	6,842E+01	3,397E+02	5,092E+05	3,421E+01
2096	1,216E+03	9,736E+05	6,541E+01	3,248E+02	4,868E+05	3,271E+01
2097	1,162E+03	9,307E+05	6,254E+01	3,105E+02	4,654E+05	3,127E+01
2098	1,111E+03	8,898E+05	5,978E+01	2,968E+02	4,449E+05	2,989E+01
2099	1,062E+03	8,506E+05	5,715E+01	2,837E+02	4,253E+05	2,858E+01
2100	1,016E+03	8,132E+05	5,464E+01	2,713E+02	4,066E+05	2,732E+01
2101	9,708E+02	7,774E+05	5,223E+01	2,593E+02	3,887E+05	2,612E+01
2102	9,281E+02	7,432E+05	4,994E+01	2,479E+02	3,716E+05	2,497E+01
2103	8,873E+02	7,105E+05	4,774E+01	2,370E+02	3,552E+05	2,387E+01
2104	8,482E+02	6,792E+05	4,564E+01	2,266E+02	3,396E+05	2,282E+01
2105	8,109E+02	6,493E+05	4,363E+01	2,166E+02	3,247E+05	2,181E+01

Results (Continued)

Year	Total landfill gas			Methane		
	(Mg/year)	(m ³ /year)	(av ft ³ /min)	(Mg/year)	(m ³ /year)	(av ft ³ /min)
2106	7,752E+02	6,208E+05	4,171E+01	2,071E+02	3,104E+05	2,085E+01
2107	7,411E+02	5,935E+05	3,987E+01	1,980E+02	2,967E+05	1,994E+01
2108	7,085E+02	5,673E+05	3,812E+01	1,893E+02	2,837E+05	1,906E+01
2109	6,773E+02	5,424E+05	3,644E+01	1,809E+02	2,712E+05	1,822E+01
2110	6,475E+02	5,185E+05	3,484E+01	1,730E+02	2,593E+05	1,742E+01
2111	6,190E+02	4,957E+05	3,331E+01	1,654E+02	2,478E+05	1,665E+01
2112	5,918E+02	4,739E+05	3,184E+01	1,581E+02	2,369E+05	1,592E+01
2113	5,658E+02	4,530E+05	3,044E+01	1,511E+02	2,265E+05	1,522E+01
2114	5,409E+02	4,331E+05	2,910E+01	1,445E+02	2,165E+05	1,455E+01
2115	5,171E+02	4,140E+05	2,782E+01	1,381E+02	2,070E+05	1,391E+01
2116	4,943E+02	3,958E+05	2,660E+01	1,320E+02	1,979E+05	1,330E+01
2117	4,726E+02	3,784E+05	2,542E+01	1,262E+02	1,892E+05	1,271E+01
2118	4,518E+02	3,618E+05	2,431E+01	1,207E+02	1,809E+05	1,215E+01
2119	4,319E+02	3,458E+05	2,324E+01	1,154E+02	1,729E+05	1,162E+01
2120	4,129E+02	3,306E+05	2,221E+01	1,103E+02	1,653E+05	1,111E+01
2121	3,947E+02	3,161E+05	2,124E+01	1,054E+02	1,580E+05	1,062E+01
2122	3,773E+02	3,022E+05	2,030E+01	1,008E+02	1,511E+05	1,015E+01
2123	3,607E+02	2,889E+05	1,941E+01	9,636E+01	1,444E+05	9,704E+00
2124	3,449E+02	2,762E+05	1,855E+01	9,212E+01	1,381E+05	9,277E+00
2125	3,297E+02	2,640E+05	1,774E+01	8,806E+01	1,320E+05	8,869E+00
2126	3,152E+02	2,524E+05	1,696E+01	8,419E+01	1,262E+05	8,479E+00
2127	3,013E+02	2,413E+05	1,621E+01	8,049E+01	1,206E+05	8,106E+00
2128	2,881E+02	2,307E+05	1,550E+01	7,694E+01	1,153E+05	7,749E+00
2129	2,754E+02	2,205E+05	1,482E+01	7,356E+01	1,103E+05	7,408E+00
2130	2,633E+02	2,108E+05	1,416E+01	7,032E+01	1,054E+05	7,082E+00
2131	2,517E+02	2,015E+05	1,354E+01	6,723E+01	1,008E+05	6,771E+00
2132	2,406E+02	1,927E+05	1,295E+01	6,427E+01	9,633E+04	6,473E+00
2133	2,300E+02	1,842E+05	1,238E+01	6,144E+01	9,209E+04	6,188E+00
2134	2,199E+02	1,761E+05	1,183E+01	5,874E+01	8,804E+04	5,916E+00
2135	2,102E+02	1,683E+05	1,131E+01	5,615E+01	8,417E+04	5,655E+00
2136	2,010E+02	1,609E+05	1,081E+01	5,368E+01	8,046E+04	5,406E+00
2137	1,921E+02	1,538E+05	1,034E+01	5,132E+01	7,692E+04	5,169E+00
2138	1,837E+02	1,471E+05	9,882E+00	4,906E+01	7,354E+04	4,941E+00
2139	1,756E+02	1,406E+05	9,447E+00	4,690E+01	7,030E+04	4,724E+00
2140	1,679E+02	1,344E+05	9,032E+00	4,484E+01	6,721E+04	4,516E+00
2141	1,605E+02	1,285E+05	8,634E+00	4,287E+01	6,425E+04	4,317E+00
2142	1,534E+02	1,229E+05	8,254E+00	4,098E+01	6,143E+04	4,127E+00
2143	1,467E+02	1,174E+05	7,891E+00	3,918E+01	5,872E+04	3,946E+00
2144	1,402E+02	1,123E+05	7,544E+00	3,745E+01	5,614E+04	3,772E+00
2145	1,340E+02	1,073E+05	7,212E+00	3,580E+01	5,367E+04	3,606E+00

Results (Continued)

