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A CASE STUDY DEMONSTRATING U.S. EPA GUIDANCE FOR EVALUATING LANDFILL GAS EMISSIONS FROM CLOSED OR ABANDONED FACILITIES

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HARFORD COUNTY, MARYLAND

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BUSH VALLEY LANDFILL HARFORD COUNTY, MARYLAND

by

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Abstract

This report describes a case study that applies EPA-600/R-05/123—the guidance for conducting air pathway analyses of landfill gas emissions that are of interest to superfund remedial project managers, on-scene coordinators, facility owners, and potentially responsible parties. The particular site examined for this case study was the Bush Valley Landfill in Harford County, MD. This site has a flexible membrane liner, 5 passive vents, and 17 monitoring probes. The case study exemplifies the use of the procedures and tools described in the guidance for evaluating LFG emissions to ambient air. The air pathway analysis is used to evaluate the inhalation risks to offsite receptors as well as the hazards of both onsite and offsite methane explosions and landfill fires. Landfill gases detected at the site were methane and chemicals of particular concern (COPCs) that encompassed 1,1,1-trichloroethane, 1,1-dichloroethene, 1,2-dichloroethane, benzene, chlorobenzene, 1,4-dichlorobenzene, chloroethane, dichlorobenzene, methylene chloride, toluene, trichloroethene, vinyl chloride, and xylenes. The report includes values of 90th percentile concentration of COPCs and isopleths of the COPC concentrations overlaid on an aerial photograph of the site.

Foreword

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Sally Gutierrez, Director
National Risk Management Research Laboratory

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Executive Summary

The Bush Valley Landfill (landfill) Site is located in Harford County, Maryland, one mile from the town of Abingdon. The site is located on a 29-acre parcel of land, approximately 16 of which are occupied by the actual landfill. The Bush Declaration Natural Resources Management Area is a 120-acre tidal cattail marsh that borders the site to the north and east. Harford Town, a planned community, lies west of the site across Bush Road, and three single-family homes are located within 300 feet of the landfill's southern border. The landfill itself consists of a mound of covered material sloping up from the southern site boundary. A flexible membrane liner (FML) and gas collection system have been installed on this landfill as have 5 passive vents and 17 probes. The screening procedures were carried out to identify any leaks that may be present in the cover.

This site was selected in order to provide a comparison to the historical decisions concerning the number and location of the perimeter monitoring probes and the need to control LFG with the conclusions one would reach if the guidance document procedures were followed.

By implementing the methodologies and protocols detailed in the Guidance for Evaluating Landfill Gas Emissions from Closed or Abandoned Facilities (EPA-600/R-05/123a), potential hot spots were identified by using the screening process. Ten chemicals of potential concern (COPCs) were identified in the landfill gas by implementing the sampling and analysis protocols from the guidance document. The organic chemicals of potential concern for this site include dioxane, acetone, benzene, carbon disulfide, chloromethane, ethanol, methylene chloride, tetrachloroethene, toluene, and vinyl chloride. Emission and dispersion modeling (LandGEM and SCREEN3) were used to estimate emission rates and ambient air concentrations. The estimated ambient air concentration for each COPC was then compared to various risk ranges.

This case study successfully illustrated that the procedures and methodologies described in the guidance could be implemented in a step-wise manner. This landfill evaluation identified previously unrecognized leaks in the FML and confirmed previous findings that indicated LFG has migrated offsite in a direction towards occupied homes via below ground sand layers. This illustrative study effort was not designed to fully characterize the aerial extent of the LFG migration. Since remedial alternatives were already being designed for the landfill and plans to replace the passive vents collection system with an enclosed oxidizer were already approved, no further site investigation effort was undertaken.

Section 1. Demonstration Objectives

The purpose of the activities described in this document was to provide a demonstration of the procedures as described within the "Guidance for Evaluating Landfill Gas Emissions from Closed or Abandoned Facilities" (guidance) (EPA-600/R-05/123). It was also the intent of this demonstration to provide an example case study for reference by the practitioner. These efforts were not intended to provide a comprehensive site analysis or complete risk assessment.

This site was selected in order to provide a comparison to the historical decisions concerning the number and location of the perimeter monitoring probes and the need to control LFG with the conclusions one would reach if the guidance document procedures were followed. A flexible membrane liner (FML) and gas collection system has already been installed on this landfill. The site has 5 passive vents and 17 monitoring probes. As part of this demonstration all of the existing probes and vents were screened for total hydrocarbons (THC), reported as methane and non-methane organic compound (NMOC) by using direct read instruments. All of the vents and probes were also sampled and analyzed for Methane, NMOC, fixed gases, and volatile organic chemicals. Additional subsurface samples were not collected to prevent any damage to the liner and the need for the project team to make such repairs to the liner. The screening procedures were carried out in order to identify any leaks that may be present in the cover. The guidance document procedures were designed to minimize the number of samples needing to be collected and to direct where sampling should occur. The statistical procedures from the guidance were completed to determine where and how many samples would have been collected if the FML were absent.

Section 2. Site Description

The Bush Valley Landfill (landfill) site is located in Harford County, Maryland, one mile from the town of Abingdon. The site is located on a 29 acre parcel of land, approximately 16 of which are occupied by the actual landfill. The landfill is located approximately 1/3 mile south of Maryland Route 7 and 1/2 mile north of U.S. Route 40. The site is accessed from Bush Road, which forms the western border of the site. The Bush Declaration Natural Resources Management Area is a 120-acre tidal cattail marsh that borders the site to the north and east. Harford Town, a planned community, lies west of the site across Bush Road. Three single-family homes are located within 300 feet of the landfill's southern border.

As noted above, a freshwater marsh lies to the north and east of the site. Bynum Rum Creek flows to the north of the site until its confluence with James Run, which in turn flows into a tributary of the Bush River. Figure 1 shows the approximate location and orientation of the landfill.

The landfill itself consists of a mound of covered material sloping up from the southern site boundary. The mound peaks 25 feet above natural grade approximately in the center of the site and then slopes downward to the north at a somewhat steeper slope than on the south side of the site. The graded site also slopes gently to the east and west towards the marsh area and Bush Road, respectively.

The landfill is capped with a geosynthetic capping system. The cap is multilayered and includes:

- 2 feet of soil bedding material on top of the solid waste
- Gas transmission layer (6 oz/yd^2 geotextile),
- Hydraulic barrier (40 mil low density polyethylene),
- Drainage layer (6 oz/yd^2 geotextile),
- Anchor trench (3 foot run out and 2 feet deep),
- Soil cover (2 feet thick) with shallow root vegetation,
- 5 passive LFG vents (4 inch schedule 80 PVC) along ridge line, and
- 9 permanent gas monitoring probes (2 inch diameter with 3/8 inch valves).

Figure 2 is a site plan. Figure 3 shows the construction details for the passive vents.

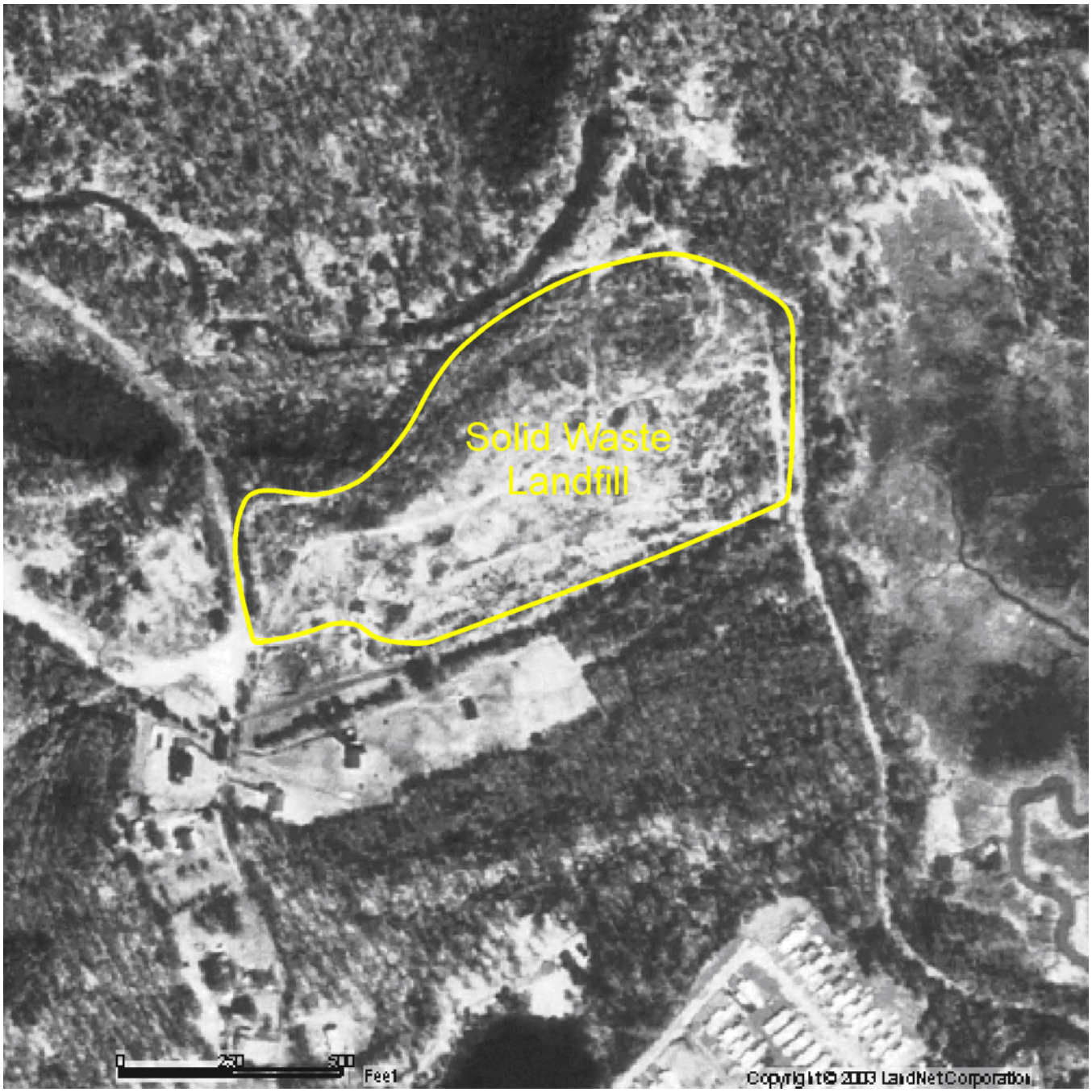


Figure 1. Location and Orientation of the Bush Valley Solid Waste Landfill.

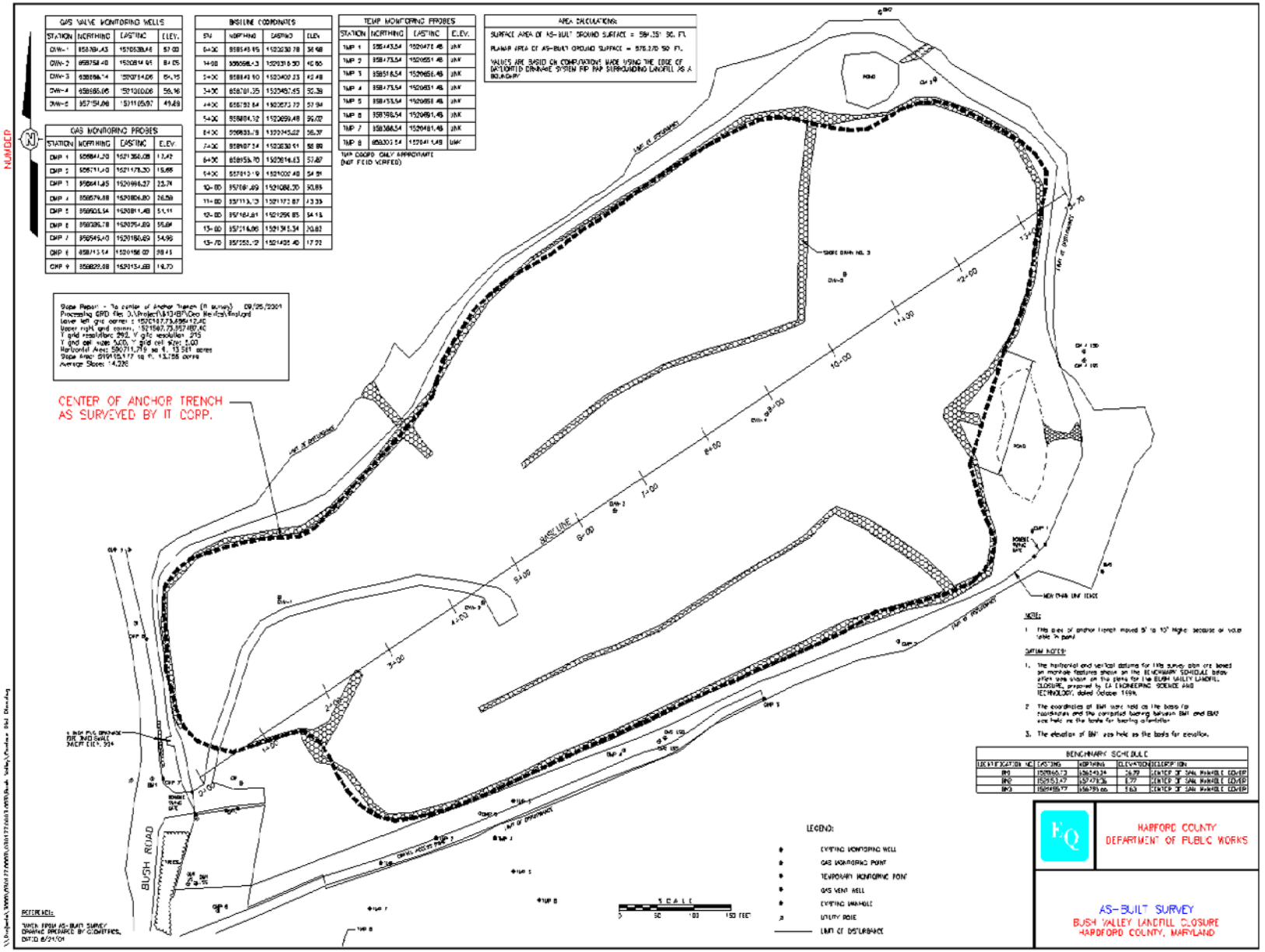


Figure 2. Bush Valley Site Plan.

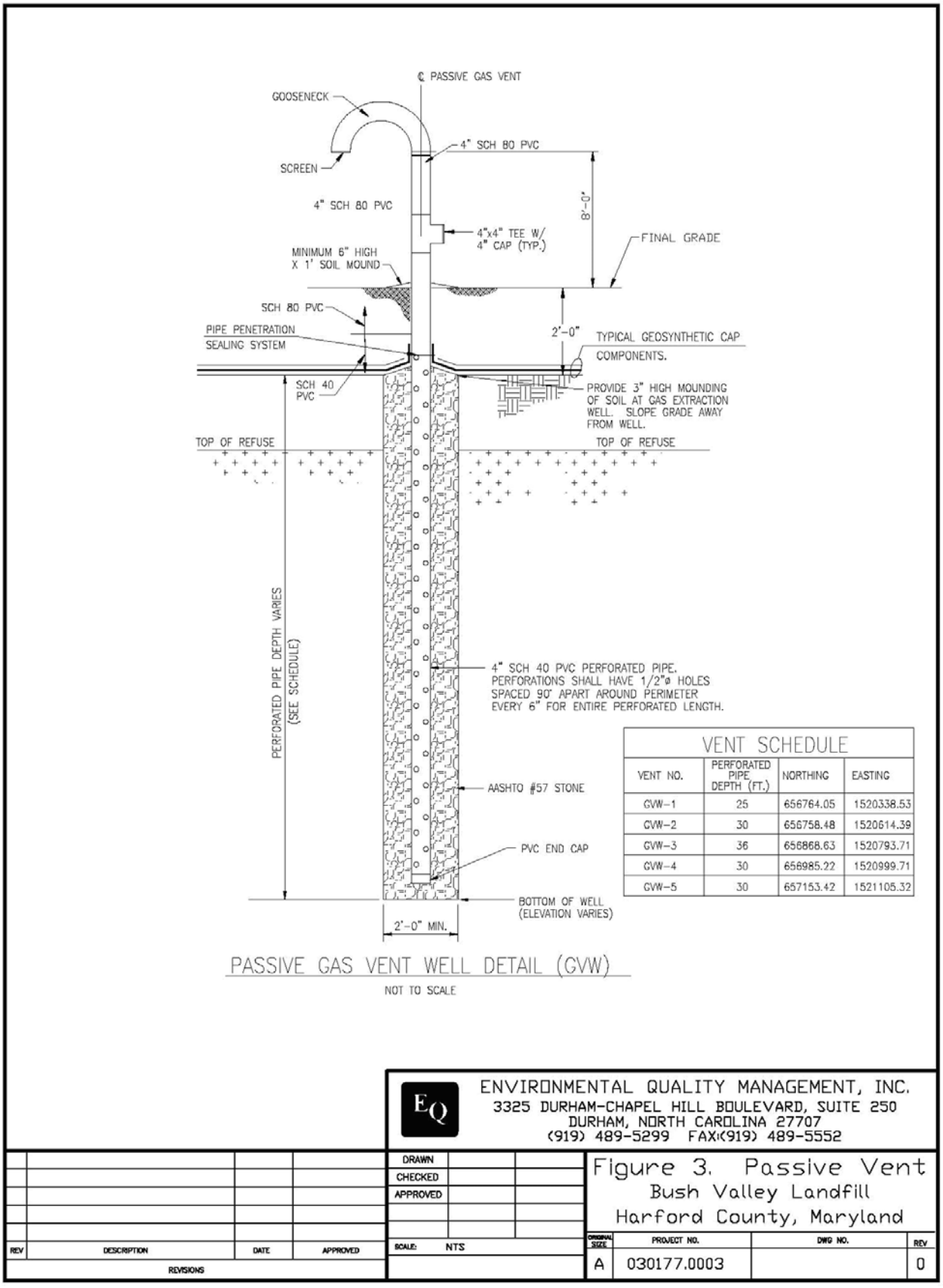


Figure 3. Passive Vent Construction Detail.

Section 3. Site History

The site history contained herein was derived from historical literature available for the site. The Bush Valley Superfund Landfill, began operation in 1974. Prior to 1974, the land was used for cattle grazing and raising crops. In 1974, a trash hauler leased the property and contracted with Harford County in 1975 to provide landfill services for the county. That same year, the Maryland Department of Health and Mental Hygiene (DHMH) granted a permit to use the land as a municipal solid waste landfill. The landfill took in household and industrial wastes. The operator abandoned the site in 1983 when the landfill reached capacity, and the site was added to the National Priority List (NPL) in 1989. The final Record of Decision (ROD) was issued in 1995. The final design for the remedial action was completed in 1999. The landfill was closed in 2001 with the installation of a flexible membrane single barrier cover system. As a part of the landfill closure, a passive landfill gas (LFG) control system was installed. This passive system consists of 14 subsurface gas collection points that terminate below the landfill cap into a gas transmission layer that is connected to five passive gas vent wells aligned along the ridge of the landfill.

In December 2002, eight temporary gas monitoring probes (TMP) were installed in the sand and gravel layer that exists approximately 15 feet below ground surface. These probes confirmed that a 15-foot thick layer of clayey soil is overlaying the sand. This study effort also demonstrated that methane at concentrations between 62 and 65.4 percent exists in the sand layer, and the gas pressure within the sand layer is approximately 0.4 inches of Hg. Prior to this study, samples from the temporary probes had not been analyzed for speciated volatile organics.

These eight temporary probes were located such that:

- TMP-1, TMP-2, and TMP-3 were installed along a transect that parallels the landfill property line and represent locations that were between the two closest residences and the buried landfill waste. These probes were between 20 and 60 feet south of the buried waste. The lateral spacing between these probes was approximately 50 feet.
- TMP-4, TMP-5, and TMP-6 were installed along a transect that connects the Fleet house (middle resident) and the buried waste that was closest to the Fleet house. The lateral spacing for these probes was approximately 50 feet.
- TMP-7 and TMP-8 were installed along a transect that connects the Milton house (eastern resident) and the buried waste that was closest to the Milton house. The lateral spacing for these probes was approximately 50 feet.

Analytical results of groundwater and ambient air samples indicate that 10 volatile organic compounds (VOCs) have been detected at varying concentrations. The organic chemicals of potential concern for this site include 1,4 dioxane, acetone, benzene, carbon disulfide, chloromethane, ethanol, methylene chloride, tetrachloroethene, toluene, and vinyl chloride.

Section 4. Field Activities and Data Collection

Field activities as described in the approved site activity plan for the Bush Valley Landfill located in Abingdon, Maryland were conducted on August 25 and August 26, 2003. Field activities included landfill surface screening analysis, screening data reduction, hot spot and homogeneity determinations, landfill soil gas sampling, passive vent gas sampling, perimeter well gas sampling, and ambient air sampling. Appendix A contains pictures from the site activities conducted on August 25 and 26, 2003.

To assist with the field activities, a 30 m by 30 m sampling grid was developed across the extent of the landfill area prior to the field activities. This sampling grid was developed to include the entire extent of the landfill boundary area and extend 30 m beyond that boundary area. This grid was then numbered for each node location forming a serpentine sampling pathway across the grid. A total of 108 sampling locations comprised the sampling grid layout developed for this site. A reference point was identified using an identifiable landmark on the site to locate the starting point. Figure 4 shows the sampling grid for the screening analysis.

4.1 Landfill Surface Screening Analysis

Once on site, the reference point was visually located, and the screening analysis was begun by locating the starting point (grid node 1) using a handheld global positioning system (GPS). The screening analysis included measurements for non-methane organic compounds (NMOC) using a photo ionized detector (PID) and for methane (CH_4) by using a flame ionized detector (FID). Both the PID and FID were held no more than one inch above the ground while measurements were being made. It should be noted that the field instruments are very sensitive, and fluctuation due to gusts of wind across the landfill cover could have been significant. Readings were taken for approximately one minute and the average value, excluding the extreme highs and lows, was recorded. In conducting the serpentine walk across the site, an effort was made to identify areas containing cracks and gaps in the landfill cover, and measurements were made at these locations to the extent possible. As this site had previously installed passive vents, these passive vents were including in the screening analysis as a breach in the cover. The permanent and temporary installed gas monitoring probes were also included in these screening activities. All predetermined sampling locations were not accessible for a variety of reasons, ranging from being located on private property to inaccessible by the field crew due to extreme overgrowth. An attempt was made to collect a reading at each location, with measurements being collected not greater than 10 m from the predetermined locations. As part of the quality assurance/quality control (QA/QC) efforts, duplicate readings were also taken at predetermined locations that were selected based on a random number generator. All screening data were recorded on field log data collection forms along with any field notes relevant to this specific location. There was 90 percent data collection efficiency. Table 1 provides the screening sample results.

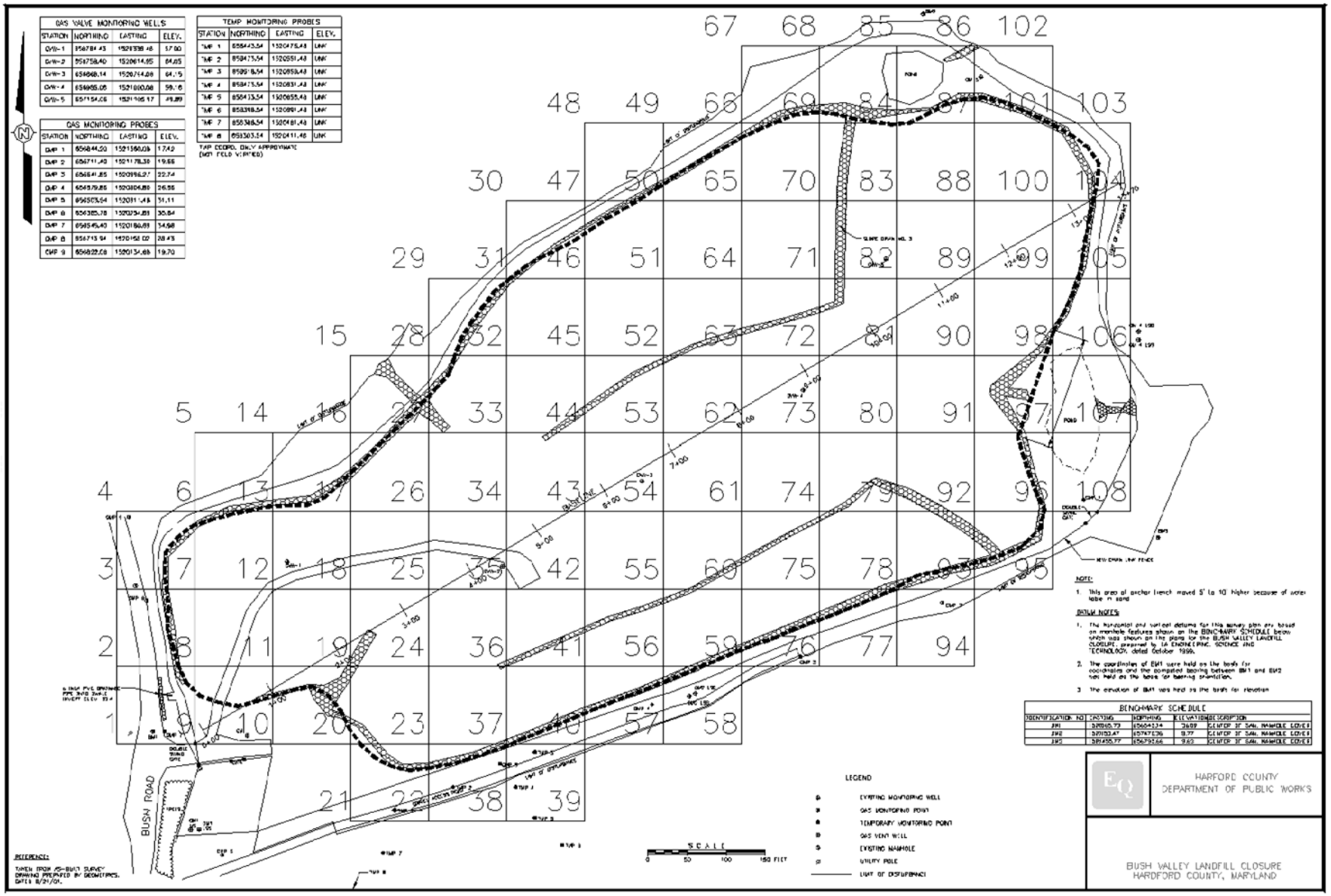


Figure 4. Screening Sampling Grid Locations.

Table 1. Bush Valley Screening Sample Results.

Grid No.	Sample ID No.	Actual UTM Coordinates		NMOC Conc.	CH_4 Conc.
		Easting	Northing		
1	LFSG-02-08 27 03 -R 001	18391264	4369160	ND	1.29
2	LFSG-02-08 27 03 -R 002	18391275	4369193	ND	1.29
3	LFSG-02-08 27 03 -R 003	18391270	4369221	ND	1.05
4	LFSG-02-08 27 03 -R 004	18391258	4369252	ND	1.58
5		NA	NA	NA	NA
6	LFSG-02-08 27 03 -R 005	18391296	4369251	ND	1.22
7	LFSG-02-08 27 03 -R 006	18391311	4369216	ND	3.33
8	LFSG-02-08 27 03 -R 007	18391314	4369185	ND	1.4
9	LFSG-02-08 27 03 -R 008	18391313	4369140	ND	1.32
10	LFSG-02-08 27 03 -R 009	18391327	4369141	ND	1.37
11	LFSG-02-08 27 03 -R 010	18391330	4369191	ND	1.31
12	LFSG-02-08 27 03 -R 011	18391329	4369221	ND	1.65
13	LFSG-02-08 27 03 -R 012	18391325	4369248	ND	3.11
14		NA	NA	NA	NA
15		NA	NA	NA	NA
16	LFSG-02-08 27 03 -R 013	18391353	4369267	ND	20.2
17	LFSG-02-08 27 03 -R 014	18391357	4369250	ND	2.08
18	LFSG-02-08 27 03 -R 015	18391355	4369220	ND	1.44
19	LFSG-02-08 27 03 -R 016	18391359	4369189	ND	1.7
20	LFSG-02-08 27 03 -R 017	18391354	4369160	ND	0.85
21	LFSG-02-08 27 03 -R 018	18391357	4369141	ND	0.9
22	LFSG-02-08 27 03 -R 097	18391384	4369133	ND	2.08
23	LFSG-02-08 27 03 -R 019	18391385	4369154	ND	5.5
24	LFSG-02-08 27 03 -R 020	18391391	4369189	ND	1.66
25	LFSG-02-08 27 03 -R 021	18391386	4369214	ND	1.39
26	LFSG-02-08 27 03 -R 022	18391386	4369252	ND	1.71
27	LFSG-02-08 27 03 -R 023	18391383	4369280	ND	34
28		NA	NA	NA	NA
29		NA	NA	NA	NA
30		NA	NA	NA	NA
31	LFSG-02-08 27 03 -R 024	18391411	4369330	ND	55.25
32	LFSG-02-08 27 03 -R 025	18391421	4369310	ND	52.27
33	LFSG-02-08 27 03 -R 026	18391419	4369278	ND	2.27
34	LFSG-02-08 27 03 -R 027	18391416	4369251	ND	1.54
35	LFSG-02-08 27 03 -R 028	18391415	4369219	ND	1.67
36	LFSG-02-08 27 03 -R 029	18391417	4369190	ND	1.86
37	LFSG-02-08 27 03 -R 030	18391416	4369161	ND	2.38
38	LFSG-02-08 27 03 -R 096	18391413	4369142	ND	1.88
39	LFSG-02-08 27 03 -R 095	18391447	4369148	ND	2.22
40	LFSG-02-08 27 03 -R 031	18391447	4369168	ND	2.08
41	LFSG-02-08 27 03 -R 032	18391442	4369190	ND	2.71
42	LFSG-02-08 27 03 -R 033	18391445	4369220	ND	38.36
43	LFSG-02-08 27 03 -R 034	18391444	4369251	ND	2.01
44	LFSG-02-08 27 03 -R 035	18391446	4369279	ND	3.85
45	LFSG-02-08 27 03 -R 036	18391443	4369312	ND	2.65

[a] ND = not detected

[b] NA = not available

continued

Table 1. Bush Valley Screening Sample Results (continued).

Grid No.	Sample ID No.	Actual UTM Coordinates		NMOC Conc.	CH_4 Conc.
		Easting	Northing		
46	LFSG-02-08 27 03 -R 037	18391442	4369341	ND	3.98
47	LFSG-02-08 27 03 -R 038	18391446	4369352	ND	3.13
48		NA	NA	NA	NA
49		NA	NA	NA	NA
50	LFSG-02-08 27 03 -R 039	18391476	4369373	ND	4.12
51	LFSG-02-08 27 03 -R 040	18391476	4369341	ND	1.79
52	LFSG-02-08 27 03 -R 041	18391477	4369310	ND	1.98
53	LFSG-02-08 27 03 -R 042	18391476	4369279	ND	2.57
54	LFSG-02-08 27 03 -R 043	18391477	4369249	ND	1.91
55	LFSG-02-08 27 03 -R 044	18391475	4369219	ND	3.34
56	LFSG-02-08 27 03 -R 045	18391475	4369189	ND	1.76
57	LFSG-02-08 27 03 -R 094	18391475	4369161	ND	2.41
58	LFSG-02-08 27 03 -R 093	18391512	4369164	ND	2.81
59	LFSG-02-08 27 03 -R 046	18391507	4369190	ND	1.84
60	LFSG-02-08 27 03 -R 047	18391504	4369223	ND	2.03
61	LFSG-02-08 27 03 -R 048	18391506	4369250	ND	2.09
62	LFSG-02-08 27 03 -R 049	18391510	4369281	ND	37.31
63	LFSG-02-08 27 03 -R 050	18391504	4369311	ND	1.79
64	LFSG-02-08 27 03 -R 051	18391507	4369341	ND	7.11
65	LFSG-02-08 27 03 -R 052	18391506	4369371	ND	5.54
66	LFSG-02-08 27 03 -R 053	18391508	4369390	ND	6.56
67		NA	NA	NA	NA
68	LFSG-02-08 27 03 -R 054	18391539	4369412	ND	5.05
69	LFSG-02-08 27 03 -R 055	18391542	4369398	ND	2.16
70	LFSG-02-08 27 03 -R 056	18391532	4369371	ND	2.26
71	LFSG-02-08 27 03 -R 057	18391535	4369340	ND	3.01
72	LFSG-02-08 27 03 -R 058	18391539	4369309	ND	2.75
73	LFSG-02-08 27 03 -R 065	18391539	4369279	ND	2.26
74	LFSG-02-08 27 03 -R 059	18391535	4369252	ND	23.43
75	LFSG-02-08 27 03 -R 060	18391539	4369220	ND	3.49
76	LFSG-02-08 27 03 -R 061	18391536	4369200	ND	2.44
77	LFSG-02-08 27 03 -R 092	18391564	4369206	ND	3.08
78	LFSG-02-08 27 03 -R 062	18391566	4369208	ND	1.86
79	LFSG-02-08 27 03 -R 063	18391560	4369252	ND	2.83
80	LFSG-02-08 27 03 -R 064	18391565	4369280	ND	2.29
81	LFSG-02-08 27 03 -R 065	18391566	4369312	ND	4.31
82	LFSG-02-08 27 03 -R 066	18391563	4369340	ND	1.51
83	LFSG-02-08 27 03 -R 067	18391564	4369371	ND	2.67
84	LFSG-02-08 27 03 -R 068	18391568	4369400	ND	1.84
85	LFSG-02-08 27 03 -R 069	18391566	4369426	ND	1.45
86	LFSG-02-08 27 03 -R 070	18391598	4369420	ND	1.67
87	LFSG-02-08 27 03 -R 071	18391595	4369398	ND	1.81
88	LFSG-02-08 27 03 -R 072	18391590	4369372	ND	1.88
89	LFSG-02-08 27 03 -R 073	18391586	4369339	ND	2.16
90	LFSG-02-08 27 03 -R 074	18391599	4369310	ND	2.55

[a] ND = not detected

[b] NA = not available

continued

Table 1. Bush Valley Screening Sample Results (concluded).

Grid No.	Sample ID No.	Actual UTM Coordinates		NMOC Conc.	CH_4 Conc.
		Easting	Northing		
91	LFSG-02-08 27 03 -R 075	18391597	4369281	ND	8.35
92	LFSG-02-08 27 03 -R 076	18391597	4369249	ND	2.4
93	LFSG-02-08 27 03 -R 077	18391596	4369221	ND	1.63
94	LFSG-02-08 27 03 -R 078	18391593	4369217	ND	2.41
95	LFSG-02-08 27 03 -R 091	18391626	4369225	ND	3.31
96	LFSG-02-08 27 03 -R 090	18391622	4369250	ND	2.29
97	LFSG-02-08 27 03 -R 079	18391620	4369278	ND	7.29
98	LFSG-02-08 27 03 -R 080	18391627	4369311	ND	5.2
99	LFSG-02-08 27 03 -R 081	18391628	4369341	ND	2.13
100	LFSG-02-08 27 03 -R 082	18391624	4369370	ND	1.95
101	LFSG-02-08 27 03 -R 083	18391627	4369400	ND	2.69
102	LFSG-02-08 27 03 -R 084	NA	NA	NA	NA
103		NA	NA	NA	NA
104	LFSG-02-08 27 03 -R 085	18391652	4369370	ND	2.88
105	LFSG-02-08 27 03 -R 086	18391650	4369339	ND	2.06
106	LFSG-02-08 27 03 -R 087	18391656	4369308	ND	2.32
107	LFSG-02-08 27 03 -R 088	18391658	4369281	ND	2.15
108	LFSG-02-08 27 03 -R 089	18391654	4369252	ND	2.34

[a] ND = not detected
[b] NA = not available

4.2 Hot Spot and Homogeneity Determinations

The screening data collected were used for two analyses. The first was for a hot spot analysis, which was done by importing the screening data set into a graphical contouring software package (Surfer) to produce concentration contours that were layered over an aerial photograph of the site. This method allowed for a visual determination of where the higher concentrations were recorded during the screening analysis and allowed for the data set to be divided into two data sets based on the contours derived from these data. This population division was used as part of the homogeneity determinations. NMOC was only detected from the passive vents and gas monitoring probes. Therefore, methane measurements were used to identify hot spots and to determine the number of near homogeneous subdivisions required to characterize the landfill surface. Figures 5 and 6 show the concentration contours for both the NMOC and methane data that were recorded during the screening analysis.

The second analysis provided a determination of the homogeneity of the site, which was done through statistical means by using the Wilcoxon Rank Sum statistical method. This method determines whether two data sets are statistically similar (i.e., homogeneous). If the two sets are determined to be similar, then the two populations are determined to be one nearly homogeneous area. But if the two data sets are determined not to be statistically similar, then the two sets are said to be two non-homogeneous areas. The hot spot analysis was used to determine if there appeared to be two distinct population sets. For this site, it was shown that there existed four nearly homogeneous areas. Appendix B contains the Wilcoxon data analysis. As was mentioned earlier, all non-detect and duplicate measurements were excluded from this statistical analysis.

4.3 Sampling Activities

Sampling activities included passive vent gas sampling, perimeter well gas sampling, and ambient air sampling. Figure 7 shows all the sampled locations. Each of the sampling methods will be discussed further in the following subsections.

4.3.1 Landfill Soil Gas Sampling via Passive Vents

As part of this demonstration, landfill soil gas samples were collected for the Chemicals of Potential Concern (COPC). The samples were collected using a Summa canister and were sent to an off-site commercial laboratory for analysis. Field instrumentation was used at each of the designated sampling locations to measure fixed gases encompassing carbon dioxide (CO_2), nitrogen (N_2), and oxygen (O_2). The fixed gas concentration values were used to verify that LFG was being collected. As per the guidance, it was determined that three landfill soil gas samples should be collected in each of the four homogeneous areas, yielding a total of 12 landfill soil gas sampling being required. However, because this site has a flexible membrane already in place, it was determined that using a slam-bar on this site was not feasible in order to prevent damage to the engineered cover and to avoid the complexities of ensuring proper repair that slam-bar use would necessitate. Instead, it was determined that LFG samples would be collected only at the installed passive gas vents (GVW). The duplicate sample was collected at GVW 1. For all GVW locations, a brass sampling valve was installed on each vent, and the vent exit was sealed to minimize leakage during sampling activities. Laboratory analytical results can be found in Appendix C.

4.3.2 Perimeter Well Gas Sampling

As a further demonstration, sampling was conducted at all perimeter wells and temporary perimeter wells. These perimeter well locations were designated as gas monitoring probes (GMPs) and temporary monitoring probes (TMPs).

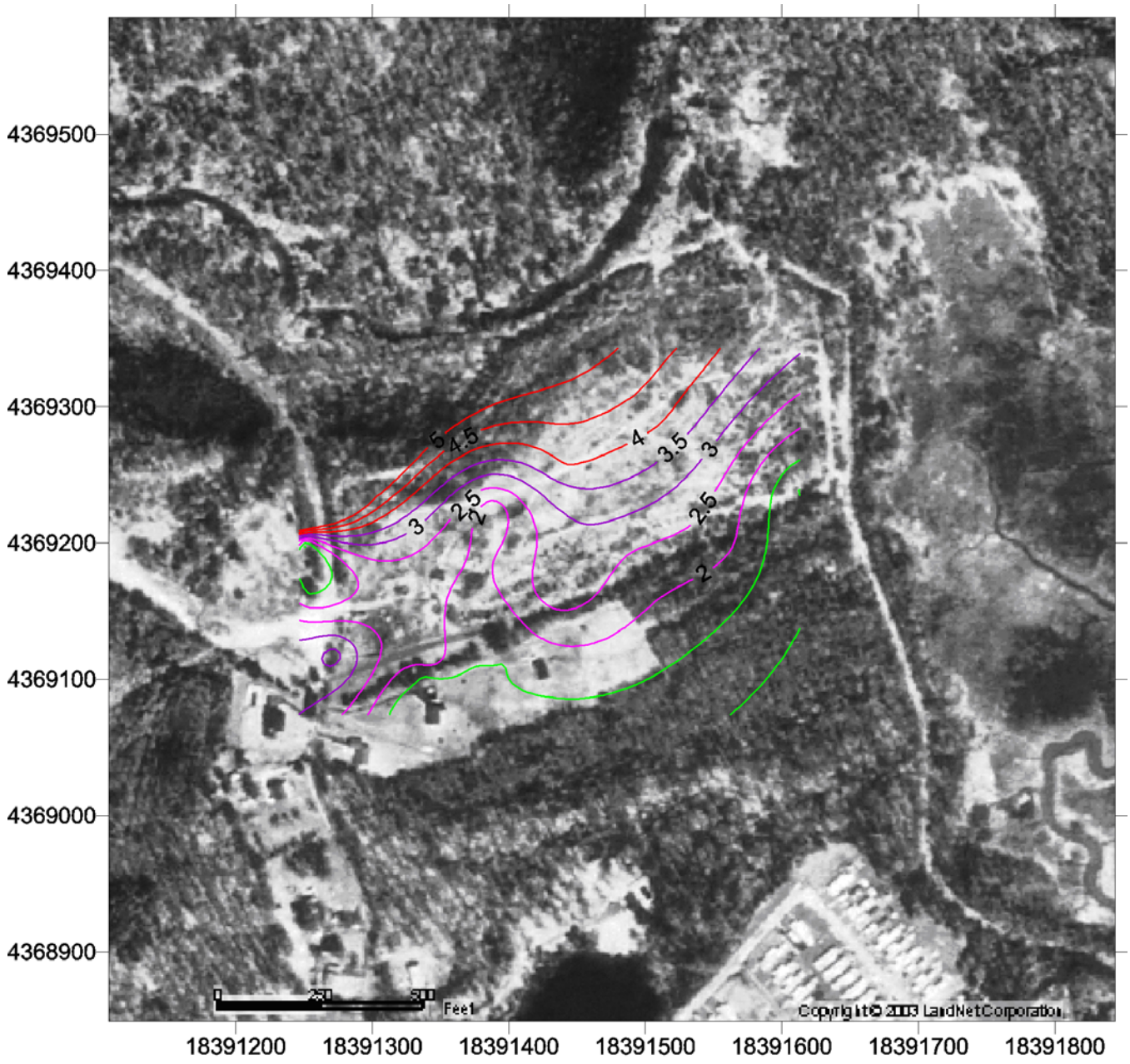


Figure 5. Measured Screening Results for NMOCs (ppm).

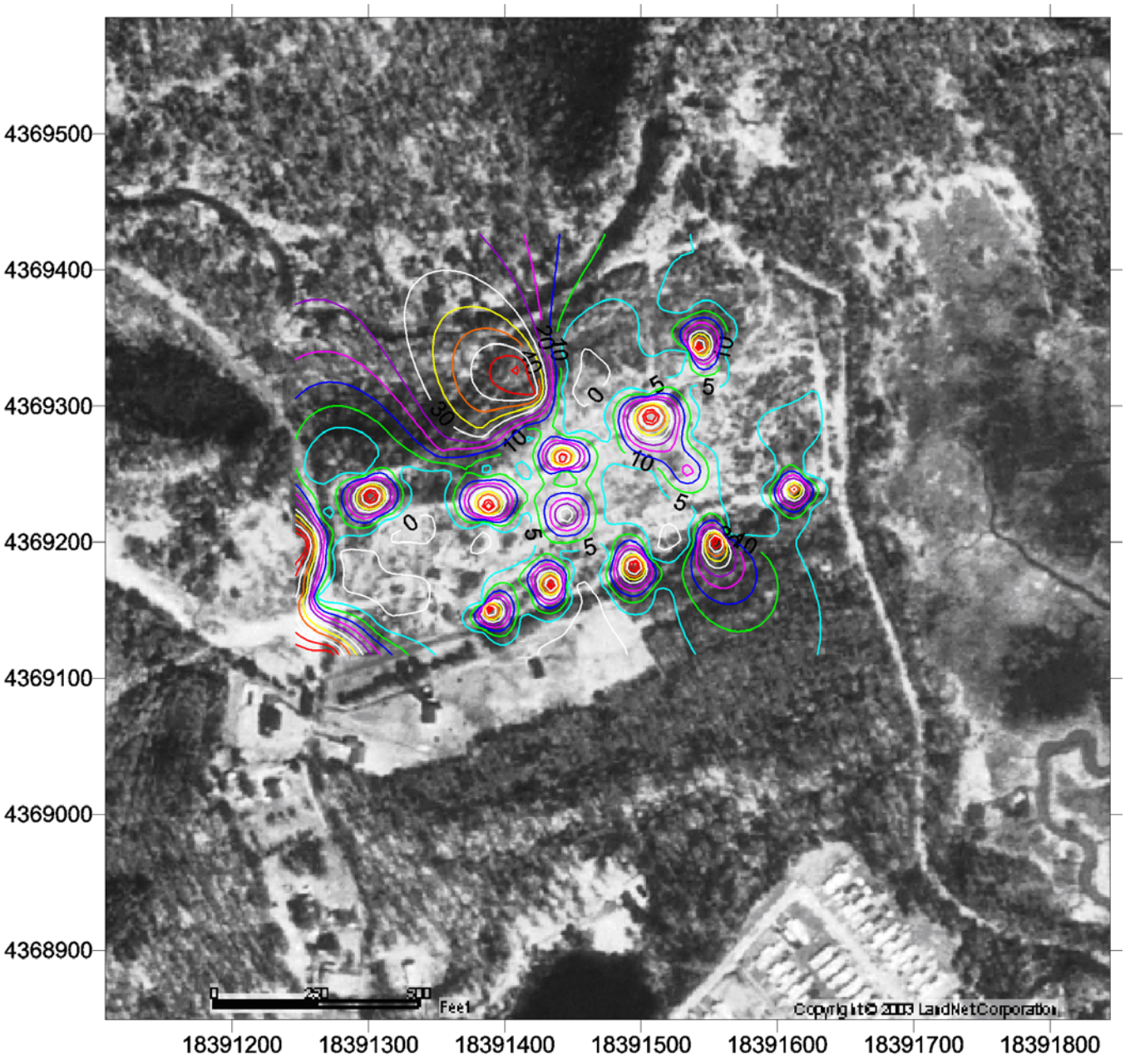


Figure 6. Measured Screening Results for Methane (ppm).

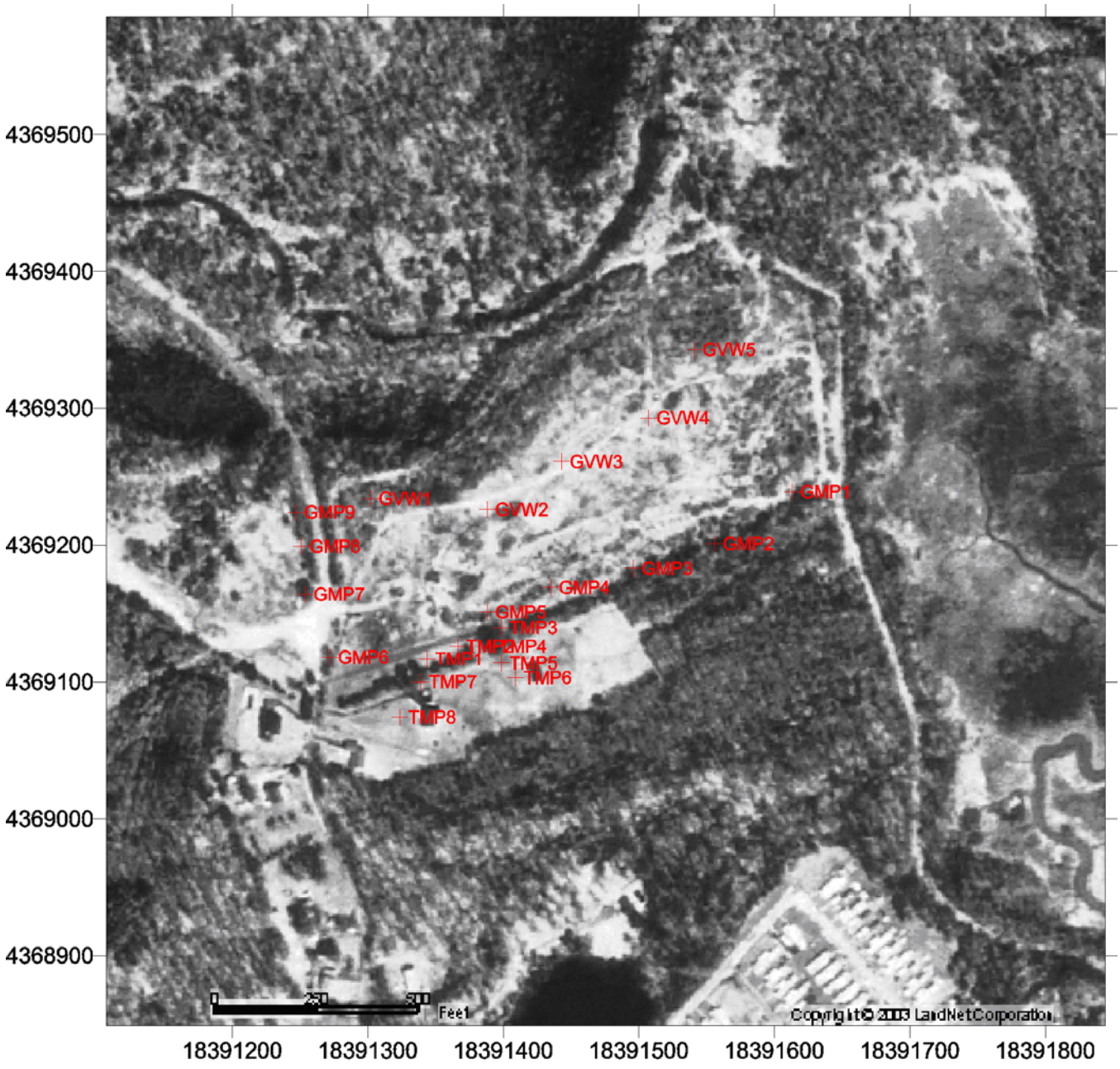


Figure 7. Bush Valley Sampling Locations.

For this site demonstration, sampling was conducted at all 17 of the perimeter wells using the previously installed sampling valves. All 17 wells were located in close proximity to off-site receptors (i.e., residential dwellings). At each of these locations, Summa canisters were used to collect the samples and analyzed for COPC, fixed gases, and methane. The Summa canister sampling rate was set to approximately 0.1 L/min to minimize the potential for ambient air leakage. Based on the fixed gas concentration data, it would appear that there is significant ambient air leakage associated with GMP-1, TMP-2, GMP-5, TMP-3, and TMP-5. The data from these probes was excluded from additional data analysis. It was observed that several of these excluded locations have elevated NMOC concentration even with the ambient air dilution. All probes had been installed for more than 7 months and some for as many as 3 years. It would appear that the grout and soils surrounding these probes had dried out and shrunk, allowing ambient air to leak into the annulus. This was confirmed by the field instrumentation readings taken at each of the sampling locations prior to initiating sampling. These field instrumentation readings demonstrated the presence of landfill gases via oxygen readings at levels of 0.4 percent. This theory is further supported by the laboratory results of samples GMP-6 and TMP5 and by comparing them to the duplicate samples collected there. In both instances these laboratory results were nearly identical. For these reasons and because all of the existing probes were sampled, there is sufficient data to continue with this illustration of the guidance document. Given these circumstances, it is desirable that a procedure to verify that existing seals have integrity be developed and included in the guidance manual. One QA/QC sample was collected at GMP 6 and TMP 5 during each of the sampling locations sets (GMP and TMP). Laboratory analytical results can be found in Appendix C.

4.3.3 Ambient Air Sampling

Sampling was conducted of the ambient air at each of the passive vent locations (GVW). Five samples were collected using a Summa canister. The Quality Assurance Project Plan (QAPP) and field activity plan required one duplicate Summa canister sample be collected as a QA/QC validation; this duplicate sample was collected at GVW 4. Laboratory analytical results can be found in Appendix C.

4.4 QA and Data Evaluation

The primary purpose of this project was to establish the usefulness of the guidance document and to identify areas that need to be clarified and/or expanded. The field efforts are a means to collect the information needed to implement the procedures included in the guidance. A secondary purpose of the project is to provide the RPM's with information that will allow them to determine if LFG controls are needed and if compliance with Applicable Relevant and Appropriate Requirements (ARARs) has been achieved. Data quality objectives are a starting point of an interactive process, and they do not necessarily constitute definitive rules for accepting or rejecting results. The measurement quality objectives have been defined in terms of standard methods with accuracy, precision, and completeness goals.

Uncertainty associated with the measurement data is expressed in terms of accuracy and precision. The accuracy of a single value contains the component of random error in a measurement and the component of systematic error, or bias. Accuracy thus reflects the total error for a given measurement. Precision values represent a measure of only the random variability for replicate measurements. In general, the purpose of calibration is to eliminate measurement bias. However, inefficient analyte recovery or matrix interferences can contribute to sample bias, which is typically assessed by analyzing matrix spike samples. At very low levels, blank effects (contamination or other artifacts) can also contribute to low-level bias. The potential for bias is evaluated by using method blanks. Instrument bias is evaluated by using control samples.

4.4.1 Accuracy

Accuracy of laboratory results has been assessed for compliance with the established QC criteria using the analytical results of method blanks, reagent/preparation blank, matrix spike/matrix spike duplicate samples, and field blanks. The percent recovery (%R) of matrix spike samples is calculated using

$$\%R = \frac{A - B}{C} \times 100$$

Where A = the analyte concentration determined experimentally from the spiked sample,
B = the background level determined by a separate analysis of the unspiked sample, and
C = the amount of the spike added.

The laboratory detected 9.4 ppbv acetone in a trip blank. This value is less than five times the value found in the sample results. The minimum and maximum recovery for the entire set of laboratory control samples was greater than 94 and less than 152 percent. Out of 159 values, 154 were within the QC limits, and the data is deemed acceptable. The 4-bromofluorobenzene surrogate spike recovery was

outside of the upper range for 56 field samples. The maximum 4-bromofluorobenzene surrogate spike recovery was 152 percent. The high 4-bromofluorobenzene surrogate recovery is indicative of matrix interference, and the results may be biased on the high side. All other spike surrogate recovery values were within the target range of 70 to 130 percent. The concentration of hexane in sample number 15742 exceeded the linear calibration range and the value is assumed to be a lower end estimate.

4.4.2 Precision

The analytical results between matrix spike and matrix spike duplicate (MS/MSD) analyses for each COPC have been assessed. The relative percent difference (RPD) was calculated for each pair of duplicate analysis using

$$RPD = \frac{S - D}{(S + D)/2} \times 100$$

Where S = first sample value (original or MS value) and
D= second sample value (duplicate or MSD value).

Methyl ethyl ketone (MEK) was reported in one of the duplicate ambient air samples but not both. Chloroethane was reported in one of the duplicate GMP6 samples but not both. MEK, xylene, and dichloroethane (DCA) were reported for one of the duplicate TMP5 samples but not the other. The RPD for the duplicate samples ranged from –0.6 to 28.5, indicating that the laboratory was capable of reproducing the analytical results. Acetone was reported in the trip blank at 9.4 ppbv. Acetone in the LFG samples ranged from non-detect to 750 ppbv. Acetone is a common laboratory contaminant, and samples with a concentration less than five times that in the method/trip blank should be considered as estimates.

4.4.2 Completeness

Completeness is a measure of the amount of valid data obtained from a measurement system compared to the amount that was expected under normal conditions. The sampling and analytical goal for completeness is 80 percent or more for all samples tested. The percent completeness was calculated by

$$Completeness(\%) = \frac{\left(number\ of\ valid\ data\right)}{\left(\begin{array}{c} number\ of\ samples\ collected \\ for\ each\ parameter\ analyzed \end{array}\right)} \times 100$$

Seventy-three percent of the targeted data was collected and validated. This is less than data quality objective of greater than 80 percent. The data quality objective was not achieved because of the air leakage problem discussed in Section 4.3.2.

Section 5. Estimation of Landfill Gas Emissions

With all samples collected and analyzed it is possible to estimate the air impact of this site through the methods described in the guidance. For the purpose of this demonstration, it was determined that only select COPCs commonly found in LFG would be fully characterized. Table 2 provides a list of those COPCs commonly found in LFG and that are considered in this demonstration. Figures 8 through 22 show the concentration isopleths of all COPCs with detected concentrations. These figures provided a visual presentation of the laboratory results that were used to further understand the dynamics of this landfill and, using the Wilcoxon statistical analysis detailed in Appendix B, to further quantify the division of this landfill into four homogeneous parcels, which are shown in Figure 23. Table 3 provides the analytical results for the four landfill parcels. For each parcel, the data were analyzed, and the 90th percentile concentrations were determined. Table 4 provides the 90th percentile values of the COPCs for the various parcels.

Table 2. COPCs Commonly Found in LFG[a,b]

1,1,1-Trichloroethane (methyl chloroform)
1,1-Dichloroethene (vinylidene chloride)
1,2-Dichloroethane (ethylene dichloride)
Acrylonitrile
Benzene
Carbon Tetrachloride
Chlorobenzene
Chloroethane (ethyl chloride)
Chlorofluorocarbons
Chloroform
Dichlorobenzene
Ethylene Dibromide
Hydrogen Sulfide
Mercury
Methylene Chloride
Perchloroethylene (tetrachloroethylene)
Toluene
Trichloroethylene (trichloroethene)
Vinyl Chloride
Xylenes

[a] Constituents associated with carcinogenic and chronic noncarcinogenic health effects that are routinely measured
[b] Source: EPA, 1997

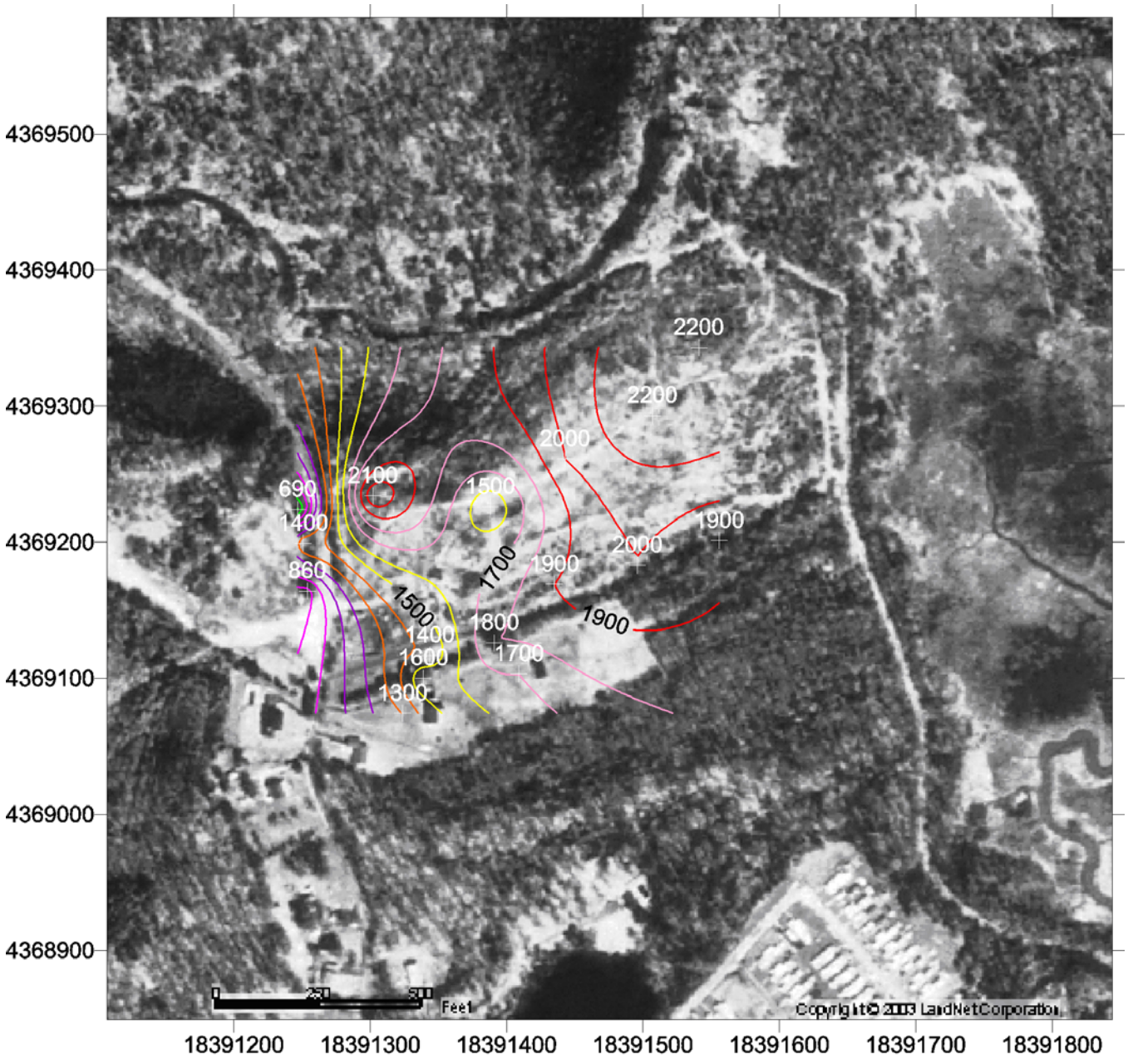


Figure 8. NMOC Concentration Isopleths (ppmvC) from Summa Sampling

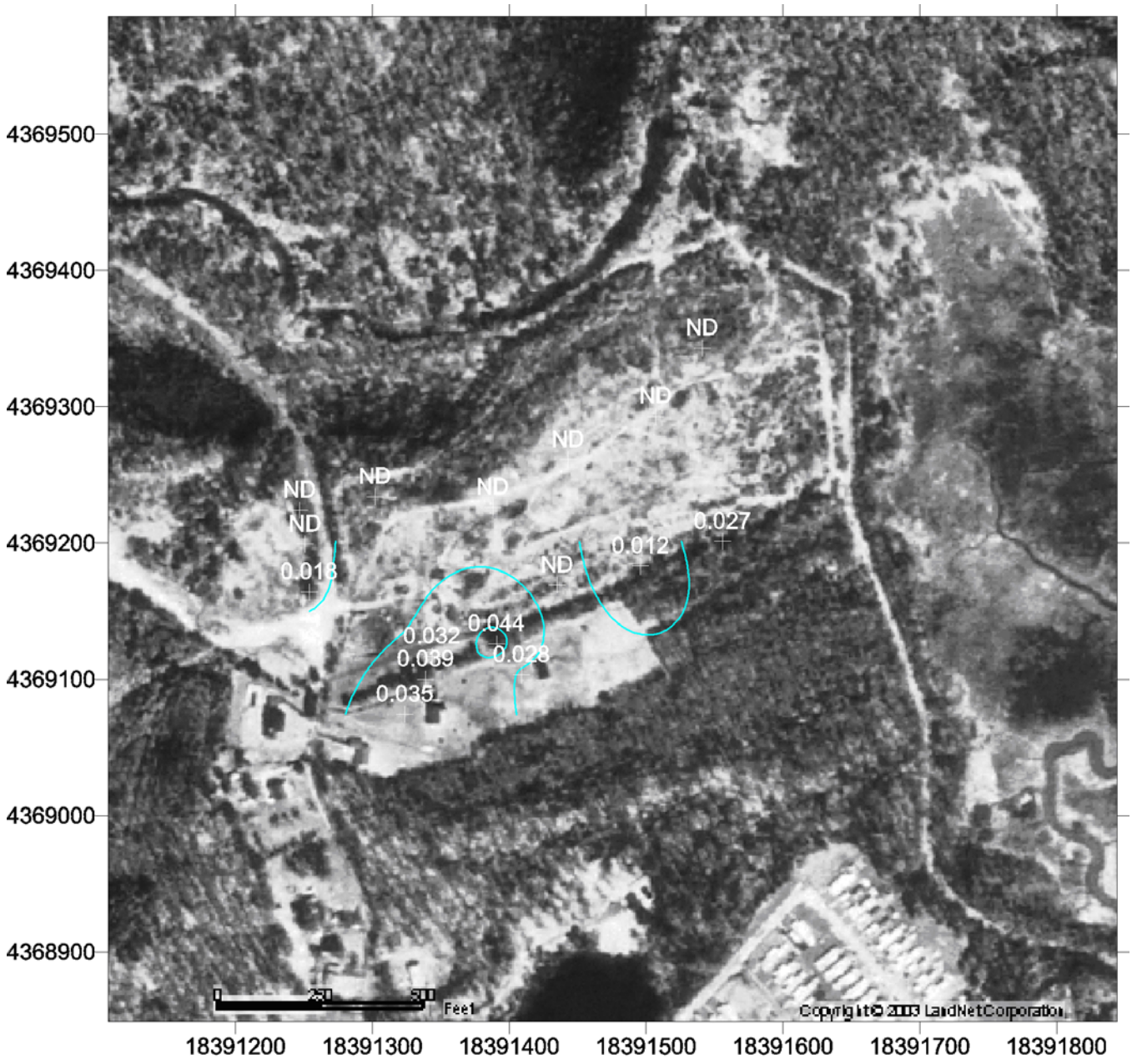


Figure 9. 1,1-Dichloroethene Concentration Isopleths (ppmv) from Summa Sampling

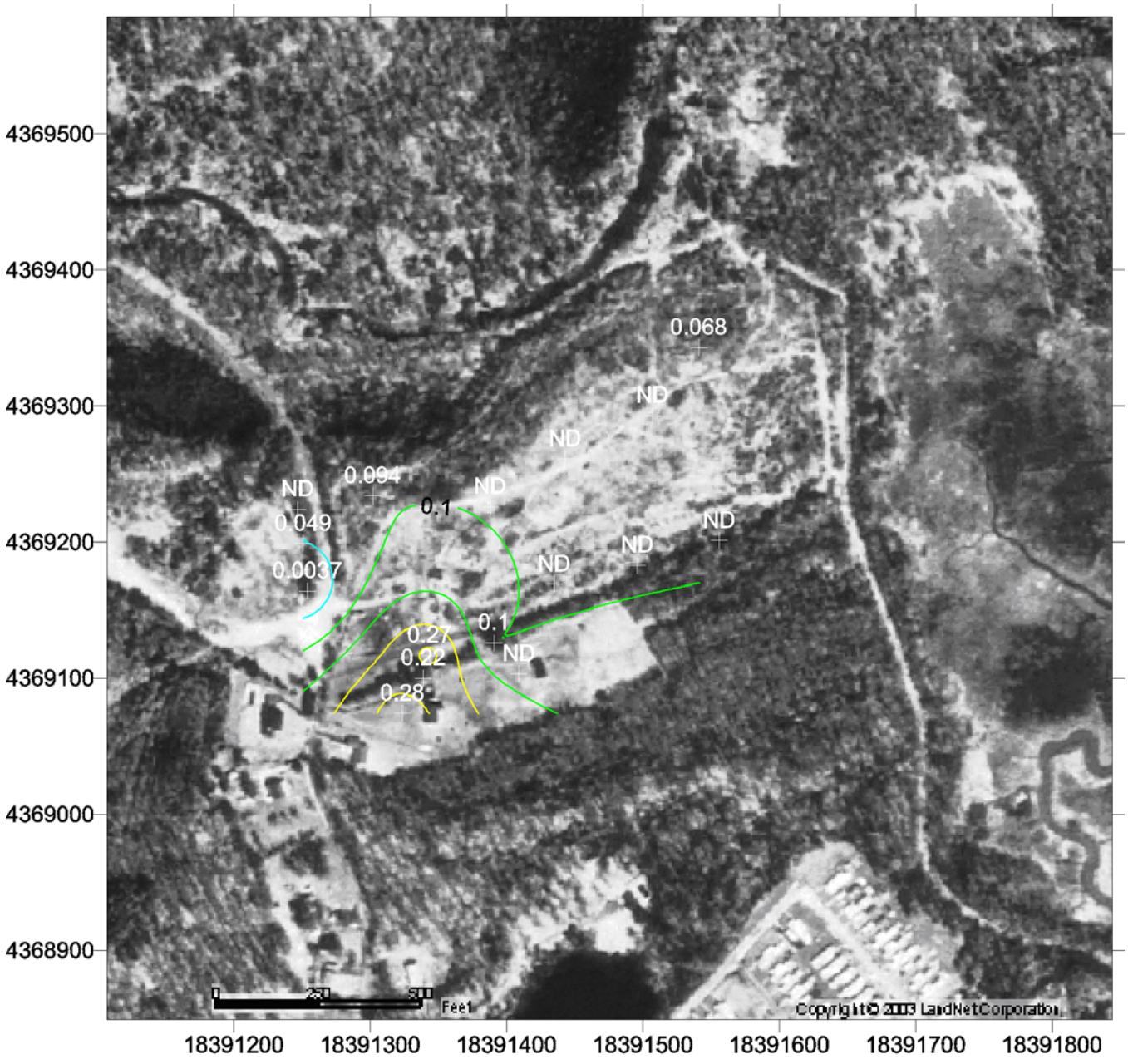


Figure 10. 1,2-Dichloroethane Concentration Isopleths (ppmv) from Summa Sampling

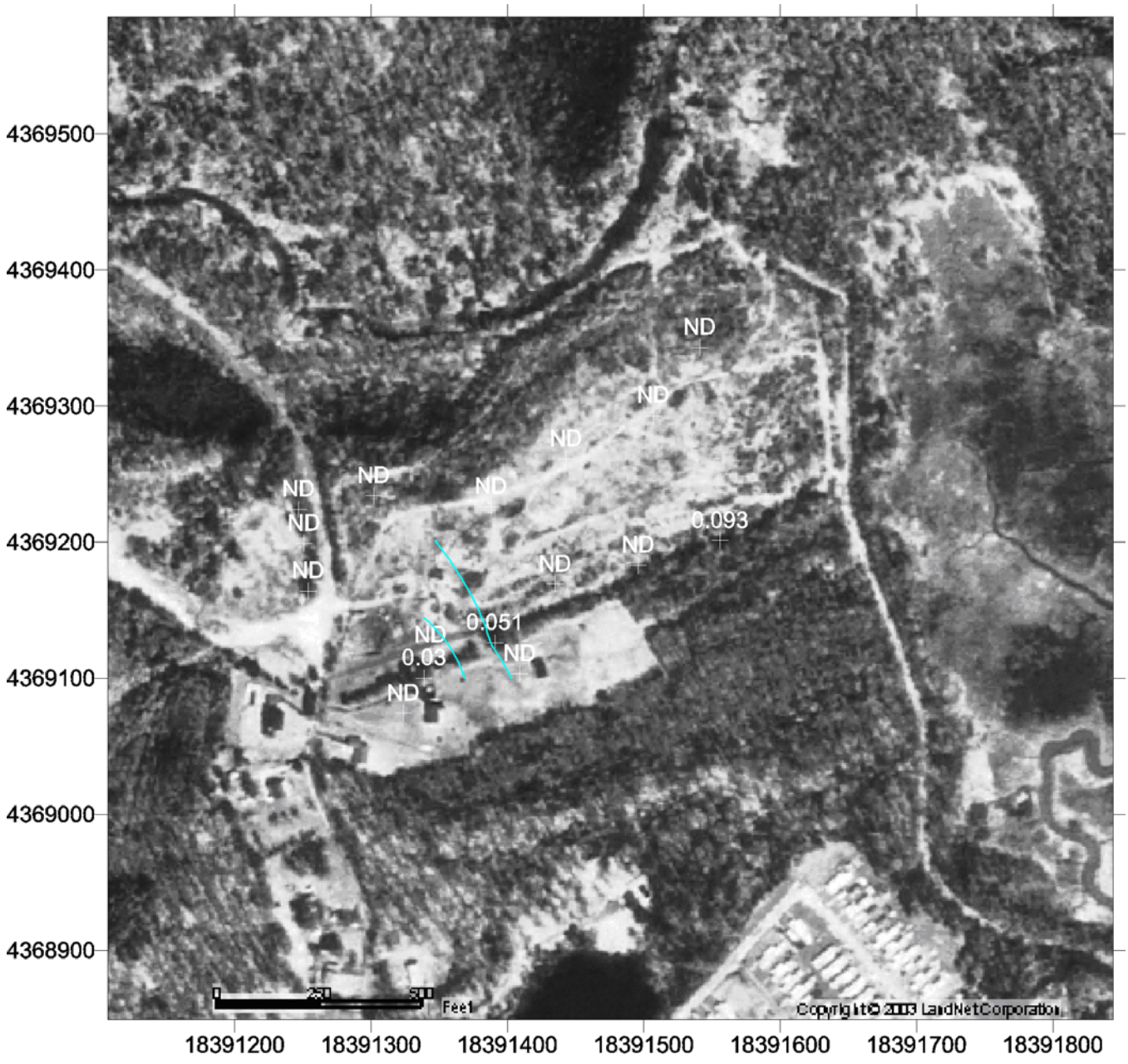


Figure 11. 1,1,1-Trichloroethane Concentration Isopleths (ppmv) from Summa Sampling

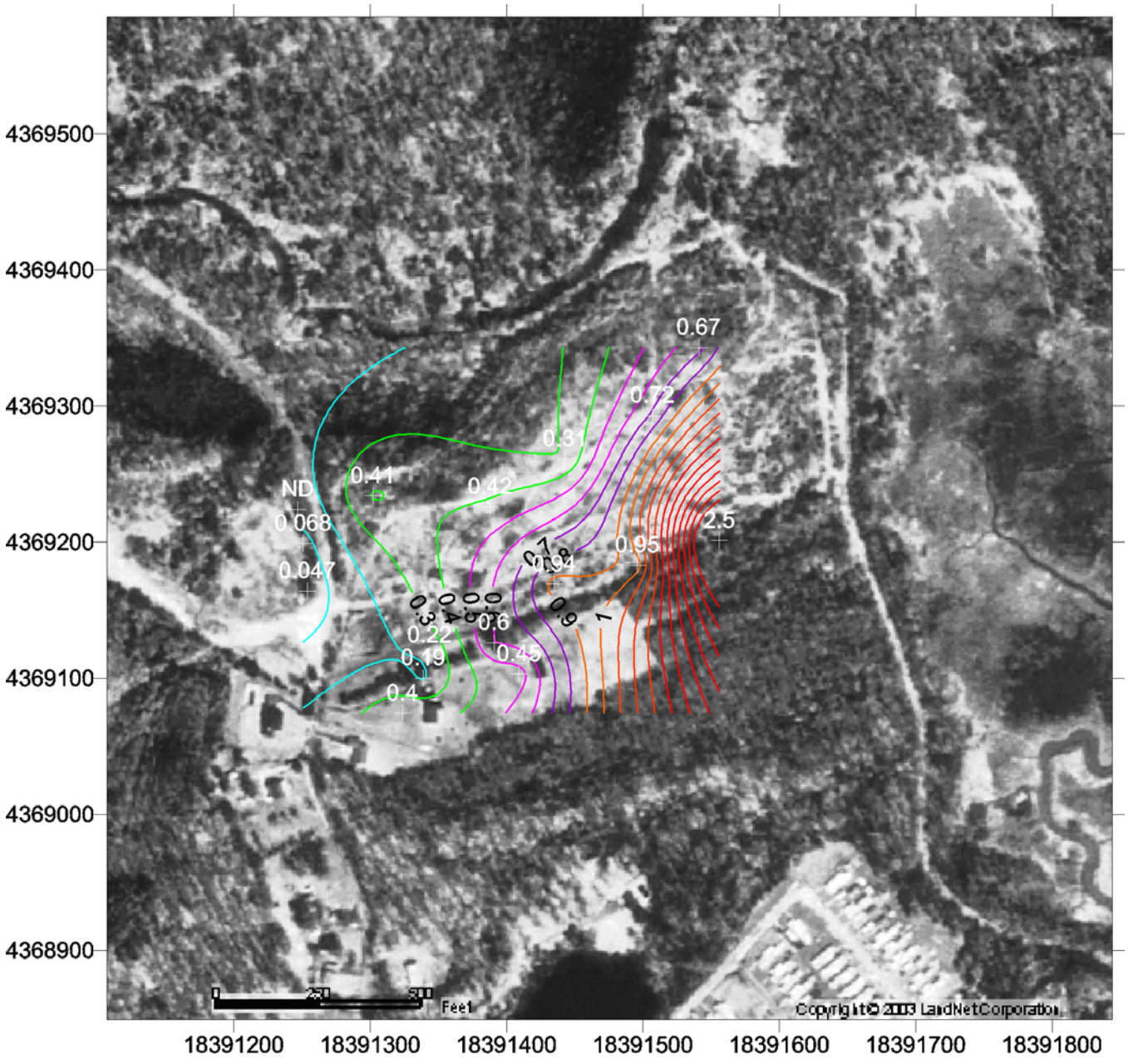


Figure 12. Benzene Concentration Isopleths (ppmv) from Summa Sampling

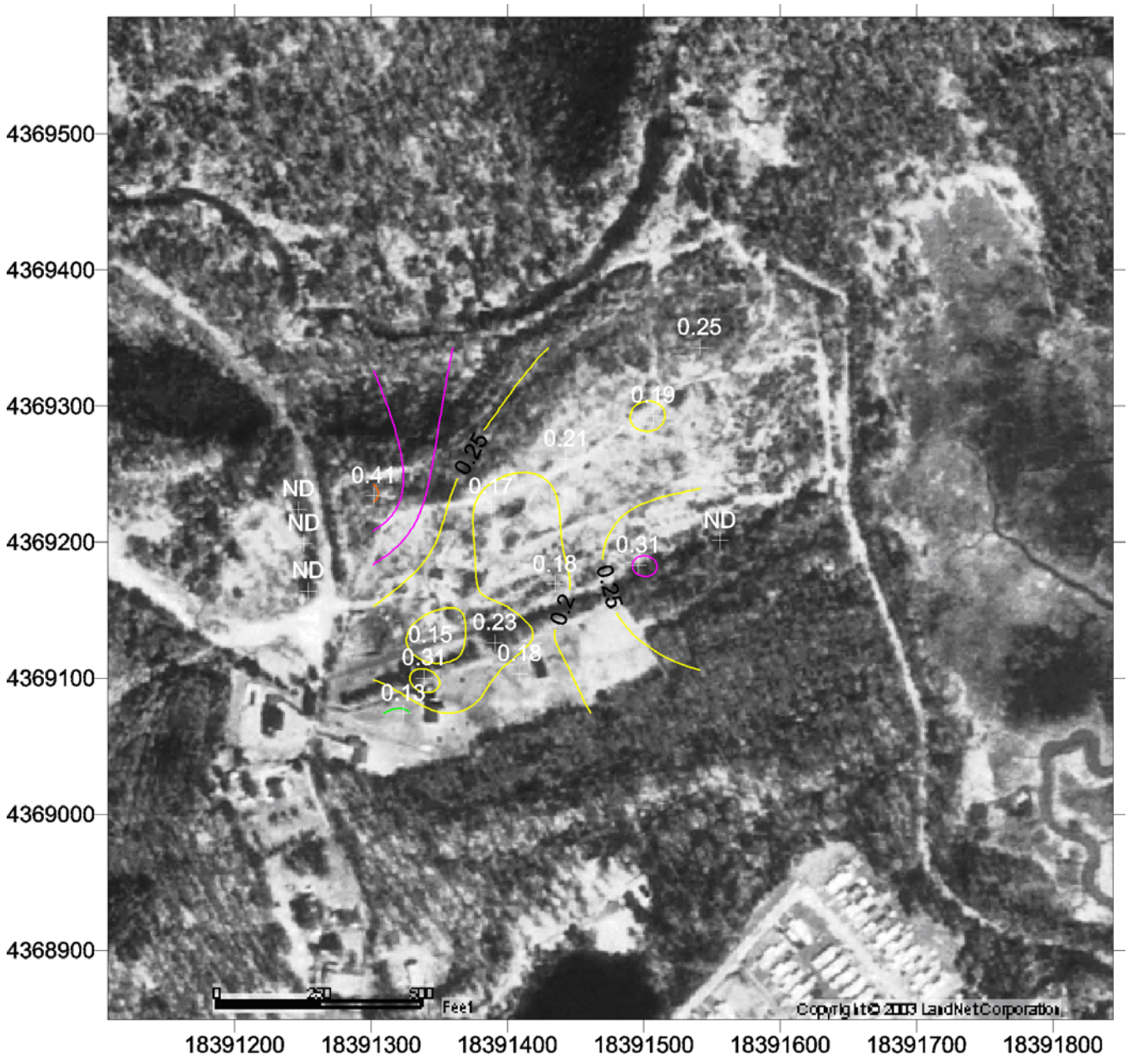


Figure 13. Chlorobenzene Concentration Isopleths (ppmv) from Summa Sampling

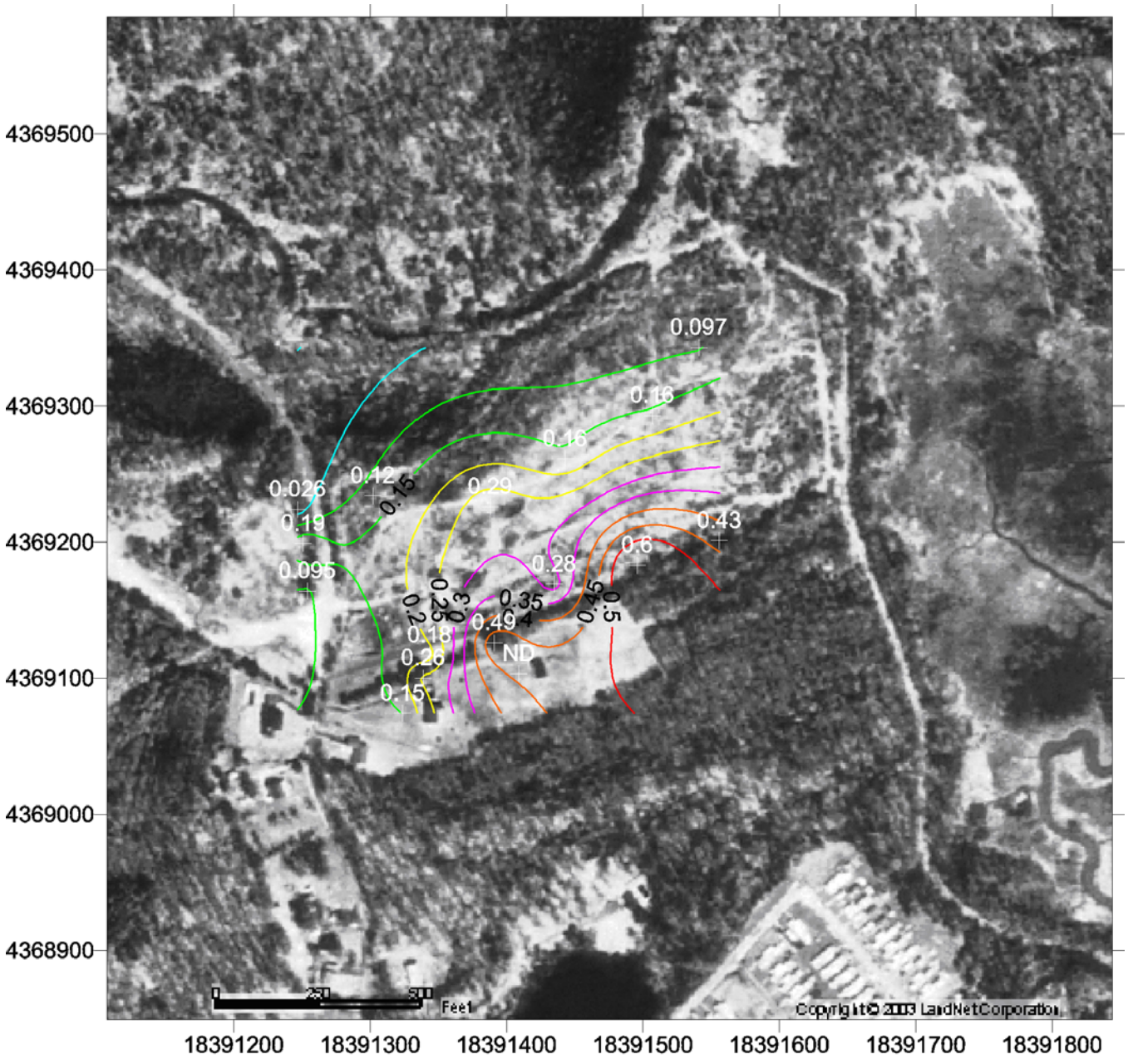


Figure 14. Chloroethane Concentration Isopleths (ppmv) from Summa Sampling

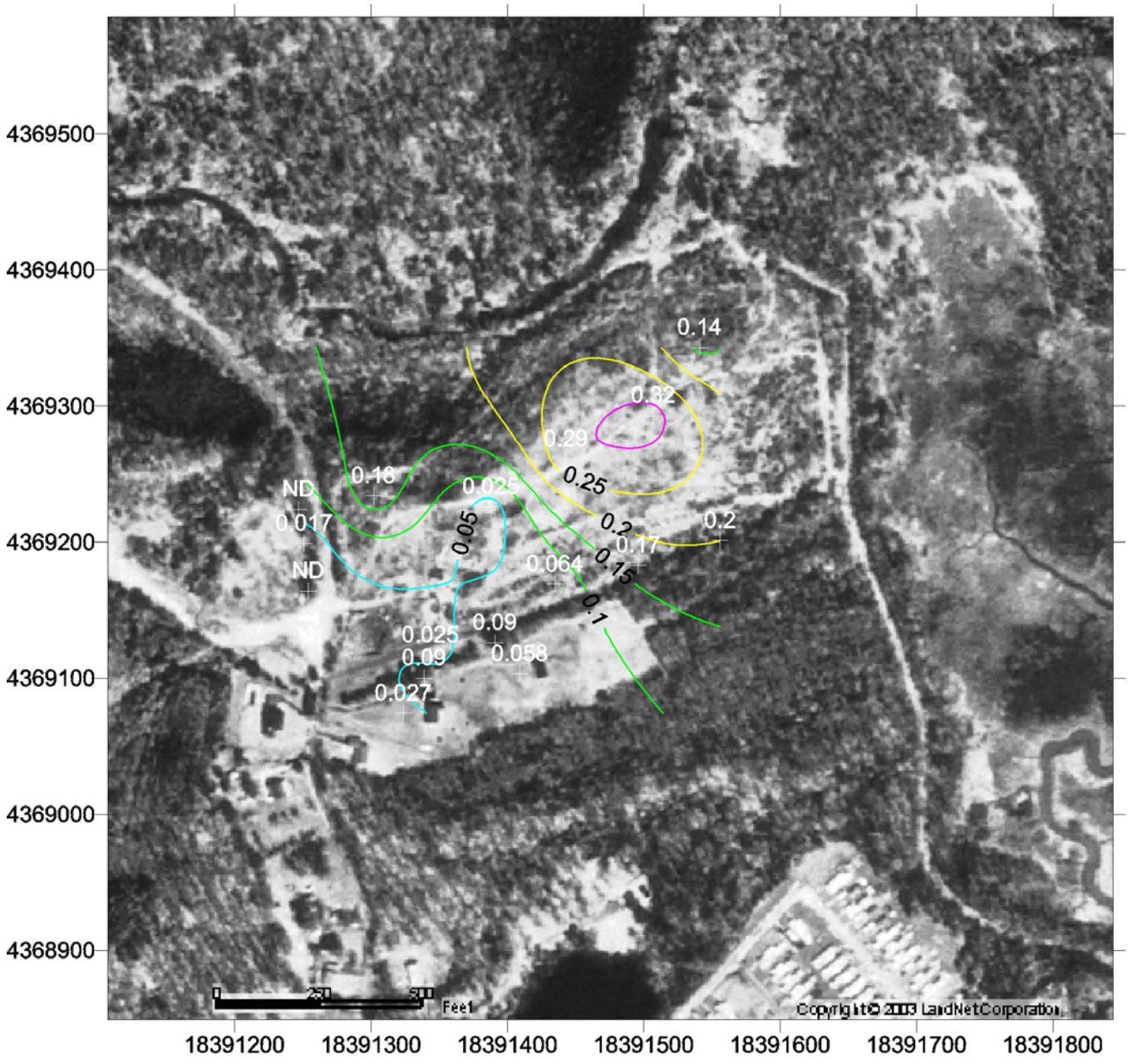


Figure 15. 1,4-Dichlorobenzene Concentration Isopleths (ppmv) from Summa Sampling