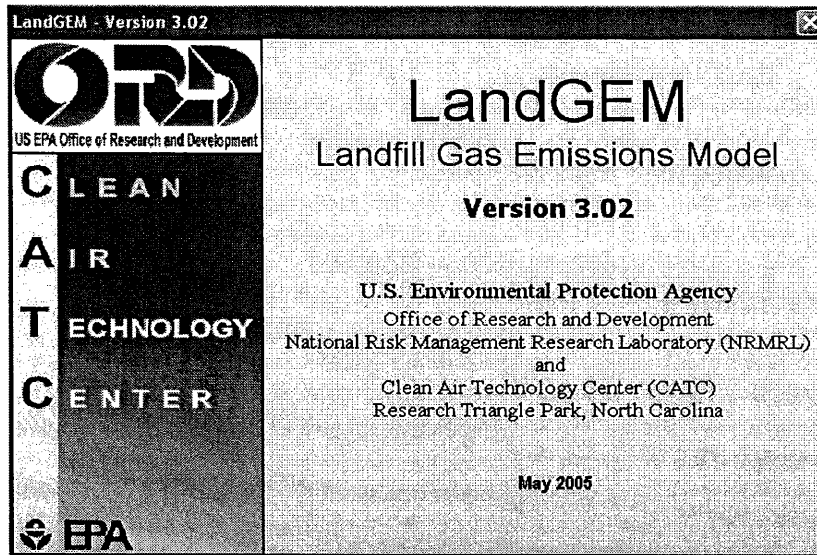
Year	Carbon dioxide			NMOC		
	(Mg/year)	(m ³ /year)	(av ft ³ /min)	(Mg/year)	(m ³ /year)	(av ft ³ /min)
2005	0	0	0	0	0	0
2006	7,283E+03	3,979E+06	2,673E+02	1,711E+01	4,774E+03	3,208E-01
2007	1,647E+04	8,999E+06	6,046E+02	3,871E+01	1,080E+04	7,255E-01
2008	2,562E+04	1,399E+07	9,403E+02	6,020E+01	1,679E+04	1,128E+00
2009	3,436E+04	1,877E+07	1,261E+03	8,074E+01	2,253E+04	1,513E+00
2010	4,272E+04	2,334E+07	1,568E+03	1,004E+02	2,801E+04	1,882E+00
2011	4,084E+04	2,231E+07	1,499E+03	9,597E+01	2,677E+04	1,799E+00
2012	3,904E+04	2,133E+07	1,433E+03	9,174E+01	2,559E+04	1,720E+00
2013	3,732E+04	2,039E+07	1,370E+03	8,771E+01	2,447E+04	1,644E+00
2014	3,568E+04	1,949E+07	1,310E+03	8,385E+01	2,339E+04	1,572E+00
2015	3,411E+04	1,864E+07	1,252E+03	8,016E+01	2,236E+04	1,503E+00
2016	3,261E+04	1,782E+07	1,197E+03	7,663E+01	2,138E+04	1,436E+00
2017	3,118E+04	1,703E+07	1,144E+03	7,326E+01	2,044E+04	1,373E+00
2018	2,980E+04	1,628E+07	1,094E+03	7,003E+01	1,954E+04	1,313E+00
2019	2,849E+04	1,557E+07	1,046E+03	6,695E+01	1,868E+04	1,255E+00
2020	2,724E+04	1,488E+07	9,998E+02	6,401E+01	1,786E+04	1,200E+00
2021	2,604E+04	1,423E+07	9,558E+02	6,119E+01	1,707E+04	1,147E+00
2022	2,489E+04	1,360E+07	9,138E+02	5,850E+01	1,632E+04	1,097E+00
2023	2,380E+04	1,300E+07	8,736E+02	5,592E+01	1,560E+04	1,048E+00
2024	2,275E+04	1,243E+07	8,351E+02	5,346E+01	1,492E+04	1,002E+00
2025	2,175E+04	1,188E+07	7,984E+02	5,111E+01	1,426E+04	9,581E-01
2026	2,079E+04	1,136E+07	7,632E+02	4,886E+01	1,363E+04	9,159E-01
2027	1,988E+04	1,086E+07	7,297E+02	4,671E+01	1,303E+04	8,756E-01
2028	1,900E+04	1,038E+07	6,976E+02	4,466E+01	1,246E+04	8,371E-01
2029	1,817E+04	9,925E+06	6,669E+02	4,269E+01	1,191E+04	8,002E-01
2030	1,737E+04	9,488E+06	6,375E+02	4,081E+01	1,139E+04	7,650E-01
2031	1,660E+04	9,071E+06	6,095E+02	3,902E+01	1,088E+04	7,314E-01
2032	1,587E+04	8,672E+06	5,826E+02	3,730E+01	1,041E+04	6,992E-01
2033	1,518E+04	8,290E+06	5,570E+02	3,566E+01	9,948E+03	6,684E-01
2034	1,451E+04	7,925E+06	5,325E+02	3,409E+01	9,510E+03	6,390E-01
2035	1,387E+04	7,577E+06	5,091E+02	3,259E+01	9,092E+03	6,109E-01
2036	1,326E+04	7,243E+06	4,867E+02	3,116E+01	8,692E+03	5,840E-01
2037	1,268E+04	6,924E+06	4,653E+02	2,978E+01	8,309E+03	5,583E-01
2038	1,212E+04	6,620E+06	4,448E+02	2,847E+01	7,944E+03	5,337E-01
2039	1,158E+04	6,328E+06	4,252E+02	2,722E+01	7,594E+03	5,103E-01
2040	1,107E+04	6,050E+06	4,065E+02	2,602E+01	7,260E+03	4,878E-01
2041	1,059E+04	5,784E+06	3,886E+02	2,488E+01	6,941E+03	4,663E-01
2042	1,012E+04	5,529E+06	3,715E+02	2,378E+01	6,635E+03	4,458E-01
2043	9,676E+03	5,286E+06	3,552E+02	2,274E+01	6,343E+03	4,262E-01
2044	9,250E+03	5,053E+06	3,395E+02	2,174E+01	6,064E+03	4,074E-01
2045	8,843E+03	4,831E+06	3,246E+02	2,078E+01	5,797E+03	3,895E-01
2046	8,454E+03	4,618E+06	3,103E+02	1,987E+01	5,542E+03	3,724E-01
2047	8,082E+03	4,415E+06	2,967E+02	1,899E+01	5,298E+03	3,560E-01
2048	7,726E+03	4,221E+06	2,836E+02	1,816E+01	5,065E+03	3,403E-01
2049	7,386E+03	4,035E+06	2,711E+02	1,736E+01	4,842E+03	3,254E-01
2050	7,061E+03	3,858E+06	2,592E+02	1,659E+01	4,629E+03	3,110E-01
2051	6,751E+03	3,688E+06	2,478E+02	1,586E+01	4,426E+03	2,973E-01
2052	6,454E+03	3,526E+06	2,369E+02	1,517E+01	4,231E+03	2,843E-01
2053	6,170E+03	3,371E+06	2,265E+02	1,450E+01	4,045E+03	2,718E-01
2054	5,898E+03	3,222E+06	2,165E+02	1,386E+01	3,867E+03	2,598E-01

Results (Continued)

Year	Carbon dioxide			NMOC		
	(Mg/year)	(m ³ /year)	(av ft ³ /min)	(Mg/year)	(m ³ /year)	(av ft ³ /min)
2055	5,639E+03	3,080E+06	2,070E+02	1,325E+01	3,696E+03	2,484E-01
2056	5,391E+03	2,945E+06	1,979E+02	1,267E+01	3,534E+03	2,374E-01
2057	5,153E+03	2,815E+06	1,892E+02	1,211E+01	3,378E+03	2,270E-01
2058	4,927E+03	2,691E+06	1,808E+02	1,158E+01	3,230E+03	2,170E-01
2059	4,710E+03	2,573E+06	1,729E+02	1,107E+01	3,088E+03	2,075E-01
2060	4,503E+03	2,460E+06	1,653E+02	1,058E+01	2,952E+03	1,983E-01
2061	4,304E+03	2,352E+06	1,580E+02	1,011E+01	2,822E+03	1,896E-01
2062	4,115E+03	2,248E+06	1,510E+02	9,670E+00	2,698E+03	1,813E-01
2063	3,934E+03	2,149E+06	1,444E+02	9,244E+00	2,579E+03	1,733E-01
2064	3,761E+03	2,055E+06	1,380E+02	8,837E+00	2,465E+03	1,657E-01
2065	3,595E+03	1,964E+06	1,320E+02	8,449E+00	2,357E+03	1,584E-01
2066	3,437E+03	1,878E+06	1,262E+02	8,077E+00	2,253E+03	1,514E-01
2067	3,286E+03	1,795E+06	1,206E+02	7,721E+00	2,154E+03	1,447E-01
2068	3,141E+03	1,716E+06	1,153E+02	7,382E+00	2,059E+03	1,384E-01
2069	3,003E+03	1,641E+06	1,102E+02	7,057E+00	1,969E+03	1,323E-01
2070	2,871E+03	1,568E+06	1,054E+02	6,746E+00	1,882E+03	1,265E-01
2071	2,745E+03	1,499E+06	1,007E+02	6,449E+00	1,799E+03	1,209E-01
2072	2,624E+03	1,433E+06	9,631E+01	6,166E+00	1,720E+03	1,156E-01
2073	2,508E+03	1,370E+06	9,207E+01	5,894E+00	1,644E+03	1,105E-01
2074	2,398E+03	1,310E+06	8,802E+01	5,635E+00	1,572E+03	1,056E-01
2075	2,293E+03	1,252E+06	8,415E+01	5,387E+00	1,503E+03	1,010E-01
2076	2,192E+03	1,197E+06	8,045E+01	5,150E+00	1,437E+03	9,654E-02
2077	2,095E+03	1,145E+06	7,691E+01	4,923E+00	1,374E+03	9,229E-02
2078	2,003E+03	1,094E+06	7,352E+01	4,707E+00	1,313E+03	8,823E-02
2079	1,915E+03	1,046E+06	7,029E+01	4,500E+00	1,255E+03	8,434E-02
2080	1,831E+03	1,000E+06	6,719E+01	4,302E+00	1,200E+03	8,063E-02
2081	1,750E+03	9,561E+05	6,424E+01	4,112E+00	1,147E+03	7,708E-02
2082	1,673E+03	9,140E+05	6,141E+01	3,931E+00	1,097E+03	7,369E-02
2083	1,599E+03	8,738E+05	5,871E+01	3,758E+00	1,049E+03	7,045E-02
2084	1,529E+03	8,353E+05	5,613E+01	3,593E+00	1,002E+03	6,735E-02
2085	1,462E+03	7,986E+05	5,366E+01	3,435E+00	9,583E+02	6,439E-02
2086	1,397E+03	7,634E+05	5,129E+01	3,284E+00	9,161E+02	6,155E-02
2087	1,336E+03	7,298E+05	4,904E+01	3,139E+00	8,758E+02	5,884E-02
2088	1,277E+03	6,977E+05	4,688E+01	3,001E+00	8,373E+02	5,626E-02
2089	1,221E+03	6,670E+05	4,482E+01	2,869E+00	8,004E+02	5,378E-02
2090	1,167E+03	6,377E+05	4,284E+01	2,743E+00	7,652E+02	5,141E-02
2091	1,116E+03	6,096E+05	4,096E+01	2,622E+00	7,315E+02	4,915E-02
2092	1,067E+03	5,828E+05	3,916E+01	2,507E+00	6,993E+02	4,699E-02
2093	1,020E+03	5,571E+05	3,743E+01	2,396E+00	6,686E+02	4,492E-02
2094	9,750E+02	5,326E+05	3,579E+01	2,291E+00	6,391E+02	4,294E-02
2095	9,321E+02	5,092E+05	3,421E+01	2,190E+00	6,110E+02	4,105E-02
2096	8,911E+02	4,868E+05	3,271E+01	2,094E+00	5,841E+02	3,925E-02
2097	8,518E+02	4,654E+05	3,127E+01	2,002E+00	5,584E+02	3,752E-02
2098	8,144E+02	4,449E+05	2,989E+01	1,914E+00	5,339E+02	3,587E-02
2099	7,785E+02	4,253E+05	2,858E+01	1,829E+00	5,104E+02	3,429E-02
2100	7,443E+02	4,066E+05	2,732E+01	1,749E+00	4,879E+02	3,278E-02
2101	7,115E+02	3,887E+05	2,612E+01	1,672E+00	4,664E+02	3,134E-02
2102	6,802E+02	3,716E+05	2,497E+01	1,598E+00	4,459E+02	2,996E-02
2103	6,503E+02	3,552E+05	2,387E+01	1,528E+00	4,263E+02	2,864E-02
2104	6,217E+02	3,396E+05	2,282E+01	1,461E+00	4,075E+02	2,738E-02
2105	5,943E+02	3,247E+05	2,181E+01	1,397E+00	3,896E+02	2,618E-02

Results (Continued)

Year	Carbon dioxide			NMOC		
	(Mg/year)	(m ³ /year)	(av ft ³ /min)	(Mg/year)	(m ³ /year)	(av ft ³ /min)
2106	5,682E+02	3,104E+05	2,085E+01	1,335E+00	3,725E+02	2,503E-02
2107	5,432E+02	2,967E+05	1,994E+01	1,276E+00	3,561E+02	2,392E-02
2108	5,193E+02	2,837E+05	1,906E+01	1,220E+00	3,404E+02	2,287E-02
2109	4,964E+02	2,712E+05	1,822E+01	1,166E+00	3,254E+02	2,187E-02
2110	4,746E+02	2,593E+05	1,742E+01	1,115E+00	3,111E+02	2,090E-02
2111	4,537E+02	2,478E+05	1,665E+01	1,066E+00	2,974E+02	1,998E-02
2112	4,337E+02	2,369E+05	1,592E+01	1,019E+00	2,843E+02	1,910E-02
2113	4,146E+02	2,265E+05	1,522E+01	9,743E-01	2,718E+02	1,826E-02
2114	3,964E+02	2,165E+05	1,455E+01	9,315E-01	2,599E+02	1,746E-02
2115	3,790E+02	2,070E+05	1,391E+01	8,905E-01	2,484E+02	1,669E-02
2116	3,623E+02	1,979E+05	1,330E+01	8,513E-01	2,375E+02	1,596E-02
2117	3,463E+02	1,892E+05	1,271E+01	8,138E-01	2,270E+02	1,525E-02
2118	3,311E+02	1,809E+05	1,215E+01	7,780E-01	2,171E+02	1,458E-02
2119	3,165E+02	1,729E+05	1,162E+01	7,438E-01	2,075E+02	1,394E-02
2120	3,026E+02	1,653E+05	1,111E+01	7,111E-01	1,984E+02	1,333E-02
2121	2,893E+02	1,580E+05	1,062E+01	6,798E-01	1,896E+02	1,274E-02
2122	2,766E+02	1,511E+05	1,015E+01	6,499E-01	1,813E+02	1,218E-02
2123	2,644E+02	1,444E+05	9,704E+00	6,213E-01	1,733E+02	1,165E-02
2124	2,528E+02	1,381E+05	9,277E+00	5,939E-01	1,657E+02	1,113E-02
2125	2,416E+02	1,320E+05	8,869E+00	5,678E-01	1,584E+02	1,064E-02
2126	2,310E+02	1,262E+05	8,479E+00	5,428E-01	1,514E+02	1,017E-02
2127	2,208E+02	1,206E+05	8,106E+00	5,189E-01	1,448E+02	9,727E-03
2128	2,111E+02	1,153E+05	7,749E+00	4,961E-01	1,384E+02	9,299E-03
2129	2,018E+02	1,103E+05	7,408E+00	4,743E-01	1,323E+02	8,890E-03
2130	1,929E+02	1,054E+05	7,082E+00	4,534E-01	1,265E+02	8,499E-03
2131	1,845E+02	1,008E+05	6,771E+00	4,334E-01	1,209E+02	8,125E-03
2132	1,763E+02	9,633E+04	6,473E+00	4,144E-01	1,156E+02	7,767E-03
2133	1,686E+02	9,209E+04	6,188E+00	3,961E-01	1,105E+02	7,425E-03
2134	1,612E+02	8,804E+04	5,916E+00	3,787E-01	1,057E+02	7,099E-03
2135	1,541E+02	8,417E+04	5,655E+00	3,620E-01	1,010E+02	6,786E-03
2136	1,473E+02	8,046E+04	5,406E+00	3,461E-01	9,656E+01	6,488E-03
2137	1,408E+02	7,692E+04	5,169E+00	3,309E-01	9,231E+01	6,202E-03
2138	1,346E+02	7,354E+04	4,941E+00	3,163E-01	8,825E+01	5,929E-03
2139	1,287E+02	7,030E+04	4,724E+00	3,024E-01	8,436E+01	5,668E-03
2140	1,230E+02	6,721E+04	4,516E+00	2,891E-01	8,065E+01	5,419E-03
2141	1,176E+02	6,425E+04	4,317E+00	2,764E-01	7,710E+01	5,181E-03
2142	1,124E+02	6,143E+04	4,127E+00	2,642E-01	7,371E+01	4,953E-03
2143	1,075E+02	5,872E+04	3,946E+00	2,526E-01	7,047E+01	4,735E-03
2144	1,028E+02	5,614E+04	3,772E+00	2,415E-01	6,737E+01	4,526E-03
2145	9,824E+01	5,367E+04	3,606E+00	2,308E-01	6,440E+01	4,327E-03



Summary Report

Landfill Name or Identifier: Zone 5 - LET de Ste-Sophie

Date: 11 mai, 2007

Description/Comments:

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 conventional 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	2010	
Landfill Closure Year (with 80-year limit)	2033	
Actual Closure Year (without limit)	2033	
Have Model Calculate Closure Year?	No	
Waste Design Capacity	28 500 000	<i>megagrams</i>

MODEL PARAMETERS

Methane Generation Rate, k	0,045	<i>year⁻¹</i>
Potential Methane Generation Capacity, L ₀	135	<i>m³/Mg</i>
NMOC Concentration	600	<i>ppmv as hexane</i>
Methane Content	50	<i>% by volume</i>