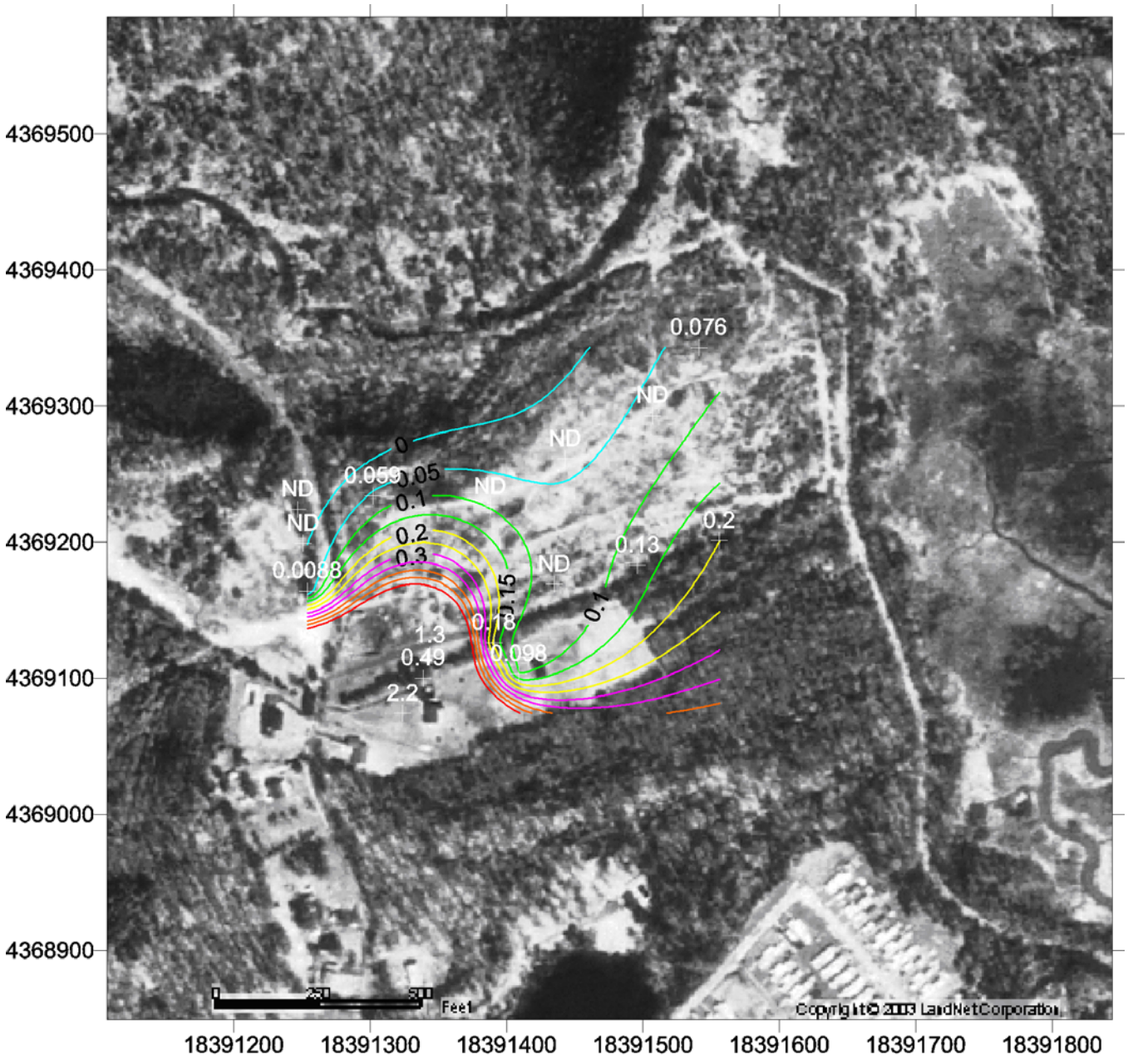


Figure 16. Methylene Chloride Concentration Isopleths (ppmv) from Summa Sampling

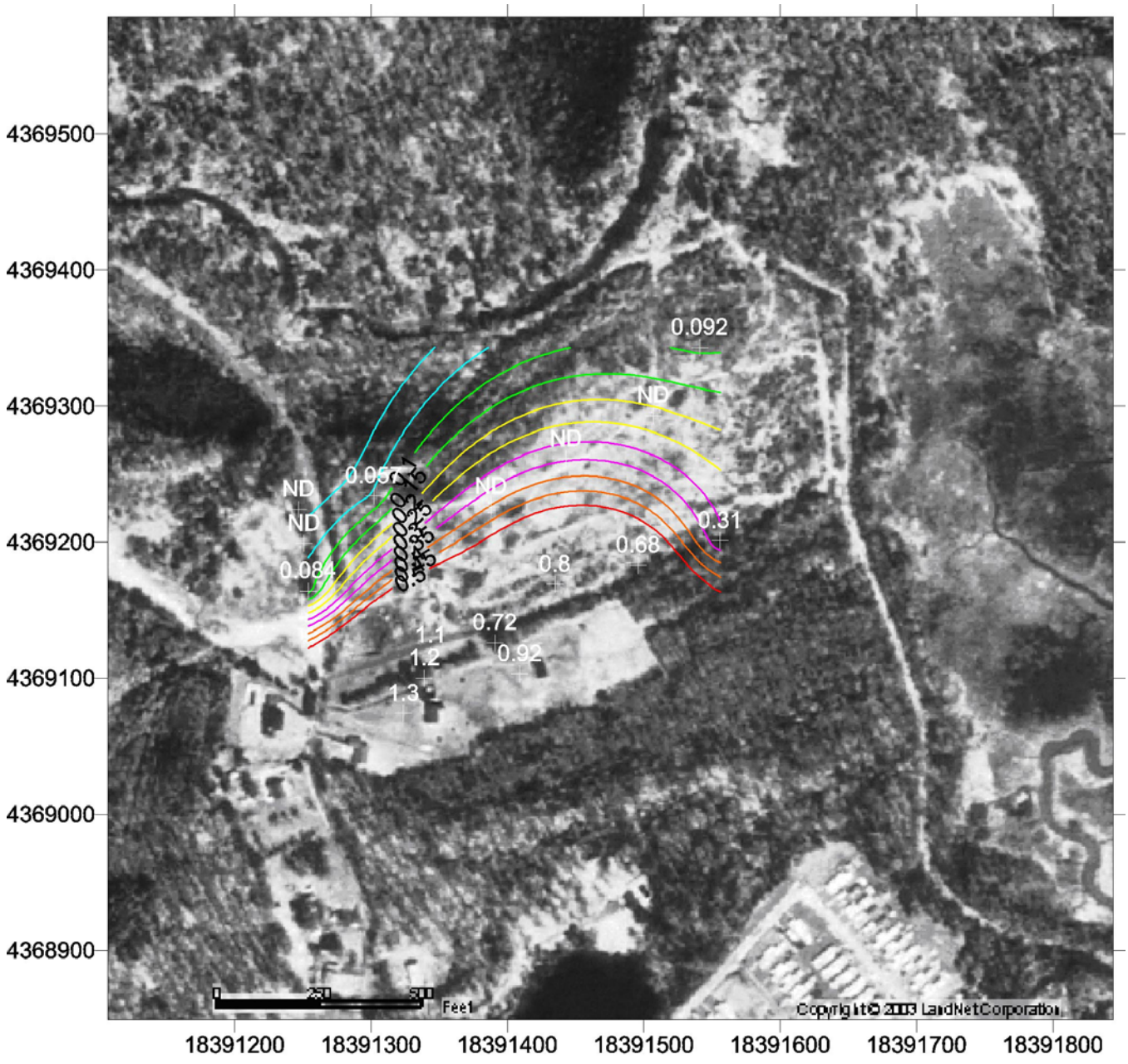


Figure 17. Tetrachloroethene Concentration Isopleths (ppmv) from Summa Sampling

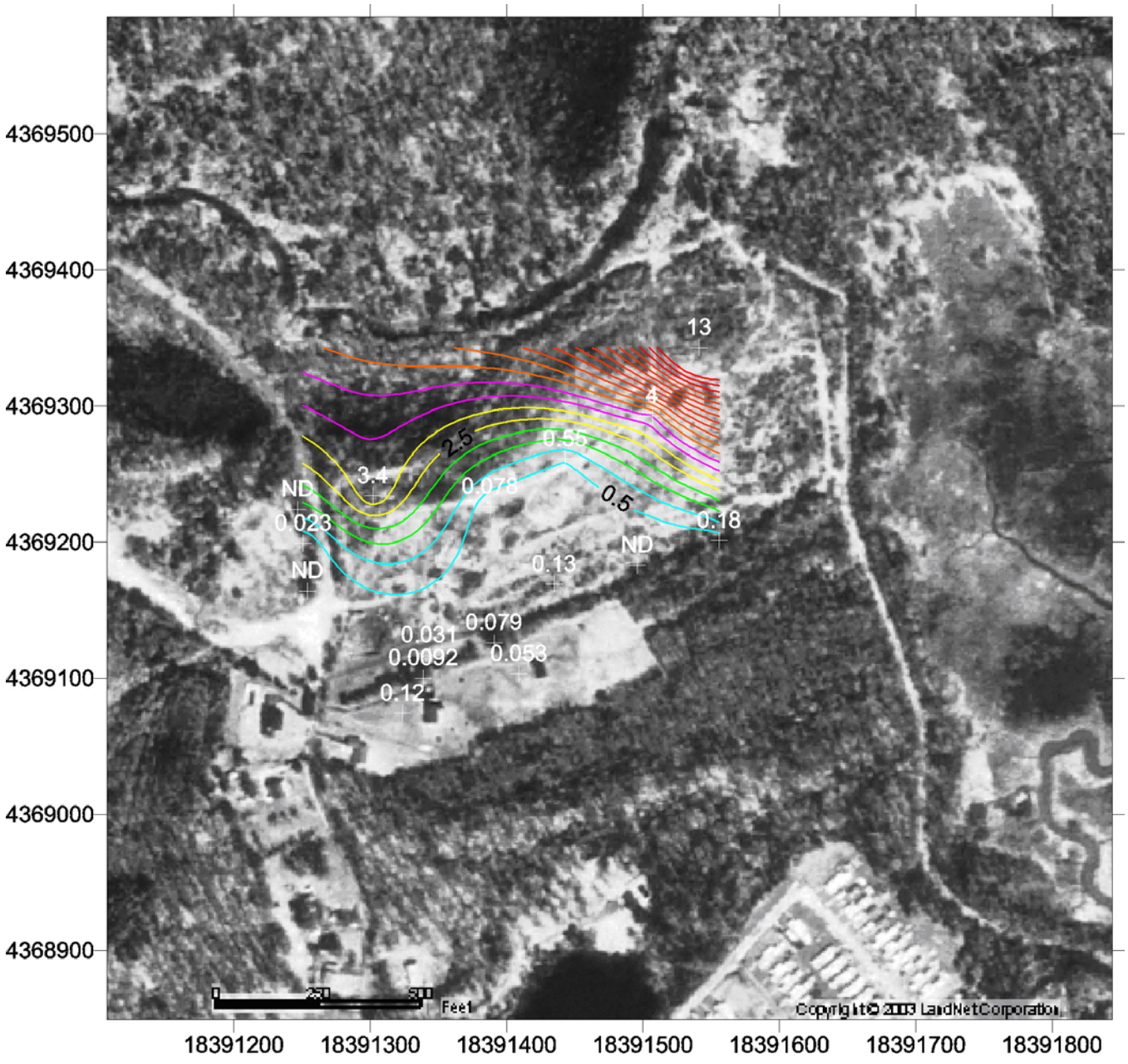


Figure 18. Toluene Concentration Isopleths (ppmv) from Summa Sampling

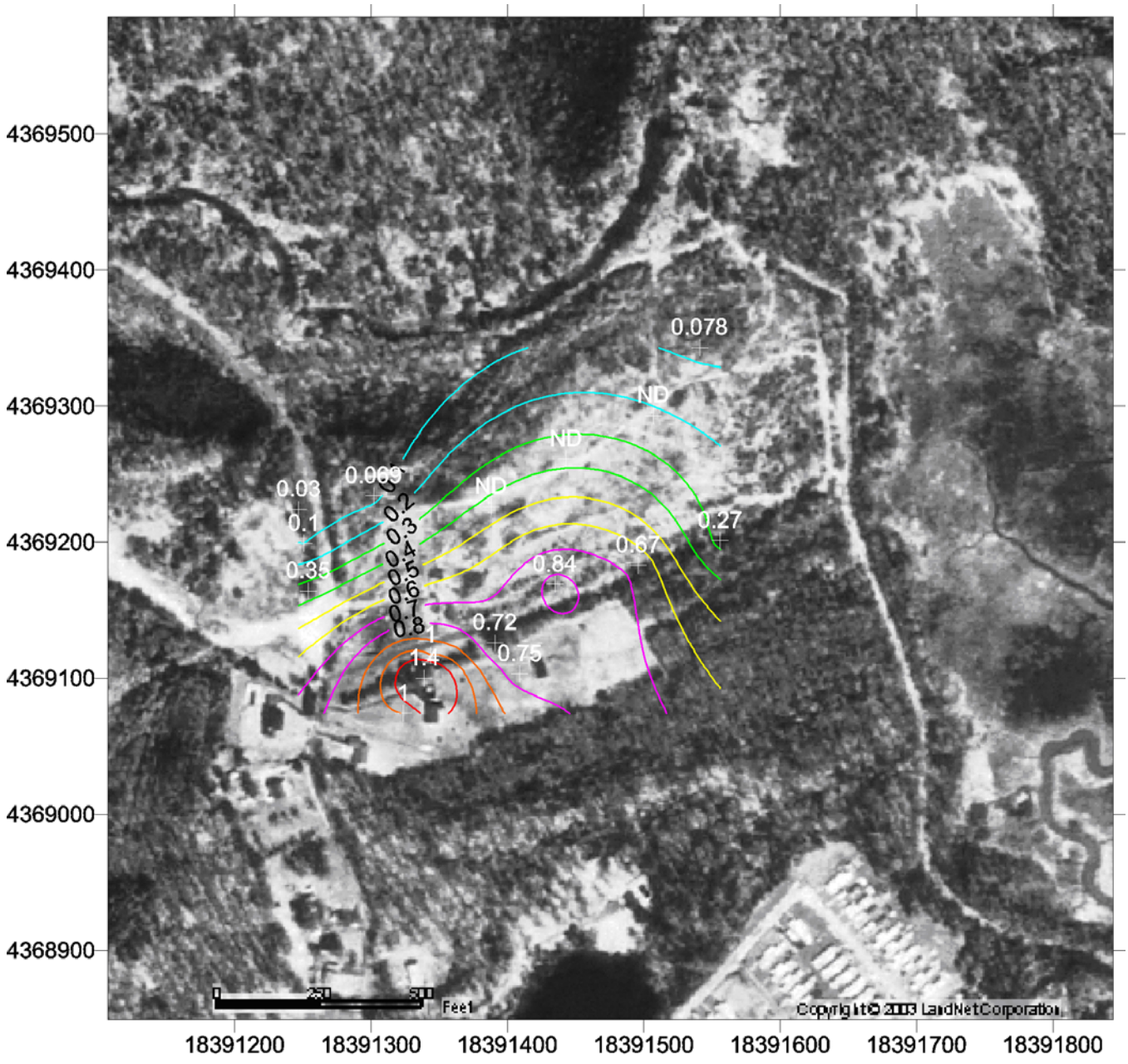


Figure 19. Trichloroethene Concentration Isopleths (ppmv) from Summa Sampling

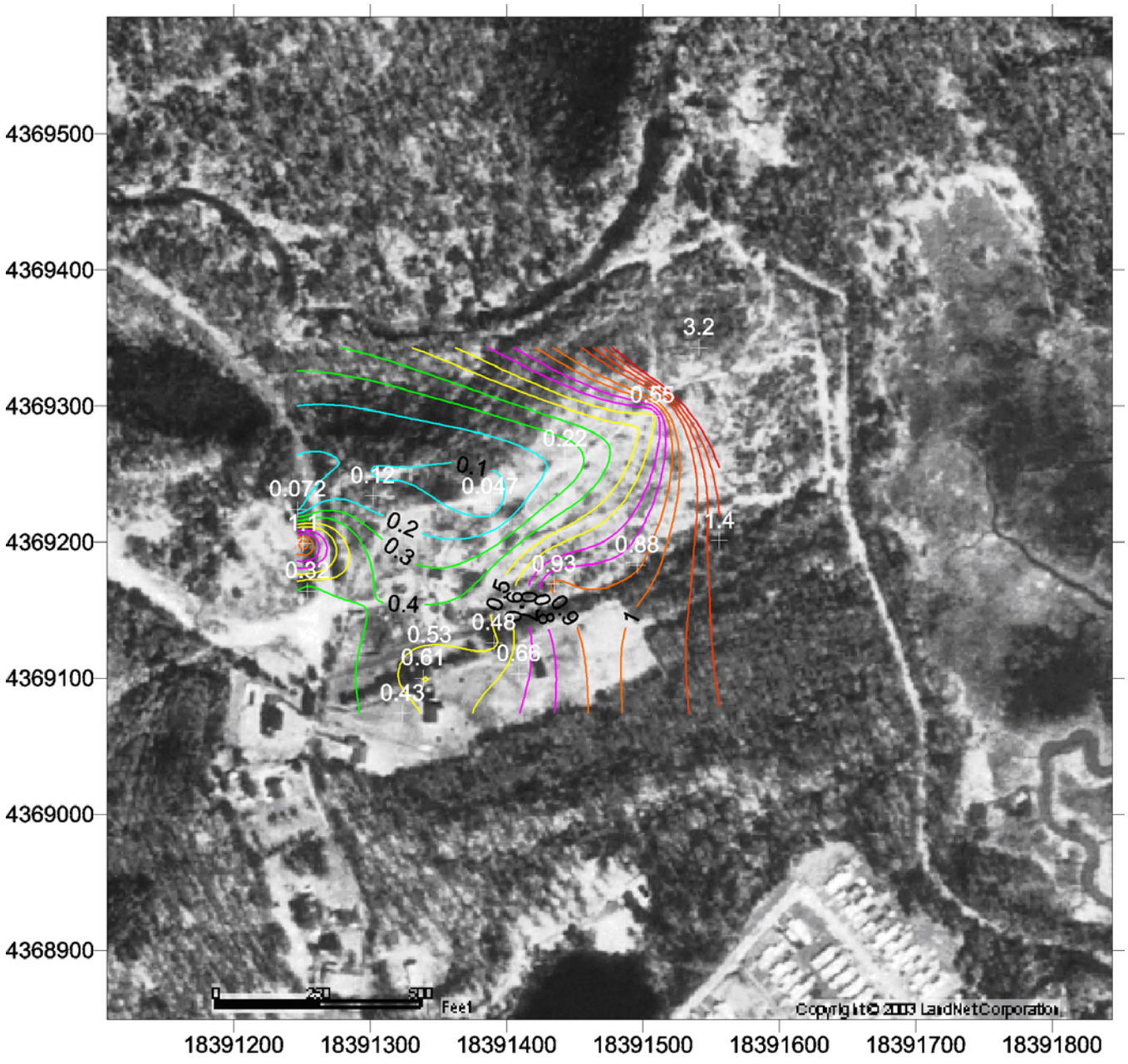


Figure 20. Vinyl Chloride Concentration Isopleths (ppmv) from Summa Sampling

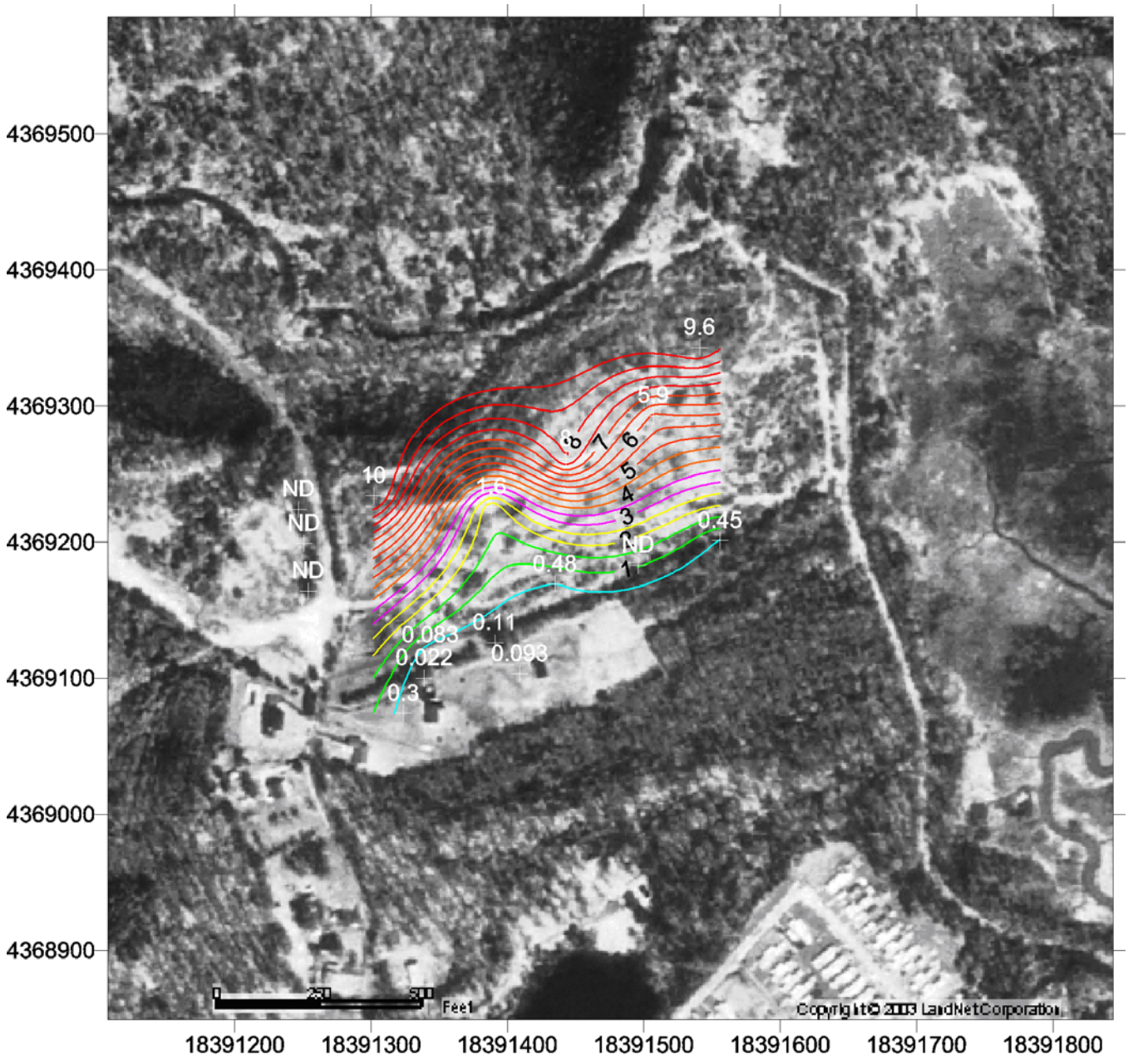


Figure 21. m,p-Xylene Concentration Isopleths (ppmv) from Summa Sampling

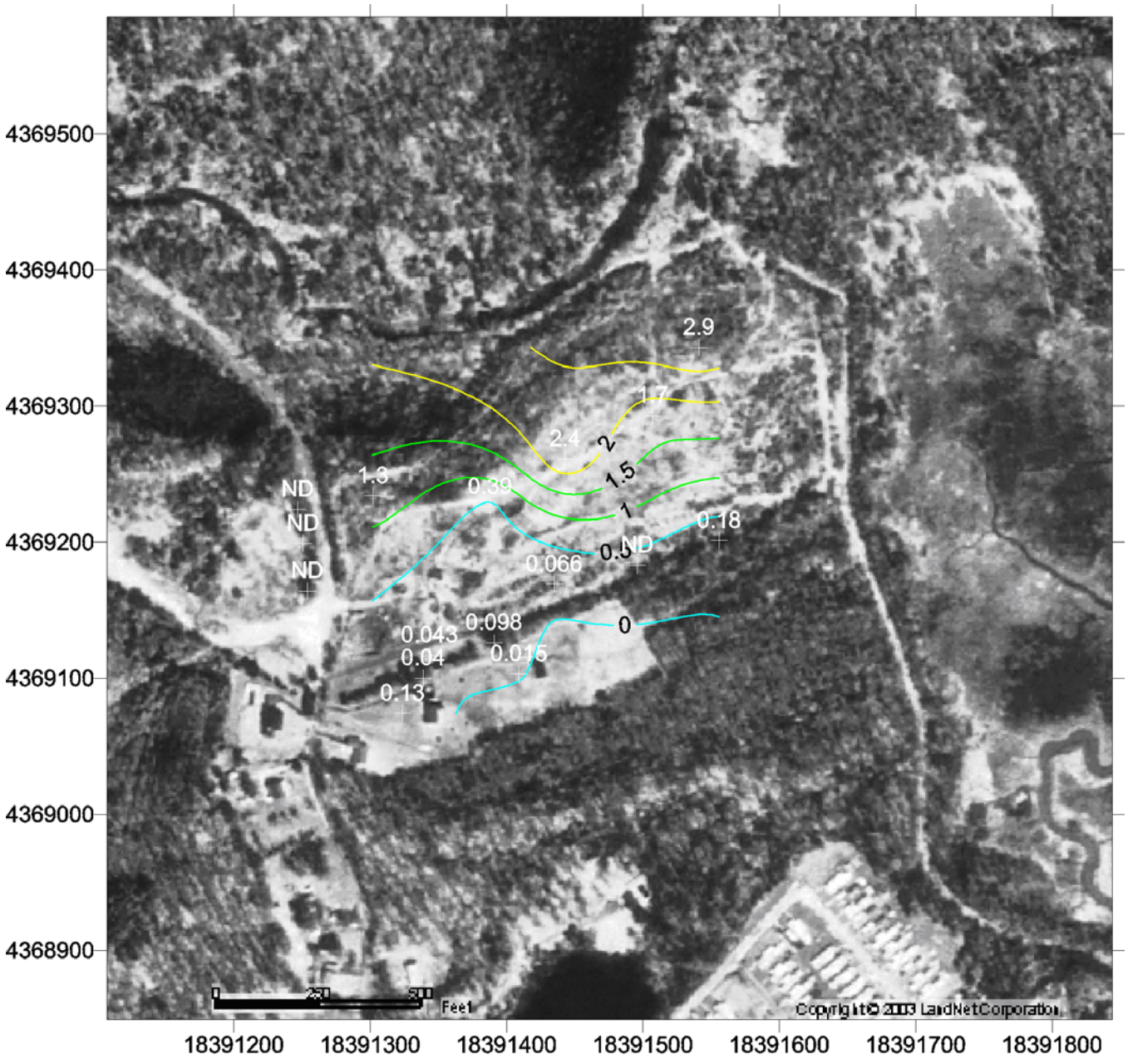


Figure 22. o-Xylene Concentration Isopleths (ppmv) from Summa Sampling

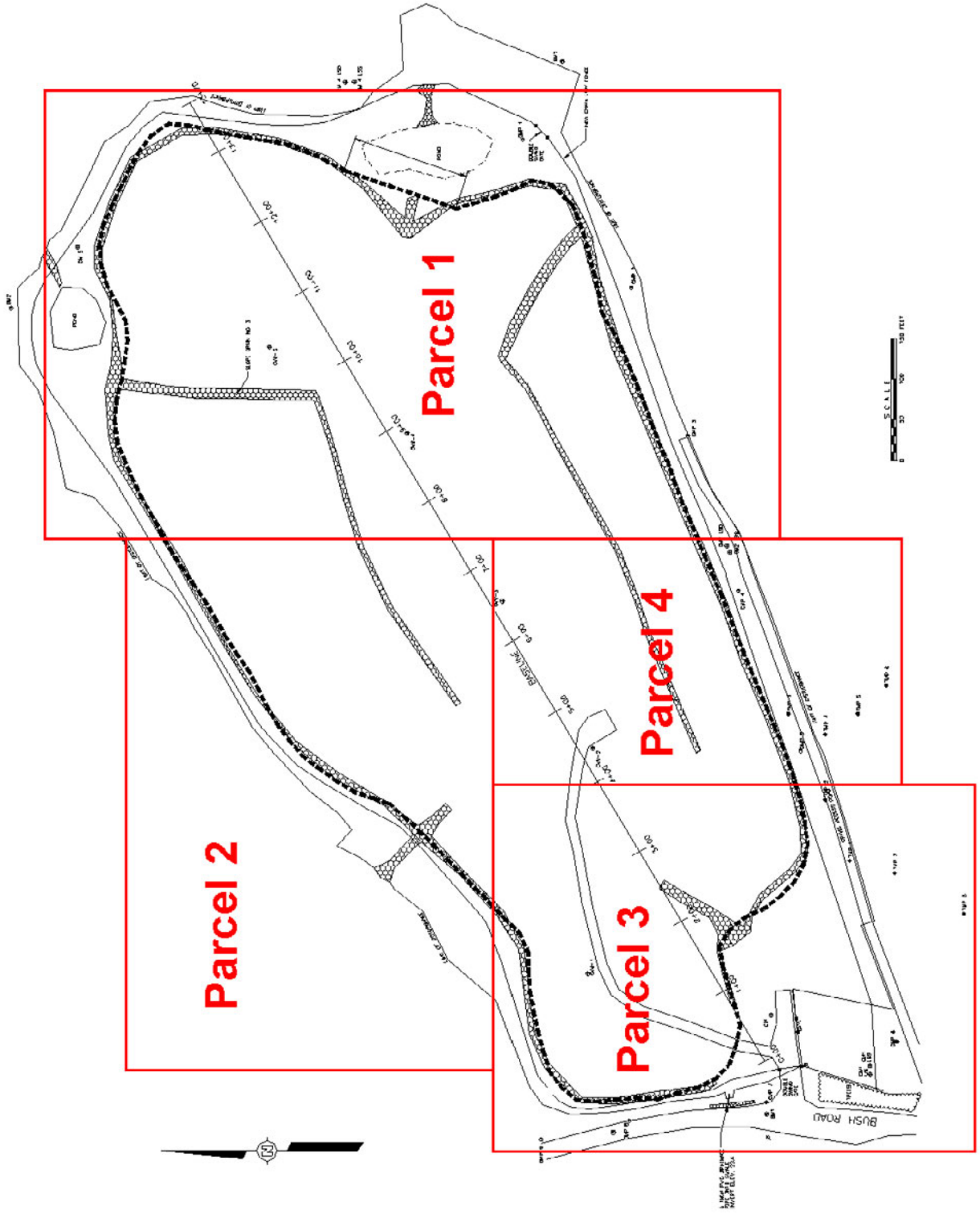


Figure 23. The Four Homogeneous Parcels of the Bush Valley Landfill.

Table 3. Analytical Results for COPCs.

Parcel	Grid ID No.	O_2 (%)	N_2 (%)	CH_4 (%)	CO_2 (%)	NMOCs	1,1,1-Trichloroethane	1,1-Dichloroethene	1,2-Dichloroethane	Benzene	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform	1,4-Dichlorobenzene	Methylene chloride	Tetrachloroethene	Toluene	Trichloroethene	Vinyl chloride	m,p-Xylene	o-Xylene
						(ppmvC)	(ppmv)	(ppmv)	(ppmv)	(ppmv)	(ppmv)	(ppmv)	(ppmv)	(ppmv)	(ppmv)	(ppmv)	(ppmv)	(ppmv)	(ppmv)	(ppmv)	(ppmv)	(ppmv)
Parcel 1	GVW4	0.30	0.88	64.00	37.00	2200.00	ND[a]	ND	ND	0.72	ND	0.19	0.16	ND	0.32	ND	ND	4.00	ND	0.55	5.90	1.70
	GVW5	0.37	1.00	62.00	40.00	2200.00	ND	ND	0.07	0.67	ND	0.25	0.10	ND	0.14	0.08	0.09	13.00	0.08	3.20	9.00	2.90
	GMP2	ND	0.55	62.00	38.00	1900.00	0.09	0.03	ND	2.50	ND	ND	0.43	ND	0.20	0.20	0.31	0.18	0.27	1.4	0.45	0.18
	GMP3	0.25	0.80	63.00	38.00	2000.00	ND	0.01	ND	0.95	ND	0.31	0.60	ND	0.17	0.13	0.68	ND	0.67	0.88	ND	ND
2	GVW3	0.24	0.70	62.00	36.00	2000.00	ND	ND	ND	0.31	ND	0.21	0.16	ND	0.29	ND	ND	0.55	ND	0.22	8.00	2.40
Parcel 3	GVW1	0.42	1.20	63.00	36.00	2100.00	ND	ND	0.09	0.41	ND	0.41	0.12	ND	0.18	0.06	0.06	3.40	0.07	0.12	10.00	1.30
	GMP7	1.00	34.00	36.00	27.00	860.00	ND	0.02	ND	0.05	ND	ND	0.10	ND	ND	0.01	0.08	ND	0.35	0.32	ND	ND
	GMP8	0.21	1.70	68.00	32.00	1400.00	ND	ND	0.05	0.07	ND	ND	0.19	ND	0.02	ND	ND	0.02	0.10	1.10	ND	ND
	GMP9	1.50	49.00	34.00	15.00	690.00	ND	ND	ND	ND	ND	ND	0.03	ND	ND	ND	ND	ND	0.03	0.07	ND	ND
	TMP1	3.60	12.00	54.00	31.00	1400.00	ND	0.03	0.27	0.22	ND	0.15	0.18	ND	0.03	1.30	1.10	0.03	1.00	0.53	0.08	0.04
	TMP7	0.24	1.70	64.00	37.00	1600.00	0.03	0.04	0.22	0.19	ND	0.31	0.26	ND	0.09	0.49	1.20	0.01	1.40	0.61	0.02	0.04
	TMP8	0.47	7.90	60.00	33.00	1300.00	ND	0.04	0.28	0.40	ND	0.13	0.15	ND	0.03	2.20	1.30	0.12	1.00	0.43	0.30	0.13
Parcel 4	GVW2	0.46	1.50	64.00	36.00	1500.00	ND	ND	ND	0.42	ND	0.17	0.29	ND	0.03	ND	ND	0.08	ND	0.05	1.60	0.39
	GMP4	1.20	8.40	57.00	38.00	1900.00	ND	ND	ND	0.94	ND	0.18	0.28	ND	0.06	ND	0.80	0.13	0.84	0.93	0.48	0.07
	TMP4	0.27	1.20	64.00	39.00	1800.00	0.05	0.04	0.10	0.06	ND	0.23	0.49	ND	0.09	0.18	0.72	0.08	0.72	0.48	0.11	0.10
	TMP6	0.19	0.72	64.00	36.00	1700.00	ND	0.03	ND	0.45	ND	0.18	0.00	ND	0.06	0.10	0.92	0.05	0.75	0.66	0.09	0.02

[a] ND = not detected

Table 4. COPCs 90th Percentile Concentrations for the Four Parcels.

COPC	90th Percentile Concentration							
	Parcel 1		Parcel 2		Parcel 3		Parcel 4	
	(ppmv)	(µg/m³)	(ppmv)	(µg/m³)	(ppmv)	(µg/m³)	(ppmv)	(µg/m³)
NMOC	2200	$1.10\times10^{+6}$	2000	$9.98\times10^{+5}$	1800	$8.99\times10^{+5}$	1870	$9.33\times10^{+5}$
1,1,1-Trichloroethane	0.093	515.			0.03	166.	0.051	282.
1,1-Dichloroethene	0.0255	103.			0.0378	152.	0.0424	171.
1,2-Dichloroethane	0.068	280.			0.276	1140.	0.1	412.
1,4-Dichlorobenzene	0.284	1740.	0.29	1770.	0.144	881.	0.0822	503.
Benzene	2.035	6610.	0.31	1010.	0.405	1320.	0.838	2720.
Chlorobenzene	0.298	1400.	0.21	987.	0.38	1790.	0.215	1010.
Chloroethane	0.549	1470.	0.16	429.	0.218	585.	0.43	1150.
Methylene chloride	0.186	657.			1.84	6500.	0.1718	607.
Tetrachloroethene	0.606	4180.			1.26	8700.	0.896	6190.
Toluene	11.2	42900.	0.55	2110.	2.088	8000.	0.1147	439.
Trichloroethene	0.59	3220.			1.16	6320.	0.822	4480.
Vinyl Chloride	2.66	6920.	0.22	572.	0.806	2100.	0.849	2210.
m,p-Xylene	8.86	39100.	8	35300.	7.09	31300.	1.264	5570.
o-Xylene	2.66	11700.	2.4	10600.	0.949	4180.	0.3024	1330.

5.1 LandGEM Modeling of LFG

With the 90th percentile values derived from the data set, these data were then used as input values for the LandGEM model to estimate the LFG emission rates for each of the COPCs. Because there were four distinct parcels, it was necessary to break this site into four distinct areas and model each individually for methane emissions. To model this site, the following parameters were used:

1 Methane generation rate (k): 0.05/yr [AP-42 default]

2 Methane generation potential (L_0): 170 m³/Mg [AP-42 default]

3 Year Opened: 1974

4 Current Year: 2004

5 Landfill Type: Co-disposal

6 Landfill Capacity: 303,128 Mg (Parcel 1), 48,324 Mg (Parcel 2), 52,717 Mg (Parcel 3), 30,752 Mg (Parcel 4)
These values were derived using the refuse estimator in LandGEM. In order to derive this value, the size of each area was estimated by multiplying the percentage of screening sampling points that each parcel encompassed by the total 16-acre area of the entire landfill. In addition it was determined from literature review of the site that the average depth across the area was approximately 35 ft. With this information, LandGEM calculated the appropriate landfill capacity.

7 Acceptance rate (1974-1983): 30,312 Mg/yr (Parcel 1), 4832 Mg/yr (Parcel 2), 5271 Mg/yr (Parcel 3), 3075 Mg/yr (Parcel 4)
This value was determined using the Autocalc function in LandGEM because historical acceptance rate data was not available for this site. To calculate acceptance rate, the landfill capacity for each parcel that LandGEM calculated was entered as the refuse in place for the year 1983 because historical data indicates this was the year the site was closed and maximum capacity was achieved. Once the refuse in place was entered for 1983, all years in which the landfill was active, including closure year, were selected (1974-1983). With these years selected, Autocalc derived the acceptance rate for each of the active years as the average value for all years selected.

8 Methane percentage: 64.00% (Parcel 1), 62.00% (Parcel 2), 65.60% (Parcel 3), 64.00% (Parcel 4)
This was based on the 90th percentile of the field sample data results.

9 NMOC Concentration: 2200 ppmv (Parcel 1), 2000 ppmv (Parcel 2), 1800 ppmv (Parcel 3), 1870 ppmv (Parcel 4)
This was based on the 90th percentile of the field sample data results.