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	
	<i>(Mg/year)</i>	<i>(short tons/year)</i>	<i>(Mg)</i>	<i>(short tons)</i>
2010	1 250 000	1 375 000	0	0
2011	1 250 000	1 375 000	1 250 000	1 375 000
2012	1 250 000	1 375 000	2 500 000	2 750 000
2013	1 250 000	1 375 000	3 750 000	4 125 000
2014	1 250 000	1 375 000	5 000 000	5 500 000
2015	1 250 000	1 375 000	6 250 000	6 875 000
2016	1 250 000	1 375 000	7 500 000	8 250 000
2017	1 250 000	1 375 000	8 750 000	9 625 000
2018	1 250 000	1 375 000	10 000 000	11 000 000
2019	1 250 000	1 375 000	11 250 000	12 375 000
2020	1 250 000	1 375 000	12 500 000	13 750 000
2021	1 250 000	1 375 000	13 750 000	15 125 000
2022	1 250 000	1 375 000	15 000 000	16 500 000
2023	1 250 000	1 375 000	16 250 000	17 875 000
2024	1 250 000	1 375 000	17 500 000	19 250 000
2025	1 250 000	1 375 000	18 750 000	20 625 000
2026	1 250 000	1 375 000	20 000 000	22 000 000
2027	1 250 000	1 375 000	21 250 000	23 375 000
2028	1 250 000	1 375 000	22 500 000	24 750 000
2029	1 250 000	1 375 000	23 750 000	26 125 000
2030	1 250 000	1 375 000	25 000 000	27 500 000
2031	1 250 000	1 375 000	26 250 000	28 875 000
2032	916 890	1 008 579	27 500 000	30 250 000
2033	0	0	28 416 890	31 258 579
2034	0	0	28 416 890	31 258 579
2035	0	0	28 416 890	31 258 579
2036	0	0	28 416 890	31 258 579
2037	0	0	28 416 890	31 258 579
2038	0	0	28 416 890	31 258 579
2039	0	0	28 416 890	31 258 579
2040	0	0	28 416 890	31 258 579
2041	0	0	28 416 890	31 258 579
2042	0	0	28 416 890	31 258 579
2043	0	0	28 416 890	31 258 579
2044	0	0	28 416 890	31 258 579
2045	0	0	28 416 890	31 258 579
2046	0	0	28 416 890	31 258 579
2047	0	0	28 416 890	31 258 579
2048	0	0	28 416 890	31 258 579
2049	0	0	28 416 890	31 258 579

WASTE ACCEPTANCE RATES (Continued)

Year	Waste Accepted		Waste-In-Place	
	(Mg/year)	(short tons/year)	(Mg)	(short tons)
2050	0	0	28 416 890	31 258 579
2051	0	0	28 416 890	31 258 579
2052	0	0	28 416 890	31 258 579
2053	0	0	28 416 890	31 258 579
2054	0	0	28 416 890	31 258 579
2055	0	0	28 416 890	31 258 579
2056	0	0	28 416 890	31 258 579
2057	0	0	28 416 890	31 258 579
2058	0	0	28 416 890	31 258 579
2059	0	0	28 416 890	31 258 579
2060	0	0	28 416 890	31 258 579
2061	0	0	28 416 890	31 258 579
2062	0	0	28 416 890	31 258 579
2063	0	0	28 416 890	31 258 579
2064	0	0	28 416 890	31 258 579
2065	0	0	28 416 890	31 258 579
2066	0	0	28 416 890	31 258 579
2067	0	0	28 416 890	31 258 579
2068	0	0	28 416 890	31 258 579
2069	0	0	28 416 890	31 258 579
2070	0	0	28 416 890	31 258 579
2071	0	0	28 416 890	31 258 579
2072	0	0	28 416 890	31 258 579
2073	0	0	28 416 890	31 258 579
2074	0	0	28 416 890	31 258 579
2075	0	0	28 416 890	31 258 579
2076	0	0	28 416 890	31 258 579
2077	0	0	28 416 890	31 258 579
2078	0	0	28 416 890	31 258 579
2079	0	0	28 416 890	31 258 579
2080	0	0	28 416 890	31 258 579
2081	0	0	28 416 890	31 258 579
2082	0	0	28 416 890	31 258 579
2083	0	0	28 416 890	31 258 579
2084	0	0	28 416 890	31 258 579
2085	0	0	28 416 890	31 258 579
2086	0	0	28 416 890	31 258 579
2087	0	0	28 416 890	31 258 579
2088	0	0	28 416 890	31 258 579
2089	0	0	28 416 890	31 258 579

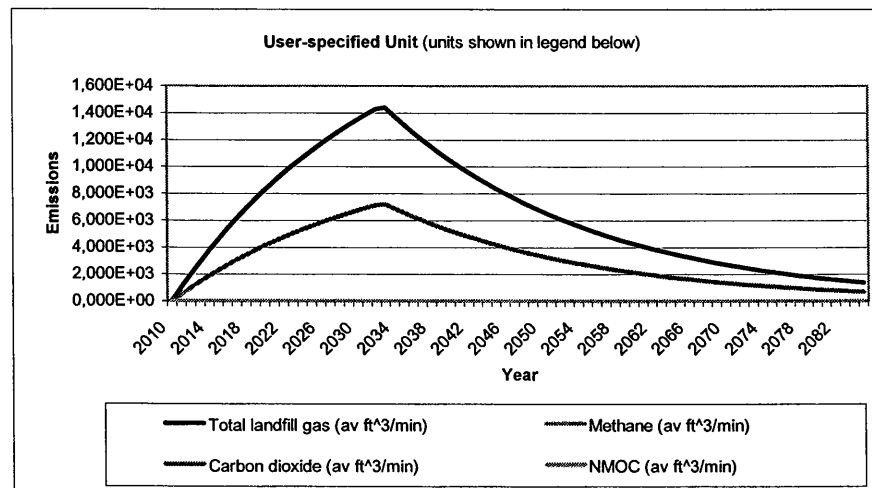
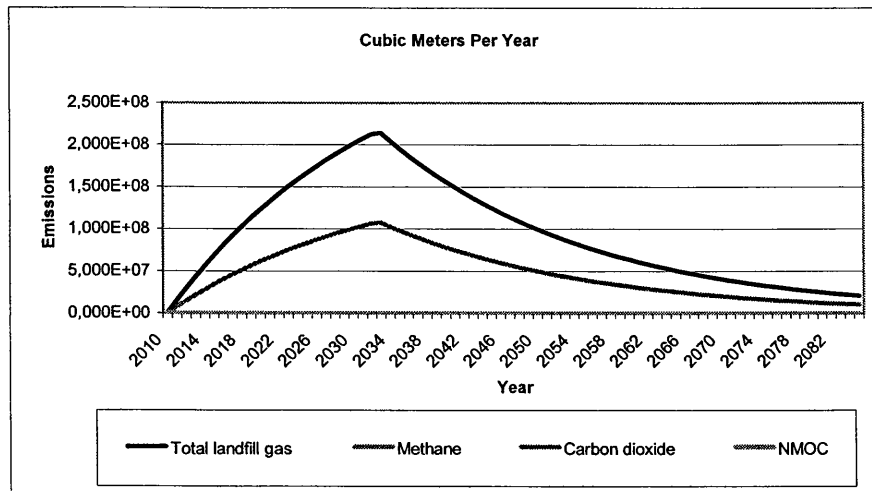
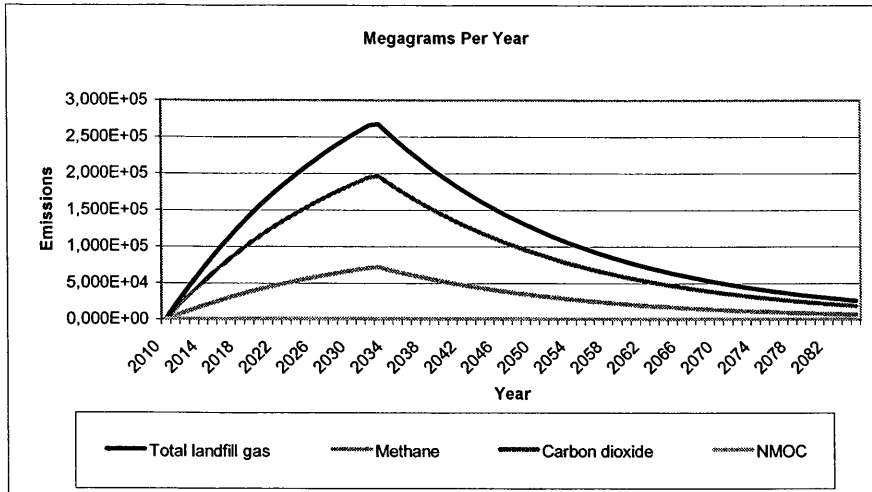
Pollutant Parameters**Gas / Pollutant Default Parameters:****User-specified Pollutant Parameters:**

	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		
	1,1,1,2,2- 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
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		
Pollutants				

Graphs



Results

Year	Total landfill gas			Methane		
	(Mg/year)	(m ³ /year)	(av ft ³ /min)	(Mg/year)	(m ³ /year)	(av ft ³ /min)
2010	0	0	0	0	0	0
2011	1,859E+04	1,488E+07	1,000E+03	4,965E+03	7,442E+06	5,000E+02
2012	3,636E+04	2,911E+07	1,956E+03	9,712E+03	1,456E+07	9,781E+02
2013	5,335E+04	4,272E+07	2,870E+03	1,425E+04	2,136E+07	1,435E+03
2014	6,959E+04	5,572E+07	3,744E+03	1,859E+04	2,786E+07	1,872E+03
2015	8,511E+04	6,815E+07	4,579E+03	2,273E+04	3,408E+07	2,290E+03
2016	9,995E+04	8,004E+07	5,378E+03	2,670E+04	4,002E+07	2,689E+03
2017	1,141E+05	9,140E+07	6,141E+03	3,049E+04	4,570E+07	3,071E+03
2018	1,277E+05	1,023E+08	6,871E+03	3,411E+04	5,113E+07	3,436E+03
2019	1,407E+05	1,126E+08	7,569E+03	3,758E+04	5,632E+07	3,784E+03
2020	1,531E+05	1,226E+08	8,236E+03	4,089E+04	6,129E+07	4,118E+03
2021	1,649E+05	1,321E+08	8,874E+03	4,405E+04	6,603E+07	4,437E+03
2022	1,763E+05	1,411E+08	9,483E+03	4,708E+04	7,057E+07	4,742E+03
2023	1,871E+05	1,498E+08	1,007E+04	4,997E+04	7,491E+07	5,033E+03
2024	1,974E+05	1,581E+08	1,062E+04	5,274E+04	7,905E+07	5,312E+03
2025	2,073E+05	1,660E+08	1,116E+04	5,538E+04	8,302E+07	5,578E+03
2026	2,168E+05	1,736E+08	1,166E+04	5,791E+04	8,681E+07	5,832E+03
2027	2,259E+05	1,809E+08	1,215E+04	6,033E+04	9,043E+07	6,076E+03
2028	2,345E+05	1,878E+08	1,262E+04	6,264E+04	9,389E+07	6,309E+03
2029	2,428E+05	1,944E+08	1,306E+04	6,485E+04	9,720E+07	6,531E+03
2030	2,507E+05	2,007E+08	1,349E+04	6,696E+04	1,004E+08	6,744E+03
2031	2,582E+05	2,068E+08	1,389E+04	6,898E+04	1,034E+08	6,947E+03
2032	2,655E+05	2,126E+08	1,428E+04	7,091E+04	1,063E+08	7,141E+03
2033	2,674E+05	2,141E+08	1,439E+04	7,143E+04	1,071E+08	7,194E+03
2034	2,556E+05	2,047E+08	1,375E+04	6,829E+04	1,024E+08	6,877E+03
2035	2,444E+05	1,957E+08	1,315E+04	6,528E+04	9,785E+07	6,575E+03
2036	2,336E+05	1,871E+08	1,257E+04	6,241E+04	9,355E+07	6,285E+03
2037	2,234E+05	1,789E+08	1,202E+04	5,966E+04	8,943E+07	6,009E+03
2038	2,135E+05	1,710E+08	1,149E+04	5,704E+04	8,549E+07	5,744E+03
2039	2,041E+05	1,635E+08	1,098E+04	5,453E+04	8,173E+07	5,492E+03
2040	1,952E+05	1,563E+08	1,050E+04	5,213E+04	7,814E+07	5,250E+03
2041	1,866E+05	1,494E+08	1,004E+04	4,983E+04	7,470E+07	5,019E+03
2042	1,784E+05	1,428E+08	9,596E+03	4,764E+04	7,141E+07	4,798E+03
2043	1,705E+05	1,365E+08	9,174E+03	4,555E+04	6,827E+07	4,587E+03
2044	1,630E+05	1,305E+08	8,770E+03	4,354E+04	6,527E+07	4,385E+03
2045	1,558E+05	1,248E+08	8,384E+03	4,163E+04	6,239E+07	4,192E+03
2046	1,490E+05	1,193E+08	8,015E+03	3,979E+04	5,965E+07	4,008E+03
2047	1,424E+05	1,140E+08	7,663E+03	3,804E+04	5,702E+07	3,831E+03
2048	1,362E+05	1,090E+08	7,326E+03	3,637E+04	5,451E+07	3,663E+03
2049	1,302E+05	1,042E+08	7,003E+03	3,477E+04	5,212E+07	3,502E+03
2050	1,244E+05	9,964E+07	6,695E+03	3,324E+04	4,982E+07	3,348E+03
2051	1,190E+05	9,526E+07	6,400E+03	3,178E+04	4,763E+07	3,200E+03
2052	1,137E+05	9,107E+07	6,119E+03	3,038E+04	4,553E+07	3,059E+03
2053	1,087E+05	8,706E+07	5,850E+03	2,904E+04	4,353E+07	2,925E+03
2054	1,039E+05	8,323E+07	5,592E+03	2,776E+04	4,161E+07	2,796E+03
2055	9,937E+04	7,957E+07	5,346E+03	2,654E+04	3,978E+07	2,673E+03
2056	9,499E+04	7,607E+07	5,111E+03	2,537E+04	3,803E+07	2,555E+03
2057	9,081E+04	7,272E+07	4,886E+03	2,426E+04	3,636E+07	2,443E+03
2058	8,682E+04	6,952E+07	4,671E+03	2,319E+04	3,476E+07	2,335E+03
2059	8,300E+04	6,646E+07	4,465E+03	2,217E+04	3,323E+07	2,233E+03

Results (Continued)