10 Air Pollutants (COPCs)
Modified per 90th percentile values as shown in Table 4.

With all values input for each parcel, LFG emission rates for each COPC were estimated using the LandGEM model. Figure 24 shows an example output file for NMOC emis-

```
==========
Model Parameters
==========
Lo : 170.00 m^3 / Mg
k : 0.0500 1/yr
NMOC : 2200.00 ppmv
Methane : 64.0000 % volume
Carbon Dioxide : 36.0000 % volume

==========
Landfill Parameters
==========
Landfill type : Co-Disposal
Year Opened : 1974   Current Year : 2004  Closure Year: 2004
Capacity : 303128 Mg
Average Acceptance Rate Required from
      Current Year to Closure Year : 0.00 Mg/year

==========
Model Results
==========
                                  NMOC Emission Rate
Year   Refuse In Place (Mg)       (Mg/yr)      (Cubic m/
yr)
==========
1975   3.031E+04                  3.175E+00    8.857E+02
1976   6.063E+04                  6.195E+00    1.728E+03
1977   9.094E+04                  9.067E+00    2.530E+03
1978   1.213E+05                  1.180E+01    3.292E+03
1979   1.516E+05                  1.440E+01    4.017E+03
1980   1.819E+05                  1.687E+01    4.707E+03
1981   2.122E+05                  1.922E+01    5.363E+03
1982   2.425E+05                  2.146E+01    5.987E+03
1983   2.728E+05                  2.359E+01    6.581E+03
 •      •                          •            •
 •      •                          •            •
2001   3.031E+05                  1.095E+01    3.054E+03
2002   3.031E+05                  1.041E+01    2.905E+03
2003   3.031E+05                  9.906E+00    2.764E+03
 •      •                          •            •
 •      •                          •            •
2201   3.031E+05                  4.970E-04    1.387E-01
2202   3.031E+05                  4.728E-04    1.319E-01
2203   3.031E+05                  4.497E-04    1.255E-01
```

Figure 24. Example LandGEM Model Run Output.

sions from the LandGEM model. Table 5 provides the emission rates estimated for each COPC within each parcel of the landfill, and Figure 25 shows the emission rate data for NMOC versus time. Appendix D contains all the LandGEM model runs for all parcels.

5.2 SCREEN3 Modeling of LFG

The next step in characterizing the emissions of LFG is to evaluate the ambient impact of each of the COPCs. For this, it is necessary to use an atmospheric dispersion model, and for purposes of this demonstration, SCREEN3 was used to provide a screening level assessment. In order to properly screen the landfill, each parcel shown in Figure 23 was evaluated separately as an area source within the model. Each area was modeled at a unity emission rate of 1 g/s to provide maximum 1-h concentration. Because each area was modeled on a unity basis, the emission rates generated from the LandGEM model could in turn be multiplied by this unity-derived concentration to determine the 1-h maximum concentrations for each COPC. To convert these concentrations to a representative annual concentration, all derived 1-h concentrations were multiplied by the appropriate multiplying factor of 0.08. If, an alternative averaging time is to be evaluated, the reader is referred to section 2.2.1.4, Atmospheric Dispersion Modeling and to Table 2-3 of the Guidance. Table 6 provides the maximum annual concentrations for each COPC. Appendix E contains the SCREEN3 model runs for each parcel.

Table 5. COPC Emission Rates by Parcel.

	2003 Emission Rates (Mg/yr)			
COPC	**Parcel 1**	**Parcel 2**	**Parcel 3**	**Parcel 4**
NMOC	9.91	1.48	1.38	0.854
1,1,1-Trichloroethane	6.27×10^{-4}		3.55×10^{-5}	3.54×10^{-5}
1,1-Dichloroethene	1.52×10^{-4}		3.44×10^{-5}	2.06×10^{-5}
1,2-Dichloroethane	3.62×10^{-4}		2.46×10^{-4}	5.25×10^{-5}
1,4-Dichlorobenzene	2.15×10^{-3}	3.67×10^{-4}	1.82×10^{-4}	6.23×10^{-5}
Benzene	8.33×10^{-3}	2.08×10^{-4}	2.84×10^{-4}	3.48×10^{-4}
Carbon tetrachloride				
Chlorobenzene	1.76×10^{-3}	2.03×10^{-4}	3.79×10^{-4}	1.31×10^{-4}
Chloroethane	1.85×10^{-3}	8.88×10^{-5}	1.26×10^{-4}	1.47×10^{-4}
Chloroform				
Methylene chloride	8.43×10^{-4}		1.39×10^{-3}	7.65×10^{-5}
Tetrachloroethene	5.29×10^{-3}		1.85×10^{-3}	7.91×10^{-4}
Toluene	5.39×10^{-2}	4.36×10^{-4}	1.71×10^{-3}	5.37×10^{-5}
Trichloroethene	4.05×10^{-3}		1.35×10^{-3}	5.71×10^{-4}
Vinyl Chloride	8.69×10^{-3}	1.18×10^{-4}	4.49×10^{-4}	2.82×10^{-4}
m,p-Xylene	4.92×10^{-2}	7.30×10^{-3}	6.67×10^{-3}	7.09×10^{-4}
o-Xylene	1.48×10^{-2}	2.19×10^{-3}	8.94×10^{-4}	1.69×10^{-4}

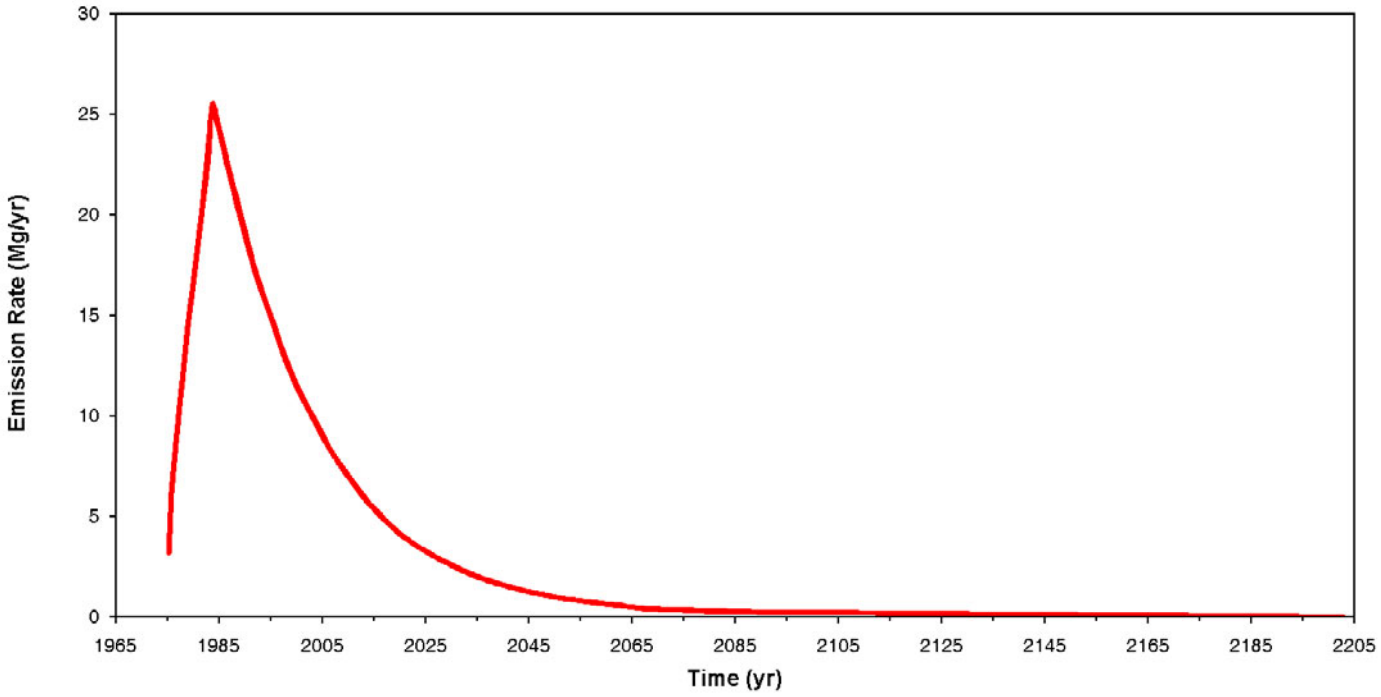


Figure 25. NMOC Emission Rates: 1975-2203.

Table 6. Maximum Annual Concentrations.

	Predicted Maximum Annual Concentrations								
COPC	**Parcel 1**		**Parcel 2**		**Parcel 3**		**Parcel 4**		**Total**
	(ppmv)	**(µg/m³)**	**(ppmv)**	**(µg/m³)**	**(ppmv)**	**(µg/m³)**	**(ppmv)**	**(µg/m³)**	**(µg/m³)**
Methane		4449.		1102.		1301.		1251.	8103.
Carbon Dioxide		6867.		1854.		1871.		1931.	$1.252\times10^{+4}$
NMOC		82.17		19.11		19.17		19.65	140.1
1,1,1-Trichloroethane	9.41×10^{-7}	5.204×10^{-3}			8.94×10^{-8}	4.948×10^{-4}	1.47×10^{-7}	8.132×10^{-4}	6.512×10^{-3}
1,1-Dichloroethene	3.13×10^{-7}	1.260×10^{-3}			1.19×10^{-7}	4.793×10^{-4}	1.17×10^{-7}	4.726×10^{-4}	2.212×10^{-3}
1,2-Dichloroethane	7.29×10^{-7}	3.002×10^{-3}			8.32×10^{-7}	3.425×10^{-3}	2.93×10^{-7}	1.206×10^{-3}	7.633×10^{-3}
1,4-Dichlorobenzene	2.92×10^{-6}	1.783×10^{-2}	7.73×10^{-7}	4.725×10^{-3}	4.16×10^{-7}	2.544×10^{-3}	2.34×10^{-7}	1.433×10^{-3}	2.654×10^{-2}
Benzene	2.13×10^{-5}	6.907×10^{-2}	8.26×10^{-7}	2.684×10^{-3}	1.22×10^{-6}	3.959×10^{-3}	2.46×10^{-6}	7.999×10^{-3}	8.371×10^{-2}
Chlorobenzene	3.11×10^{-6}	1.463×10^{-2}	5.57×10^{-7}	2.620×10^{-3}	1.12×10^{-6}	5.288×10^{-3}	6.42×10^{-7}	3.020×10^{-3}	2.556×10^{-2}
Chloroethane	5.73×10^{-6}	1.538×10^{-2}	4.26×10^{-7}	1.144×10^{-3}	6.54×10^{-7}	1.754×10^{-3}	1.26×10^{-6}	3.383×10^{-3}	2.166×10^{-2}
Methylene chloride	1.98×10^{-6}	6.991×10^{-3}			5.47×10^{-6}	1.931×10^{-2}	4.98×10^{-7}	1.759×10^{-3}	2.806×10^{-2}
Tetrachloroethene	6.35×10^{-6}	4.384×10^{-2}			3.74×10^{-6}	2.583×10^{-2}	2.63×10^{-6}	1.819×10^{-2}	8.786×10^{-2}
Toluene	1.17×10^{-4}	4.473×10^{-1}	1.47×10^{-6}	5.617×10^{-3}	6.21×10^{-6}	2.380×10^{-2}	3.22×10^{-7}	1.235×10^{-3}	4.779×10^{-1}
Trichloroethene	6.17×10^{-6}	3.360×10^{-2}			3.46×10^{-6}	1.884×10^{-2}	2.41×10^{-6}	1.313×10^{-2}	6.557×10^{-2}
Vinyl Chloride	2.77×10^{-5}	7.205×10^{-2}	5.86×10^{-7}	1.524×10^{-3}	2.41×10^{-6}	6.258×10^{-3}	2.49×10^{-6}	6.476×10^{-3}	8.631×10^{-2}
m,p-Xylene	9.25×10^{-5}	4.077×10^{-1}	2.14×10^{-5}	9.415×10^{-2}	2.11×10^{-5}	9.305×10^{-2}	3.70×10^{-6}	1.631×10^{-2}	6.112×10^{-1}
o-Xylene	2.78×10^{-5}	1.224×10^{-1}	6.41×10^{-6}	2.825×10^{-2}	2.83×10^{-6}	1.247×10^{-2}	8.80×10^{-7}	3.882×10^{-3}	1.670×10^{-1}

Section 6. Risk Assessment

The risk assessment provided in this section is for illustrative purposes only. It is not intended to represent a complete and detailed risk assessment for determining further actions at this site.

In order to calculate the incremental risk associated with exposure to a COPC, the time averaged emission rate for the time period of concern must first be determined. The equation for determining the time averaged emission rate is

$$< E >= (1/ED) \times \left[\left(\frac{h}{2} \right) \times \left(E_0 + 2 \sum_{E_1}^{E_{n-1}} E \right) + E_n \right]$$

where

$< E >$ = Time-averaged emission rate (megagrams per year),
ED = Exposure duration (years),
h = Time-step interval (years), h = 1 yr,
$E_{0,1,2 \ldots n}$ = Emission rate at the end of the first year (E_0) and each succeeding year from LandGEM (megagrams per year), and
n = Number of time-steps ($n = ED$).

This time averaged emission rate is then entered into the atmospheric dispersion model to estimate the average exposure point concentration of the COPC. Using this approach, a dispersion model run will be required for each chemical of concern. Alternatively, if the dispersion model is run assuming the emission rate is at unity (1 g/m^2•s), the dispersion model will generate a normalized air concentration in (micrograms per cubic meter per gram per square meter second) at the receptor of concern. The estimated ambient air concentration (micrograms per cubic meter) is determined by multiplying the dispersion coefficient and the time averaged emission rate. The LandGEM model runs for the Bush Valley Landfill predicted very low emission rates, and the emission rate for every COPC was declining from 2003 forward. Hence, it was decided to use only the 2003 emission rates to calculate, for illustrative purposes, the ambient air concentrations. These predicted ambient air concentrations were then compared to the target concentrations in Table 7.

Table 7 identifies target media concentrations corresponding to risk or hazard based concentrations for ambient air in residential settings. Only air concentrations that satisfy both the prescribed cancer risk level and the target hazard index are included in Table 7. The approach described here also can be used to evaluate chemicals not listed in the tables. It must be emphasized that the concentrations presented in Table 7 are screening levels. They are not clean-up levels or preliminary remediation goals nor are they intended to supercede existing criteria of the lead regulatory authority. The lead regulatory authority for a site may determine that criteria other than those provided herein are appropriate for their specific site or area.

The sources of chemical data used in the calculations necessary to create Table 7 were EPA's Superfund Chemical Data Matrix (SCDM) database and EPA's Water 9 database whenever a chemical was not included in the SCDM database. EPA's Integrated Risk Information System (IRIS) is the preferred source of carcinogenic unit risks and non-carcinogenic reference concentrations (RfCs) for inhalation exposure.[1] The following two sources were consulted, in order of preference, when IRIS values were not available: provisional toxicity values recommended by EPA's National Center for Environmental Assessment (NCEA) and EPA's Health Effects Assessment Summary Tables (HEAST). If no inhalation toxicity data could be obtained from IRIS, NCEA, or HEAST, extrapolated unit risks and RfCs were derived by using toxicity data for oral exposure (cancer slope factors and reference doses, respectively) from these reference sources using the same preference order. Toxicity databases such as IRIS are constantly being updated; this table is current as of August 2002. Users

[1] U.S. EPA. 2002. Integrated Risk Information System (IRIS). http://www.epa.gov/iriswebp/iris/index.html (accessed October 2005)

Table 7. Risk Assessment Analysis

CAS No.	Chemical	Basis of Target Conc.	C_{target}—Target Ambient Air Concentration to Satisfy both the Prescribed Risk Level ($R=10^{-6}$) and the Target Hazard Index (HI=1)[a]		Total Predicted Ambient Air Conc. ($\mu g/m^3$)
			Cancer ($\mu g/m^3$)	Non-cancer ($\mu g/m^3$)	
71556	1,1,1-Trichloroethane	NC[b]		$2.2\times10^{+03}$	6.5×10^{-03}
75354	1,1-Dichloroethylene	NC		$2.1\times10^{+02}$	2.2×10^{-03}
107062	1,2-Dichloroethane	C[c]	7.4×10^{-02}	5.1	7.6×10^{-03}
106467	1,4-Dichlorobenzene	C	3.1×10^{-01}	$8.4\times10^{+02}$	2.7×10^{-02}
71432	Benzene	C	2.5×10^{-01}	31.	8.4×10^{-02}
56235	Carbon tetrachloride	C	1.3×10^{-01}	2.6	0.00
108907	Chlorobenzene	NC		62.	2.6×10^{-02}
75003	Chloroethane (ethyl chloride)	C	2.3	$1.0\times10^{+04}$	2.2×10^{-02}
67663	Chloroform	C	8.3×10^{-02}	5.1×10^{-01}	0.00
75092	Methylene chloride	C	4.1	$3.1\times10^{+03}$	2.8×10^{-02}
127184	Tetrachloroethylene	C	3.2×10^{-01}	37.	8.8×10^{-02}
108883	Toluene	NC		$4.0\times10^{+02}$	4.8×10^{-01}
79016	Trichloroethylene	C	1.7×10^{-02}	37.	6.6×10^{-02}
75014	Vinyl Chloride (chloroethene)	C	1.1×10^{-01}	$1.0\times10^{+02}$	8.6×10^{-02}
108383	m,p-Xylene	NC		$1.1\times10^{+02}$	6.1×10^{-01}
95476	o-Xylene	NC		$1.1\times10^{+02}$	1.7×10^{-01}

[a] U.S. EPA Region 9 PRG Tables, October 2004
[b] NC = noncancer risk
[c] C = cancer risk

of this guidance are strongly encouraged to research the latest toxicity values for contaminants of interest from the sources noted above.

The ambient air concentrations in the table are risk-based screening levels calculated following an approach consistent with that presented in HEAST (U.S. EPA, 1997). Separate carcinogenic and non-carcinogenic target concentrations were calculated for each compound when both unit risks and reference concentrations were available. When inhalation toxicity values were not available, unit risks and reference concentrations were extrapolated from oral slope factors or reference doses, respectively. For both carcinogens and non-carcinogens, target air concentrations were based on an adult exposure scenario and assume maximum exposure of an individual (i.e., exposure to contaminants 24 hours per day, 7 days per week, over 70 years). An inhalation rate of 20 m^3/day and a body weight of 70 kg are assumed and have been factored into the inhalation unit risk and reference concentration toxicity values.

Unit risks were extrapolated from cancer slope factors using

$$URF = CFS \times IR \times \left(\frac{1}{BW}\right)\left(\frac{10^{-3} mg}{\mu g}\right)$$

where

URF = unit risk factor (micrograms per cubic meter)$^{-1}$,
CSF = cancer slope factor,
IR = inhalation rate (cubic meters per day), and
BW = body weight (kilograms).

Reference concentrations were extrapolated from reference doses using

$$RfC = RfD \times BW \times \left(\frac{1}{IR}\right)$$

where

RfC = reference concentration (milligram per cubic meter) and
RfD = reference dose (milligram per kilogram per day).

For carcinogens,

$$C_{cancer} = TCR/URF$$

and for noncarcinogens,

$$C_{noncancer} = THQ \times RfC$$

where

C_{cancer} = target indoor air carcinogen concentration (micrograms per cubic meter),
$C_{noncancer}$ = target indoor air noncarcinogen concentration (micrograms per cubic meter),
TCR = target cancer risk (e.g., 1.0×10^{-5}), and
THQ = target hazard quotient (e.g., 1.0).

For most compounds, the more stringent of the cancer- and noncancer-based contaminant concentrations is chosen as the target are concentration that satisfies both the prescribed cancer risk and the target hazard quotient.

$$C_{target,ia} = MIN(C_{cancer}, C_{noncancer})$$

The target concentration, however, was preferentially selected for those compounds that had both an inhalation-based toxicity value and an oral-extrapolated value. The selected screening level was preferentially based on the non-extrapolated toxicity value chosen to calculate the acceptable ambient air concentration.[2]

For ease in application of the table, the indoor air concentrations are given in units of micrograms per cubic meter. The conversion from parts per billion by volume to micrograms per cubic meter is

$$C\left[ppmv\right] = C\left[\frac{\mu g}{m^3}\right] \times 10^9 \left[\frac{ppb}{atm}\right] \times 10^{-3} \left[\frac{m^3}{L}\right] \times R \times \frac{T}{MW \times 10^6 \left[\mu g/g\right]}$$

where

R = gas constant (0.0821 L*atm/mole*K),
T = absolute temperature (298 K), and
MW = molecular weight (grams per mole)

The calculated target air concentrations are listed in the tables along with a column indicating whether cancer or noncancer risks drive the target concentration. If the exposure scenario of concern is an adult resident living at the receptor location being most impacted, the forward-calculation of incremental risks begins with the estimated ambient air concentration (i.e., C_{air} in micrograms per cubic meter). For carcinogenic contaminants, the risk level is calculated as

$$Risk = \frac{URF \times EF \times ED \times C_{air}}{AT_C \times 365 days/yr}$$

where

$Risk$ = incremental risk level, unitless (e.g., 1×10^{-6}),
C_{air} = annual average ambient air concentration for each carciogen (micrograms per cubic meter),
AT_C = averaging time for carcinogens (years—70 yr),
EF = exposure frequency (days per year—350 days), and
ED = exposure duration (years—30 yr).

For noncarcinogenic contaminants, the hazard quotient is calculated as

$$HQ = \frac{EF \times ED \times \frac{1}{RfC} \times C_{air}}{AT_{NC} \times 365\, days/yr}$$

where

HQ = Hazard quotient, unitless (e.g., 1.0) and
AT_{NC} = Averaging time for noncarcinogens (year—30 yr)

Table 7 illustrates the results of using the above equations and discussions. The last column in Table 7 represents the total ambient air concentration in micrograms per cubic meter. This value is derived by multiplying the emission flux values from LandGEM by the ambient air concentration from the dispersion model (SCREEN3) when run at a unity emission rate (1 g/s). These values would be compared to the appropriate risk derived concentrations as seen in the previous three columns to determine if a particular COPC is above or below an acceptable air concentration and whether further actions or investigations may be needed. Again, Table 7 is presented for illustrative purposes only and is not intended to represent the results or conclusions drawn from a detailed risk assessment.

[2] The target air concentration for trichloroethylene is the lone exception to this rule. The target concentration is based on a carcinogenic unit risk extrapolated from an upper bound oral cancer slope factor of 4×10^{-1} $(mg/kg/day)^{-1}$ cited in NCEA's draft risk assessment for trichloroethylene (EPA, 2001). However, as noted in that document, available evidence from toxicological studies suggests similar carcinogenic effects from both the oral and inhalation routes of exposure. The existence of this evidence gives greater weight to the extrapolated unit risk, and given that the unit risk produces a lower target concentration than the non-extrapolated RfC, the unit risk-based value is adopted here as the target air concentration for trichloroethylene.

Section 7. Findings and Conclusions

This case study documents how the guidance can be used to evaluate landfill gas emissions. It illustrates the usefulness of both the information and the procedures presented in the Guidance for Evaluating Landfill Gas Emissions from Closed or Abandoned Facilities. By applying the investigative techniques and recommended practices, the research team was able to:

1 Determine where the landfill gases are escaping into the atmosphere ,
2 Identify the chemicals of potential concern,
3 Quantify the speciated LFG emission rates ,
4 Identify the most likely to be affected at off-site location(s), and
5 Characterize ambient air concentrations.

This case study report provided data and information that were used by the remedial project manager to:

1 Assess the health risk associated with the emissions from the landfill,
2 Determine if additional site investigation effort is needed,
3 Evaluate the level of effort associated with the existing LFG monitoring program,
4 Determine if the previously proposed remedial design needed to be altered,
5 Evaluate the need for institution controls and future land use policy decisions, and
6 Decide if the risks and hazards associated with the landfill gas needed to be controlled with LFG control technology.

Specific to the Bush valley site the following lessons were learned:

- The conventional field screening, discrete sampling using Summa canisters, commercial laboratory analysis using T015 analytical methods, and emission and dispersion modeling procedures provided the information needed to assess the risks and hazards associated with the LFG emissions. The turn around time for the commercial laboratory was measured in weeks. The data reduction and modeling efforts require 2-3 man days of effort, so health risks could not be quantified on a real time basis. Readily available equipment and ordinary environmental technician skills are required to obtain quality results.
- This effort identified previously unrecognized leaks in the FML, which had been installed for less than 5 years. This effort demonstrated the needed to periodically investigate the integrity of landfill liners.
- This effort confirmed previous findings that indicated LFG has migrated offsite in a direction towards occupied homes via below ground sand layers. Since this illustrative study effort was not designed to fully characterize the aerial extent of the LFG migration, a LFG plume chase was not undertaken. It was recognized the additional offsite LFG monitoring systems and potentially indoor air sampling would have been initiated in accordance with Guidance Document, if implementation of final remedy would be substantially delayed. It was recognized that the remedial design was nearly complete and plans to replace the passive vents collection system with an enclosed oxidizer, were already approved, no further site investigation effort was undertaken.
- Using the research data, the predicted trichloroethylene ambient air concentrations are above that which would create an unacceptable risk at the 1×10^{-6} level but below that which would acceptable at a 1×10^{-5} level.
- This project demonstrated that the LFG monitoring system needs to be permanently installed and maintained. Several of the temporary monitoring probes showed evidence of ambient air in-leakage.

Appendix A
Site Activity Photographs

Bush Valley Landfill Entrance Sign

Warning Sign on the Bush Valley Landfill Entry Fence

Entrance View of the Bush Valley Landfill

View of the Bush Valley Landfill

Perimeter Gas Monitoring Probe

Encased Valve to a Perimeter Gas Monitoring Probe

Passive Vent on the Top of the Bush Valley Landfill

Sampling Valve Installed on a Passive Vent

Landfill Gas Screening of a Perimeter Gas Monitoring Probe

Landfill Gas Screening of a Perimeter Gas Monitoring Probe

Landfill Gas Screening at a Passive Vent

Landfill Gas Screening at a Passive Vent

Landfill Gas Screening at a Passive Vent

Landfill Gas Sampling at a Perimeter Gas Monitoring Probe

Landfill Gas Sampling and Duplicate Sampling at a Perimeter Gas Monitoring Probe

Landfill Gas Sampling with Duplicate Sampling and Ambient Air Sampling at a Passive Vent

Landfill Gas Sampling and Ambient Air Sampling at a Passive Vent

Landfill Gas Sampling at a Temporary Gas Monitoring Probe

Appendix B
Wilcoxon Statistical Analysis

Wilcoxon Two-Sample, Rank-Sum Test

In order to properly characterize and establish a sampling method for each landfill, it is necessary to identify those areas that are nearly homogeneous in composition. This is determined following the screening procedures. Through application of statistical methods on the screening data, it is possible to divide the landfill into nearly homogeneous areas. For the purpose of this guidance, it was decided to use a method referred to as the Wilcoxon two-sample, rank-sum test, or simply the rank-sum test. This is a statistical method used to determine if two independent sample populations are statistically similar (i.e., they have the same mean and median). For this application, statistically similar populations refer to areas within the landfill that are nearly homogeneous.

The first step is to assign the screening data that was collected to two populations (e.g., north landfill and south landfill) as

$$n = n_1 + n_2$$

where

n = entire screening data set,
n_1 = population of size n_1,
n_2 = population of size n_2, and
$n_1 \leq n_2$.

Once the all data has been assigned to one or the other populations, all the data must be placed in ascending order regardless of which population it was assigned and assigned a rank from 1 to n. In case of ties, all tied values should be assigned a ranking that is the mean of the tied rankings. For example, if two values are tied for the second lowest value, they both would be assigned a ranking of 2.5, which is the mean of the second and third ranking spots. After all values have been ranked, the ranks associated with the values from the smaller population, n_1, are added and the sum denoted as T'. Once T' is derived, it is compared with the values in Table X to decide on a given level of significance. Table X can be used for a given combination of n_1 and n_2 up to a total population size (n) of 20. If $T'_{\alpha} \leq T' \leq T'_{1-\alpha}$, then the two populations can be considered statistically similar and therefore one homogeneous area.

For a larger data set, the following statistical test must be used.

$$Z = \frac{T' - \frac{n_1(n_1 + n_2 + 1)}{2}}{\sqrt{\frac{n_1 n_2 (n_1 + n_2 + 1)}{12}}}$$

This value of Z is then compared to a specific level of significance on a t distribution shown in Table IV, where df is the total population size (n). If $|Z| \geq Z_{\alpha/2}$, then the two populations can not be considered statistically similar and are therefore two nonhomogeneous areas.

Continue this process until all areas of the landfill have been divided into distinct homogeneous areas.

TABLE X DISTRIBUTION OF THE RANK SUM T'

The values of T'_α, $T'_{1-\alpha}$, and α are such that, if the n_1 and n_2 observations are chosen at random from the same population, the chance that the rank sum T' of the n_1 observations in the smaller sample is equal to or less than T'_α is α and the chance that T' is equal to or greater than $T'_{1-\alpha}$ is α. The sample sizes are shown in parentheses (n_1, n_2)

T'_α	$T'_{1-\alpha}$	α	T'_α	$T'_{1-\alpha}$	α	T'_α	$T'_{1-\alpha}$	α	T'_α	$T'_{1-\alpha}$	α
	(1,9)			(3,8)			(4,8) (*Cont.*)			(5,7) (*Cont.*)	
1	10	.100	6	30	.006	12	40	.008	19	46	.015
	(1,10)		7	29	.012	13	39	.014	20	45	.024
1	11	.091	8	28	.024	14	38	.024	21	44	.037
	(2,3)		9	27	.042	15	37	.036	22	43	.053
3	9	.100	10	26	.067	16	36	.055	23	42	.074
	(2,4)		11	25	.097	17	35	.077		(5,8)	
3	11	.067		(3,9)			(4,9)		15	55	.001
	(2,5)		6	33	.005	10	46	.001	16	54	.002
3	13	.047	7	32	.009	11	45	.003	17	53	.003
4	12	.095	8	31	.018	12	44	.006	18	52	.005
	(2,6)		9	30	.032	13	43	.010	19	51	.009
3	15	.036	10	29	.050	14	42	.017	20	50	.015
4	14	.071	11	28	.073	15	41	.025	21	49	.023
	(2,7)			(3,10)		16	40	.038	22	48	.033
3	17	.028	6	36	.003	17	39	.053	23	47	.047
4	16	.056	7	35	.007	18	38	.074	24	46	.064
	(2,8)		8	34	.014	19	37	.099	25	45	.085
3	19	.022	9	33	.024		(4,10)			(5,9)	
4	18	.044	10	32	.038	10	50	.001	15	60	.000
5	17	.089	11	31	.056	11	49	.002	16	59	.001
	(2,9)		12	30	.080	12	48	.004	17	58	.002
3	21	.018		(4,4)		13	47	.007	18	57	.003
4	20	.036	10	26	.014	14	46	.012	19	56	.006
5	19	.073	11	25	.029	15	45	.018	20	55	.009
	(2,10)		12	24	.057	16	44	.026	21	54	.014
3	23	.015	13	23	.100	17	43	.038	22	53	.021
4	22	.030		(4,5)		18	42	.053	23	52	.030
5	21	.061	10	30	.008	19	41	.071	24	51	.041
6	20	.091	11	29	.016	20	40	.094	25	50	.056
	(3,3)		12	28	.032		(5,5)		26	49	.073
6	15	.050	13	27	.056	15	40	.004	27	48	.095
7	14	.100	14	26	.095	16	39	.008		(5,10)	
	(3,4)			(4,6)		17	38	.016	15	65	.000
6	18	.028	10	34	.005	18	37	.028	16	64	.001
7	17	.057	11	33	.010	19	36	.048	17	63	.001
	(3,5)		12	32	.019	20	35	.075	18	62	.002
6	21	.018	13	31	.033		(5,6)		19	61	.004
7	20	.036	14	30	.057	15	45	.002	20	60	.006
8	19	.071	15	29	.086	16	44	.004	21	59	.010
	(3,6)			(4,7)		17	43	.009	22	58	.014
6	24	.012	10	38	.003	18	42	.015	23	57	.020
7	23	.024	11	37	.006	19	41	.026	24	56	.028
8	22	.048	12	36	.012	20	40	.041	25	55	.038
9	21	.083	13	35	.021	21	39	.063	26	54	.050
	(3,7)		14	34	.036	22	38	.089	27	53	.065
6	27	.008	15	33	.055		(5,7)		28	52	.082
7	26	.017	16	32	.082	15	50	.001		(6,6)	
8	25	.033		(4,8)		16	49	.003	21	57	.001
9	24	.058	10	42	.002	17	48	.005	22	56	.002
10	23	.092	11	41	.004	18	47	.009	23	55	.004

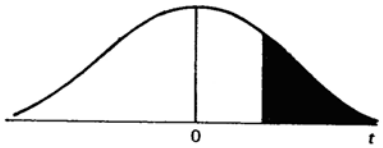
DISTRIBUTION OF THE RANK SUM T' (continued)

T'_α	$T'_{1-\alpha}$	α	T'_α	$T'_{1-\alpha}$	α	T'_α	$T'_{1-\alpha}$	α	T'_α	$T'_{1-\alpha}$	α
(6,6) (*Cont.*)			(6,9) (*Cont.*)			(7,8) (*Cont.*)			(8,8) (*Cont.*)		
24	54	.008	35	61	.072	41	71	.047	37	99	.000
25	53	.013	36	60	.091	42	70	.060	38	98	.000
26	52	.021	(6,10)			43	69	.076	39	97	.001
27	51	.032	21	81	.000	44	68	.095	40	96	.001
28	50	.047	22	80	.000	45	67	.116	41	95	.001
29	49	.066	23	79	.000	(7,9)			42	94	.002
30	48	.090	24	78	.001	28	91	.000	43	93	.003
(6,7)			25	77	.001	29	90	.000	44	92	.005
21	63	.001	26	76	.002	30	89	.000	45	91	.007
22	62	.001	27	75	.004	31	88	.001	46	90	.010
23	61	.002	28	74	.005	32	87	.001	47	89	.014
24	60	.004	29	73	.008	33	86	.002	48	88	.019
25	59	.007	30	72	.011	34	85	.003	49	87	.025
26	58	.011	31	71	.016	35	84	.004	50	86	.032
27	57	.017	32	70	.021	36	83	.006	51	85	.041
28	56	.026	33	69	.028	37	82	.008	52	84	.052
29	55	.037	34	68	.036	38	81	.011	53	83	.065
30	54	.051	35	67	.047	39	80	.016	54	82	.080
31	53	.069	36	66	.059	40	79	.021	55	81	.097
32	52	.090	37	65	.074	41	78	.027	(8,9)		
(6,8)			38	64	.090	42	77	.036	36	108	.000
21	69	.000	(7,7)			43	76	.045	40	104	.000
22	68	.001	28	77	.000	44	75	.057	41	103	.001
23	67	.001	29	76	.001	45	74	.071	42	102	.001
24	66	.002	30	75	.001	46	73	.087	43	101	.002
25	65	.004	31	74	.002	(7,10)			44	100	.003
26	64	.006	32	73	.003	28	98	.000	45	99	.004
27	63	.010	33	72	.006	29	97	.000	46	98	.006
28	62	.015	34	71	.009	30	96	.000	47	97	.008
29	61	.021	35	70	.013	31	95	.000	48	96	.010
30	60	.030	36	69	.019	32	94	.001	49	95	.014
31	59	.041	37	68	.027	33	93	.001	50	94	.018
32	58	.054	38	67	.036	34	92	.001	51	93	.023
33	57	.071	39	66	.049	35	91	.002	52	92	.030
34	56	.091	40	65	.064	36	90	.003	53	91	.037
(6,9)			41	64	.082	37	89	.005	54	90	.046
21	75	.000	(7,8)			38	88	.007	55	89	.057
22	74	.000	28	84	.000	39	87	.009	56	88	.069
23	73	.001	29	83	.000	40	86	.012	57	87	.084
24	72	.001	30	82	.001	41	85	.017	(8,10)		
25	71	.002	31	81	.001	42	84	.022	36	116	.000
26	70	.004	32	80	.002	43	83	.028	41	111	.000
27	69	.006	33	79	.003	44	82	.035	42	110	.001
28	68	.009	34	78	.005	45	81	.044	43	109	.001
29	67	.013	35	77	.007	46	80	.054	44	108	.002
30	66	.018	36	76	.010	47	79	.067	45	107	.002
31	65	.025	37	75	.014	48	78	.081	46	106	.003
32	64	.033	38	74	.020	49	77	.097	47	105	.004
33	63	.044	39	73	.027	(8,8)			48	104	.006
34	62	.057	40	72	.036	36	100	.000	49	103	.008

DISTRIBUTION OF THE RANK SUM T' (continued)

T'_α	$T'_{1-\alpha}$	α	T'_α	$T'_{1-\alpha}$	α	T'_α	$T'_{1-\alpha}$	α	T'_α	$T'_{1-\alpha}$	α
(8,10) (*Cont.*)			(9,9) (*Cont.*)			(9,10) (*Cont.*)			(10,10) (*Cont.*)		
50	102	.010	58	113	.007	58	122	.004	69	141	.003
51	101	.013	59	112	.009	59	121	.005	70	140	.003
52	100	.017	60	111	.012	60	120	.007	71	139	.004
53	99	.022	61	110	.016	61	119	.009	72	138	.006
54	98	.027	62	109	.020	62	118	.011	73	137	.007
55	97	.034	63	108	.025	63	117	.014	74	136	.009
56	96	.042	64	107	.031	64	116	.017	75	135	.012
57	95	.051	65	106	.039	65	115	.022	76	134	.014
58	94	.061	66	105	.047	66	114	.027	77	133	.018
59	93	.073	67	104	.057	67	113	.033	78	132	.022
60	92	.086	68	103	.068	68	112	.039	79	131	.026
	(9,9)		69	102	.081	69	111	.047	80	130	.032
45	126	.000	70	101	.095	70	110	.056	81	129	.038
50	121	.000		(9,10)		71	109	.067	82	128	.045
51	120	.001	45	135	.000	72	108	.078	83	127	.053
52	119	.001	52	128	.000	73	107	.091	84	126	.062
53	118	.001	53	127	.001		(10,10)		85	125	.072
54	117	.002	54	126	.001	65	145	.001	86	124	.083
55	116	.003	55	125	.001	66	144	.001	87	123	.095
56	115	.004	56	124	.002	67	143	.001			
57	114	.005	57	123	.003	68	142	.002			

TABLE IV t DISTRIBUTION



df	.100	.050	.025	.010	.005	df
1	3.078	6.314	12.706	31.821	63.657	1
2	1.886	2.920	4.303	6.965	9.925	2
3	1.638	2.353	3.182	4.541	5.841	3
4	1.533	2.132	2.776	3.747	4.604	4
5	1.476	2.015	2.571	3.365	4.032	5
6	1.440	1.943	2.447	3.143	3.707	6
7	1.415	1.895	2.365	2.998	3.499	7
8	1.397	1.860	2.306	2.896	3.355	8
9	1.383	1.833	2.262	2.821	3.250	9
10	1.372	1.812	2.228	2.764	3.169	10
11	1.363	1.796	2.201	2.718	3.106	11
12	1.356	1.782	2.179	2.681	3.055	12
13	1.350	1.771	2.160	2.650	3.012	13
14	1.345	1.761	2.145	2.624	2.977	14
15	1.341	1.753	2.131	2.602	2.947	15
16	1.337	1.746	2.120	2.583	2.921	16
17	1.333	1.740	2.110	2.567	2.898	17
18	1.330	1.734	2.101	2.552	2.878	18
19	1.328	1.729	2.093	2.539	2.861	19
20	1.325	1.725	2.086	2.528	2.845	20
21	1.323	1.721	2.080	2.518	2.831	21
22	1.321	1.717	2.074	2.508	2.819	22
23	1.319	1.714	2.069	2.500	2.807	23
24	1.318	1.711	2.064	2.492	2.797	24
25	1.316	1.708	2.060	2.485	2.787	25
26	1.315	1.706	2.056	2.479	2.779	26
27	1.314	1.703	2.052	2.473	2.771	27
28	1.313	1.701	2.048	2.467	2.763	28
29	1.311	1.699	2.045	2.462	2.756	29
inf.	1.282	1.645	1.960	2.326	2.576	inf.