Year	Total landfill gas			Methane		
	(Mg/year)	(m ³ /year)	(av ft ³ /min)	(Mg/year)	(m ³ /year)	(av ft ³ /min)
2060	7,935E+04	6,354E+07	4,269E+03	2,119E+04	3,177E+07	2,134E+03
2061	7,585E+04	6,074E+07	4,081E+03	2,026E+04	3,037E+07	2,041E+03
2062	7,252E+04	5,807E+07	3,902E+03	1,937E+04	2,903E+07	1,951E+03
2063	6,933E+04	5,551E+07	3,730E+03	1,852E+04	2,776E+07	1,865E+03
2064	6,627E+04	5,307E+07	3,566E+03	1,770E+04	2,653E+07	1,783E+03
2065	6,336E+04	5,073E+07	3,409E+03	1,692E+04	2,537E+07	1,704E+03
2066	6,057E+04	4,850E+07	3,259E+03	1,618E+04	2,425E+07	1,629E+03
2067	5,791E+04	4,637E+07	3,115E+03	1,547E+04	2,318E+07	1,558E+03
2068	5,536E+04	4,433E+07	2,978E+03	1,479E+04	2,216E+07	1,489E+03
2069	5,292E+04	4,238E+07	2,847E+03	1,414E+04	2,119E+07	1,424E+03
2070	5,059E+04	4,051E+07	2,722E+03	1,351E+04	2,026E+07	1,361E+03
2071	4,837E+04	3,873E+07	2,602E+03	1,292E+04	1,936E+07	1,301E+03
2072	4,624E+04	3,703E+07	2,488E+03	1,235E+04	1,851E+07	1,244E+03
2073	4,420E+04	3,540E+07	2,378E+03	1,181E+04	1,770E+07	1,189E+03
2074	4,226E+04	3,384E+07	2,274E+03	1,129E+04	1,692E+07	1,137E+03
2075	4,040E+04	3,235E+07	2,174E+03	1,079E+04	1,617E+07	1,087E+03
2076	3,862E+04	3,093E+07	2,078E+03	1,032E+04	1,546E+07	1,039E+03
2077	3,692E+04	2,957E+07	1,986E+03	9,862E+03	1,478E+07	9,932E+02
2078	3,530E+04	2,826E+07	1,899E+03	9,428E+03	1,413E+07	9,495E+02
2079	3,374E+04	2,702E+07	1,816E+03	9,013E+03	1,351E+07	9,078E+02
2080	3,226E+04	2,583E+07	1,736E+03	8,617E+03	1,292E+07	8,678E+02
2081	3,084E+04	2,470E+07	1,659E+03	8,238E+03	1,235E+07	8,296E+02
2082	2,948E+04	2,361E+07	1,586E+03	7,875E+03	1,180E+07	7,931E+02
2083	2,819E+04	2,257E+07	1,516E+03	7,529E+03	1,128E+07	7,582E+02
2084	2,695E+04	2,158E+07	1,450E+03	7,197E+03	1,079E+07	7,249E+02
2085	2,576E+04	2,063E+07	1,386E+03	6,881E+03	1,031E+07	6,930E+02
2086	2,463E+04	1,972E+07	1,325E+03	6,578E+03	9,860E+06	6,625E+02
2087	2,354E+04	1,885E+07	1,267E+03	6,288E+03	9,426E+06	6,333E+02
2088	2,251E+04	1,802E+07	1,211E+03	6,012E+03	9,011E+06	6,055E+02
2089	2,152E+04	1,723E+07	1,158E+03	5,747E+03	8,615E+06	5,788E+02
2090	2,057E+04	1,647E+07	1,107E+03	5,494E+03	8,236E+06	5,533E+02
2091	1,966E+04	1,575E+07	1,058E+03	5,253E+03	7,873E+06	5,290E+02
2092	1,880E+04	1,505E+07	1,011E+03	5,021E+03	7,527E+06	5,057E+02
2093	1,797E+04	1,439E+07	9,669E+02	4,800E+03	7,196E+06	4,835E+02
2094	1,718E+04	1,376E+07	9,244E+02	4,589E+03	6,879E+06	4,622E+02
2095	1,643E+04	1,315E+07	8,837E+02	4,387E+03	6,576E+06	4,419E+02
2096	1,570E+04	1,257E+07	8,448E+02	4,194E+03	6,287E+06	4,224E+02
2097	1,501E+04	1,202E+07	8,076E+02	4,010E+03	6,010E+06	4,038E+02
2098	1,435E+04	1,149E+07	7,721E+02	3,833E+03	5,746E+06	3,861E+02
2099	1,372E+04	1,099E+07	7,381E+02	3,665E+03	5,493E+06	3,691E+02
2100	1,312E+04	1,050E+07	7,057E+02	3,503E+03	5,251E+06	3,528E+02
2101	1,254E+04	1,004E+07	6,746E+02	3,349E+03	5,020E+06	3,373E+02
2102	1,199E+04	9,598E+06	6,449E+02	3,202E+03	4,799E+06	3,225E+02
2103	1,146E+04	9,176E+06	6,165E+02	3,061E+03	4,588E+06	3,083E+02
2104	1,096E+04	8,772E+06	5,894E+02	2,926E+03	4,386E+06	2,947E+02
2105	1,047E+04	8,386E+06	5,635E+02	2,797E+03	4,193E+06	2,817E+02
2106	1,001E+04	8,017E+06	5,387E+02	2,674E+03	4,009E+06	2,693E+02
2107	9,572E+03	7,665E+06	5,150E+02	2,557E+03	3,832E+06	2,575E+02
2108	9,150E+03	7,327E+06	4,923E+02	2,444E+03	3,664E+06	2,462E+02
2109	8,748E+03	7,005E+06	4,707E+02	2,337E+03	3,502E+06	2,353E+02
2110	8,363E+03	6,697E+06	4,499E+02	2,234E+03	3,348E+06	2,250E+02

Results (Continued)

Year	Total landfill gas			Methane		
	(Mg/year)	(m ³ /year)	(av ft ³ /min)	(Mg/year)	(m ³ /year)	(av ft ³ /min)
2111	7,995E+03	6,402E+06	4,301E+02	2,136E+03	3,201E+06	2,151E+02
2112	7,643E+03	6,120E+06	4,112E+02	2,042E+03	3,060E+06	2,056E+02
2113	7,307E+03	5,851E+06	3,931E+02	1,952E+03	2,925E+06	1,966E+02
2114	6,985E+03	5,593E+06	3,758E+02	1,866E+03	2,797E+06	1,879E+02
2115	6,678E+03	5,347E+06	3,593E+02	1,784E+03	2,674E+06	1,796E+02
2116	6,384E+03	5,112E+06	3,435E+02	1,705E+03	2,556E+06	1,717E+02
2117	6,103E+03	4,887E+06	3,284E+02	1,630E+03	2,444E+06	1,642E+02
2118	5,835E+03	4,672E+06	3,139E+02	1,558E+03	2,336E+06	1,570E+02
2119	5,578E+03	4,466E+06	3,001E+02	1,490E+03	2,233E+06	1,501E+02
2120	5,332E+03	4,270E+06	2,869E+02	1,424E+03	2,135E+06	1,434E+02
2121	5,098E+03	4,082E+06	2,743E+02	1,362E+03	2,041E+06	1,371E+02
2122	4,873E+03	3,902E+06	2,622E+02	1,302E+03	1,951E+06	1,311E+02
2123	4,659E+03	3,731E+06	2,507E+02	1,244E+03	1,865E+06	1,253E+02
2124	4,454E+03	3,567E+06	2,396E+02	1,190E+03	1,783E+06	1,198E+02
2125	4,258E+03	3,410E+06	2,291E+02	1,137E+03	1,705E+06	1,145E+02
2126	4,071E+03	3,260E+06	2,190E+02	1,087E+03	1,630E+06	1,095E+02
2127	3,892E+03	3,116E+06	2,094E+02	1,039E+03	1,558E+06	1,047E+02
2128	3,720E+03	2,979E+06	2,002E+02	9,937E+02	1,490E+06	1,001E+02
2129	3,557E+03	2,848E+06	1,914E+02	9,500E+02	1,424E+06	9,568E+01
2130	3,400E+03	2,723E+06	1,829E+02	9,082E+02	1,361E+06	9,147E+01
2131	3,250E+03	2,603E+06	1,749E+02	8,682E+02	1,301E+06	8,744E+01
2132	3,107E+03	2,488E+06	1,672E+02	8,300E+02	1,244E+06	8,359E+01
2133	2,971E+03	2,379E+06	1,598E+02	7,935E+02	1,189E+06	7,992E+01
2134	2,840E+03	2,274E+06	1,528E+02	7,586E+02	1,137E+06	7,640E+01
2135	2,715E+03	2,174E+06	1,461E+02	7,252E+02	1,087E+06	7,304E+01
2136	2,596E+03	2,078E+06	1,396E+02	6,933E+02	1,039E+06	6,982E+01
2137	2,481E+03	1,987E+06	1,335E+02	6,628E+02	9,935E+05	6,675E+01
2138	2,372E+03	1,900E+06	1,276E+02	6,336E+02	9,498E+05	6,381E+01
2139	2,268E+03	1,816E+06	1,220E+02	6,058E+02	9,080E+05	6,101E+01
2140	2,168E+03	1,736E+06	1,166E+02	5,791E+02	8,680E+05	5,832E+01
2141	2,073E+03	1,660E+06	1,115E+02	5,536E+02	8,298E+05	5,576E+01
2142	1,981E+03	1,587E+06	1,066E+02	5,293E+02	7,933E+05	5,330E+01
2143	1,894E+03	1,517E+06	1,019E+02	5,060E+02	7,584E+05	5,096E+01
2144	1,811E+03	1,450E+06	9,743E+01	4,837E+02	7,250E+05	4,871E+01
2145	1,731E+03	1,386E+06	9,314E+01	4,624E+02	6,931E+05	4,657E+01
2146	1,655E+03	1,325E+06	8,904E+01	4,421E+02	6,626E+05	4,452E+01
2147	1,582E+03	1,267E+06	8,513E+01	4,226E+02	6,335E+05	4,256E+01
2148	1,513E+03	1,211E+06	8,138E+01	4,040E+02	6,056E+05	4,069E+01
2149	1,446E+03	1,158E+06	7,780E+01	3,862E+02	5,789E+05	3,890E+01
2150	1,382E+03	1,107E+06	7,438E+01	3,692E+02	5,535E+05	3,719E+01