Bush Valley Landfill Site
26–27 August 2003
Wilcoxon Rank Sum Analysis (Run 1)

Population 1 size (n_1)	50
Population 2 size (n_2)	52
Total population size (n)	102
Sum of Ranks (W_{rs})	2896.5
Large Sample Statistic (Z_{rs})	2.152204
Confidence Interval	5.0%
$Z_{1-\alpha}$	1.645
Accept or Reject H_0?	REJECT

Bush Valley Landfill Site
26–27 August 2003
Wilsoxon Rank Sum Analysis, Run 1

Grid No.	UTM Coordinates of Grid Node		Methane Conc.	Methane Conc. for Rank	Assign Pop. Set	Prelim Ranking	No. Ties 23	Final Ranking	Pop. 1 W_{rs} 2896.5
	Easting	Northing							
1	18391264	4369160	1.29	1.29	2	5	2	5.5	
2	18391275	4369193	1.29	1.29	2	5	2	5.5	
3	18391270	4369221	1.05	1.05	2	3	1	3	
4	18391258	4369252	1.58	1.58	2	16	1	16	
6	18391296	4369251	1.22	1.22	2	4	1	4	
7	18391311	4369216	3.33	3.33	2	76	1	76	
8	18391314	4369185	1.4	1.4	2	11	1	11	
9	18391313	4369140	1.32	1.32	2	8	1	8	
10	18391327	4369141	1.37	1.37	2	9	1	9	
11	18391330	4369191	1.31	1.31	2	7	1	7	
12	18391329	4369221	1.65	1.65	2	18	1	18	
GVW1	18391302	4369234	67.7	67.7	2	102	1	102	
13	18391325	4369248	3.11	3.11	2	73	1	73	
16	18391353	4369267	20.2	20.2	2	91	1	91	
17	18391357	4369250	2.08	2.08	2	40	3	41	
18	18391355	4369220	1.44	1.44	2	12	1	12	
19	18391359	4369189	1.7	1.7	2	22	1	22	
20	18391354	4369160	0.85	0.85	2	1	1	1	
21	18391357	4369141	0.9	0.9	2	2	1	2	
22	18391384	4369133	2.08	2.08	2	40	3	41	
23	18391385	4369154	5.5	5.5	2	85	1	85	
24	18391391	4369189	1.66	1.66	2	19	1	19	
25	18391386	4369214	1.39	1.39	2	10	1	10	
26	18391386	4369252	1.71	1.71	2	23	1	23	
27	18391383	4369280	34	34	2	93	1	93	

continued

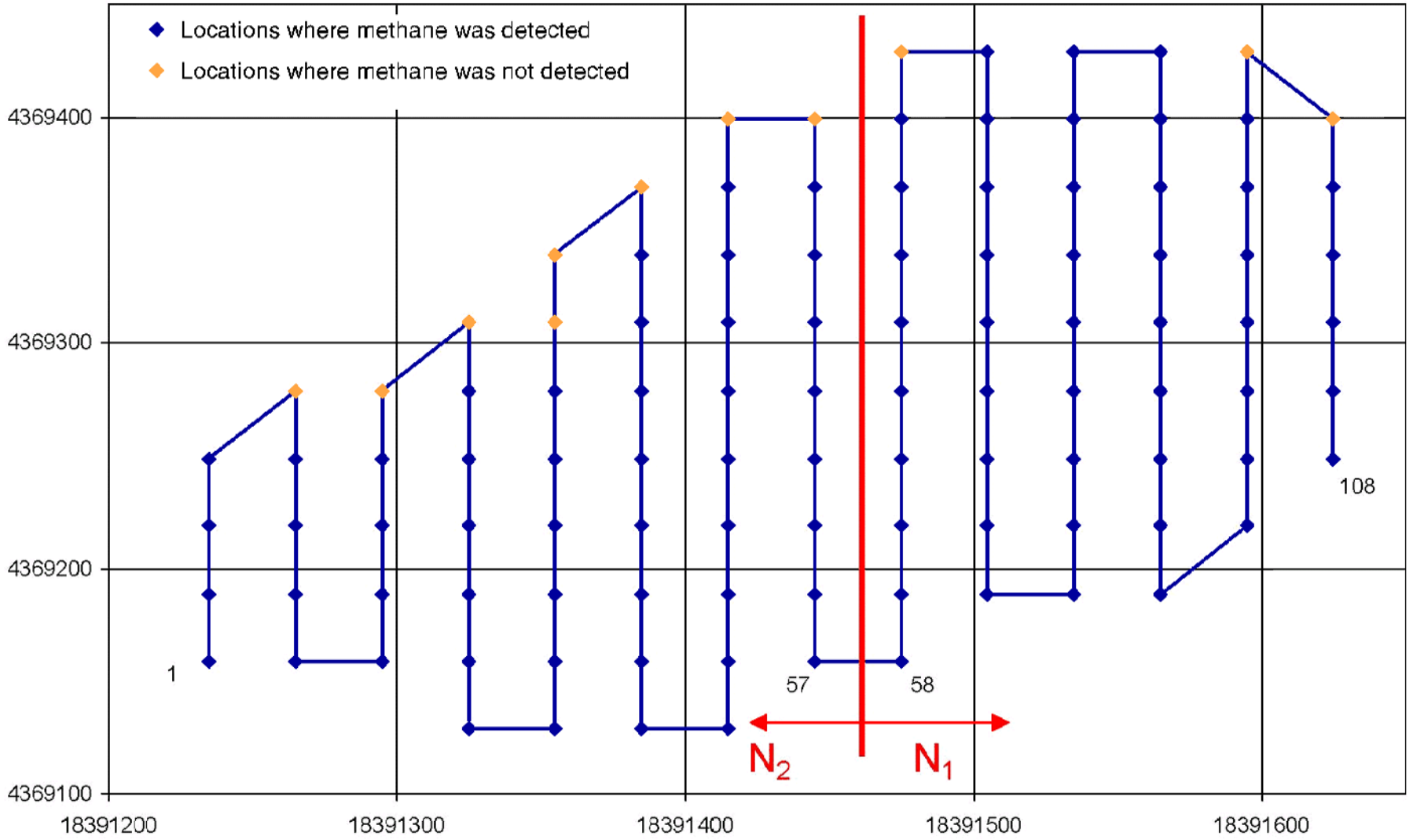
Bush Valley Landfill Site
26–27 August 2003
Wilsoxon Rank Sum Analysis, Run 1 (continued)

Grid No.	UTM Coordinates of Grid Node		Methane Conc.	Methane Conc. for Rank	Assign Pop. Set	Prelim Ranking	No. Ties 23	Final Ranking	Pop. 1 W_{rs} 2896.5
	Easting	Northing							
31	18391411	4369330	55.25	55.25	2	97	1	97	
32	18391421	4369310	52.27	52.27	2	96	1	96	
33	18391419	4369278	2.27	2.27	2	51	1	51	
34	18391416	4369251	1.54	1.54	2	15	1	15	
GVW2	18391388	4369226	65.8	65.8	2	100	1	100	
35	18391415	4369219	1.67	1.67	2	20	2	20.5	
36	18391417	4369190	1.86	1.86	2	30	2	30.5	
37	18391416	4369161	2.38	2.38	2	56	1	56	
38	18391413	4369142	1.88	1.88	2	32	2	32.5	
39	18391447	4369148	2.22	2.22	2	48	1	48	
40	18391447	4369168	2.08	2.08	2	40	3	41	
41	18391442	4369190	2.71	2.71	2	66	1	66	
42	18391445	4369220	38.36	38.36	2	95	1	95	
43	18391444	4369251	2.01	2.01	2	37	1	37	
44	18391446	4369279	3.85	3.85	2	79	1	79	
45	18391443	4369312	2.65	2.65	2	63	1	63	
46	18391442	4369341	3.98	3.98	2	80	1	80	
47	18391446	4369352	3.13	3.13	2	74	1	74	
50	18391476	4369373	4.12	4.12	2	81	1	81	
51	18391476	4369341	1.79	1.79	2	25	2	25.5	
52	18391477	4369310	1.98	1.98	2	36	1	36	
53	18391476	4369279	2.57	2.57	2	62	1	62	
GVW3	18391443	4369261	65.2	65.2	2	99	1	99	
54	18391477	4369249	1.91	1.91	2	34	1	34	
55	18391475	4369219	3.34	3.34	2	77	1	77	
56	18391475	4369189	1.76	1.76	2	24	1	24	
57	18391475	4369161	2.41	2.41	2	58	2	58.5	
58	18391512	4369164	2.81	2.81	1	68	1	68	68
59	18391507	4369190	1.84	1.84	1	28	2	28.5	28.5
60	18391504	4369223	2.03	2.03	1	38	1	38	38
61	18391506	4369250	2.09	2.09	1	43	1	43	43
62	18391510	4369281	37.31	37.31	1	94	1	94	94
63	18391504	4369311	1.79	1.79	1	25	2	25.5	25.5
64	18391507	4369341	7.11	7.11	1	88	1	88	88
65	18391506	4369371	5.54	5.54	1	86	1	86	86
66	18391508	4369390	6.56	6.56	1	87	1	87	87
68	18391539	4369412	5.05	5.05	1	83	1	83	83
69	18391542	4369398	2.16	2.16	1	46	2	46.5	46.5
70	18391532	4369371	2.26	2.26	1	49	2	49.5	49.5
71	18391535	4369340	3.01	3.01	1	71	1	71	71
72	18391539	4369309	2.75	2.75	1	67	1	67	67
GVW4	18391507	4369293	67.2	67.2	1	101	1	101	101

continued

Bush Valley Landfill Site
26–27 August 2003
Wilsoxon Rank Sum Analysis, Run 1 (concluded)

Grid No.	UTM Coordinates of Grid Node		Methane Conc.	Methane Conc. for Rank	Assign Pop. Set	Prelim Ranking	No. Ties	Final Ranking	Pop. 1 W_{rs}
	Easting	Northing					23		2896.5
73	18391539	2794369	2.26	2.26	1	49	2	49.5	49.5
74	18391535	4369252	23.43	23.43	1	92	1	92	92
75	18391539	4369220	3.49	3.49	1	78	1	78	78
76	18391536	4369200	2.44	2.44	1	60	1	60	60
77	18391564	4369206	3.08	3.08	1	72	1	72	72
78	18391566	4369208	1.86	1.86	1	30	2	30.5	30.5
79	18391560	4369252	2.83	2.83	1	69	1	69	69
80	18391565	4369280	2.29	2.29	1	52	2	52.5	52.5
81	18391566	4369312	4.31	4.31	1	82	1	82	82
82	18391563	4369340	1.51	1.51	1	14	1	14	14
GVW5	18391541	4369343	62.9	62.9	1	98	1	98	98
83	18391564	4369371	2.67	2.67	1	64	1	64	64
84	18391568	4369400	1.84	1.84	1	28	2	28.5	28.5
85	18391566	4369426	1.45	1.45	1	13	1	13	13
86	18391598	4369420	1.67	1.67	1	20	2	20.5	20.5
87	18391595	4369398	1.81	1.81	1	27	1	27	27
88	18391590	4369372	1.88	1.88	1	32	2	32.5	32.5
89	18391586	4369339	2.16	2.16	1	46	2	46.5	46.5
90	18391599	4369310	2.55	2.55	1	61	1	61	61
91	18391597	4369281	8.35	8.35	1	90	1	90	90
92	18391597	4369249	2.4	2.4	1	57	1	57	57
93	18391596	4369221	1.63	1.63	1	17	1	17	17
94	18391593	4369217	2.41	2.41	1	58	2	58.5	58.5
95	18391626	4369225	3.31	3.31	1	75	1	75	75
96	18391622	4369250	2.29	2.29	1	52	2	52.5	52.5
97	18391620	4369278	7.29	7.29	1	89	1	89	89
98	18391627	4369311	5.2	5.2	1	84	1	84	84
99	18391628	4369341	2.13	2.13	1	44	1	44	44
100	18391624	4369370	1.95	1.95	1	35	1	35	35
101	18391627	4369400	2.69	2.69	1	65	1	65	65
104	18391652	4369370	2.88	2.88	1	70	1	70	70
105	18391650	4369339	2.06	2.06	1	39	1	39	39
106	18391656	4369308	2.32	2.32	1	54	1	54	54
107	18391658	4369281	2.15	2.15	1	45	1	45	45
108	18391654	4369252	2.34	2.34	1	55	1	55	55



Bush Valley Screening Sampling Locations for Wilcoxon Run 1 Populations

Bush Valley Landfill Site
26–27 August 2003
Wilcoxon Rank Sum Analysis (Run 2)

Population 1 size (n_1)	13
Population 2 size (n_2)	39
Total population size (n)	52
Sum of Ranks (W_{rs})	498
Large Sample Statistic (Z_{rs})	3.244169
Confidence Interval	5.0%
$Z_{1-\alpha}$	1.645
Accept or Reject H_0?	REJECT

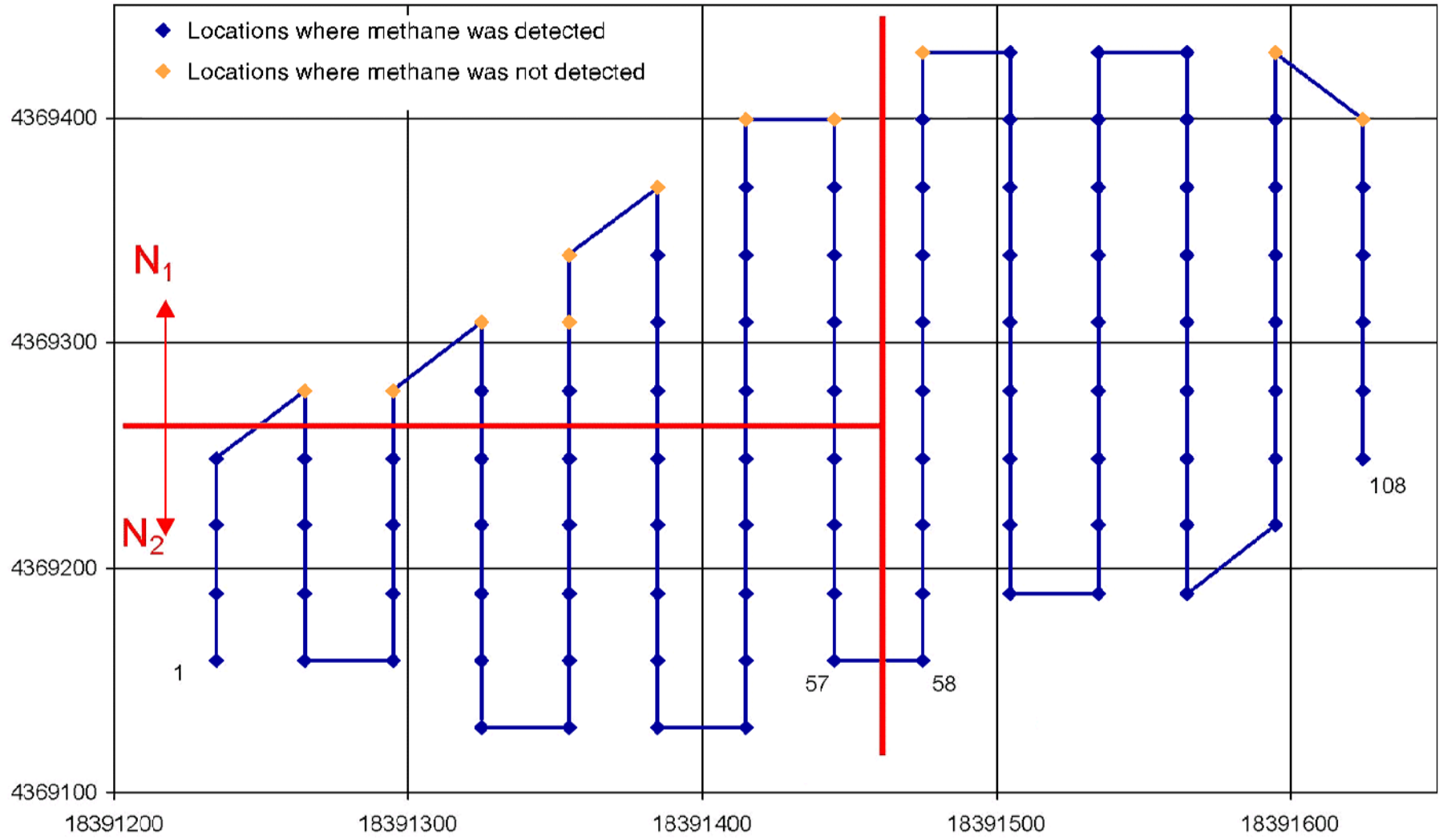
Bush Valley Landfill Site
26–27 August 2003
Wilsoxon Rank Sum Analysis, Run 2

Grid No.	UTM Coordinates of Grid Node		Methane Conc.	Methane Conc. for Rank	Assign Pop. Set	Prelim Ranking	No. Ties 5	Final Ranking	Pop. 1 W_{rs} 498.0
	Easting	Northing							
1	18391264	4369160	1.29	1.29	2	5	2	5.5	
2	18391275	4369193	1.29	1.29	2	5	2	5.5	
3	18391270	4369221	1.05	1.05	2	3	1	3	
4	18391258	4369252	1.58	1.58	2	14	1	14	
6	18391296	4369251	1.22	1.22	2	4	1	4	
7	18391311	4369216	3.33	3.33	2	39	1	39	
8	18391314	4369185	1.4	1.4	2	11	1	11	
9	18391313	4369140	1.32	1.32	2	8	1	8	
10	18391327	4369141	1.37	1.37	2	9	1	9	
11	18391330	4369191	1.31	1.31	2	7	1	7	
12	18391329	4369221	1.65	1.65	2	15	1	15	
GVW1	18391302	4369234	67.7	67.7	2	52	1	52	
13	18391325	4369248	3.11	3.11	2	37	1	37	
16	18391353	4369267	20.2	20.2	1	45	1	45	45
17	18391357	4369250	2.08	2.08	2	27	3	28	
18	18391355	4369220	1.44	1.44	2	12	1	12	
19	18391359	4369189	1.7	1.7	2	18	1	18	
20	18391354	4369160	0.85	0.85	2	1	1	1	
21	18391357	4369141	0.9	0.9	2	2	1	2	
22	18391384	4369133	2.08	2.08	2	27	3	28	
23	18391385	4369154	5.5	5.5	2	44	1	44	
24	18391391	4369189	1.66	1.66	2	16	1	16	
25	18391386	4369214	1.39	1.39	2	10	1	10	
26	18391386	4369252	1.71	1.71	2	19	1	19	
27	18391383	4369280	34	34	1	46	1	46	46

continued

Bush Valley Landfill Site
26–27 August 2003
Wilsoxon Rank Sum Analysis, Run 2 (concluded)

Grid No.	UTM Coordinates of Grid Node		Methane Conc.	Methane Conc. for Rank	Assign Pop. Set	Prelim Ranking	No. Ties 23	Final Ranking	Pop. 1 W_{rs} 2896.5
	Easting	Northing							
31	18391411	4369330	55.25	55.25	1	49	1	49	49
32	18391421	4369310	52.27	52.27	1	48	1	48	48
33	18391419	4369278	2.27	2.27	1	31	1	31	31
34	18391416	4369251	1.54	1.54	2	13	1	13	
GVW2	18391388	4369226	65.8	65.8	2	51	1	51	
35	18391415	4369219	1.67	1.67	2	17	1	17	
36	18391417	4369190	1.86	1.86	2	22	1	22	
37	18391416	4369161	2.38	2.38	2	32	1	32	
38	18391413	4369142	1.88	1.88	2	23	1	23	
39	18391447	4369148	2.22	2.22	2	30	1	30	
40	18391447	4369168	2.08	2.08	2	27	3	28	
41	18391442	4369190	2.71	2.71	2	36	1	36	
42	18391445	4369220	38.36	38.36	2	47	1	47	
43	18391444	4369251	2.01	2.01	2	26	1	26	
44	18391446	4369279	3.85	3.85	1	41	1	41	41
45	18391443	4369312	2.65	2.65	1	35	1	35	35
46	18391442	4369341	3.98	3.98	1	42	1	42	42
47	18391446	4369352	3.13	3.13	1	38	1	38	38
50	18391476	4369373	4.12	4.12	1	43	1	43	43
51	18391476	4369341	1.79	1.79	1	21	1	21	21
52	18391477	4369310	1.98	1.98	1	25	1	25	25
53	18391476	4369279	2.57	2.57	1	34	1	34	34
GVW3	18391443	4369261	65.2	65.2	2	50	1	50	
54	18391477	4369249	1.91	1.91	2	24	1	24	
55	18391475	4369219	3.34	3.34	2	40	1	40	
56	18391475	4369189	1.76	1.76	2	20	1	20	
57	18391475	4369161	2.41	2.41	2	33	1	33	



Bush Valley Screening Sampling Locations for Wilcoxon Run 2 Populations

Bush Valley Landfill Site
26–27 August 2003
Wilcoxon Rank Sum Analysis (Run 3)

Population 1 size (n_1)	16
Population 2 size (n_2)	34
Total population size (n)	50
Sum of Ranks (W_{rs})	392
Large Sample Statistic (Z_{rs})	–0.33279
Confidence Interval	5.0%
$Z_{1-\alpha}$	1.645
Accept or Reject H_0?	ACCEPT

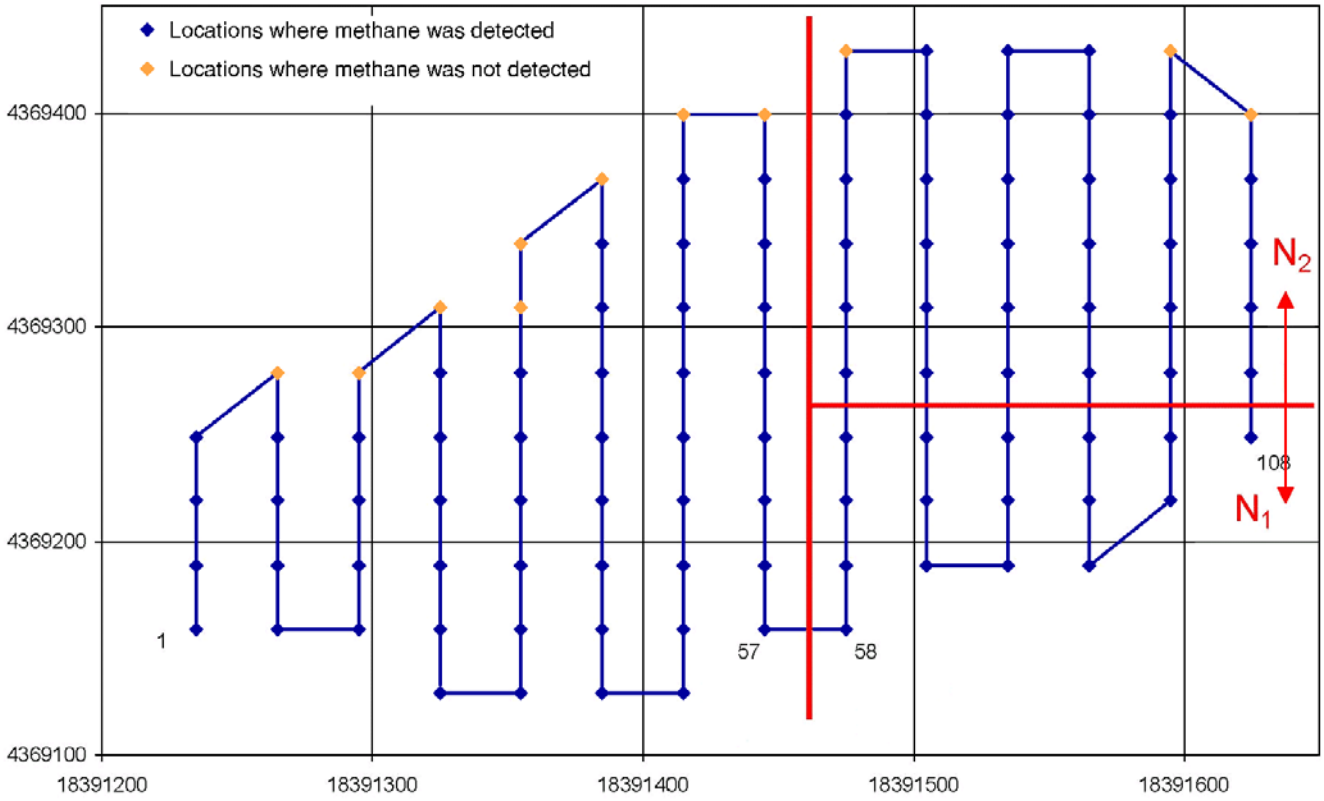
Bush Valley Landfill Site
26–27 August 2003
Wilsoxon Rank Sum Analysis, Run 3

Grid No.	UTM Coordinates of Grid Node		Methane Conc.	Methane Conc. for Rank	Assign Pop. Set	Prelim Ranking	No. Ties 8	Final Ranking	Pop. 1 W_{rs} 392.0
	Easting	Northing							
58	18391512	4369164	2.81	2.81	1	332	1	32	32
59	18391507	4369190	1.84	1.84	1	7	2	7.5	7.5
60	18391504	4369223	2.03	2.03	1	12	1	12	12
61	18391506	4369250	2.09	2.09	1	14	1	14	14
62	18391510	4369281	37.31	37.31	2	48	1	48	
63	18391504	4369311	1.79	1.79	2	5	1	5	
64	18391507	4369341	7.11	7.11	2	44	1	44	
65	18391506	4369371	5.54	5.54	2	42	1	42	
66	18391508	4369390	6.56	6.56	2	43	1	43	
68	18391539	4369412	5.05	5.05	2	40	1	40	
69	18391542	4369398	2.16	2.16	2	17	2	17.5	
70	18391532	4369371	2.26	2.26	2	19	2	19.5	
71	18391535	4369340	3.01	3.01	2	35	1	35	
72	18391539	4369309	2.75	2.75	2	31	1	31	
GVW4	18391507	4369293	67.2	67.2	2	50	1	50	
73	18391539	2794369	2.26	2.26	2	19	2	19.5	
74	18391535	4369252	23.43	23.43	1	47	1	47	47
75	18391539	4369220	3.49	3.49	1	38	1	38	38
76	18391536	4369200	2.44	2.44	1	27	1	27	27
77	18391564	4369206	3.08	3.08	1	36	1	36	36
78	18391566	4369208	1.86	1.86	1	9	1	9	9
79	18391560	4369252	2.83	2.83	1	33	1	33	33
80	18391565	4369280	2.29	2.29	2	21	2	21.5	
81	18391566	4369312	4.31	4.31	2	39	1	39	
82	18391563	4369340	1.51	1.51	2	2	1	2	

continued

Bush Valley Landfill Site
26–27 August 2003
Wilsoxon Rank Sum Analysis, Run 3 (concluded)

Grid No.	UTM Coordinates of Grid Node		Methane Conc.	Methane Conc. for Rank	Assign Pop. Set	Prelim Ranking	No. Ties 8	Final Ranking	Pop. 1 W_{rs} 392.0
	Easting	Northing							
GVW5	18391541	4369343	62.9	62.9	2	49	1	49	
83	18391564	4369371	2.67	2.67	2	29	1	29	
84	18391568	4369400	1.84	1.84	2	7	2	7.5	
85	18391566	4369426	1.45	1.45	2	1	1	1	
86	18391598	4369420	1.67	1.67	2	4	1	4	
87	18391595	4369398	1.81	1.81	2	6	1	6	
88	18391590	4369372	1.88	1.88	2	10	1	10	
89	18391586	4369339	2.16	2.16	2	17	2	17.5	
90	18391599	4369310	2.55	2.55	2	28	1	28	
91	18391597	4369281	8.35	8.35	2	46	1	46	
92	18391597	4369249	2.4	2.4	1	25	1	25	25
93	18391596	4369221	1.63	1.63	1	3	1	3	3
94	18391593	4369217	2.41	2.41	1	26	1	26	26
95	18391626	4369225	3.31	3.31	1	37	1	37	37
96	18391622	4369250	2.29	2.29	1	21	2	21.5	21.5
97	18391620	4369278	7.29	7.29	2	45	1	45	
98	18391627	4369311	5.2	5.2	2	41	1	41	
99	18391628	4369341	2.13	2.13	2	15	1	15	
100	18391624	4369370	1.95	1.95	2	11	1	11	
101	18391627	4369400	2.69	2.69	2	30	1	30	
104	18391652	4369370	2.88	2.88	2	34	1	34	
105	18391650	4369339	2.06	2.06	2	13	1	13	
106	18391656	4369308	2.32	2.32	2	23	1	23	
107	18391658	4369281	2.15	2.15		16	1	16	
108	18391654	4369252	2.34	2.34	1	24	1	24	24



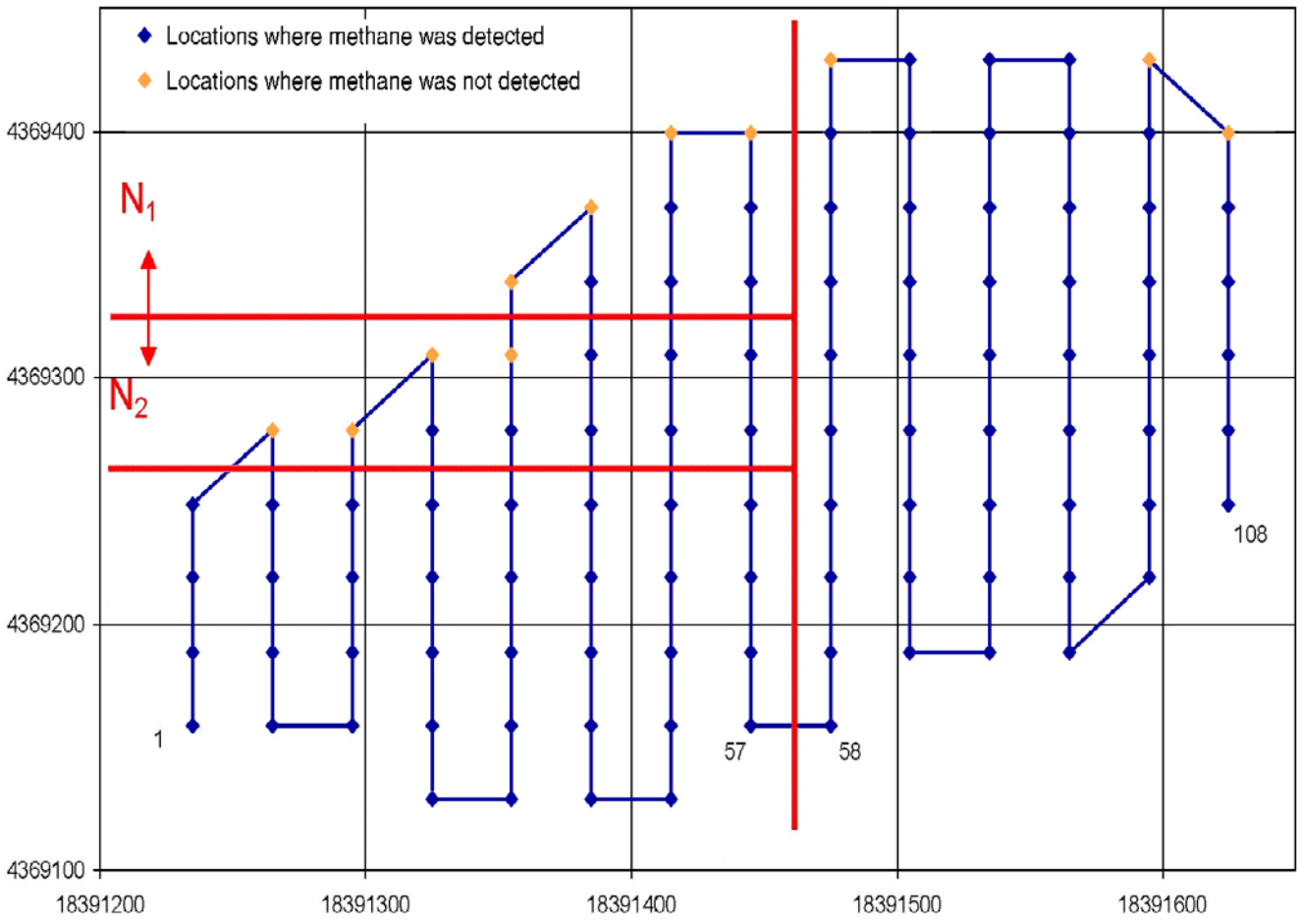
Bush Valley Screening Sampling Locations for Wilcoxon Run 3 Populations

Bush Valley Landfill Site
26–27 August 2003
Wilcoxon Rank Sum Analysis (Run 4)

Population 1 size (n_1)	5
Population 2 size (n_2)	8
Total population size (n)	13
Sum of Ranks (W_{rs})	37
Large Sample Statistic (Z_{rs})	Refer to Table X
Confidence Interval	5.0%
$Z_{1-\alpha}$	Refer to Table X
Accept or Reject H_0?	ACCEPT

Bush Valley Landfill Site
26–27 August 2003
Wilsoxon Rank Sum Analysis, Run 4

Grid No.	UTM Coordinates of Grid Node		Methane Conc.	Methane Conc. for Rank	Assign Pop. Set	Prelim Ranking	No. Ties 0	Final Ranking	Pop. 1 W_{rs} 37.0
	Easting	Northing							
16	18391353	4369267	20.2	20.2	2	10	1	10	
27	18391383	4369280	34	34	2	11	1	11	
31	18391411	4369330	55.25	55.25	1	13	1	13	13
32	18391421	4369310	52.27	52.27	2	12	1	12	
33	18391419	4369278	2.27	2.27	2	3	1	3	
44	18391446	4369279	3.85	3.85	2	7	1	7	
45	18391443	4369312	2.65	2.65	2	5	1	5	
46	18391442	4369341	3.98	3.98	1	8	1	8	8
47	18391446	4369352	3.13	3.13	1	6	1	6	6
50	18391476	4369373	4.12	4.12	1	9	1	9	9
51	18391476	4369341	1.79	1.79	1	1	1	1	1
52	18391477	4369310	1.98	1.98	2	2	1	2	
53	18391476	4369279	2.57	2.57	2	4	1	4	



Bush Valley Screening Sampling Locations for Wilcoxon Run 4 Populations

Bush Valley Landfill Site
26–27 August 2003
Wilcoxon Rank Sum Analysis (Run 5)

Population 1 size (n_1)	16
Population 2 size (n_2)	23
Total population size (n)	39
Sum of Ranks (W_{rs})	429
Large Sample Statistic (Z_{rs})	3.112957
Confidence Interval	5.0%
$Z_{1-\alpha}$	1.645
Accept or Reject H_0?	REJECT

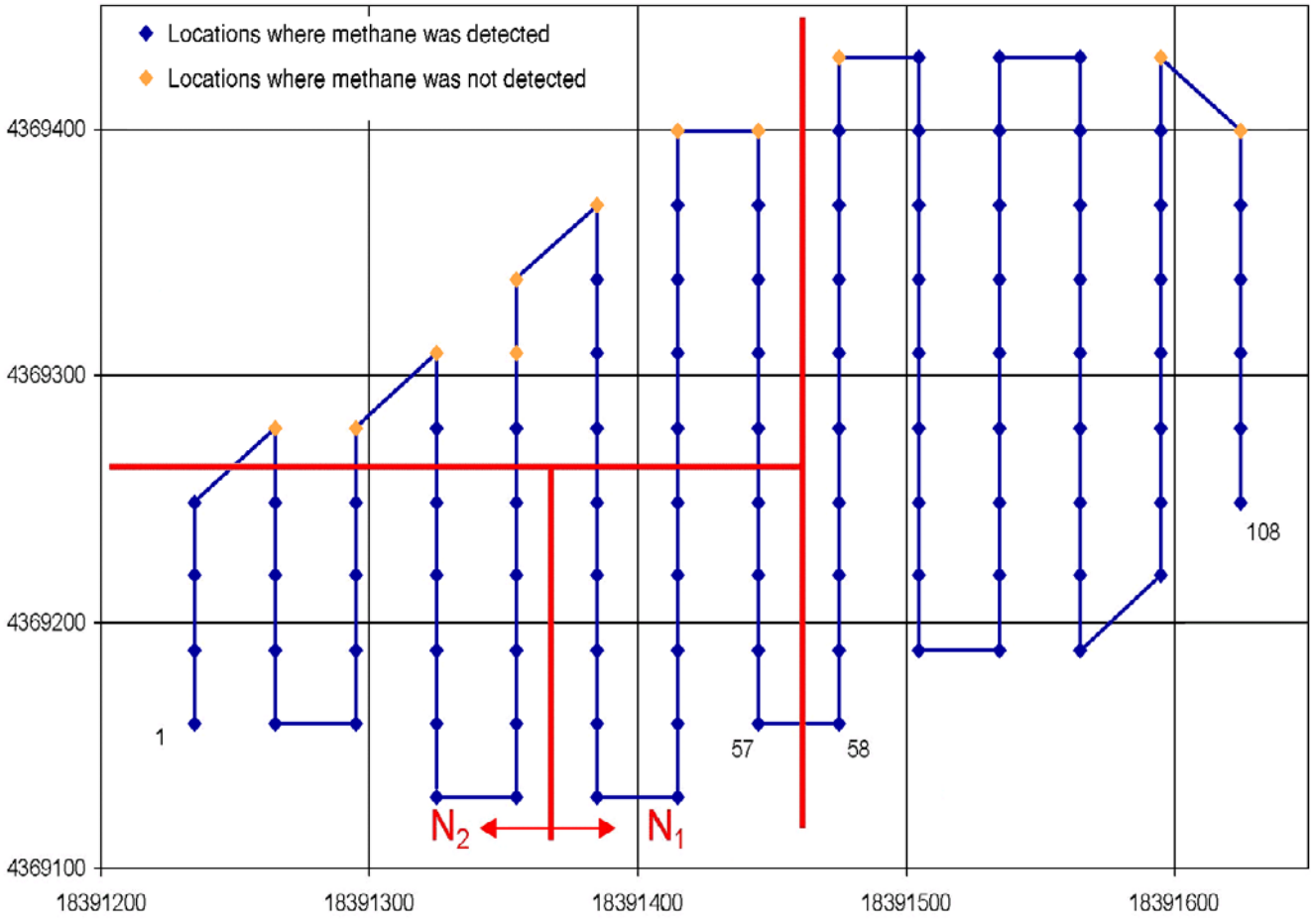
Bush Valley Landfill Site
26–27 August 2003
Wilsoxon Rank Sum Analysis, Run 5

Grid No.	UTM Coordinates of Grid Node		Methane Conc.	Methane Conc. for Rank	Assign Pop. Set	Prelim Ranking	No. Ties 5	Final Ranking	Pop. 1 W_{rs} 429.0
	Easting	Northing							
1	18391264	4369160	1.29	1.29	2	5	2	5.5	
2	18391275	4369193	1.29	1.29	2	5	2	5.5	
3	18391270	4369221	1.05	1.05	2	3	1	3	
4	18391258	4369252	1.58	1.58	2	14	1	14	
6	18391296	4369251	1.22	1.22	2	4	1	4	
7	18391311	4369216	3.33	3.33	2	33	1	33	
8	18391314	4369185	1.4	1.4	2	11	1	11	
9	18391313	4369140	1.32	1.32	2	8	1	8	
10	18391327	4369141	1.37	1.37	2	9	1	9	
11	18391330	4369191	1.31	1.31	2	7	1	7	
12	18391329	4369221	1.65	1.65	2	15	1	15	
GVW1	18391302	4369234	67.7	67.7	2	39	1	39	
13	18391325	4369248	3.11	3.11	2	32	1	32	
17	18391357	4369250	2.08	2.08	2	25	3	26	
18	18391355	4369220	1.44	1.44	2	12	1	12	
19	18391359	4369189	1.7	1.7	2	18	1	18	
20	18391354	4369160	0.85	0.85	2	1	1	1	
21	18391357	4369141	0.9	0.9	2	2	1	2	
22	18391384	4369133	2.08	2.08	2	25	3	26	
23	18391385	4369154	5.5	5.5	2	35	1	35	
24	18391391	4369189	1.66	1.66	2	16	1	16	
25	18391386	4369214	1.39	1.39	2	10	1	10	
26	18391386	4369252	1.71	1.71	2	19	1	19	
34	18391416	4369251	1.54	1.54	1	13	1	13	13
GVW2	18391388	4369226	65.8	65.8	1	38	1	38	38

continued

Bush Valley Landfill Site
26–27 August 2003
Wilsoxon Rank Sum Analysis, Run 5 (concluded)

Grid No.	UTM Coordinates of Grid Node		Methane Conc.	Methane Conc. for Rank	Assign Pop. Set	Prelim Ranking	No. Ties 5	Final Ranking	Pop. 1 W_{rs} 429.0
	Easting	Northing							
35	18391415	4369219	1.67	1.67	1	17	1	17	17
36	18391417	4369190	1.86	1.86	1	21	1	21	21
37	18391416	4369161	2.38	2.38	1	29	1	29	29
38	18391413	4369142	1.88	1.88	1	22	1	22	22
39	18391447	4369148	2.22	2.22	1	28	1	28	28
40	18391447	4369168	2.08	2.08	1	25	3	26	26
41	18391442	4369190	2.71	2.71	1	31	1	31	31
42	18391445	4369220	38.36	38.36	1	36	1	36	36
43	18391444	4369251	2.01	2.01	1	24	1	24	24
GVW3	18391443	4369261	65.2	65.2	1	37	1	37	37
54	18391477	4369249	1.91	1.91	1	23	1	23	23
55	18391475	4369219	3.34	3.34	1	34	1	34	34
56	18391475	4369189	1.76	1.76	1	20	1	20	20
57	18391475	4369161	2.41	2.41	1	30	1	30	30



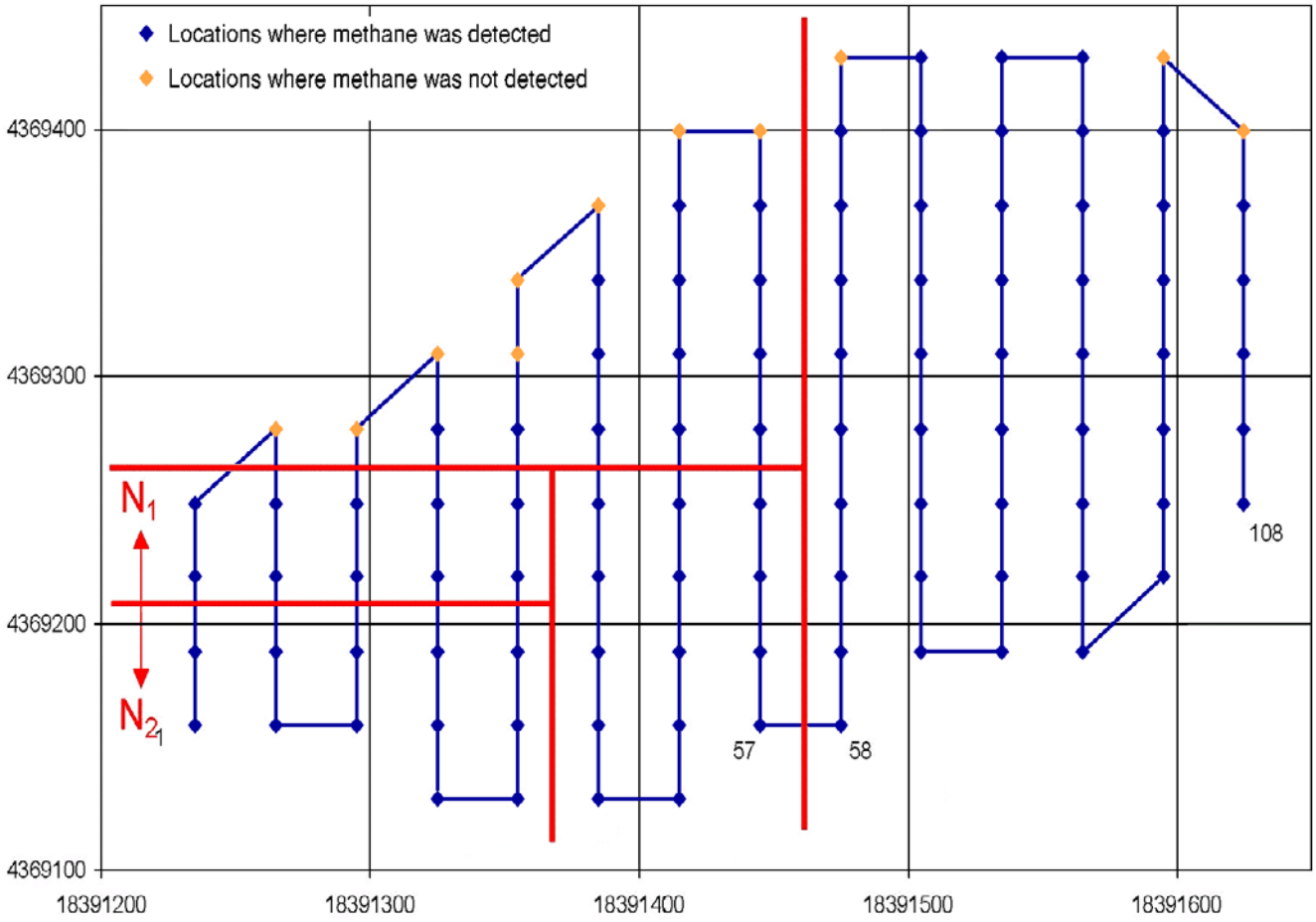
Bush Valley Screening Sampling Locations for Wilcoxon Run 5 Populations

Bush Valley Landfill Site
26–27 August 2003
Wilcoxon Rank Sum Analysis (Run 6)

Population 1 size (n_1)	11
Population 2 size (n_2)	12
Total population size (n)	23
Sum of Ranks (W_{rs})	155.5
Large Sample Statistic (Z_{rs})	1.44704
Confidence Interval	5.0%
$Z_{1-\alpha}$	1.714
Accept or Reject H_0?	ACCEPT

Bush Valley Landfill Site
26–27 August 2003
Wilsoxon Rank Sum Analysis, Run 6

Grid No.	UTM Coordinates of Grid Node		Methane Conc.	Methane Conc. for Rank	Assign Pop. Set	Prelim Ranking	No. Ties 4	Final Ranking	Pop. 1 W_{rs} 155.5
	Easting	Northing							
1	18391264	4369160	1.29	1.29	2	5	2	5.5	
2	18391275	4369193	1.29	1.29	2	5	2	5.5	
3	18391270	4369221	1.05	1.05	1	3	1	3	3
4	18391258	4369252	1.58	1.58	1	13	1	13	13
6	18391296	4369251	1.22	1.22	1	4	1	4	4
7	18391311	4369216	3.33	3.33	1	21	1	21	21
8	18391314	4369185	1.4	1.4	2	11	1	11	
9	18391313	4369140	1.32	1.32	2	8	1	8	
10	18391327	4369141	1.37	1.37	2	9	1	9	
11	18391330	4369191	1.31	1.31	2	7	1	7	
12	18391329	4369221	1.65	1.65	1	14	1	14	14
GVW1	18391302	4369234	67.7	67.7	1	23	1	23	23
13	18391325	4369248	3.11	3.11	1	20	1	20	20
17	18391357	4369250	2.08	2.08	1	18	2	18.5	18.5
18	18391355	4369220	1.44	1.44	1	12	1	12	12
19	18391359	4369189	1.7	1.7	2	16	1	16	
20	18391354	4369160	0.85	0.85	2	1	1	1	
21	18391357	4369141	0.9	0.9	2	2	1	2	
22	18391384	4369133	2.08	2.08	2	18	2	18.5	
23	18391385	4369154	5.5	5.5	2	22	1	22	
24	18391391	4369189	1.66	1.66	2	15	1	15	
25	18391386	4369214	1.39	1.39	1	10	1	10	10
26	18391386	4369252	1.71	1.71	1	17	1	17	17



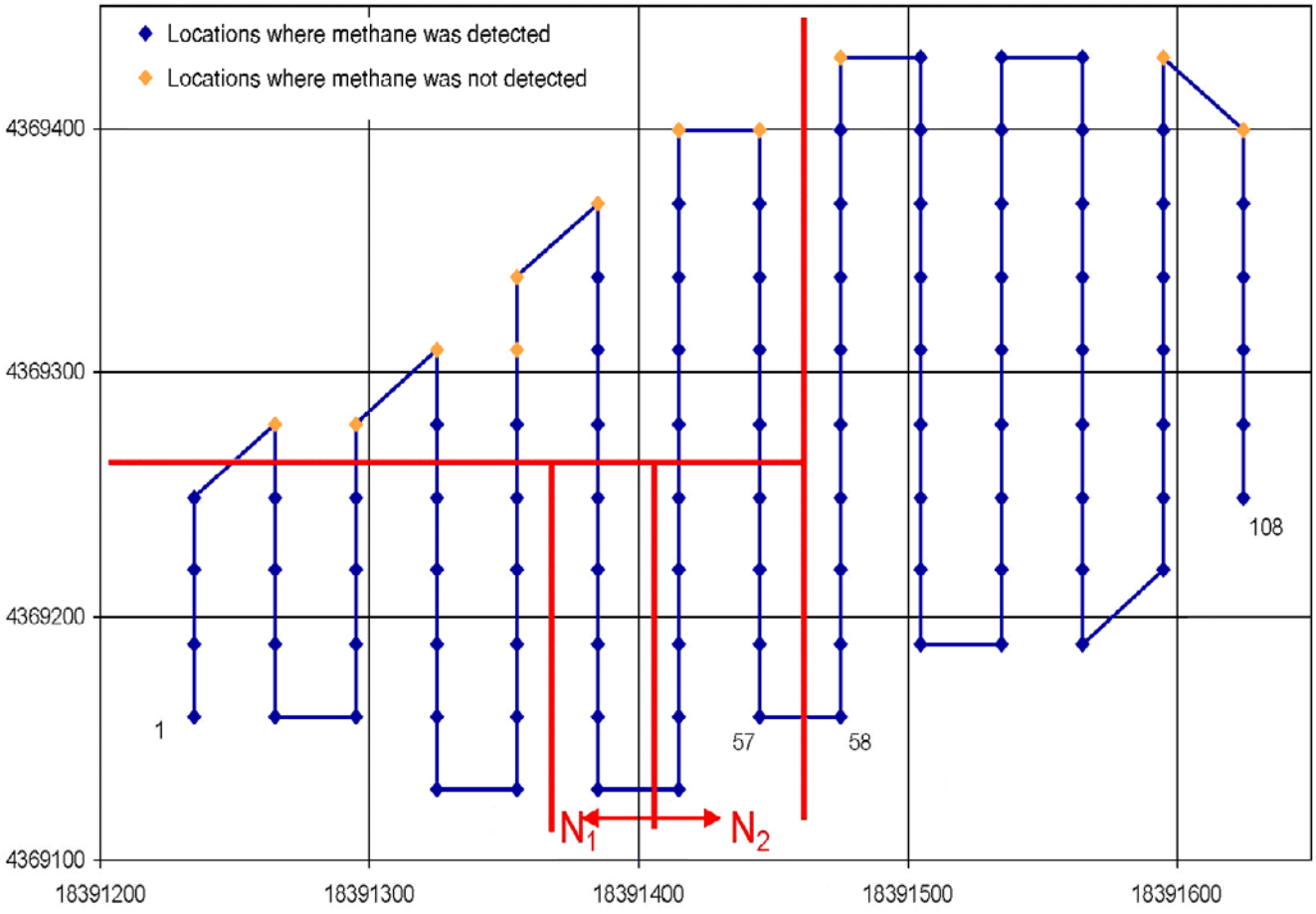
Bush Valley Screening Sampling Locations for Wilcoxon Run 6 Populations

Bush Valley Landfill Site
26–27 August 2003
Wilcoxon Rank Sum Analysis (Run 7)

Population 1 size (n_1)	6
Population 2 size (n_2)	10
Total population size (n)	16
Sum of Ranks (W_{rs})	38
Large Sample Statistic (Z_{rs})	Refer to Table X
Confidence Interval	5.0%
$Z_{1-\alpha}$	Refer to Table X
Accept or Reject H_0?	ACCEPT

Bush Valley Landfill Site
26–27 August 2003
Wilsoxon Rank Sum Analysis, Run 7

Grid No.	UTM Coordinates of Grid Node		Methane Conc.	Methane Conc. for Rank	Assign Pop. Set	Prelim Ranking	No. Ties 0	Final Ranking	Pop. 1 W_{rs} 38.0
	Easting	Northing							
34	18391416	4369251	1.54	1.54	1	1	1	1	1
GVW2	18391388	4369226	65.8	65.8	1	16	1	1	16
35	18391415	4369219	1.67	1.67	1	2	1	2	2
36	18391417	4369190	1.86	1.86	1	4	1	4	4
37	18391416	4369161	2.38	2.38	1	10	1	10	10
38	18391413	4369142	1.88	1.88	1	5	1	5	5
39	18391447	4369148	2.22	2.22	2	9	1	9	
40	18391447	4369168	2.08	2.08	2	8	1	8	
41	18391442	4369190	2.71	2.71	2	12	1	12	
42	18391445	4369220	38.36	38.36	2	14	1	14	
43	18391444	4369251	2.01	2.01	2	7	1	7	
GVW3	18391443	4369261	65.2	65.2	2	15	1	15	
54	18391477	4369249	1.91	1.91	2	6	1	6	
55	18391475	4369219	3.34	3.34	2	13	1	13	
56	18391475	4369189	1.76	1.76	2	3	1	3	
57	18391475	4369161	2.41	2.41	2	11	1	11	



Bush Valley Screening Sampling Locations for Wilcoxon Run 7 Populations

Appendix C
Laboratory Results

Table 1. Summary of Volatile Organic Compound Laboratory Analysis Results.

Bush Valley Landfill, Harford County, MD
November 2003

Sample Number	15731	15732	15733	15734	15735	15736	15737	15738
Sample Location	GVW1	GVW1 Dup	GVW2	GVW3	GVW4	GVW5	GMP7	TMP7
Substance	(ppbv)	(ppbv)	(ppbv)	(ppbv)	(ppbv)	(ppbv)	(ppbv)	(ppbv)
1,1-Dichloroethane	U[a]	U	12	U	U	68	70	570
1,1-Dichloroethene	U	U	U	U	U	U	18	39
1,2-Dichlorobenzene	73	72	U	U	U	U	U	U
1,2-Dichloroethane	94	96	U	U	U	68	3.7	220
cis-1,2-Dichloroethene	61	62	36	U	41	120	1000	440
trans-1,2-Dichloroethene	U	U	U	U	U	U	27	170
1,2-Dichloropropane	U	U	U	U	U	U	U	U
1,4-Dichlorobenzene	180	170	25	290	320	140	U	90
1,1,1-Trichloroethane	U	U	U	U	U	U	U	30
1,2,4-Trimethylbenzene	640	620	1000	1100	920	710	U	U
1,3,5-Trimethylbenzene	270	270	300	470	400	290	U	U
2-Butanone (Methyl Ethyl Ketone)	1200	1200	460	210	570	870	720	190
2-Propanol	280	220	U	U	U	U	U	29
4-Ethyltoluene	590	580	1000	1000	920	730	U	U
Acetone	750	680	49	U	U	230	71	U
Benzene	410	400	420	310	720	670	47	190
Carbon tetrachloride	U	U	U	U	U	U	U	U
Chlorobenzene	410	410	170	210	190	250	U	310
Chloroethane	120	110	290	160	160	97	95	260
Chloroform	U	U	U	U	U	U	U	U
Cyclohexane	1100	1100	470	430	720	980	360	950
Ethylbenzene	4400	4400	1500	6500	7500	4200	U	U
Freon 11	74	74	U	U	120	U	U	100
Freon 12	400	410	110	120	660	430	1000	1500
Freon 113	U	U	80	U	87	44	U	U
Freon 114	270	260	60	140	130	95	180	600
Heptane	4200	4200	1100	2300	2300	2900	U	U
Hexane	9400	9400	1400	1100	1600	1900	460	2600
Methylene chloride	59	53	U	U	U	76	8.8	490
Styrene	140	130	U	U	U	240	U	U
Tetrachloroethene	57	56	U	U	U	92	84	1200
Tetrahydrofuran	930	920	640	720	1500	1500	370	U
Toluene	3400	3300	78	550	4000	13,000	U	9.2
Trichloroethene	69	62	U	U	U	78	350	1400
Vinyl chloride	120	110	47	220	550	3200	320	610
m,p-Xylene	10,000	10,000	1600	8000	5900	9600	U	22
o-Xylene	1300	1300	390	2400	1700	2900	U	40

[a] U = not detected

continued

Table 1. Summary of Volatile Organic Compound Laboratory Analysis Results (continued).

Bush Valley Landfill, Harford County, MD
November 2003

Sample Number	15739	15740	15741	15742	15743	15744	15745	15746
Sample Location	TMP1	TMP2	TMP3	TMP4	TMP5	TMP5 Dup.	TMP6	TMP8
Substance	(ppbv)	(ppbv)	(ppbv)	(ppbv)	(ppbv)	(ppbv)	(ppbv)	(ppbv)
1,1-Dichloroethane	470	24	7.5	360	110	150	290	530
1,1-Dichloroethene	32	2.4	U[a]	44	12	15	28	35
1,2-Dichlorobenzene	U	21	1.3	7.8	U	U	U	U
1,2-Dichloroethane	270	5.2	7.6	100	25	U	U	280
cis-1,2-Dichloroethene	300	20	59	720	260	350	750	310
trans-1,2-Dichloroethene	150	9.3	5.4	130	48	61	120	150
1,2-Dichloropropane	U	2.3	3.3	73	32	42	71	45
1,4-Dichlorobenzene	25	16	12	90	35	68	58	27
1,1,1-Trichloroethane	U	7.5	U	51	U	U	U	U
1,2,4-Trimethylbenzene	U	2.2	1.8	12	U	U	U	22
1,3,5-Trimethylbenzene	U	1.1	1.6	15	U	U	U	11
2-Butanone (Methyl Ethyl Ketone)	U	U	U	90	U	16	470	950
2-Propanol	U	U	U	U	U	U	U	U
4-Ethyltoluene	U	U	U	U	U	U	U	U
Acetone	U	63	51	U	200	180	81	78
Benzene	220	23	38	600	220	310	450	400
Carbon tetrachloride	U	U	U	U	U	U	U	U
Chlorobenzene	150	16	12	230	80	110	180	130
Chloroethane	180	14	10	490	140	110	U	150
Chloroform	U	U	U	U	U	U	U	U
Cyclohexane	590	69	33	1700	530	730	1500	430
Ethylbenzene	19	1.5	5.6	18	U	U	21	31
Freon 11	79	5.4	U	130	19	9.4	34	34
Freon 12	1600	76	43	2200	480	870	1600	1700
Freon 113	U	U	U	U	U	U	U	U
Freon 114	490	12	4.9	680	270	400	940	580
Heptane	U	82	78	3800[b]	260	350	1900	U
Hexane	1500	130	55	3700[b]	1000	1300	2500	870
Methylene chloride	1300	23	5.0	180	48	63	98	2200
Styrene	U	U	U	U	U	U	U	U
Tetrachloroethene	1100	42	24	720	310	440	920	1300
Tetrahydrofuran	U	U	U	U	U	U	U	U
Toluene	31	2.5	15	79	10	15	53	120
Trichloroethene	1000	58	29	720	260	380	750	1000
Vinyl chloride	530	18	22	480	320	300	660	430
m,p-Xylene	83	9.1	18	110	U	5.0	93	300
o-Xylene	43	4.8	4.7	98	27	37	15	130

[a] U = not detected
[b] Estimated because the concentration exceeded the calibration range

continued

Table 1. Summary of Volatile Organic Compound Laboratory Analysis Results (continued).

Bush Valley Landfill, Harford County, MD
November 2003

Sample Number	15747	15748	15749	15750	15751	15752	15753	15754
Sample Location	GMP8	GMP9	GVW1 Ambient	GVW2 Ambient	GVW3 Ambient	GVW4 Ambient	GVW4 Ambient Dup.	GVW5 Ambient
Substance	(ppbv)	(ppbv)	(ppbv)	(ppbv)	(ppbv)	(ppbv)	(ppbv)	(ppbv)
1,1-Dichloroethane	33	U[a]	U	U	U	U	U	U
1,1-Dichloroethene	U	U	U	U	U	U	U	U
1,2-Dichlorobenzene	U	U	U	U	U	U	U	U
1,2-Dichloroethane	49	U	U	U	U	U	U	U
cis-1,2-Dichloroethene	380	26	U	U	U	U	U	U
trans-1,2-Dichloroethene	U	U	U	U	U	U	U	U
1,2-Dichloropropane	U	U	U	U	U	U	U	U
1,4-Dichlorobenzene	17	U	U	U	U	U	U	U
1,1,1-Trichloroethane	U	U	U	U	U	U	U	U
1,2,4-Trimethylbenzene	U	U	U	U	U	U	U	U
1,3,5-Trimethylbenzene	U	U	U	U	U	U	U	11
2-Butanone (Methyl Ethyl Ketone)	U	5600	U	19	U	4.3	U	U
2-Propanol	U	U	U	U	U	U	U	U
4-Ethyltoluene	U	U	U	U	U	U	U	U
Acetone	U	110	150	160	170	100	48	45
Benzene	68	U	U	U	U	U	U	U
Carbon tetrachloride	U	U	U	U	U	U	U	U
Chlorobenzene	U	U	U	U	U	U	U	U
Chloroethane	190	26	10	U	U	U	U	U
Chloroform	U	U	U	U	U	U	U	U
Cyclohexane	210	U	U	U	U	U	U	U
Ethylbenzene	U	U	U	U	U	U	U	U
Freon 11	U	U	U	U	U	U	U	U
Freon 12	3400	250	U	U	U	U	U	U
Freon 113	U	U	U	U	U	U	U	U
Freon 114	520	340	U	U	U	U	U	U
Heptane	130	U	U	U	U	U	U	U
Hexane	990	U	U	U	U	U	U	U
Methylene chloride	U	U	3.1	2.2	1.6	1.1	1.2	U
Styrene	U	U	U	U	U	U	U	U
Tetrachloroethene	U	U	U	U	U	U	U	U
Tetrahydrofuran	1100	4300	U	13	U	U	U	U
Toluene	23	U	U	5.6	U	U	U	U
Trichloroethene	100	30	U	U	U	U	U	U
Vinyl chloride	1100	72	U	U	U	U	U	U
m,p-Xylene	U	U	U	U	U	U	U	U
o-Xylene	U	U	U	U	U	U	U	U

[a] U = not detected

continued

Table 1. Summary of Volatile Organic Compound Laboratory Analysis Results (concluded).

Bush Valley Landfill, Harford County, MD
November 2003

Sample Number	15755	15756	15757	15758	15759	15760	15761	15762
Sample Location	GMP6	GMP6 Dup.	GMP5	GMP4	GMP3	GMP2	GMP1	Trip Blank
Substance	(ppbv)	(ppbv)	(ppbv)	(ppbv)	(ppbv)	(ppbv)	(ppbv)	(ppbv)
1,1-Dichloroethane	170	170	250	310	270	860	8.4	U[a]
1,1-Dichloroethene	16	15	23	U	12	27	U	U
1,2-Dichlorobenzene	U	U	U	U	U	U	U	U
1,2-Dichloroethane	U	U	U	U	U	U	U	U
cis-1,2-Dichloroethene	170	170	520	1200	730	2200	U	U
trans-1,2-Dichloroethene	39	37	80	150	140	180	U	U
1,2-Dichloropropane	12	11	44	150	110	450	14	U
1,4-Dichlorobenzene	6.3	5.8	96	64	170	200	58	U
1,1,1-Trichloroethane	U	U	78	U	U	93	U	U
1,2,4-Trimethylbenzene	U	U	U	52	U	50	U	U
1,3,5-Trimethylbenzene	U	U	U	57	U	48	U	11
2-Butanone (Methyl Ethyl Ketone)	1500	1400	130	530	U	890	580	U
2-Propanol	U	U	U	U	U	U	U	U
4-Ethyltoluene	U	U	U	U	U	U	U	U
Acetone	620	170	U	U	U	U	U	9.4
Benzene	19	21	410	940	950	2500	57	U
Carbon tetrachloride	U	U	U	U	U	U	U	U
Chlorobenzene	U	U	120	180	310	U	51	U
Chloroethane	U	44	230	280	600	430	18	U
Chloroform	U	U	U	U	U	U	U	U
Cyclohexane	210	210	820	2900	2100	2100	130	U
Ethylbenzene	U	U	21	560	U	67	U	U
Freon 11	U	U	100	U	U	230	U	U
Freon 12	750	770	2800	2100	1400	2000	120	U
Freon 113	U	U	U	U	U	U	U	U
Freon 114	240	250	280	580	1100	860	54	U
Heptane	U	U	1800	6700	2600	5100	62	U
Hexane	470	450	1700	3300	3800	3300	160	U
Methylene chloride	220	210	78	U	130	200	U	U
Styrene	U	U	U	U	U	U	3.9	U
Tetrachloroethene	740	710	460	800	680	310	U	U
Tetrahydrofuran	500	480	U	U	130	U	150	U
Toluene	U	U	30	130	U	180	U	U
Trichloroethene	420	420	520	840	670	270	U	U
Vinyl chloride	150	140	350	930	880	1400	5.6	U
m,p-Xylene	U	U	29	480	U	450	U	U
o-Xylene	U	U	33	66	U	180	U	U

[a] U = not detected

Table 2. Summary of Fixed Gas and NMOC Laboratory Analysis Results.

Bush Valley Landfill, Harford County, MD
November 2003

Sample Number	15731	15732	15733	15734	15735	15736	15737	15738
Sample Location	GVW1	GVW1 Dup.	GVW2	GVW3	GVW4	GVW5	GMP7	TMP7
Substance								
Oxygen (%)	0.42	0.30	0.46	0.24	0.30	0.37	1.0	0.24
Nitrogen (%)	1.2	0.88	1.5	0.70	0.88	1.0	34	1.7
Methane (%)	63	64	64	62	64	62	36	64
Carbon Dioxide (%)	36	37	36	36	37	40	27	37
NMOC[a] (ppmC)[b]	2100	2200	1500	2000	2200	2200	860	1600

Sample Number	15739	15740	15741	15742	15743	15744	15745	15746
Sample Location	TMP1	TMP2	TMP3	TMP4	TMP5	TMP5 Dup.	TMP6	TMP8
Substance								
Oxygen (%)	3.6	22	22	0.27	14	13	0.19	0.47
Nitrogen (%)	12	72	74	1.2	44	41	0.72	7.9
Methane (%)	54	4.2	2.4	64	27	29	64	60
Carbon Dioxide (%)	31	2.2	1.5	39	16	17	36	33
NMOC (ppmC)	1400	U[c]	U	1800	710	780	1700	1300

Sample Number	15747	15748	15749	15750	15751	15752	15753	15754
Sample Location	GMP8	GMP9	GVW1 Ambient	GVW2 Ambient	GVW3 Ambient	GVW4 Ambient	GVW4 Dup. Ambient	GVW5 Ambient
Substance								
Oxygen (%)	0.21	1.5	23	23	23	23	23	23
Nitrogen (%)	1.7	49	75	77	77	76	75	76
Methane (%)	68	34	U	U	U	U	U	U
Carbon Dioxide (%)	32	15	U	U	U	U	U	U
NMOC (ppmC)	1400	690	U	U	U	U	U	U

Sample Number	15755	15756	15757	15758	15759	15760	15761	15762
Sample Location	GMP6	GMP6 Dup.	GMP5	GMP4	GMP3	GMP2	GMP1	Trip Blank
Substance								
Oxygen (%)	12	12	11	1.2	0.25	U	9.6	U
Nitrogen (%)	50	50	37	8.4	0.80	0.55	53	0.25
Methane (%)	22	22	33	57	63	62	17	U
Carbon Dioxide (%)	14	15	21	38	38	38	19	U
NMOC (ppmC)	580	580	1000	1900	2000	1900	600	U

[a] NMOC = nonmethane organic compounds (reported as methane)
[b] ppmvC = parts per million by volume carbon
[c] U = not detected

Appendix D
LandGEM Model Runs

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Table D-1. Emisson Rate of Methane from Parcel 1 for Years 1975 to 2203.

Source: H:\3000\030177~2.000\030177~1.003\BUSHVA~1\STRATA1.PRM

Model Parameters

Lo : 170.00 m^3 / Mg
k : 0.0500 1/yr
NMOC : 2200.00 ppmv
Methane : 64.0000 % volume
Carbon Dioxide : 36.0000 % volume

Landfill Parameters

Landfill type : Co-Disposal
Year Opened : 1974 Current Year : 2004 Closure Year: 2004
Capacity : 303128 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 0.00 Mg/year

Model Results

Year	Refuse In Place (Mg)	Methane Emission Rate (Mg/yr)	Methane Emission Rate (Cubic m/yr)
1975	3.031E+04	1.719E+02	2.577E+05
1976	6.063E+04	3.354E+02	5.028E+05
1977	9.094E+04	4.909E+02	7.359E+05
1978	1.213E+05	6.389E+02	9.577E+05
1979	1.516E+05	7.796E+02	1.169E+06
1980	1.819E+05	9.135E+02	1.369E+06
1981	2.122E+05	1.041E+03	1.560E+06
1982	2.425E+05	1.162E+03	1.742E+06
1983	2.728E+05	1.277E+03	1.914E+06
1984	3.031E+05	1.387E+03	2.079E+06
1985	3.031E+05	1.319E+03	1.977E+06
1986	3.031E+05	1.255E+03	1.881E+06
1987	3.031E+05	1.194E+03	1.789E+06
1988	3.031E+05	1.135E+03	1.702E+06
1989	3.031E+05	1.080E+03	1.619E+06
1990	3.031E+05	1.027E+03	1.540E+06
1991	3.031E+05	9.773E+02	1.465E+06
1992	3.031E+05	9.296E+02	1.393E+06
1993	3.031E+05	8.843E+02	1.325E+06
1994	3.031E+05	8.412E+02	1.261E+06
1995	3.031E+05	8.001E+02	1.199E+06
1996	3.031E+05	7.611E+02	1.141E+06
1997	3.031E+05	7.240E+02	1.085E+06
1998	3.031E+05	6.887E+02	1.032E+06
1999	3.031E+05	6.551E+02	9.819E+05
2000	3.031E+05	6.231E+02	9.340E+05
2001	3.031E+05	5.927E+02	8.885E+05
2002	3.031E+05	5.638E+02	8.451E+05
2003	3.031E+05	5.363E+02	8.039E+05
2004	3.031E+05	5.102E+02	7.647E+05
2005	3.031E+05	4.853E+02	7.274E+05
2006	3.031E+05	4.616E+02	6.919E+05
2007	3.031E+05	4.391E+02	6.582E+05
2008	3.031E+05	4.177E+02	6.261E+05
2009	3.031E+05	3.973E+02	5.956E+05
2010	3.031E+05	3.780E+02	5.665E+05
2011	3.031E+05	3.595E+02	5.389E+05
2012	3.031E+05	3.420E+02	5.126E+05
2013	3.031E+05	3.253E+02	4.876E+05
2014	3.031E+05	3.094E+02	4.638E+05
2015	3.031E+05	2.944E+02	4.412E+05
2016	3.031E+05	2.800E+02	4.197E+05
2017	3.031E+05	2.663E+02	3.992E+05
2018	3.031E+05	2.533E+02	3.797E+05
2019	3.031E+05	2.410E+02	3.612E+05
2020	3.031E+05	2.292E+02	3.436E+05

continued

Table D-1. Emisson Rate of Methane from Parcel 1 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2021	3.031E+05	2.181E+02	3.269E+05
2022	3.031E+05	2.074E+02	3.109E+05
2023	3.031E+05	1.973E+02	2.957E+05
2024	3.031E+05	1.877E+02	2.813E+05
2025	3.031E+05	1.785E+02	2.676E+05
2026	3.031E+05	1.698E+02	2.546E+05
2027	3.031E+05	1.615E+02	2.421E+05
2028	3.031E+05	1.537E+02	2.303E+05
2029	3.031E+05	1.462E+02	2.191E+05
2030	3.031E+05	1.390E+02	2.084E+05
2031	3.031E+05	1.323E+02	1.982E+05
2032	3.031E+05	1.258E+02	1.886E+05
2033	3.031E+05	1.197E+02	1.794E+05
2034	3.031E+05	1.138E+02	1.706E+05
2035	3.031E+05	1.083E+02	1.623E+05
2036	3.031E+05	1.030E+02	1.544E+05
2037	3.031E+05	9.798E+01	1.469E+05
2038	3.031E+05	9.320E+01	1.397E+05
2039	3.031E+05	8.866E+01	1.329E+05
2040	3.031E+05	8.433E+01	1.264E+05
2041	3.031E+05	8.022E+01	1.202E+05
2042	3.031E+05	7.631E+01	1.144E+05
2043	3.031E+05	7.259E+01	1.088E+05
2044	3.031E+05	6.905E+01	1.035E+05
2045	3.031E+05	6.568E+01	9.845E+04
2046	3.031E+05	6.248E+01	9.365E+04
2047	3.031E+05	5.943E+01	8.908E+04
2048	3.031E+05	5.653E+01	8.473E+04
2049	3.031E+05	5.377E+01	8.060E+04
2050	3.031E+05	5.115E+01	7.667E+04
2051	3.031E+05	4.866E+01	7.293E+04
2052	3.031E+05	4.628E+01	6.937E+04
2053	3.031E+05	4.403E+01	6.599E+04
2054	3.031E+05	4.188E+01	6.277E+04
2055	3.031E+05	3.984E+01	5.971E+04
2056	3.031E+05	3.789E+01	5.680E+04
2057	3.031E+05	3.605E+01	5.403E+04
2058	3.031E+05	3.429E+01	5.139E+04
2059	3.031E+05	3.261E+01	4.889E+04
2060	3.031E+05	3.102E+01	4.650E+04
2061	3.031E+05	2.951E+01	4.423E+04
2062	3.031E+05	2.807E+01	4.208E+04
2063	3.031E+05	2.670E+01	4.003E+04
2064	3.031E+05	2.540E+01	3.807E+04
2065	3.031E+05	2.416E+01	3.622E+04
2066	3.031E+05	2.298E+01	3.445E+04
2067	3.031E+05	2.186E+01	3.277E+04
2068	3.031E+05	2.080E+01	3.117E+04
2069	3.031E+05	1.978E+01	2.965E+04
2070	3.031E+05	1.882E+01	2.821E+04
2071	3.031E+05	1.790E+01	2.683E+04
2072	3.031E+05	1.703E+01	2.552E+04
2073	3.031E+05	1.620E+01	2.428E+04
2074	3.031E+05	1.541E+01	2.309E+04
2075	3.031E+05	1.465E+01	2.197E+04
2076	3.031E+05	1.394E+01	2.090E+04
2077	3.031E+05	1.326E+01	1.988E+04
2078	3.031E+05	1.261E+01	1.891E+04
2079	3.031E+05	1.200E+01	1.798E+04
2080	3.031E+05	1.141E+01	1.711E+04
2081	3.031E+05	1.086E+01	1.627E+04
2082	3.031E+05	1.033E+01	1.548E+04
2083	3.031E+05	9.823E+00	1.472E+04
2084	3.031E+05	9.344E+00	1.401E+04
2085	3.031E+05	8.889E+00	1.332E+04
2086	3.031E+05	8.455E+00	1.267E+04
2087	3.031E+05	8.043E+00	1.206E+04
2088	3.031E+05	7.650E+00	1.147E+04
2089	3.031E+05	7.277E+00	1.091E+04
2090	3.031E+05	6.922E+00	1.038E+04

continued

Table D-1. Emisson Rate of Methane from Parcel 1 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2091	3.031E+05	6.585E+00	9.870E+03
2092	3.031E+05	6.264E+00	9.389E+03
2093	3.031E+05	5.958E+00	8.931E+03
2094	3.031E+05	5.668E+00	8.495E+03
2095	3.031E+05	5.391E+00	8.081E+03
2096	3.031E+05	5.128E+00	7.687E+03
2097	3.031E+05	4.878E+00	7.312E+03
2098	3.031E+05	4.640E+00	6.955E+03
2099	3.031E+05	4.414E+00	6.616E+03
2100	3.031E+05	4.199E+00	6.293E+03
2101	3.031E+05	3.994E+00	5.987E+03
2102	3.031E+05	3.799E+00	5.695E+03
2103	3.031E+05	3.614E+00	5.417E+03
2104	3.031E+05	3.438E+00	5.153E+03
2105	3.031E+05	3.270E+00	4.901E+03
2106	3.031E+05	3.110E+00	4.662E+03
2107	3.031E+05	2.959E+00	4.435E+03
2108	3.031E+05	2.814E+00	4.219E+03
2109	3.031E+05	2.677E+00	4.013E+03
2110	3.031E+05	2.547E+00	3.817E+03
2111	3.031E+05	2.422E+00	3.631E+03
2112	3.031E+05	2.304E+00	3.454E+03
2113	3.031E+05	2.192E+00	3.285E+03
2114	3.031E+05	2.085E+00	3.125E+03
2115	3.031E+05	1.983E+00	2.973E+03
2116	3.031E+05	1.887E+00	2.828E+03
2117	3.031E+05	1.795E+00	2.690E+03
2118	3.031E+05	1.707E+00	2.559E+03
2119	3.031E+05	1.624E+00	2.434E+03
2120	3.031E+05	1.545E+00	2.315E+03
2121	3.031E+05	1.469E+00	2.202E+03
2122	3.031E+05	1.398E+00	2.095E+03
2123	3.031E+05	1.329E+00	1.993E+03
2124	3.031E+05	1.265E+00	1.896E+03
2125	3.031E+05	1.203E+00	1.803E+03
2126	3.031E+05	1.144E+00	1.715E+03
2127	3.031E+05	1.088E+00	1.632E+03
2128	3.031E+05	1.035E+00	1.552E+03
2129	3.031E+05	9.849E-01	1.476E+03
2130	3.031E+05	9.369E-01	1.404E+03
2131	3.031E+05	8.912E-01	1.336E+03
2132	3.031E+05	8.477E-01	1.271E+03
2133	3.031E+05	8.064E-01	1.209E+03
2134	3.031E+05	7.670E-01	1.150E+03
2135	3.031E+05	7.296E-01	1.094E+03
2136	3.031E+05	6.940E-01	1.040E+03
2137	3.031E+05	6.602E-01	9.896E+02
2138	3.031E+05	6.280E-01	9.413E+02
2139	3.031E+05	5.974E-01	8.954E+02
2140	3.031E+05	5.682E-01	8.517E+02
2141	3.031E+05	5.405E-01	8.102E+02
2142	3.031E+05	5.142E-01	7.707E+02
2143	3.031E+05	4.891E-01	7.331E+02
2144	3.031E+05	4.652E-01	6.973E+02
2145	3.031E+05	4.425E-01	6.633E+02
2146	3.031E+05	4.210E-01	6.310E+02
2147	3.031E+05	4.004E-01	6.002E+02
2148	3.031E+05	3.809E-01	5.709E+02
2149	3.031E+05	3.623E-01	5.431E+02
2150	3.031E+05	3.446E-01	5.166E+02
2151	3.031E+05	3.278E-01	4.914E+02
2152	3.031E+05	3.119E-01	4.674E+02
2153	3.031E+05	2.966E-01	4.446E+02
2154	3.031E+05	2.822E-01	4.230E+02
2155	3.031E+05	2.684E-01	4.023E+02
2156	3.031E+05	2.553E-01	3.827E+02
2157	3.031E+05	2.429E-01	3.640E+02
2158	3.031E+05	2.310E-01	3.463E+02
2159	3.031E+05	2.198E-01	3.294E+02
2160	3.031E+05	2.090E-01	3.133E+02

continued

Table D-1. Emisson Rate of Methane from Parcel 1 for Years 1975 to 2203 (concluded).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2161	3.031E+05	1.988E-01	2.981E+02
2162	3.031E+05	1.891E-01	2.835E+02
2163	3.031E+05	1.799E-01	2.697E+02
2164	3.031E+05	1.711E-01	2.565E+02
2165	3.031E+05	1.628E-01	2.440E+02
2166	3.031E+05	1.549E-01	2.321E+02
2167	3.031E+05	1.473E-01	2.208E+02
2168	3.031E+05	1.401E-01	2.100E+02
2169	3.031E+05	1.333E-01	1.998E+02
2170	3.031E+05	1.268E-01	1.900E+02
2171	3.031E+05	1.206E-01	1.808E+02
2172	3.031E+05	1.147E-01	1.720E+02
2173	3.031E+05	1.091E-01	1.636E+02
2174	3.031E+05	1.038E-01	1.556E+02
2175	3.031E+05	9.874E-02	1.480E+02
2176	3.031E+05	9.393E-02	1.408E+02
2177	3.031E+05	8.935E-02	1.339E+02
2178	3.031E+05	8.499E-02	1.274E+02
2179	3.031E+05	8.084E-02	1.212E+02
2180	3.031E+05	7.690E-02	1.153E+02
2181	3.031E+05	7.315E-02	1.096E+02
2182	3.031E+05	6.958E-02	1.043E+02
2183	3.031E+05	6.619E-02	9.921E+01
2184	3.031E+05	6.296E-02	9.437E+01
2185	3.031E+05	5.989E-02	8.977E+01
2186	3.031E+05	5.697E-02	8.539E+01
2187	3.031E+05	5.419E-02	8.123E+01
2188	3.031E+05	5.155E-02	7.727E+01
2189	3.031E+05	4.903E-02	7.350E+01
2190	3.031E+05	4.664E-02	6.991E+01
2191	3.031E+05	4.437E-02	6.650E+01
2192	3.031E+05	4.220E-02	6.326E+01
2193	3.031E+05	4.015E-02	6.018E+01
2194	3.031E+05	3.819E-02	5.724E+01
2195	3.031E+05	3.633E-02	5.445E+01
2196	3.031E+05	3.455E-02	5.179E+01
2197	3.031E+05	3.287E-02	4.927E+01
2198	3.031E+05	3.127E-02	4.686E+01
2199	3.031E+05	2.974E-02	4.458E+01
2200	3.031E+05	2.829E-02	4.241E+01
2201	3.031E+05	2.691E-02	4.034E+01
2202	3.031E+05	2.560E-02	3.837E+01
2203	3.031E+05	2.435E-02	3.650E+01

Table D-2. Emisson Rate of Carbon Dioxide from Parcel 1 for Years 1975 to 2203.