Results (Continued)

Year	Carbon dioxide			NMOC		
	(Mg/year)	(m ³ /year)	(av ft ³ /min)	(Mg/year)	(m ³ /year)	(av ft ³ /min)
2010	0	0	0	0	0	0
2011	1,362E+04	7,442E+06	5,000E+02	3,201E+01	8,931E+03	6,000E-01
2012	2,665E+04	1,456E+07	9,781E+02	6,261E+01	1,747E+04	1,174E+00
2013	3,910E+04	2,136E+07	1,435E+03	9,187E+01	2,563E+04	1,722E+00
2014	5,100E+04	2,786E+07	1,872E+03	1,198E+02	3,343E+04	2,246E+00
2015	6,238E+04	3,408E+07	2,290E+03	1,466E+02	4,089E+04	2,748E+00
2016	7,326E+04	4,002E+07	2,689E+03	1,721E+02	4,802E+04	3,227E+00
2017	8,366E+04	4,570E+07	3,071E+03	1,966E+02	5,484E+04	3,685E+00
2018	9,360E+04	5,113E+07	3,436E+03	2,199E+02	6,136E+04	4,123E+00
2019	1,031E+05	5,632E+07	3,784E+03	2,423E+02	6,759E+04	4,541E+00
2020	1,122E+05	6,129E+07	4,118E+03	2,636E+02	7,355E+04	4,942E+00
2021	1,209E+05	6,603E+07	4,437E+03	2,840E+02	7,924E+04	5,324E+00
2022	1,292E+05	7,057E+07	4,742E+03	3,035E+02	8,468E+04	5,690E+00
2023	1,371E+05	7,491E+07	5,033E+03	3,222E+02	8,989E+04	6,040E+00
2024	1,447E+05	7,905E+07	5,312E+03	3,400E+02	9,486E+04	6,374E+00
2025	1,520E+05	8,302E+07	5,578E+03	3,571E+02	9,962E+04	6,693E+00
2026	1,589E+05	8,681E+07	5,832E+03	3,734E+02	1,042E+05	6,999E+00
2027	1,655E+05	9,043E+07	6,076E+03	3,890E+02	1,085E+05	7,291E+00
2028	1,719E+05	9,389E+07	6,309E+03	4,039E+02	1,127E+05	7,570E+00
2029	1,779E+05	9,720E+07	6,531E+03	4,181E+02	1,166E+05	7,837E+00
2030	1,837E+05	1,004E+08	6,744E+03	4,317E+02	1,204E+05	8,092E+00
2031	1,893E+05	1,034E+08	6,947E+03	4,447E+02	1,241E+05	8,336E+00
2032	1,946E+05	1,063E+08	7,141E+03	4,572E+02	1,275E+05	8,570E+00
2033	1,960E+05	1,071E+08	7,194E+03	4,605E+02	1,285E+05	8,633E+00
2034	1,874E+05	1,024E+08	6,877E+03	4,403E+02	1,228E+05	8,253E+00
2035	1,791E+05	9,785E+07	6,575E+03	4,209E+02	1,174E+05	7,890E+00
2036	1,712E+05	9,355E+07	6,285E+03	4,024E+02	1,123E+05	7,542E+00
2037	1,637E+05	8,943E+07	6,009E+03	3,847E+02	1,073E+05	7,211E+00
2038	1,565E+05	8,549E+07	5,744E+03	3,677E+02	1,026E+05	6,893E+00
2039	1,496E+05	8,173E+07	5,492E+03	3,516E+02	9,808E+04	6,590E+00
2040	1,430E+05	7,814E+07	5,250E+03	3,361E+02	9,376E+04	6,300E+00
2041	1,367E+05	7,470E+07	5,019E+03	3,213E+02	8,964E+04	6,023E+00
2042	1,307E+05	7,141E+07	4,798E+03	3,072E+02	8,569E+04	5,758E+00
2043	1,250E+05	6,827E+07	4,587E+03	2,937E+02	8,192E+04	5,504E+00
2044	1,195E+05	6,527E+07	4,385E+03	2,807E+02	7,832E+04	5,262E+00
2045	1,142E+05	6,239E+07	4,192E+03	2,684E+02	7,487E+04	5,031E+00
2046	1,092E+05	5,965E+07	4,008E+03	2,566E+02	7,158E+04	4,809E+00
2047	1,044E+05	5,702E+07	3,831E+03	2,453E+02	6,843E+04	4,598E+00
2048	9,979E+04	5,451E+07	3,663E+03	2,345E+02	6,542E+04	4,395E+00
2049	9,540E+04	5,212E+07	3,502E+03	2,242E+02	6,254E+04	4,202E+00
2050	9,120E+04	4,982E+07	3,348E+03	2,143E+02	5,979E+04	4,017E+00
2051	8,719E+04	4,763E+07	3,200E+03	2,049E+02	5,716E+04	3,840E+00
2052	8,335E+04	4,553E+07	3,059E+03	1,959E+02	5,464E+04	3,671E+00
2053	7,968E+04	4,353E+07	2,925E+03	1,872E+02	5,224E+04	3,510E+00
2054	7,618E+04	4,161E+07	2,796E+03	1,790E+02	4,994E+04	3,355E+00
2055	7,282E+04	3,978E+07	2,673E+03	1,711E+02	4,774E+04	3,208E+00
2056	6,962E+04	3,803E+07	2,555E+03	1,636E+02	4,564E+04	3,067E+00
2057	6,656E+04	3,636E+07	2,443E+03	1,564E+02	4,363E+04	2,932E+00
2058	6,363E+04	3,476E+07	2,335E+03	1,495E+02	4,171E+04	2,803E+00
2059	6,083E+04	3,323E+07	2,233E+03	1,429E+02	3,988E+04	2,679E+00

Results (Continued)