Source: H:\3000\030177~2.000\030177~1.003\BUSHVA~1\STRATA1.PRM

Model Parameters

Lo : 170.00 m^3 / Mg
k : 0.0500 1/yr
NMOC : 2200.00 ppmv
Methane : 64.0000 % volume
Carbon Dioxide : 36.0000 % volume

Landfill Parameters

Landfill type : Co-Disposal
Year Opened : 1974 Current Year : 2004 Closure Year: 2004
Capacity : 303128 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 0.00 Mg/year

Model Results

Year	Refuse In Place (Mg)	Carbon Dioxide Emission Rate (Mg/yr)	(Cubic m/yr)
1975	3.031E+04	2.653E+02	1.449E+05
1976	6.063E+04	5.177E+02	2.828E+05
1977	9.094E+04	7.577E+02	4.139E+05
1978	1.213E+05	9.861E+02	5.387E+05
1979	1.516E+05	1.203E+03	6.573E+05
1980	1.819E+05	1.410E+03	7.702E+05
1981	2.122E+05	1.606E+03	8.776E+05
1982	2.425E+05	1.793E+03	9.797E+05
1983	2.728E+05	1.971E+03	1.077E+06
1984	3.031E+05	2.140E+03	1.169E+06
1985	3.031E+05	2.036E+03	1.112E+06
1986	3.031E+05	1.937E+03	1.058E+06
1987	3.031E+05	1.842E+03	1.006E+06
1988	3.031E+05	1.752E+03	9.573E+05
1989	3.031E+05	1.667E+03	9.106E+05
1990	3.031E+05	1.586E+03	8.662E+05
1991	3.031E+05	1.508E+03	8.240E+05
1992	3.031E+05	1.435E+03	7.838E+05
1993	3.031E+05	1.365E+03	7.456E+05
1994	3.031E+05	1.298E+03	7.092E+05
1995	3.031E+05	1.235E+03	6.746E+05
1996	3.031E+05	1.175E+03	6.417E+05
1997	3.031E+05	1.117E+03	6.104E+05
1998	3.031E+05	1.063E+03	5.807E+05
1999	3.031E+05	1.011E+03	5.523E+05
2000	3.031E+05	9.617E+02	5.254E+05
2001	3.031E+05	9.148E+02	4.998E+05
2002	3.031E+05	8.702E+02	4.754E+05
2003	3.031E+05	8.278E+02	4.522E+05
2004	3.031E+05	7.874E+02	4.302E+05
2005	3.031E+05	7.490E+02	4.092E+05
2006	3.031E+05	7.125E+02	3.892E+05
2007	3.031E+05	6.777E+02	3.702E+05
2008	3.031E+05	6.447E+02	3.522E+05
2009	3.031E+05	6.132E+02	3.350E+05
2010	3.031E+05	5.833E+02	3.187E+05
2011	3.031E+05	5.549E+02	3.031E+05
2012	3.031E+05	5.278E+02	2.883E+05
2013	3.031E+05	5.021E+02	2.743E+05
2014	3.031E+05	4.776E+02	2.609E+05
2015	3.031E+05	4.543E+02	2.482E+05
2016	3.031E+05	4.321E+02	2.361E+05
2017	3.031E+05	4.111E+02	2.246E+05
2018	3.031E+05	3.910E+02	2.136E+05
2019	3.031E+05	3.719E+02	2.032E+05
2020	3.031E+05	3.538E+02	1.933E+05

continued

Table D-2. Emisson Rate of Carbon Dioxide from Parcel 1 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2021	3.031E+05	3.365E+02	1.839E+05
2022	3.031E+05	3.201E+02	1.749E+05
2023	3.031E+05	3.045E+02	1.664E+05
2024	3.031E+05	2.897E+02	1.582E+05
2025	3.031E+05	2.755E+02	1.505E+05
2026	3.031E+05	2.621E+02	1.432E+05
2027	3.031E+05	2.493E+02	1.362E+05
2028	3.031E+05	2.372E+02	1.296E+05
2029	3.031E+05	2.256E+02	1.232E+05
2030	3.031E+05	2.146E+02	1.172E+05
2031	3.031E+05	2.041E+02	1.115E+05
2032	3.031E+05	1.942E+02	1.061E+05
2033	3.031E+05	1.847E+02	1.009E+05
2034	3.031E+05	1.757E+02	9.598E+04
2035	3.031E+05	1.671E+02	9.130E+04
2036	3.031E+05	1.590E+02	8.685E+04
2037	3.031E+05	1.512E+02	8.261E+04
2038	3.031E+05	1.438E+02	7.858E+04
2039	3.031E+05	1.368E+02	7.475E+04
2040	3.031E+05	1.302E+02	7.110E+04
2041	3.031E+05	1.238E+02	6.764E+04
2042	3.031E+05	1.178E+02	6.434E+04
2043	3.031E+05	1.120E+02	6.120E+04
2044	3.031E+05	1.066E+02	5.822E+04
2045	3.031E+05	1.014E+02	5.538E+04
2046	3.031E+05	9.642E+01	5.268E+04
2047	3.031E+05	9.172E+01	5.011E+04
2048	3.031E+05	8.725E+01	4.766E+04
2049	3.031E+05	8.299E+01	4.534E+04
2050	3.031E+05	7.894E+01	4.313E+04
2051	3.031E+05	7.509E+01	4.102E+04
2052	3.031E+05	7.143E+01	3.902E+04
2053	3.031E+05	6.795E+01	3.712E+04
2054	3.031E+05	6.463E+01	3.531E+04
2055	3.031E+05	6.148E+01	3.359E+04
2056	3.031E+05	5.848E+01	3.195E+04
2057	3.031E+05	5.563E+01	3.039E+04
2058	3.031E+05	5.292E+01	2.891E+04
2059	3.031E+05	5.034E+01	2.750E+04
2060	3.031E+05	4.788E+01	2.616E+04
2061	3.031E+05	4.555E+01	2.488E+04
2062	3.031E+05	4.333E+01	2.367E+04
2063	3.031E+05	4.121E+01	2.251E+04
2064	3.031E+05	3.920E+01	2.142E+04
2065	3.031E+05	3.729E+01	2.037E+04
2066	3.031E+05	3.547E+01	1.938E+04
2067	3.031E+05	3.374E+01	1.843E+04
2068	3.031E+05	3.210E+01	1.753E+04
2069	3.031E+05	3.053E+01	1.668E+04
2070	3.031E+05	2.904E+01	1.587E+04
2071	3.031E+05	2.763E+01	1.509E+04
2072	3.031E+05	2.628E+01	1.436E+04
2073	3.031E+05	2.500E+01	1.366E+04
2074	3.031E+05	2.378E+01	1.299E+04
2075	3.031E+05	2.262E+01	1.236E+04
2076	3.031E+05	2.151E+01	1.175E+04
2077	3.031E+05	2.047E+01	1.118E+04
2078	3.031E+05	1.947E+01	1.063E+04
2079	3.031E+05	1.852E+01	1.012E+04
2080	3.031E+05	1.761E+01	9.623E+03
2081	3.031E+05	1.676E+01	9.154E+03
2082	3.031E+05	1.594E+01	8.707E+03
2083	3.031E+05	1.516E+01	8.283E+03
2084	3.031E+05	1.442E+01	7.879E+03
2085	3.031E+05	1.372E+01	7.494E+03
2086	3.031E+05	1.305E+01	7.129E+03
2087	3.031E+05	1.241E+01	6.781E+03
2088	3.031E+05	1.181E+01	6.450E+03
2089	3.031E+05	1.123E+01	6.136E+03
2090	3.031E+05	1.068E+01	5.837E+03

continued

Table D-2. Emisson Rate of Carbon Dioxide from Parcel 1 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2091	3.031E+05	1.016E+01	5.552E+03
2092	3.031E+05	9.667E+00	5.281E+03
2093	3.031E+05	9.196E+00	5.024E+03
2094	3.031E+05	8.747E+00	4.779E+03
2095	3.031E+05	8.321E+00	4.546E+03
2096	3.031E+05	7.915E+00	4.324E+03
2097	3.031E+05	7.529E+00	4.113E+03
2098	3.031E+05	7.162E+00	3.912E+03
2099	3.031E+05	6.812E+00	3.722E+03
2100	3.031E+05	6.480E+00	3.540E+03
2101	3.031E+05	6.164E+00	3.367E+03
2102	3.031E+05	5.863E+00	3.203E+03
2103	3.031E+05	5.577E+00	3.047E+03
2104	3.031E+05	5.305E+00	2.898E+03
2105	3.031E+05	5.047E+00	2.757E+03
2106	3.031E+05	4.801E+00	2.623E+03
2107	3.031E+05	4.566E+00	2.495E+03
2108	3.031E+05	4.344E+00	2.373E+03
2109	3.031E+05	4.132E+00	2.257E+03
2110	3.031E+05	3.930E+00	2.147E+03
2111	3.031E+05	3.739E+00	2.042E+03
2112	3.031E+05	3.556E+00	1.943E+03
2113	3.031E+05	3.383E+00	1.848E+03
2114	3.031E+05	3.218E+00	1.758E+03
2115	3.031E+05	3.061E+00	1.672E+03
2116	3.031E+05	2.912E+00	1.591E+03
2117	3.031E+05	2.770E+00	1.513E+03
2118	3.031E+05	2.635E+00	1.439E+03
2119	3.031E+05	2.506E+00	1.369E+03
2120	3.031E+05	2.384E+00	1.302E+03
2121	3.031E+05	2.268E+00	1.239E+03
2122	3.031E+05	2.157E+00	1.178E+03
2123	3.031E+05	2.052E+00	1.121E+03
2124	3.031E+05	1.952E+00	1.066E+03
2125	3.031E+05	1.857E+00	1.014E+03
2126	3.031E+05	1.766E+00	9.648E+02
2127	3.031E+05	1.680E+00	9.177E+02
2128	3.031E+05	1.598E+00	8.730E+02
2129	3.031E+05	1.520E+00	8.304E+02
2130	3.031E+05	1.446E+00	7.899E+02
2131	3.031E+05	1.375E+00	7.514E+02
2132	3.031E+05	1.308E+00	7.147E+02
2133	3.031E+05	1.245E+00	6.799E+02
2134	3.031E+05	1.184E+00	6.467E+02
2135	3.031E+05	1.126E+00	6.152E+02
2136	3.031E+05	1.071E+00	5.852E+02
2137	3.031E+05	1.019E+00	5.566E+02
2138	3.031E+05	9.692E-01	5.295E+02
2139	3.031E+05	9.220E-01	5.037E+02
2140	3.031E+05	8.770E-01	4.791E+02
2141	3.031E+05	8.342E-01	4.557E+02
2142	3.031E+05	7.935E-01	4.335E+02
2143	3.031E+05	7.548E-01	4.124E+02
2144	3.031E+05	7.180E-01	3.923E+02
2145	3.031E+05	6.830E-01	3.731E+02
2146	3.031E+05	6.497E-01	3.549E+02
2147	3.031E+05	6.180E-01	3.376E+02
2148	3.031E+05	5.879E-01	3.211E+02
2149	3.031E+05	5.592E-01	3.055E+02
2150	3.031E+05	5.319E-01	2.906E+02
2151	3.031E+05	5.060E-01	2.764E+02
2152	3.031E+05	4.813E-01	2.629E+02
2153	3.031E+05	4.578E-01	2.501E+02
2154	3.031E+05	4.355E-01	2.379E+02
2155	3.031E+05	4.143E-01	2.263E+02
2156	3.031E+05	3.941E-01	2.153E+02
2157	3.031E+05	3.748E-01	2.048E+02
2158	3.031E+05	3.566E-01	1.948E+02
2159	3.031E+05	3.392E-01	1.853E+02
2160	3.031E+05	3.226E-01	1.763E+02

continued

Table D-2. Emisson Rate of Carbon Dioxide from Parcel 1 for Years 1975 to 2203 (concluded).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2161	3.031E+05	3.069E-01	1.677E+02
2162	3.031E+05	2.919E-01	1.595E+02
2163	3.031E+05	2.777E-01	1.517E+02
2164	3.031E+05	2.641E-01	1.443E+02
2165	3.031E+05	2.513E-01	1.373E+02
2166	3.031E+05	2.390E-01	1.306E+02
2167	3.031E+05	2.274E-01	1.242E+02
2168	3.031E+05	2.163E-01	1.181E+02
2169	3.031E+05	2.057E-01	1.124E+02
2170	3.031E+05	1.957E-01	1.069E+02
2171	3.031E+05	1.861E-01	1.017E+02
2172	3.031E+05	1.771E-01	9.673E+01
2173	3.031E+05	1.684E-01	9.201E+01
2174	3.031E+05	1.602E-01	8.752E+01
2175	3.031E+05	1.524E-01	8.325E+01
2176	3.031E+05	1.450E-01	7.919E+01
2177	3.031E+05	1.379E-01	7.533E+01
2178	3.031E+05	1.312E-01	7.166E+01
2179	3.031E+05	1.248E-01	6.816E+01
2180	3.031E+05	1.187E-01	6.484E+01
2181	3.031E+05	1.129E-01	6.168E+01
2182	3.031E+05	1.074E-01	5.867E+01
2183	3.031E+05	1.022E-01	5.581E+01
2184	3.031E+05	9.717E-02	5.309E+01
2185	3.031E+05	9.243E-02	5.050E+01
2186	3.031E+05	8.793E-02	4.803E+01
2187	3.031E+05	8.364E-02	4.569E+01
2188	3.031E+05	7.956E-02	4.346E+01
2189	3.031E+05	7.568E-02	4.134E+01
2190	3.031E+05	7.199E-02	3.933E+01
2191	3.031E+05	6.848E-02	3.741E+01
2192	3.031E+05	6.514E-02	3.558E+01
2193	3.031E+05	6.196E-02	3.385E+01
2194	3.031E+05	5.894E-02	3.220E+01
2195	3.031E+05	5.606E-02	3.063E+01
2196	3.031E+05	5.333E-02	2.913E+01
2197	3.031E+05	5.073E-02	2.771E+01
2198	3.031E+05	4.825E-02	2.636E+01
2199	3.031E+05	4.590E-02	2.508E+01
2200	3.031E+05	4.366E-02	2.385E+01
2201	3.031E+05	4.153E-02	2.269E+01
2202	3.031E+05	3.951E-02	2.158E+01
2203	3.031E+05	3.758E-02	2.053E+01

Table D-3. Emisson Rate of NMOCs from Parcel 1 for Years 1975 to 2203.

Source: H:\3000\030177~2.000\030177~1.003\BUSHVA~1\STRATA1.PRM

Model Parameters

Lo : 170.00 m^3 / Mg
k : 0.0500 1/yr
NMOC : 2200.00 ppmv
Methane : 64.0000 % volume
Carbon Dioxide : 36.0000 % volume

Landfill Parameters

Landfill type : Co-Disposal
Year Opened : 1974 Current Year : 2004 Closure Year: 2004
Capacity : 303128 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 0.00 Mg/year

Model Results

Year	Refuse In Place (Mg)	NMOC Emission Rate (Mg/yr)	NMOC Emission Rate (Cubic m/yr)
1975	3.031E+04	3.175E+00	8.857E+02
1976	6.063E+04	6.195E+00	1.728E+03
1977	9.094E+04	9.067E+00	2.530E+03
1978	1.213E+05	1.180E+01	3.292E+03
1979	1.516E+05	1.440E+01	4.017E+03
1980	1.819E+05	1.687E+01	4.707E+03
1981	2.122E+05	1.922E+01	5.363E+03
1982	2.425E+05	2.146E+01	5.987E+03
1983	2.728E+05	2.359E+01	6.581E+03
1984	3.031E+05	2.561E+01	7.146E+03
1985	3.031E+05	2.436E+01	6.797E+03
1986	3.031E+05	2.318E+01	6.466E+03
1987	3.031E+05	2.205E+01	6.150E+03
1988	3.031E+05	2.097E+01	5.850E+03
1989	3.031E+05	1.995E+01	5.565E+03
1990	3.031E+05	1.897E+01	5.294E+03
1991	3.031E+05	1.805E+01	5.035E+03
1992	3.031E+05	1.717E+01	4.790E+03
1993	3.031E+05	1.633E+01	4.556E+03
1994	3.031E+05	1.554E+01	4.334E+03
1995	3.031E+05	1.478E+01	4.123E+03
1996	3.031E+05	1.406E+01	3.922E+03
1997	3.031E+05	1.337E+01	3.730E+03
1998	3.031E+05	1.272E+01	3.548E+03
1999	3.031E+05	1.210E+01	3.375E+03
2000	3.031E+05	1.151E+01	3.211E+03
2001	3.031E+05	1.095E+01	3.054E+03
2002	3.031E+05	1.041E+01	2.905E+03
2003	3.031E+05	9.906E+00	2.764E+03
2004	3.031E+05	9.423E+00	2.629E+03
2005	3.031E+05	8.963E+00	2.501E+03
2006	3.031E+05	8.526E+00	2.379E+03
2007	3.031E+05	8.110E+00	2.263E+03
2008	3.031E+05	7.715E+00	2.152E+03
2009	3.031E+05	7.338E+00	2.047E+03
2010	3.031E+05	6.980E+00	1.947E+03
2011	3.031E+05	6.640E+00	1.852E+03
2012	3.031E+05	6.316E+00	1.762E+03
2013	3.031E+05	6.008E+00	1.676E+03
2014	3.031E+05	5.715E+00	1.594E+03
2015	3.031E+05	5.436E+00	1.517E+03
2016	3.031E+05	5.171E+00	1.443E+03
2017	3.031E+05	4.919E+00	1.372E+03
2018	3.031E+05	4.679E+00	1.305E+03
2019	3.031E+05	4.451E+00	1.242E+03
2020	3.031E+05	4.234E+00	1.181E+03

continued

Table D-3. Emisson Rate of NMOCs from Parcel 1 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2021	3.031E+05	4.027E+00	1.124E+03
2022	3.031E+05	3.831E+00	1.069E+03
2023	3.031E+05	3.644E+00	1.017E+03
2024	3.031E+05	3.466E+00	9.671E+02
2025	3.031E+05	3.297E+00	9.199E+02
2026	3.031E+05	3.137E+00	8.750E+02
2027	3.031E+05	2.984E+00	8.324E+02
2028	3.031E+05	2.838E+00	7.918E+02
2029	3.031E+05	2.700E+00	7.531E+02
2030	3.031E+05	2.568E+00	7.164E+02
2031	3.031E+05	2.443E+00	6.815E+02
2032	3.031E+05	2.324E+00	6.482E+02
2033	3.031E+05	2.210E+00	6.166E+02
2034	3.031E+05	2.102E+00	5.865E+02
2035	3.031E+05	2.000E+00	5.579E+02
2036	3.031E+05	1.902E+00	5.307E+02
2037	3.031E+05	1.810E+00	5.048E+02
2038	3.031E+05	1.721E+00	4.802E+02
2039	3.031E+05	1.637E+00	4.568E+02
2040	3.031E+05	1.558E+00	4.345E+02
2041	3.031E+05	1.482E+00	4.133E+02
2042	3.031E+05	1.409E+00	3.932E+02
2043	3.031E+05	1.341E+00	3.740E+02
2044	3.031E+05	1.275E+00	3.558E+02
2045	3.031E+05	1.213E+00	3.384E+02
2046	3.031E+05	1.154E+00	3.219E+02
2047	3.031E+05	1.098E+00	3.062E+02
2048	3.031E+05	1.044E+00	2.913E+02
2049	3.031E+05	9.931E-01	2.771E+02
2050	3.031E+05	9.447E-01	2.636E+02
2051	3.031E+05	8.986E-01	2.507E+02
2052	3.031E+05	8.548E-01	2.385E+02
2053	3.031E+05	8.131E-01	2.268E+02
2054	3.031E+05	7.735E-01	2.158E+02
2055	3.031E+05	7.357E-01	2.053E+02
2056	3.031E+05	6.999E-01	1.952E+02
2057	3.031E+05	6.657E-01	1.857E+02
2058	3.031E+05	6.333E-01	1.767E+02
2059	3.031E+05	6.024E-01	1.680E+02
2060	3.031E+05	5.730E-01	1.599E+02
2061	3.031E+05	5.450E-01	1.521E+02
2062	3.031E+05	5.185E-01	1.446E+02
2063	3.031E+05	4.932E-01	1.376E+02
2064	3.031E+05	4.691E-01	1.309E+02
2065	3.031E+05	4.462E-01	1.245E+02
2066	3.031E+05	4.245E-01	1.184E+02
2067	3.031E+05	4.038E-01	1.126E+02
2068	3.031E+05	3.841E-01	1.072E+02
2069	3.031E+05	3.654E-01	1.019E+02
2070	3.031E+05	3.475E-01	9.696E+01
2071	3.031E+05	3.306E-01	9.223E+01
2072	3.031E+05	3.145E-01	8.773E+01
2073	3.031E+05	2.991E-01	8.345E+01
2074	3.031E+05	2.845E-01	7.938E+01
2075	3.031E+05	2.707E-01	7.551E+01
2076	3.031E+05	2.575E-01	7.183E+01
2077	3.031E+05	2.449E-01	6.832E+01
2078	3.031E+05	2.330E-01	6.499E+01
2079	3.031E+05	2.216E-01	6.182E+01
2080	3.031E+05	2.108E-01	5.881E+01
2081	3.031E+05	2.005E-01	5.594E+01
2082	3.031E+05	1.907E-01	5.321E+01
2083	3.031E+05	1.814E-01	5.062E+01
2084	3.031E+05	1.726E-01	4.815E+01
2085	3.031E+05	1.642E-01	4.580E+01
2086	3.031E+05	1.562E-01	4.357E+01
2087	3.031E+05	1.485E-01	4.144E+01
2088	3.031E+05	1.413E-01	3.942E+01
2089	3.031E+05	1.344E-01	3.750E+01
2090	3.031E+05	1.279E-01	3.567E+01

continued

Table D-3. Emisson Rate of NMOCs from Parcel 1 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2091	3.031E+05	1.216E-01	3.393E+01
2092	3.031E+05	1.157E-01	3.227E+01
2093	3.031E+05	1.100E-01	3.070E+01
2094	3.031E+05	1.047E-01	2.920E+01
2095	3.031E+05	9.957E-02	2.778E+01
2096	3.031E+05	9.471E-02	2.642E+01
2097	3.031E+05	9.010E-02	2.513E+01
2098	3.031E+05	8.570E-02	2.391E+01
2099	3.031E+05	8.152E-02	2.274E+01
2100	3.031E+05	7.755E-02	2.163E+01
2101	3.031E+05	7.376E-02	2.058E+01
2102	3.031E+05	7.017E-02	1.958E+01
2103	3.031E+05	6.674E-02	1.862E+01
2104	3.031E+05	6.349E-02	1.771E+01
2105	3.031E+05	6.039E-02	1.685E+01
2106	3.031E+05	5.745E-02	1.603E+01
2107	3.031E+05	5.465E-02	1.525E+01
2108	3.031E+05	5.198E-02	1.450E+01
2109	3.031E+05	4.945E-02	1.379E+01
2110	3.031E+05	4.703E-02	1.312E+01
2111	3.031E+05	4.474E-02	1.248E+01
2112	3.031E+05	4.256E-02	1.187E+01
2113	3.031E+05	4.048E-02	1.129E+01
2114	3.031E+05	3.851E-02	1.074E+01
2115	3.031E+05	3.663E-02	1.022E+01
2116	3.031E+05	3.484E-02	9.721E+00
2117	3.031E+05	3.314E-02	9.247E+00
2118	3.031E+05	3.153E-02	8.796E+00
2119	3.031E+05	2.999E-02	8.367E+00
2120	3.031E+05	2.853E-02	7.959E+00
2121	3.031E+05	2.714E-02	7.570E+00
2122	3.031E+05	2.581E-02	7.201E+00
2123	3.031E+05	2.455E-02	6.850E+00
2124	3.031E+05	2.336E-02	6.516E+00
2125	3.031E+05	2.222E-02	6.198E+00
2126	3.031E+05	2.113E-02	5.896E+00
2127	3.031E+05	2.010E-02	5.608E+00
2128	3.031E+05	1.912E-02	5.335E+00
2129	3.031E+05	1.819E-02	5.075E+00
2130	3.031E+05	1.730E-02	4.827E+00
2131	3.031E+05	1.646E-02	4.592E+00
2132	3.031E+05	1.566E-02	4.368E+00
2133	3.031E+05	1.489E-02	4.155E+00
2134	3.031E+05	1.417E-02	3.952E+00
2135	3.031E+05	1.348E-02	3.759E+00
2136	3.031E+05	1.282E-02	3.576E+00
2137	3.031E+05	1.219E-02	3.402E+00
2138	3.031E+05	1.160E-02	3.236E+00
2139	3.031E+05	1.103E-02	3.078E+00
2140	3.031E+05	1.049E-02	2.928E+00
2141	3.031E+05	9.983E-03	2.785E+00
2142	3.031E+05	9.496E-03	2.649E+00
2143	3.031E+05	9.033E-03	2.520E+00
2144	3.031E+05	8.592E-03	2.397E+00
2145	3.031E+05	8.173E-03	2.280E+00
2146	3.031E+05	7.775E-03	2.169E+00
2147	3.031E+05	7.395E-03	2.063E+00
2148	3.031E+05	7.035E-03	1.963E+00
2149	3.031E+05	6.692E-03	1.867E+00
2150	3.031E+05	6.365E-03	1.776E+00
2151	3.031E+05	6.055E-03	1.689E+00
2152	3.031E+05	5.760E-03	1.607E+00
2153	3.031E+05	5.479E-03	1.528E+00
2154	3.031E+05	5.211E-03	1.454E+00
2155	3.031E+05	4.957E-03	1.383E+00
2156	3.031E+05	4.716E-03	1.316E+00
2157	3.031E+05	4.486E-03	1.251E+00
2158	3.031E+05	4.267E-03	1.190E+00
2159	3.031E+05	4.059E-03	1.132E+00
2160	3.031E+05	3.861E-03	1.077E+00

continued

Table D-3. Emisson Rate of NMOCs from Parcel 1 for Years 1975 to 2203 (concluded).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2161	3.031E+05	3.672E-03	1.025E+00
2162	3.031E+05	3.493E-03	9.746E-01
2163	3.031E+05	3.323E-03	9.271E-01
2164	3.031E+05	3.161E-03	8.818E-01
2165	3.031E+05	3.007E-03	8.388E-01
2166	3.031E+05	2.860E-03	7.979E-01
2167	3.031E+05	2.721E-03	7.590E-01
2168	3.031E+05	2.588E-03	7.220E-01
2169	3.031E+05	2.462E-03	6.868E-01
2170	3.031E+05	2.342E-03	6.533E-01
2171	3.031E+05	2.227E-03	6.214E-01
2172	3.031E+05	2.119E-03	5.911E-01
2173	3.031E+05	2.015E-03	5.623E-01
2174	3.031E+05	1.917E-03	5.349E-01
2175	3.031E+05	1.824E-03	5.088E-01
2176	3.031E+05	1.735E-03	4.840E-01
2177	3.031E+05	1.650E-03	4.604E-01
2178	3.031E+05	1.570E-03	4.379E-01
2179	3.031E+05	1.493E-03	4.166E-01
2180	3.031E+05	1.420E-03	3.962E-01
2181	3.031E+05	1.351E-03	3.769E-01
2182	3.031E+05	1.285E-03	3.585E-01
2183	3.031E+05	1.222E-03	3.410E-01
2184	3.031E+05	1.163E-03	3.244E-01
2185	3.031E+05	1.106E-03	3.086E-01
2186	3.031E+05	1.052E-03	2.935E-01
2187	3.031E+05	1.001E-03	2.792E-01
2188	3.031E+05	9.521E-04	2.656E-01
2189	3.031E+05	9.056E-04	2.527E-01
2190	3.031E+05	8.615E-04	2.403E-01
2191	3.031E+05	8.194E-04	2.286E-01
2192	3.031E+05	7.795E-04	2.175E-01
2193	3.031E+05	7.415E-04	2.069E-01
2194	3.031E+05	7.053E-04	1.968E-01
2195	3.031E+05	6.709E-04	1.872E-01
2196	3.031E+05	6.382E-04	1.780E-01
2197	3.031E+05	6.071E-04	1.694E-01
2198	3.031E+05	5.775E-04	1.611E-01
2199	3.031E+05	5.493E-04	1.532E-01
2200	3.031E+05	5.225E-04	1.458E-01
2201	3.031E+05	4.970E-04	1.387E-01
2202	3.031E+05	4.728E-04	1.319E-01
2203	3.031E+05	4.497E-04	1.255E-01

Table D-4. Emisson Rate of 1,1,1-Trichloroethane from Parcel 1 for Years 1975 to 2203.

Source: H:\3000\030177~2.000\030177~1.003\BUSHVA~1\STRATA1.PRM

Model Parameters

Lo : 170.00 m^3 / Mg
k : 0.0500 1/yr
NMOC : 2200.00 ppmv
Methane : 64.0000 % volume
Carbon Dioxide : 36.0000 % volume
Air Pollutant : 1,1,1-Trichloroethane (HAP)
Molecular Wt = 133.41 Concentration = 0.090000 ppmV

Landfill Parameters

Landfill type : Co-Disposal
Year Opened : 1974 Current Year : 2004 Closure Year: 2004
Capacity : 303128 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 0.00 Mg/year

Model Results

Year	Refuse In Place (Mg)	1,1,1-Trichloroethane (HAP) Emission Rate (Mg/yr)	(Cubic m/yr)
1975	3.031E+04	2.011E-04	3.623E-02
1976	6.063E+04	3.923E-04	7.070E-02
1977	9.094E+04	5.742E-04	1.035E-01
1978	1.213E+05	7.473E-04	1.347E-01
1979	1.516E+05	9.119E-04	1.643E-01
1980	1.819E+05	1.068E-03	1.926E-01
1981	2.122E+05	1.217E-03	2.194E-01
1982	2.425E+05	1.359E-03	2.449E-01
1983	2.728E+05	1.494E-03	2.692E-01
1984	3.031E+05	1.622E-03	2.923E-01
1985	3.031E+05	1.543E-03	2.781E-01
1986	3.031E+05	1.468E-03	2.645E-01
1987	3.031E+05	1.396E-03	2.516E-01
1988	3.031E+05	1.328E-03	2.393E-01
1989	3.031E+05	1.263E-03	2.277E-01
1990	3.031E+05	1.202E-03	2.166E-01
1991	3.031E+05	1.143E-03	2.060E-01
1992	3.031E+05	1.087E-03	1.959E-01
1993	3.031E+05	1.034E-03	1.864E-01
1994	3.031E+05	9.838E-04	1.773E-01
1995	3.031E+05	9.358E-04	1.687E-01
1996	3.031E+05	8.902E-04	1.604E-01
1997	3.031E+05	8.468E-04	1.526E-01
1998	3.031E+05	8.055E-04	1.452E-01
1999	3.031E+05	7.662E-04	1.381E-01
2000	3.031E+05	7.288E-04	1.313E-01
2001	3.031E+05	6.933E-04	1.249E-01
2002	3.031E+05	6.595E-04	1.188E-01
2003	3.031E+05	6.273E-04	1.131E-01
2004	3.031E+05	5.967E-04	1.075E-01
2005	3.031E+05	5.676E-04	1.023E-01
2006	3.031E+05	5.399E-04	9.731E-02
2007	3.031E+05	5.136E-04	9.256E-02
2008	3.031E+05	4.886E-04	8.805E-02
2009	3.031E+05	4.647E-04	8.375E-02
2010	3.031E+05	4.421E-04	7.967E-02
2011	3.031E+05	4.205E-04	7.578E-02
2012	3.031E+05	4.000E-04	7.209E-02
2013	3.031E+05	3.805E-04	6.857E-02
2014	3.031E+05	3.619E-04	6.523E-02
2015	3.031E+05	3.443E-04	6.204E-02
2016	3.031E+05	3.275E-04	5.902E-02
2017	3.031E+05	3.115E-04	5.614E-02
2018	3.031E+05	2.963E-04	5.340E-02

continued

Table D-4. Emisson Rate of 1,1,1-Trichloroethane from Parcel 1 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2019	3.031E+05	2.819E-04	5.080E-02
2020	3.031E+05	2.681E-04	4.832E-02
2021	3.031E+05	2.550E-04	4.596E-02
2022	3.031E+05	2.426E-04	4.372E-02
2023	3.031E+05	2.308E-04	4.159E-02
2024	3.031E+05	2.195E-04	3.956E-02
2025	3.031E+05	2.088E-04	3.763E-02
2026	3.031E+05	1.986E-04	3.580E-02
2027	3.031E+05	1.889E-04	3.405E-02
2028	3.031E+05	1.797E-04	3.239E-02
2029	3.031E+05	1.710E-04	3.081E-02
2030	3.031E+05	1.626E-04	2.931E-02
2031	3.031E+05	1.547E-04	2.788E-02
2032	3.031E+05	1.472E-04	2.652E-02
2033	3.031E+05	1.400E-04	2.523E-02
2034	3.031E+05	1.331E-04	2.400E-02
2035	3.031E+05	1.267E-04	2.282E-02
2036	3.031E+05	1.205E-04	2.171E-02
2037	3.031E+05	1.146E-04	2.065E-02
2038	3.031E+05	1.090E-04	1.965E-02
2039	3.031E+05	1.037E-04	1.869E-02
2040	3.031E+05	9.864E-05	1.778E-02
2041	3.031E+05	9.383E-05	1.691E-02
2042	3.031E+05	8.925E-05	1.608E-02
2043	3.031E+05	8.490E-05	1.530E-02
2044	3.031E+05	8.076E-05	1.455E-02
2045	3.031E+05	7.682E-05	1.384E-02
2046	3.031E+05	7.307E-05	1.317E-02
2047	3.031E+05	6.951E-05	1.253E-02
2048	3.031E+05	6.612E-05	1.192E-02
2049	3.031E+05	6.289E-05	1.133E-02
2050	3.031E+05	5.983E-05	1.078E-02
2051	3.031E+05	5.691E-05	1.026E-02
2052	3.031E+05	5.413E-05	9.756E-03
2053	3.031E+05	5.149E-05	9.280E-03
2054	3.031E+05	4.898E-05	8.827E-03
2055	3.031E+05	4.659E-05	8.397E-03
2056	3.031E+05	4.432E-05	7.987E-03
2057	3.031E+05	4.216E-05	7.598E-03
2058	3.031E+05	4.010E-05	7.227E-03
2059	3.031E+05	3.815E-05	6.875E-03
2060	3.031E+05	3.629E-05	6.539E-03
2061	3.031E+05	3.452E-05	6.221E-03
2062	3.031E+05	3.283E-05	5.917E-03
2063	3.031E+05	3.123E-05	5.629E-03
2064	3.031E+05	2.971E-05	5.354E-03
2065	3.031E+05	2.826E-05	5.093E-03
2066	3.031E+05	2.688E-05	4.845E-03
2067	3.031E+05	2.557E-05	4.608E-03
2068	3.031E+05	2.432E-05	4.384E-03
2069	3.031E+05	2.314E-05	4.170E-03
2070	3.031E+05	2.201E-05	3.966E-03
2071	3.031E+05	2.094E-05	3.773E-03
2072	3.031E+05	1.991E-05	3.589E-03
2073	3.031E+05	1.894E-05	3.414E-03
2074	3.031E+05	1.802E-05	3.247E-03
2075	3.031E+05	1.714E-05	3.089E-03
2076	3.031E+05	1.630E-05	2.938E-03
2077	3.031E+05	1.551E-05	2.795E-03
2078	3.031E+05	1.475E-05	2.659E-03
2079	3.031E+05	1.403E-05	2.529E-03
2080	3.031E+05	1.335E-05	2.406E-03
2081	3.031E+05	1.270E-05	2.288E-03
2082	3.031E+05	1.208E-05	2.177E-03
2083	3.031E+05	1.149E-05	2.071E-03
2084	3.031E+05	1.093E-05	1.970E-03
2085	3.031E+05	1.040E-05	1.874E-03
2086	3.031E+05	9.889E-06	1.782E-03
2087	3.031E+05	9.407E-06	1.695E-03
2088	3.031E+05	8.948E-06	1.613E-03

continued

Table D-4. Emisson Rate of 1,1,1-Trichloroethane from Parcel 1 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2089	3.031E+05	8.512E-06	1.534E-03
2090	3.031E+05	8.097E-06	1.459E-03
2091	3.031E+05	7.702E-06	1.388E-03
2092	3.031E+05	7.326E-06	1.320E-03
2093	3.031E+05	6.969E-06	1.256E-03
2094	3.031E+05	6.629E-06	1.195E-03
2095	3.031E+05	6.306E-06	1.136E-03
2096	3.031E+05	5.998E-06	1.081E-03
2097	3.031E+05	5.706E-06	1.028E-03
2098	3.031E+05	5.427E-06	9.781E-04
2099	3.031E+05	5.163E-06	9.304E-04
2100	3.031E+05	4.911E-06	8.850E-04
2101	3.031E+05	4.671E-06	8.419E-04
2102	3.031E+05	4.444E-06	8.008E-04
2103	3.031E+05	4.227E-06	7.617E-04
2104	3.031E+05	4.021E-06	7.246E-04
2105	3.031E+05	3.825E-06	6.893E-04
2106	3.031E+05	3.638E-06	6.556E-04
2107	3.031E+05	3.461E-06	6.237E-04
2108	3.031E+05	3.292E-06	5.932E-04
2109	3.031E+05	3.131E-06	5.643E-04
2110	3.031E+05	2.979E-06	5.368E-04
2111	3.031E+05	2.833E-06	5.106E-04
2112	3.031E+05	2.695E-06	4.857E-04
2113	3.031E+05	2.564E-06	4.620E-04
2114	3.031E+05	2.439E-06	4.395E-04
2115	3.031E+05	2.320E-06	4.181E-04
2116	3.031E+05	2.207E-06	3.977E-04
2117	3.031E+05	2.099E-06	3.783E-04
2118	3.031E+05	1.997E-06	3.598E-04
2119	3.031E+05	1.899E-06	3.423E-04
2120	3.031E+05	1.807E-06	3.256E-04
2121	3.031E+05	1.719E-06	3.097E-04
2122	3.031E+05	1.635E-06	2.946E-04
2123	3.031E+05	1.555E-06	2.802E-04
2124	3.031E+05	1.479E-06	2.666E-04
2125	3.031E+05	1.407E-06	2.536E-04
2126	3.031E+05	1.338E-06	2.412E-04
2127	3.031E+05	1.273E-06	2.294E-04
2128	3.031E+05	1.211E-06	2.182E-04
2129	3.031E+05	1.152E-06	2.076E-04
2130	3.031E+05	1.096E-06	1.975E-04
2131	3.031E+05	1.042E-06	1.878E-04
2132	3.031E+05	9.915E-07	1.787E-04
2133	3.031E+05	9.431E-07	1.700E-04
2134	3.031E+05	8.971E-07	1.617E-04
2135	3.031E+05	8.534E-07	1.538E-04
2136	3.031E+05	8.118E-07	1.463E-04
2137	3.031E+05	7.722E-07	1.392E-04
2138	3.031E+05	7.345E-07	1.324E-04
2139	3.031E+05	6.987E-07	1.259E-04
2140	3.031E+05	6.646E-07	1.198E-04
2141	3.031E+05	6.322E-07	1.139E-04
2142	3.031E+05	6.014E-07	1.084E-04
2143	3.031E+05	5.720E-07	1.031E-04
2144	3.031E+05	5.441E-07	9.806E-05
2145	3.031E+05	5.176E-07	9.328E-05
2146	3.031E+05	4.924E-07	8.873E-05
2147	3.031E+05	4.683E-07	8.440E-05
2148	3.031E+05	4.455E-07	8.029E-05
2149	3.031E+05	4.238E-07	7.637E-05
2150	3.031E+05	4.031E-07	7.265E-05
2151	3.031E+05	3.834E-07	6.910E-05
2152	3.031E+05	3.647E-07	6.573E-05
2153	3.031E+05	3.470E-07	6.253E-05
2154	3.031E+05	3.300E-07	5.948E-05
2155	3.031E+05	3.139E-07	5.658E-05
2156	3.031E+05	2.986E-07	5.382E-05
2157	3.031E+05	2.841E-07	5.119E-05
2158	3.031E+05	2.702E-07	4.870E-05

continued

Table D-4. Emisson Rate of 1,1,1-Trichloroethane from Parcel 1 for Years 1975 to 2203 (concluded).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2159	3.031E+05	2.570E-07	4.632E-05
2160	3.031E+05	2.445E-07	4.406E-05
2161	3.031E+05	2.326E-07	4.191E-05
2162	3.031E+05	2.212E-07	3.987E-05
2163	3.031E+05	2.104E-07	3.792E-05
2164	3.031E+05	2.002E-07	3.608E-05
2165	3.031E+05	1.904E-07	3.432E-05
2166	3.031E+05	1.811E-07	3.264E-05
2167	3.031E+05	1.723E-07	3.105E-05
2168	3.031E+05	1.639E-07	2.954E-05
2169	3.031E+05	1.559E-07	2.810E-05
2170	3.031E+05	1.483E-07	2.673E-05
2171	3.031E+05	1.411E-07	2.542E-05
2172	3.031E+05	1.342E-07	2.418E-05
2173	3.031E+05	1.276E-07	2.300E-05
2174	3.031E+05	1.214E-07	2.188E-05
2175	3.031E+05	1.155E-07	2.081E-05
2176	3.031E+05	1.099E-07	1.980E-05
2177	3.031E+05	1.045E-07	1.883E-05
2178	3.031E+05	9.941E-08	1.791E-05
2179	3.031E+05	9.456E-08	1.704E-05
2180	3.031E+05	8.995E-08	1.621E-05
2181	3.031E+05	8.556E-08	1.542E-05
2182	3.031E+05	8.139E-08	1.467E-05
2183	3.031E+05	7.742E-08	1.395E-05
2184	3.031E+05	7.364E-08	1.327E-05
2185	3.031E+05	7.005E-08	1.262E-05
2186	3.031E+05	6.663E-08	1.201E-05
2187	3.031E+05	6.338E-08	1.142E-05
2188	3.031E+05	6.029E-08	1.087E-05
2189	3.031E+05	5.735E-08	1.034E-05
2190	3.031E+05	5.455E-08	9.832E-06
2191	3.031E+05	5.189E-08	9.352E-06
2192	3.031E+05	4.936E-08	8.896E-06
2193	3.031E+05	4.696E-08	8.462E-06
2194	3.031E+05	4.467E-08	8.049E-06
2195	3.031E+05	4.249E-08	7.657E-06
2196	3.031E+05	4.042E-08	7.283E-06
2197	3.031E+05	3.844E-08	6.928E-06
2198	3.031E+05	3.657E-08	6.590E-06
2199	3.031E+05	3.479E-08	6.269E-06
2200	3.031E+05	3.309E-08	5.963E-06
2201	3.031E+05	3.148E-08	5.672E-06
2202	3.031E+05	2.994E-08	5.396E-06
2203	3.031E+05	2.848E-08	5.133E-06

Table D-5. Emisson Rate of 1,1-Dichloroethene from Parcel 1 for Years 1975 to 2203.