Year	Carbon dioxide			NMOC		
	(Mg/year)	(m ³ /year)	(av ft ³ /min)	(Mg/year)	(m ³ /year)	(av ft ³ /min)
2060	5,815E+04	3,177E+07	2,134E+03	1,366E+02	3,812E+04	2,561E+00
2061	5,559E+04	3,037E+07	2,041E+03	1,306E+02	3,644E+04	2,449E+00
2062	5,315E+04	2,903E+07	1,951E+03	1,249E+02	3,484E+04	2,341E+00
2063	5,081E+04	2,776E+07	1,865E+03	1,194E+02	3,331E+04	2,238E+00
2064	4,857E+04	2,653E+07	1,783E+03	1,141E+02	3,184E+04	2,139E+00
2065	4,643E+04	2,537E+07	1,704E+03	1,091E+02	3,044E+04	2,045E+00
2066	4,439E+04	2,425E+07	1,629E+03	1,043E+02	2,910E+04	1,955E+00
2067	4,244E+04	2,318E+07	1,558E+03	9,972E+01	2,782E+04	1,869E+00
2068	4,057E+04	2,216E+07	1,489E+03	9,533E+01	2,660E+04	1,787E+00
2069	3,879E+04	2,119E+07	1,424E+03	9,114E+01	2,543E+04	1,708E+00
2070	3,708E+04	2,026E+07	1,361E+03	8,713E+01	2,431E+04	1,633E+00
2071	3,545E+04	1,936E+07	1,301E+03	8,330E+01	2,324E+04	1,561E+00
2072	3,389E+04	1,851E+07	1,244E+03	7,963E+01	2,222E+04	1,493E+00
2073	3,240E+04	1,770E+07	1,189E+03	7,613E+01	2,124E+04	1,427E+00
2074	3,097E+04	1,692E+07	1,137E+03	7,278E+01	2,030E+04	1,364E+00
2075	2,961E+04	1,617E+07	1,087E+03	6,957E+01	1,941E+04	1,304E+00
2076	2,831E+04	1,546E+07	1,039E+03	6,651E+01	1,856E+04	1,247E+00
2077	2,706E+04	1,478E+07	9,932E+02	6,359E+01	1,774E+04	1,192E+00
2078	2,587E+04	1,413E+07	9,495E+02	6,079E+01	1,696E+04	1,139E+00
2079	2,473E+04	1,351E+07	9,078E+02	5,811E+01	1,621E+04	1,089E+00
2080	2,364E+04	1,292E+07	8,678E+02	5,556E+01	1,550E+04	1,041E+00
2081	2,260E+04	1,235E+07	8,296E+02	5,311E+01	1,482E+04	9,956E-01
2082	2,161E+04	1,180E+07	7,931E+02	5,077E+01	1,417E+04	9,517E-01
2083	2,066E+04	1,128E+07	7,582E+02	4,854E+01	1,354E+04	9,099E-01
2084	1,975E+04	1,079E+07	7,249E+02	4,640E+01	1,295E+04	8,698E-01
2085	1,888E+04	1,031E+07	6,930E+02	4,436E+01	1,238E+04	8,316E-01
2086	1,805E+04	9,860E+06	6,625E+02	4,241E+01	1,183E+04	7,950E-01
2087	1,725E+04	9,426E+06	6,333E+02	4,054E+01	1,131E+04	7,600E-01
2088	1,649E+04	9,011E+06	6,055E+02	3,876E+01	1,081E+04	7,265E-01
2089	1,577E+04	8,615E+06	5,788E+02	3,705E+01	1,034E+04	6,946E-01
2090	1,508E+04	8,236E+06	5,533E+02	3,542E+01	9,883E+03	6,640E-01
2091	1,441E+04	7,873E+06	5,290E+02	3,387E+01	9,448E+03	6,348E-01
2092	1,378E+04	7,527E+06	5,057E+02	3,238E+01	9,032E+03	6,069E-01
2093	1,317E+04	7,196E+06	4,835E+02	3,095E+01	8,635E+03	5,802E-01
2094	1,259E+04	6,879E+06	4,622E+02	2,959E+01	8,255E+03	5,546E-01
2095	1,204E+04	6,576E+06	4,419E+02	2,829E+01	7,891E+03	5,302E-01
2096	1,151E+04	6,287E+06	4,224E+02	2,704E+01	7,544E+03	5,069E-01
2097	1,100E+04	6,010E+06	4,038E+02	2,585E+01	7,212E+03	4,846E-01
2098	1,052E+04	5,746E+06	3,861E+02	2,471E+01	6,895E+03	4,633E-01
2099	1,005E+04	5,493E+06	3,691E+02	2,363E+01	6,591E+03	4,429E-01
2100	9,612E+03	5,251E+06	3,528E+02	2,259E+01	6,301E+03	4,234E-01
2101	9,189E+03	5,020E+06	3,373E+02	2,159E+01	6,024E+03	4,048E-01
2102	8,785E+03	4,799E+06	3,225E+02	2,064E+01	5,759E+03	3,870E-01
2103	8,398E+03	4,588E+06	3,083E+02	1,973E+01	5,506E+03	3,699E-01
2104	8,029E+03	4,386E+06	2,947E+02	1,887E+01	5,263E+03	3,536E-01
2105	7,676E+03	4,193E+06	2,817E+02	1,804E+01	5,032E+03	3,381E-01
2106	7,338E+03	4,009E+06	2,693E+02	1,724E+01	4,810E+03	3,232E-01
2107	7,015E+03	3,832E+06	2,575E+02	1,648E+01	4,599E+03	3,090E-01
2108	6,706E+03	3,664E+06	2,462E+02	1,576E+01	4,396E+03	2,954E-01
2109	6,411E+03	3,502E+06	2,353E+02	1,507E+01	4,203E+03	2,824E-01
2110	6,129E+03	3,348E+06	2,250E+02	1,440E+01	4,018E+03	2,700E-01

Results (Continued)

Year	Carbon dioxide			NMOC		
	(Mg/year)	(m ³ /year)	(av ft ³ /min)	(Mg/year)	(m ³ /year)	(av ft ³ /min)
2111	5,859E+03	3,201E+06	2,151E+02	1,377E+01	3,841E+03	2,581E-01
2112	5,602E+03	3,060E+06	2,056E+02	1,316E+01	3,672E+03	2,467E-01
2113	5,355E+03	2,925E+06	1,966E+02	1,258E+01	3,511E+03	2,359E-01
2114	5,119E+03	2,797E+06	1,879E+02	1,203E+01	3,356E+03	2,255E-01
2115	4,894E+03	2,674E+06	1,796E+02	1,150E+01	3,208E+03	2,156E-01
2116	4,679E+03	2,556E+06	1,717E+02	1,099E+01	3,067E+03	2,061E-01
2117	4,473E+03	2,444E+06	1,642E+02	1,051E+01	2,932E+03	1,970E-01
2118	4,276E+03	2,336E+06	1,570E+02	1,005E+01	2,803E+03	1,883E-01
2119	4,088E+03	2,233E+06	1,501E+02	9,606E+00	2,680E+03	1,801E-01
2120	3,908E+03	2,135E+06	1,434E+02	9,183E+00	2,562E+03	1,721E-01
2121	3,736E+03	2,041E+06	1,371E+02	8,779E+00	2,449E+03	1,646E-01
2122	3,572E+03	1,951E+06	1,311E+02	8,393E+00	2,341E+03	1,573E-01
2123	3,415E+03	1,865E+06	1,253E+02	8,024E+00	2,238E+03	1,504E-01
2124	3,264E+03	1,783E+06	1,198E+02	7,671E+00	2,140E+03	1,438E-01
2125	3,121E+03	1,705E+06	1,145E+02	7,333E+00	2,046E+03	1,375E-01
2126	2,983E+03	1,630E+06	1,095E+02	7,010E+00	1,956E+03	1,314E-01
2127	2,852E+03	1,558E+06	1,047E+02	6,702E+00	1,870E+03	1,256E-01
2128	2,727E+03	1,490E+06	1,001E+02	6,407E+00	1,787E+03	1,201E-01
2129	2,607E+03	1,424E+06	9,568E+01	6,125E+00	1,709E+03	1,148E-01
2130	2,492E+03	1,361E+06	9,147E+01	5,856E+00	1,634E+03	1,098E-01
2131	2,382E+03	1,301E+06	8,744E+01	5,598E+00	1,562E+03	1,049E-01
2132	2,277E+03	1,244E+06	8,359E+01	5,352E+00	1,493E+03	1,003E-01
2133	2,177E+03	1,189E+06	7,992E+01	5,116E+00	1,427E+03	9,590E-02
2134	2,081E+03	1,137E+06	7,640E+01	4,891E+00	1,364E+03	9,168E-02
2135	1,990E+03	1,087E+06	7,304E+01	4,676E+00	1,304E+03	8,765E-02
2136	1,902E+03	1,039E+06	6,982E+01	4,470E+00	1,247E+03	8,379E-02
2137	1,819E+03	9,935E+05	6,675E+01	4,273E+00	1,192E+03	8,010E-02
2138	1,739E+03	9,498E+05	6,381E+01	4,085E+00	1,140E+03	7,658E-02
2139	1,662E+03	9,080E+05	6,101E+01	3,906E+00	1,090E+03	7,321E-02
2140	1,589E+03	8,680E+05	5,832E+01	3,734E+00	1,042E+03	6,999E-02
2141	1,519E+03	8,298E+05	5,576E+01	3,569E+00	9,958E+02	6,691E-02
2142	1,452E+03	7,933E+05	5,330E+01	3,412E+00	9,520E+02	6,396E-02
2143	1,388E+03	7,584E+05	5,096E+01	3,262E+00	9,101E+02	6,115E-02
2144	1,327E+03	7,250E+05	4,871E+01	3,119E+00	8,700E+02	5,846E-02
2145	1,269E+03	6,931E+05	4,657E+01	2,981E+00	8,318E+02	5,589E-02
2146	1,213E+03	6,626E+05	4,452E+01	2,850E+00	7,952E+02	5,343E-02
2147	1,160E+03	6,335E+05	4,256E+01	2,725E+00	7,602E+02	5,108E-02
2148	1,109E+03	6,056E+05	4,069E+01	2,605E+00	7,267E+02	4,883E-02
2149	1,060E+03	5,789E+05	3,890E+01	2,490E+00	6,947E+02	4,668E-02
2150	1,013E+03	5,535E+05	3,719E+01	2,381E+00	6,642E+02	4,463E-02