Source: H:\3000\030177~2.000\030177~1.003\BUSHVA~1\STRATA1.PRM

Model Parameters

Lo : 170.00 m^3 / Mg
k : 0.0500 1/yr
NMOC : 2200.00 ppmv
Methane : 64.0000 % volume
Carbon Dioxide : 36.0000 % volume
Air Pollutant : 1,1-Dichloroethene (HAP/VOC)
Molecular Wt = 96.94 Concentration = 0.030000 ppmV

Landfill Parameters

Landfill type : Co-Disposal
Year Opened : 1974 Current Year : 2004 Closure Year: 2004
Capacity : 303128 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 0.00 Mg/year

Model Results

Year	Refuse In Place (Mg)	1,1-Dichloroethene (HAP/VOC) Emission Rate (Mg/yr)	(Cubic m/yr)
1975	3.031E+04	4.870E-05	1.208E-02
1976	6.063E+04	9.502E-05	2.357E-02
1977	9.094E+04	1.391E-04	3.449E-02
1978	1.213E+05	1.810E-04	4.489E-02
1979	1.516E+05	2.209E-04	5.478E-02
1980	1.819E+05	2.588E-04	6.418E-02
1981	2.122E+05	2.949E-04	7.313E-02
1982	2.425E+05	3.292E-04	8.164E-02
1983	2.728E+05	3.618E-04	8.974E-02
1984	3.031E+05	3.929E-04	9.744E-02
1985	3.031E+05	3.737E-04	9.269E-02
1986	3.031E+05	3.555E-04	8.817E-02
1987	3.031E+05	3.382E-04	8.387E-02
1988	3.031E+05	3.217E-04	7.978E-02
1989	3.031E+05	3.060E-04	7.589E-02
1990	3.031E+05	2.911E-04	7.219E-02
1991	3.031E+05	2.769E-04	6.867E-02
1992	3.031E+05	2.634E-04	6.532E-02
1993	3.031E+05	2.505E-04	6.213E-02
1994	3.031E+05	2.383E-04	5.910E-02
1995	3.031E+05	2.267E-04	5.622E-02
1996	3.031E+05	2.156E-04	5.348E-02
1997	3.031E+05	2.051E-04	5.087E-02
1998	3.031E+05	1.951E-04	4.839E-02
1999	3.031E+05	1.856E-04	4.603E-02
2000	3.031E+05	1.765E-04	4.378E-02
2001	3.031E+05	1.679E-04	4.165E-02
2002	3.031E+05	1.597E-04	3.962E-02
2003	3.031E+05	1.519E-04	3.768E-02
2004	3.031E+05	1.445E-04	3.585E-02
2005	3.031E+05	1.375E-04	3.410E-02
2006	3.031E+05	1.308E-04	3.244E-02
2007	3.031E+05	1.244E-04	3.085E-02
2008	3.031E+05	1.183E-04	2.935E-02
2009	3.031E+05	1.126E-04	2.792E-02
2010	3.031E+05	1.071E-04	2.656E-02
2011	3.031E+05	1.019E-04	2.526E-02
2012	3.031E+05	9.688E-05	2.403E-02
2013	3.031E+05	9.216E-05	2.286E-02
2014	3.031E+05	8.766E-05	2.174E-02
2015	3.031E+05	8.339E-05	2.068E-02
2016	3.031E+05	7.932E-05	1.967E-02
2017	3.031E+05	7.545E-05	1.871E-02
2018	3.031E+05	7.177E-05	1.780E-02

continued

Table D-5. Emisson Rate of 1,1-Dichloroethene from Parcel 1 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2019	3.031E+05	6.827E-05	1.693E-02
2020	3.031E+05	6.494E-05	1.611E-02
2021	3.031E+05	6.178E-05	1.532E-02
2022	3.031E+05	5.876E-05	1.457E-02
2023	3.031E+05	5.590E-05	1.386E-02
2024	3.031E+05	5.317E-05	1.319E-02
2025	3.031E+05	5.058E-05	1.254E-02
2026	3.031E+05	4.811E-05	1.193E-02
2027	3.031E+05	4.576E-05	1.135E-02
2028	3.031E+05	4.353E-05	1.080E-02
2029	3.031E+05	4.141E-05	1.027E-02
2030	3.031E+05	3.939E-05	9.769E-03
2031	3.031E+05	3.747E-05	9.293E-03
2032	3.031E+05	3.564E-05	8.840E-03
2033	3.031E+05	3.390E-05	8.408E-03
2034	3.031E+05	3.225E-05	7.998E-03
2035	3.031E+05	3.068E-05	7.608E-03
2036	3.031E+05	2.918E-05	7.237E-03
2037	3.031E+05	2.776E-05	6.884E-03
2038	3.031E+05	2.640E-05	6.549E-03
2039	3.031E+05	2.512E-05	6.229E-03
2040	3.031E+05	2.389E-05	5.925E-03
2041	3.031E+05	2.273E-05	5.636E-03
2042	3.031E+05	2.162E-05	5.361E-03
2043	3.031E+05	2.056E-05	5.100E-03
2044	3.031E+05	1.956E-05	4.851E-03
2045	3.031E+05	1.861E-05	4.615E-03
2046	3.031E+05	1.770E-05	4.390E-03
2047	3.031E+05	1.684E-05	4.176E-03
2048	3.031E+05	1.601E-05	3.972E-03
2049	3.031E+05	1.523E-05	3.778E-03
2050	3.031E+05	1.449E-05	3.594E-03
2051	3.031E+05	1.378E-05	3.419E-03
2052	3.031E+05	1.311E-05	3.252E-03
2053	3.031E+05	1.247E-05	3.093E-03
2054	3.031E+05	1.186E-05	2.942E-03
2055	3.031E+05	1.129E-05	2.799E-03
2056	3.031E+05	1.073E-05	2.662E-03
2057	3.031E+05	1.021E-05	2.533E-03
2058	3.031E+05	9.713E-06	2.409E-03
2059	3.031E+05	9.240E-06	2.292E-03
2060	3.031E+05	8.789E-06	2.180E-03
2061	3.031E+05	8.360E-06	2.074E-03
2062	3.031E+05	7.953E-06	1.972E-03
2063	3.031E+05	7.565E-06	1.876E-03
2064	3.031E+05	7.196E-06	1.785E-03
2065	3.031E+05	6.845E-06	1.698E-03
2066	3.031E+05	6.511E-06	1.615E-03
2067	3.031E+05	6.194E-06	1.536E-03
2068	3.031E+05	5.891E-06	1.461E-03
2069	3.031E+05	5.604E-06	1.390E-03
2070	3.031E+05	5.331E-06	1.322E-03
2071	3.031E+05	5.071E-06	1.258E-03
2072	3.031E+05	4.824E-06	1.196E-03
2073	3.031E+05	4.588E-06	1.138E-03
2074	3.031E+05	4.365E-06	1.082E-03
2075	3.031E+05	4.152E-06	1.030E-03
2076	3.031E+05	3.949E-06	9.795E-04
2077	3.031E+05	3.757E-06	9.317E-04
2078	3.031E+05	3.573E-06	8.862E-04
2079	3.031E+05	3.399E-06	8.430E-04
2080	3.031E+05	3.233E-06	8.019E-04
2081	3.031E+05	3.076E-06	7.628E-04
2082	3.031E+05	2.926E-06	7.256E-04
2083	3.031E+05	2.783E-06	6.902E-04
2084	3.031E+05	2.647E-06	6.565E-04
2085	3.031E+05	2.518E-06	6.245E-04
2086	3.031E+05	2.395E-06	5.941E-04
2087	3.031E+05	2.278E-06	5.651E-04
2088	3.031E+05	2.167E-06	5.375E-04

continued

Table D-5. Emisson Rate of 1,1-Dichloroethene from Parcel 1 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2089	3.031E+05	2.062E-06	5.113E-04
2090	3.031E+05	1.961E-06	4.864E-04
2091	3.031E+05	1.865E-06	4.627E-04
2092	3.031E+05	1.774E-06	4.401E-04
2093	3.031E+05	1.688E-06	4.186E-04
2094	3.031E+05	1.606E-06	3.982E-04
2095	3.031E+05	1.527E-06	3.788E-04
2096	3.031E+05	1.453E-06	3.603E-04
2097	3.031E+05	1.382E-06	3.427E-04
2098	3.031E+05	1.315E-06	3.260E-04
2099	3.031E+05	1.250E-06	3.101E-04
2100	3.031E+05	1.189E-06	2.950E-04
2101	3.031E+05	1.131E-06	2.806E-04
2102	3.031E+05	1.076E-06	2.669E-04
2103	3.031E+05	1.024E-06	2.539E-04
2104	3.031E+05	9.739E-07	2.415E-04
2105	3.031E+05	9.264E-07	2.298E-04
2106	3.031E+05	8.812E-07	2.185E-04
2107	3.031E+05	8.382E-07	2.079E-04
2108	3.031E+05	7.973E-07	1.977E-04
2109	3.031E+05	7.584E-07	1.881E-04
2110	3.031E+05	7.214E-07	1.789E-04
2111	3.031E+05	6.863E-07	1.702E-04
2112	3.031E+05	6.528E-07	1.619E-04
2113	3.031E+05	6.210E-07	1.540E-04
2114	3.031E+05	5.907E-07	1.465E-04
2115	3.031E+05	5.619E-07	1.394E-04
2116	3.031E+05	5.345E-07	1.326E-04
2117	3.031E+05	5.084E-07	1.261E-04
2118	3.031E+05	4.836E-07	1.199E-04
2119	3.031E+05	4.600E-07	1.141E-04
2120	3.031E+05	4.376E-07	1.085E-04
2121	3.031E+05	4.162E-07	1.032E-04
2122	3.031E+05	3.959E-07	9.820E-05
2123	3.031E+05	3.766E-07	9.341E-05
2124	3.031E+05	3.583E-07	8.885E-05
2125	3.031E+05	3.408E-07	8.452E-05
2126	3.031E+05	3.242E-07	8.040E-05
2127	3.031E+05	3.084E-07	7.648E-05
2128	3.031E+05	2.933E-07	7.275E-05
2129	3.031E+05	2.790E-07	6.920E-05
2130	3.031E+05	2.654E-07	6.582E-05
2131	3.031E+05	2.525E-07	6.261E-05
2132	3.031E+05	2.401E-07	5.956E-05
2133	3.031E+05	2.284E-07	5.666E-05
2134	3.031E+05	2.173E-07	5.389E-05
2135	3.031E+05	2.067E-07	5.126E-05
2136	3.031E+05	1.966E-07	4.876E-05
2137	3.031E+05	1.870E-07	4.639E-05
2138	3.031E+05	1.779E-07	4.412E-05
2139	3.031E+05	1.692E-07	4.197E-05
2140	3.031E+05	1.610E-07	3.992E-05
2141	3.031E+05	1.531E-07	3.798E-05
2142	3.031E+05	1.457E-07	3.613E-05
2143	3.031E+05	1.386E-07	3.436E-05
2144	3.031E+05	1.318E-07	3.269E-05
2145	3.031E+05	1.254E-07	3.109E-05
2146	3.031E+05	1.193E-07	2.958E-05
2147	3.031E+05	1.134E-07	2.813E-05
2148	3.031E+05	1.079E-07	2.676E-05
2149	3.031E+05	1.026E-07	2.546E-05
2150	3.031E+05	9.764E-08	2.422E-05
2151	3.031E+05	9.288E-08	2.303E-05
2152	3.031E+05	8.835E-08	2.191E-05
2153	3.031E+05	8.404E-08	2.084E-05
2154	3.031E+05	7.994E-08	1.983E-05
2155	3.031E+05	7.604E-08	1.886E-05
2156	3.031E+05	7.233E-08	1.794E-05
2157	3.031E+05	6.880E-08	1.706E-05
2158	3.031E+05	6.545E-08	1.623E-05

continued

Table D-5. Emisson Rate of 1,1-Dichloroethene from Parcel 1 for Years 1975 to 2203 (concluded).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2159	3.031E+05	6.226E-08	1.544E-05
2160	3.031E+05	5.922E-08	1.469E-05
2161	3.031E+05	5.633E-08	1.397E-05
2162	3.031E+05	5.358E-08	1.329E-05
2163	3.031E+05	5.097E-08	1.264E-05
2164	3.031E+05	4.849E-08	1.203E-05
2165	3.031E+05	4.612E-08	1.144E-05
2166	3.031E+05	4.387E-08	1.088E-05
2167	3.031E+05	4.173E-08	1.035E-05
2168	3.031E+05	3.970E-08	9.845E-06
2169	3.031E+05	3.776E-08	9.365E-06
2170	3.031E+05	3.592E-08	8.908E-06
2171	3.031E+05	3.417E-08	8.474E-06
2172	3.031E+05	3.250E-08	8.061E-06
2173	3.031E+05	3.092E-08	7.668E-06
2174	3.031E+05	2.941E-08	7.294E-06
2175	3.031E+05	2.797E-08	6.938E-06
2176	3.031E+05	2.661E-08	6.600E-06
2177	3.031E+05	2.531E-08	6.278E-06
2178	3.031E+05	2.408E-08	5.971E-06
2179	3.031E+05	2.290E-08	5.680E-06
2180	3.031E+05	2.179E-08	5.403E-06
2181	3.031E+05	2.072E-08	5.140E-06
2182	3.031E+05	1.971E-08	4.889E-06
2183	3.031E+05	1.875E-08	4.651E-06
2184	3.031E+05	1.784E-08	4.424E-06
2185	3.031E+05	1.697E-08	4.208E-06
2186	3.031E+05	1.614E-08	4.003E-06
2187	3.031E+05	1.535E-08	3.808E-06
2188	3.031E+05	1.460E-08	3.622E-06
2189	3.031E+05	1.389E-08	3.445E-06
2190	3.031E+05	1.321E-08	3.277E-06
2191	3.031E+05	1.257E-08	3.117E-06
2192	3.031E+05	1.196E-08	2.965E-06
2193	3.031E+05	1.137E-08	2.821E-06
2194	3.031E+05	1.082E-08	2.683E-06
2195	3.031E+05	1.029E-08	2.552E-06
2196	3.031E+05	9.789E-09	2.428E-06
2197	3.031E+05	9.312E-09	2.309E-06
2198	3.031E+05	8.857E-09	2.197E-06
2199	3.031E+05	8.425E-09	2.090E-06
2200	3.031E+05	8.015E-09	1.988E-06
2201	3.031E+05	7.624E-09	1.891E-06
2202	3.031E+05	7.252E-09	1.799E-06
2203	3.031E+05	6.898E-09	1.711E-06

Table D-6. Emisson Rate of 1,2-Dichloroethane from Parcel 1 for Years 1975 to 2203.

Source: H:\3000\030177~2.000\030177~1.003\BUSHVA~1\STRATA1.PRM

Model Parameters

Lo : 170.00 m^3 / Mg
k : 0.0500 1/yr
NMOC : 2200.00 ppmv
Methane : 64.0000 % volume
Carbon Dioxide : 36.0000 % volume
Air Pollutant : 1,2-Dichloroethane (HAP/VOC)
Molecular Wt = 98.96 Concentration = 0.070000 ppmV

Landfill Parameters

Landfill type : Co-Disposal
Year Opened : 1974 Current Year : 2004 Closure Year: 2004
Capacity : 303128 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 0.00 Mg/year

Model Results

Year	Refuse In Place (Mg)	1,2-Dichloroethane (HAP/VOC) Emission Rate (Mg/yr)	(Cubic m/yr)
1975	3.031E+04	1.160E-04	2.818E-02
1976	6.063E+04	2.263E-04	5.499E-02
1977	9.094E+04	3.313E-04	8.049E-02
1978	1.213E+05	4.311E-04	1.047E-01
1979	1.516E+05	5.261E-04	1.278E-01
1980	1.819E+05	6.164E-04	1.498E-01
1981	2.122E+05	7.024E-04	1.706E-01
1982	2.425E+05	7.841E-04	1.905E-01
1983	2.728E+05	8.619E-04	2.094E-01
1984	3.031E+05	9.358E-04	2.274E-01
1985	3.031E+05	8.902E-04	2.163E-01
1986	3.031E+05	8.468E-04	2.057E-01
1987	3.031E+05	8.055E-04	1.957E-01
1988	3.031E+05	7.662E-04	1.861E-01
1989	3.031E+05	7.288E-04	1.771E-01
1990	3.031E+05	6.933E-04	1.684E-01
1991	3.031E+05	6.595E-04	1.602E-01
1992	3.031E+05	6.273E-04	1.524E-01
1993	3.031E+05	5.967E-04	1.450E-01
1994	3.031E+05	5.676E-04	1.379E-01
1995	3.031E+05	5.399E-04	1.312E-01
1996	3.031E+05	5.136E-04	1.248E-01
1997	3.031E+05	4.885E-04	1.187E-01
1998	3.031E+05	4.647E-04	1.129E-01
1999	3.031E+05	4.421E-04	1.074E-01
2000	3.031E+05	4.205E-04	1.022E-01
2001	3.031E+05	4.000E-04	9.718E-02
2002	3.031E+05	3.805E-04	9.244E-02
2003	3.031E+05	3.619E-04	8.793E-02
2004	3.031E+05	3.443E-04	8.364E-02
2005	3.031E+05	3.275E-04	7.956E-02
2006	3.031E+05	3.115E-04	7.568E-02
2007	3.031E+05	2.963E-04	7.199E-02
2008	3.031E+05	2.819E-04	6.848E-02
2009	3.031E+05	2.681E-04	6.514E-02
2010	3.031E+05	2.550E-04	6.196E-02
2011	3.031E+05	2.426E-04	5.894E-02
2012	3.031E+05	2.308E-04	5.607E-02
2013	3.031E+05	2.195E-04	5.333E-02
2014	3.031E+05	2.088E-04	5.073E-02
2015	3.031E+05	1.986E-04	4.826E-02
2016	3.031E+05	1.889E-04	4.590E-02
2017	3.031E+05	1.797E-04	4.366E-02
2018	3.031E+05	1.710E-04	4.154E-02

continued

Table D-6. Emisson Rate of 1,2-Dichloroethane from Parcel 1 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2019	3.031E+05	1.626E-04	3.951E-02
2020	3.031E+05	1.547E-04	3.758E-02
2021	3.031E+05	1.471E-04	3.575E-02
2022	3.031E+05	1.400E-04	3.401E-02
2023	3.031E+05	1.331E-04	3.235E-02
2024	3.031E+05	1.266E-04	3.077E-02
2025	3.031E+05	1.205E-04	2.927E-02
2026	3.031E+05	1.146E-04	2.784E-02
2027	3.031E+05	1.090E-04	2.648E-02
2028	3.031E+05	1.037E-04	2.519E-02
2029	3.031E+05	9.864E-05	2.396E-02
2030	3.031E+05	9.382E-05	2.279E-02
2031	3.031E+05	8.925E-05	2.168E-02
2032	3.031E+05	8.490E-05	2.063E-02
2033	3.031E+05	8.076E-05	1.962E-02
2034	3.031E+05	7.682E-05	1.866E-02
2035	3.031E+05	7.307E-05	1.775E-02
2036	3.031E+05	6.951E-05	1.689E-02
2037	3.031E+05	6.612E-05	1.606E-02
2038	3.031E+05	6.289E-05	1.528E-02
2039	3.031E+05	5.983E-05	1.453E-02
2040	3.031E+05	5.691E-05	1.383E-02
2041	3.031E+05	5.413E-05	1.315E-02
2042	3.031E+05	5.149E-05	1.251E-02
2043	3.031E+05	4.898E-05	1.190E-02
2044	3.031E+05	4.659E-05	1.132E-02
2045	3.031E+05	4.432E-05	1.077E-02
2046	3.031E+05	4.216E-05	1.024E-02
2047	3.031E+05	4.010E-05	9.743E-03
2048	3.031E+05	3.815E-05	9.268E-03
2049	3.031E+05	3.629E-05	8.816E-03
2050	3.031E+05	3.452E-05	8.386E-03
2051	3.031E+05	3.283E-05	7.977E-03
2052	3.031E+05	3.123E-05	7.588E-03
2053	3.031E+05	2.971E-05	7.218E-03
2054	3.031E+05	2.826E-05	6.866E-03
2055	3.031E+05	2.688E-05	6.531E-03
2056	3.031E+05	2.557E-05	6.212E-03
2057	3.031E+05	2.432E-05	5.909E-03
2058	3.031E+05	2.314E-05	5.621E-03
2059	3.031E+05	2.201E-05	5.347E-03
2060	3.031E+05	2.094E-05	5.086E-03
2061	3.031E+05	1.991E-05	4.838E-03
2062	3.031E+05	1.894E-05	4.602E-03
2063	3.031E+05	1.802E-05	4.378E-03
2064	3.031E+05	1.714E-05	4.164E-03
2065	3.031E+05	1.630E-05	3.961E-03
2066	3.031E+05	1.551E-05	3.768E-03
2067	3.031E+05	1.475E-05	3.584E-03
2068	3.031E+05	1.403E-05	3.409E-03
2069	3.031E+05	1.335E-05	3.243E-03
2070	3.031E+05	1.270E-05	3.085E-03
2071	3.031E+05	1.208E-05	2.935E-03
2072	3.031E+05	1.149E-05	2.791E-03
2073	3.031E+05	1.093E-05	2.655E-03
2074	3.031E+05	1.040E-05	2.526E-03
2075	3.031E+05	9.889E-06	2.403E-03
2076	3.031E+05	9.407E-06	2.285E-03
2077	3.031E+05	8.948E-06	2.174E-03
2078	3.031E+05	8.512E-06	2.068E-03
2079	3.031E+05	8.096E-06	1.967E-03
2080	3.031E+05	7.702E-06	1.871E-03
2081	3.031E+05	7.326E-06	1.780E-03
2082	3.031E+05	6.969E-06	1.693E-03
2083	3.031E+05	6.629E-06	1.610E-03
2084	3.031E+05	6.306E-06	1.532E-03
2085	3.031E+05	5.998E-06	1.457E-03
2086	3.031E+05	5.705E-06	1.386E-03
2087	3.031E+05	5.427E-06	1.319E-03
2088	3.031E+05	5.163E-06	1.254E-03

continued

Table D-6. Emisson Rate of 1,2-Dichloroethane from Parcel 1 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2089	3.031E+05	4.911E-06	1.193E-03
2090	3.031E+05	4.671E-06	1.135E-03
2091	3.031E+05	4.443E-06	1.080E-03
2092	3.031E+05	4.227E-06	1.027E-03
2093	3.031E+05	4.021E-06	9.768E-04
2094	3.031E+05	3.824E-06	9.292E-04
2095	3.031E+05	3.638E-06	8.839E-04
2096	3.031E+05	3.461E-06	8.408E-04
2097	3.031E+05	3.292E-06	7.997E-04
2098	3.031E+05	3.131E-06	7.607E-04
2099	3.031E+05	2.979E-06	7.236E-04
2100	3.031E+05	2.833E-06	6.883E-04
2101	3.031E+05	2.695E-06	6.548E-04
2102	3.031E+05	2.564E-06	6.228E-04
2103	3.031E+05	2.439E-06	5.925E-04
2104	3.031E+05	2.320E-06	5.636E-04
2105	3.031E+05	2.207E-06	5.361E-04
2106	3.031E+05	2.099E-06	5.099E-04
2107	3.031E+05	1.997E-06	4.851E-04
2108	3.031E+05	1.899E-06	4.614E-04
2109	3.031E+05	1.807E-06	4.389E-04
2110	3.031E+05	1.718E-06	4.175E-04
2111	3.031E+05	1.635E-06	3.971E-04
2112	3.031E+05	1.555E-06	3.778E-04
2113	3.031E+05	1.479E-06	3.593E-04
2114	3.031E+05	1.407E-06	3.418E-04
2115	3.031E+05	1.338E-06	3.252E-04
2116	3.031E+05	1.273E-06	3.093E-04
2117	3.031E+05	1.211E-06	2.942E-04
2118	3.031E+05	1.152E-06	2.799E-04
2119	3.031E+05	1.096E-06	2.662E-04
2120	3.031E+05	1.042E-06	2.532E-04
2121	3.031E+05	9.915E-07	2.409E-04
2122	3.031E+05	9.431E-07	2.291E-04
2123	3.031E+05	8.971E-07	2.180E-04
2124	3.031E+05	8.534E-07	2.073E-04
2125	3.031E+05	8.117E-07	1.972E-04
2126	3.031E+05	7.722E-07	1.876E-04
2127	3.031E+05	7.345E-07	1.784E-04
2128	3.031E+05	6.987E-07	1.697E-04
2129	3.031E+05	6.646E-07	1.615E-04
2130	3.031E+05	6.322E-07	1.536E-04
2131	3.031E+05	6.014E-07	1.461E-04
2132	3.031E+05	5.720E-07	1.390E-04
2133	3.031E+05	5.441E-07	1.322E-04
2134	3.031E+05	5.176E-07	1.257E-04
2135	3.031E+05	4.923E-07	1.196E-04
2136	3.031E+05	4.683E-07	1.138E-04
2137	3.031E+05	4.455E-07	1.082E-04
2138	3.031E+05	4.238E-07	1.030E-04
2139	3.031E+05	4.031E-07	9.793E-05
2140	3.031E+05	3.834E-07	9.316E-05
2141	3.031E+05	3.647E-07	8.861E-05
2142	3.031E+05	3.470E-07	8.429E-05
2143	3.031E+05	3.300E-07	8.018E-05
2144	3.031E+05	3.139E-07	7.627E-05
2145	3.031E+05	2.986E-07	7.255E-05
2146	3.031E+05	2.841E-07	6.901E-05
2147	3.031E+05	2.702E-07	6.565E-05
2148	3.031E+05	2.570E-07	6.245E-05
2149	3.031E+05	2.445E-07	5.940E-05
2150	3.031E+05	2.326E-07	5.650E-05
2151	3.031E+05	2.212E-07	5.375E-05
2152	3.031E+05	2.104E-07	5.113E-05
2153	3.031E+05	2.002E-07	4.863E-05
2154	3.031E+05	1.904E-07	4.626E-05
2155	3.031E+05	1.811E-07	4.400E-05
2156	3.031E+05	1.723E-07	4.186E-05
2157	3.031E+05	1.639E-07	3.982E-05
2158	3.031E+05	1.559E-07	3.788E-05

continued

Table D-6. Emisson Rate of 1,2-Dichloroethane from Parcel 1 for Years 1975 to 2203 (concluded).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2159	3.031E+05	1.483E-07	3.603E-05
2160	3.031E+05	1.411E-07	3.427E-05
2161	3.031E+05	1.342E-07	3.260E-05
2162	3.031E+05	1.276E-07	3.101E-05
2163	3.031E+05	1.214E-07	2.950E-05
2164	3.031E+05	1.155E-07	2.806E-05
2165	3.031E+05	1.099E-07	2.669E-05
2166	3.031E+05	1.045E-07	2.539E-05
2167	3.031E+05	9.940E-08	2.415E-05
2168	3.031E+05	9.456E-08	2.297E-05
2169	3.031E+05	8.994E-08	2.185E-05
2170	3.031E+05	8.556E-08	2.079E-05
2171	3.031E+05	8.138E-08	1.977E-05
2172	3.031E+05	7.742E-08	1.881E-05
2173	3.031E+05	7.364E-08	1.789E-05
2174	3.031E+05	7.005E-08	1.702E-05
2175	3.031E+05	6.663E-08	1.619E-05
2176	3.031E+05	6.338E-08	1.540E-05
2177	3.031E+05	6.029E-08	1.465E-05
2178	3.031E+05	5.735E-08	1.393E-05
2179	3.031E+05	5.455E-08	1.325E-05
2180	3.031E+05	5.189E-08	1.261E-05
2181	3.031E+05	4.936E-08	1.199E-05
2182	3.031E+05	4.695E-08	1.141E-05
2183	3.031E+05	4.466E-08	1.085E-05
2184	3.031E+05	4.249E-08	1.032E-05
2185	3.031E+05	4.041E-08	9.819E-06
2186	3.031E+05	3.844E-08	9.340E-06
2187	3.031E+05	3.657E-08	8.884E-06
2188	3.031E+05	3.478E-08	8.451E-06
2189	3.031E+05	3.309E-08	8.039E-06
2190	3.031E+05	3.147E-08	7.647E-06
2191	3.031E+05	2.994E-08	7.274E-06
2192	3.031E+05	2.848E-08	6.919E-06
2193	3.031E+05	2.709E-08	6.582E-06
2194	3.031E+05	2.577E-08	6.261E-06
2195	3.031E+05	2.451E-08	5.955E-06
2196	3.031E+05	2.332E-08	5.665E-06
2197	3.031E+05	2.218E-08	5.389E-06
2198	3.031E+05	2.110E-08	5.126E-06
2199	3.031E+05	2.007E-08	4.876E-06
2200	3.031E+05	1.909E-08	4.638E-06
2201	3.031E+05	1.816E-08	4.412E-06
2202	3.031E+05	1.727E-08	4.197E-06
2203	3.031E+05	1.643E-08	3.992E-06

Table D-7. Emisson Rate of Benzene from Parcel 1 for Years 1975 to 2203.

Source: H:\3000\030177~2.000\030177~1.003\BUSHVA~1\STRATA1.PRM

Model Parameters

Lo : 170.00 m^3 / Mg
k : 0.0500 1/yr
NMOC : 2200.00 ppmv
Methane : 64.0000 % volume
Carbon Dioxide : 36.0000 % volume
Air Pollutant : Benzene (HAP/VOC)
Molecular Wt = 78.12 Concentration = 2.040000 ppmV

Landfill Parameters

Landfill type : Co-Disposal
Year Opened : 1974 Current Year : 2004 Closure Year: 2004
Capacity : 303128 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 0.00 Mg/year

Model Results

Year	Refuse In Place (Mg)	Benzene (HAP/VOC) Emission Rate (Mg/yr)	(Cubic m/yr)
1975	3.031E+04	2.669E-03	8.213E-01
1976	6.063E+04	5.207E-03	1.603E+00
1977	9.094E+04	7.622E-03	2.346E+00
1978	1.213E+05	9.918E-03	3.053E+00
1979	1.516E+05	1.210E-02	3.725E+00
1980	1.819E+05	1.418E-02	4.365E+00
1981	2.122E+05	1.616E-02	4.973E+00
1982	2.425E+05	1.804E-02	5.552E+00
1983	2.728E+05	1.983E-02	6.102E+00
1984	3.031E+05	2.153E-02	6.626E+00
1985	3.031E+05	2.048E-02	6.303E+00
1986	3.031E+05	1.948E-02	5.995E+00
1987	3.031E+05	1.853E-02	5.703E+00
1988	3.031E+05	1.763E-02	5.425E+00
1989	3.031E+05	1.677E-02	5.160E+00
1990	3.031E+05	1.595E-02	4.909E+00
1991	3.031E+05	1.517E-02	4.669E+00
1992	3.031E+05	1.443E-02	4.442E+00
1993	3.031E+05	1.373E-02	4.225E+00
1994	3.031E+05	1.306E-02	4.019E+00
1995	3.031E+05	1.242E-02	3.823E+00
1996	3.031E+05	1.182E-02	3.636E+00
1997	3.031E+05	1.124E-02	3.459E+00
1998	3.031E+05	1.069E-02	3.290E+00
1999	3.031E+05	1.017E-02	3.130E+00
2000	3.031E+05	9.674E-03	2.977E+00
2001	3.031E+05	9.202E-03	2.832E+00
2002	3.031E+05	8.753E-03	2.694E+00
2003	3.031E+05	8.326E-03	2.563E+00
2004	3.031E+05	7.920E-03	2.438E+00
2005	3.031E+05	7.534E-03	2.319E+00
2006	3.031E+05	7.166E-03	2.206E+00
2007	3.031E+05	6.817E-03	2.098E+00
2008	3.031E+05	6.484E-03	1.996E+00
2009	3.031E+05	6.168E-03	1.898E+00
2010	3.031E+05	5.867E-03	1.806E+00
2011	3.031E+05	5.581E-03	1.718E+00
2012	3.031E+05	5.309E-03	1.634E+00
2013	3.031E+05	5.050E-03	1.554E+00
2014	3.031E+05	4.804E-03	1.478E+00
2015	3.031E+05	4.570E-03	1.406E+00
2016	3.031E+05	4.347E-03	1.338E+00
2017	3.031E+05	4.135E-03	1.273E+00
2018	3.031E+05	3.933E-03	1.210E+00

continued

Table D-7. Emisson Rate of Benzene from Parcel 1 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2019	3.031E+05	3.741E-03	1.151E+00
2020	3.031E+05	3.559E-03	1.095E+00
2021	3.031E+05	3.385E-03	1.042E+00
2022	3.031E+05	3.220E-03	9.910E-01
2023	3.031E+05	3.063E-03	9.427E-01
2024	3.031E+05	2.914E-03	8.967E-01
2025	3.031E+05	2.772E-03	8.530E-01
2026	3.031E+05	2.636E-03	8.114E-01
2027	3.031E+05	2.508E-03	7.718E-01
2028	3.031E+05	2.386E-03	7.342E-01
2029	3.031E+05	2.269E-03	6.984E-01
2030	3.031E+05	2.158E-03	6.643E-01
2031	3.031E+05	2.053E-03	6.319E-01
2032	3.031E+05	1.953E-03	6.011E-01
2033	3.031E+05	1.858E-03	5.718E-01
2034	3.031E+05	1.767E-03	5.439E-01
2035	3.031E+05	1.681E-03	5.174E-01
2036	3.031E+05	1.599E-03	4.921E-01
2037	3.031E+05	1.521E-03	4.681E-01
2038	3.031E+05	1.447E-03	4.453E-01
2039	3.031E+05	1.376E-03	4.236E-01
2040	3.031E+05	1.309E-03	4.029E-01
2041	3.031E+05	1.245E-03	3.833E-01
2042	3.031E+05	1.185E-03	3.646E-01
2043	3.031E+05	1.127E-03	3.468E-01
2044	3.031E+05	1.072E-03	3.299E-01
2045	3.031E+05	1.020E-03	3.138E-01
2046	3.031E+05	9.699E-04	2.985E-01
2047	3.031E+05	9.226E-04	2.839E-01
2048	3.031E+05	8.776E-04	2.701E-01
2049	3.031E+05	8.348E-04	2.569E-01
2050	3.031E+05	7.941E-04	2.444E-01
2051	3.031E+05	7.553E-04	2.325E-01
2052	3.031E+05	7.185E-04	2.211E-01
2053	3.031E+05	6.835E-04	2.103E-01
2054	3.031E+05	6.501E-04	2.001E-01
2055	3.031E+05	6.184E-04	1.903E-01
2056	3.031E+05	5.883E-04	1.810E-01
2057	3.031E+05	5.596E-04	1.722E-01
2058	3.031E+05	5.323E-04	1.638E-01
2059	3.031E+05	5.063E-04	1.558E-01
2060	3.031E+05	4.816E-04	1.482E-01
2061	3.031E+05	4.581E-04	1.410E-01
2062	3.031E+05	4.358E-04	1.341E-01
2063	3.031E+05	4.145E-04	1.276E-01
2064	3.031E+05	3.943E-04	1.214E-01
2065	3.031E+05	3.751E-04	1.154E-01
2066	3.031E+05	3.568E-04	1.098E-01
2067	3.031E+05	3.394E-04	1.045E-01
2068	3.031E+05	3.228E-04	9.936E-02
2069	3.031E+05	3.071E-04	9.451E-02
2070	3.031E+05	2.921E-04	8.990E-02
2071	3.031E+05	2.779E-04	8.552E-02
2072	3.031E+05	2.643E-04	8.135E-02
2073	3.031E+05	2.514E-04	7.738E-02
2074	3.031E+05	2.392E-04	7.361E-02
2075	3.031E+05	2.275E-04	7.002E-02
2076	3.031E+05	2.164E-04	6.660E-02
2077	3.031E+05	2.059E-04	6.335E-02
2078	3.031E+05	1.958E-04	6.026E-02
2079	3.031E+05	1.863E-04	5.733E-02
2080	3.031E+05	1.772E-04	5.453E-02
2081	3.031E+05	1.685E-04	5.187E-02
2082	3.031E+05	1.603E-04	4.934E-02
2083	3.031E+05	1.525E-04	4.693E-02
2084	3.031E+05	1.451E-04	4.465E-02
2085	3.031E+05	1.380E-04	4.247E-02
2086	3.031E+05	1.313E-04	4.040E-02
2087	3.031E+05	1.249E-04	3.843E-02
2088	3.031E+05	1.188E-04	3.655E-02

continued

Table D-7. Emisson Rate of Benzene from Parcel 1 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2089	3.031E+05	1.130E-04	3.477E-02
2090	3.031E+05	1.075E-04	3.307E-02
2091	3.031E+05	1.022E-04	3.146E-02
2092	3.031E+05	9.724E-05	2.993E-02
2093	3.031E+05	9.250E-05	2.847E-02
2094	3.031E+05	8.799E-05	2.708E-02
2095	3.031E+05	8.369E-05	2.576E-02
2096	3.031E+05	7.961E-05	2.450E-02
2097	3.031E+05	7.573E-05	2.331E-02
2098	3.031E+05	7.204E-05	2.217E-02
2099	3.031E+05	6.852E-05	2.109E-02
2100	3.031E+05	6.518E-05	2.006E-02
2101	3.031E+05	6.200E-05	1.908E-02
2102	3.031E+05	5.898E-05	1.815E-02
2103	3.031E+05	5.610E-05	1.727E-02
2104	3.031E+05	5.337E-05	1.642E-02
2105	3.031E+05	5.076E-05	1.562E-02
2106	3.031E+05	4.829E-05	1.486E-02
2107	3.031E+05	4.593E-05	1.414E-02
2108	3.031E+05	4.369E-05	1.345E-02
2109	3.031E+05	4.156E-05	1.279E-02
2110	3.031E+05	3.953E-05	1.217E-02
2111	3.031E+05	3.761E-05	1.157E-02
2112	3.031E+05	3.577E-05	1.101E-02
2113	3.031E+05	3.403E-05	1.047E-02
2114	3.031E+05	3.237E-05	9.962E-03
2115	3.031E+05	3.079E-05	9.476E-03
2116	3.031E+05	2.929E-05	9.014E-03
2117	3.031E+05	2.786E-05	8.574E-03
2118	3.031E+05	2.650E-05	8.156E-03
2119	3.031E+05	2.521E-05	7.758E-03
2120	3.031E+05	2.398E-05	7.380E-03
2121	3.031E+05	2.281E-05	7.020E-03
2122	3.031E+05	2.170E-05	6.678E-03
2123	3.031E+05	2.064E-05	6.352E-03
2124	3.031E+05	1.963E-05	6.042E-03
2125	3.031E+05	1.867E-05	5.747E-03
2126	3.031E+05	1.776E-05	5.467E-03
2127	3.031E+05	1.690E-05	5.200E-03
2128	3.031E+05	1.607E-05	4.947E-03
2129	3.031E+05	1.529E-05	4.706E-03
2130	3.031E+05	1.454E-05	4.476E-03
2131	3.031E+05	1.383E-05	4.258E-03
2132	3.031E+05	1.316E-05	4.050E-03
2133	3.031E+05	1.252E-05	3.853E-03
2134	3.031E+05	1.191E-05	3.665E-03
2135	3.031E+05	1.133E-05	3.486E-03
2136	3.031E+05	1.077E-05	3.316E-03
2137	3.031E+05	1.025E-05	3.154E-03
2138	3.031E+05	9.749E-06	3.000E-03
2139	3.031E+05	9.274E-06	2.854E-03
2140	3.031E+05	8.821E-06	2.715E-03
2141	3.031E+05	8.391E-06	2.582E-03
2142	3.031E+05	7.982E-06	2.457E-03
2143	3.031E+05	7.593E-06	2.337E-03
2144	3.031E+05	7.222E-06	2.223E-03
2145	3.031E+05	6.870E-06	2.114E-03
2146	3.031E+05	6.535E-06	2.011E-03
2147	3.031E+05	6.216E-06	1.913E-03
2148	3.031E+05	5.913E-06	1.820E-03
2149	3.031E+05	5.625E-06	1.731E-03
2150	3.031E+05	5.350E-06	1.647E-03
2151	3.031E+05	5.089E-06	1.566E-03
2152	3.031E+05	4.841E-06	1.490E-03
2153	3.031E+05	4.605E-06	1.417E-03
2154	3.031E+05	4.381E-06	1.348E-03
2155	3.031E+05	4.167E-06	1.282E-03
2156	3.031E+05	3.964E-06	1.220E-03
2157	3.031E+05	3.770E-06	1.160E-03
2158	3.031E+05	3.586E-06	1.104E-03

continued

Table D-7. Emisson Rate of Benzene from Parcel 1 for Years 1975 to 2203 (concluded).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2159	3.031E+05	3.412E-06	1.050E-03
2160	3.031E+05	3.245E-06	9.988E-04
2161	3.031E+05	3.087E-06	9.500E-04
2162	3.031E+05	2.936E-06	9.037E-04
2163	3.031E+05	2.793E-06	8.596E-04
2164	3.031E+05	2.657E-06	8.177E-04
2165	3.031E+05	2.527E-06	7.778E-04
2166	3.031E+05	2.404E-06	7.399E-04
2167	3.031E+05	2.287E-06	7.038E-04
2168	3.031E+05	2.175E-06	6.695E-04
2169	3.031E+05	2.069E-06	6.368E-04
2170	3.031E+05	1.968E-06	6.058E-04
2171	3.031E+05	1.872E-06	5.762E-04
2172	3.031E+05	1.781E-06	5.481E-04
2173	3.031E+05	1.694E-06	5.214E-04
2174	3.031E+05	1.612E-06	4.960E-04
2175	3.031E+05	1.533E-06	4.718E-04
2176	3.031E+05	1.458E-06	4.488E-04
2177	3.031E+05	1.387E-06	4.269E-04
2178	3.031E+05	1.319E-06	4.061E-04
2179	3.031E+05	1.255E-06	3.863E-04
2180	3.031E+05	1.194E-06	3.674E-04
2181	3.031E+05	1.136E-06	3.495E-04
2182	3.031E+05	1.080E-06	3.325E-04
2183	3.031E+05	1.028E-06	3.162E-04
2184	3.031E+05	9.774E-07	3.008E-04
2185	3.031E+05	9.298E-07	2.861E-04
2186	3.031E+05	8.844E-07	2.722E-04
2187	3.031E+05	8.413E-07	2.589E-04
2188	3.031E+05	8.002E-07	2.463E-04
2189	3.031E+05	7.612E-07	2.343E-04
2190	3.031E+05	7.241E-07	2.229E-04
2191	3.031E+05	6.888E-07	2.120E-04
2192	3.031E+05	6.552E-07	2.016E-04
2193	3.031E+05	6.232E-07	1.918E-04
2194	3.031E+05	5.928E-07	1.825E-04
2195	3.031E+05	5.639E-07	1.736E-04
2196	3.031E+05	5.364E-07	1.651E-04
2197	3.031E+05	5.103E-07	1.570E-04
2198	3.031E+05	4.854E-07	1.494E-04
2199	3.031E+05	4.617E-07	1.421E-04
2200	3.031E+05	4.392E-07	1.352E-04
2201	3.031E+05	4.178E-07	1.286E-04
2202	3.031E+05	3.974E-07	1.223E-04
2203	3.031E+05	3.780E-07	1.163E-04

Table D-8. Emisson Rate of Carbon Tetrachloride from Parcel 1 for Years 1975 to 2203.

Source: H:\3000\030177~2.000\030177~1.003\BUSHVA~1\STRATA1.PRM

Model Parameters

Lo : 170.00 m^3 / Mg
k : 0.0500 1/yr
NMOC : 2200.00 ppmv
Methane : 64.0000 % volume
Carbon Dioxide : 36.0000 % volume
Air Pollutant : Carbon Tetrachloride (HAP/VOC)
Molecular Wt = 153.84 Concentration = 0.000000 ppmV

Landfill Parameters

Landfill type : Co-Disposal
Year Opened : 1974 Current Year : 2004 Closure Year: 2004
Capacity : 303128 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 0.00 Mg/year

Model Results

Year	Refuse In Place (Mg)	Carbon Tetrachloride (HAP/VOC) Emission Rate (Mg/yr)	(Cubic m/yr)
1975	3.031E+04	0.000E+00	0.000E+00
1976	6.063E+04	0.000E+00	0.000E+00
1977	9.094E+04	0.000E+00	0.000E+00
1978	1.213E+05	0.000E+00	0.000E+00
1979	1.516E+05	0.000E+00	0.000E+00
1980	1.819E+05	0.000E+00	0.000E+00
1981	2.122E+05	0.000E+00	0.000E+00
1982	2.425E+05	0.000E+00	0.000E+00
1983	2.728E+05	0.000E+00	0.000E+00
1984	3.031E+05	0.000E+00	0.000E+00
1985	3.031E+05	0.000E+00	0.000E+00
1986	3.031E+05	0.000E+00	0.000E+00
1987	3.031E+05	0.000E+00	0.000E+00
1988	3.031E+05	0.000E+00	0.000E+00
1989	3.031E+05	0.000E+00	0.000E+00
1990	3.031E+05	0.000E+00	0.000E+00
1991	3.031E+05	0.000E+00	0.000E+00
1992	3.031E+05	0.000E+00	0.000E+00
1993	3.031E+05	0.000E+00	0.000E+00
1994	3.031E+05	0.000E+00	0.000E+00
1995	3.031E+05	0.000E+00	0.000E+00
1996	3.031E+05	0.000E+00	0.000E+00
1997	3.031E+05	0.000E+00	0.000E+00
1998	3.031E+05	0.000E+00	0.000E+00
1999	3.031E+05	0.000E+00	0.000E+00
2000	3.031E+05	0.000E+00	0.000E+00
2001	3.031E+05	0.000E+00	0.000E+00
2002	3.031E+05	0.000E+00	0.000E+00
2003	3.031E+05	0.000E+00	0.000E+00
2004	3.031E+05	0.000E+00	0.000E+00
2005	3.031E+05	0.000E+00	0.000E+00
2006	3.031E+05	0.000E+00	0.000E+00
2007	3.031E+05	0.000E+00	0.000E+00
2008	3.031E+05	0.000E+00	0.000E+00
2009	3.031E+05	0.000E+00	0.000E+00
2010	3.031E+05	0.000E+00	0.000E+00
2011	3.031E+05	0.000E+00	0.000E+00
2012	3.031E+05	0.000E+00	0.000E+00
2013	3.031E+05	0.000E+00	0.000E+00
2014	3.031E+05	0.000E+00	0.000E+00
2015	3.031E+05	0.000E+00	0.000E+00
2016	3.031E+05	0.000E+00	0.000E+00
2017	3.031E+05	0.000E+00	0.000E+00
2018	3.031E+05	0.000E+00	0.000E+00

continued

Table D-8. Emisson Rate of Carbon Tetrachloride from Parcel 1 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2019	3.031E+05	0.000E+00	0.000E+00
2020	3.031E+05	0.000E+00	0.000E+00
2021	3.031E+05	0.000E+00	0.000E+00
2022	3.031E+05	0.000E+00	0.000E+00
2023	3.031E+05	0.000E+00	0.000E+00
2024	3.031E+05	0.000E+00	0.000E+00
2025	3.031E+05	0.000E+00	0.000E+00
2026	3.031E+05	0.000E+00	0.000E+00
2027	3.031E+05	0.000E+00	0.000E+00
2028	3.031E+05	0.000E+00	0.000E+00
2029	3.031E+05	0.000E+00	0.000E+00
2030	3.031E+05	0.000E+00	0.000E+00
2031	3.031E+05	0.000E+00	0.000E+00
2032	3.031E+05	0.000E+00	0.000E+00
2033	3.031E+05	0.000E+00	0.000E+00
2034	3.031E+05	0.000E+00	0.000E+00
2035	3.031E+05	0.000E+00	0.000E+00
2036	3.031E+05	0.000E+00	0.000E+00
2037	3.031E+05	0.000E+00	0.000E+00
2038	3.031E+05	0.000E+00	0.000E+00
2039	3.031E+05	0.000E+00	0.000E+00
2040	3.031E+05	0.000E+00	0.000E+00
2041	3.031E+05	0.000E+00	0.000E+00
2042	3.031E+05	0.000E+00	0.000E+00
2043	3.031E+05	0.000E+00	0.000E+00
2044	3.031E+05	0.000E+00	0.000E+00
2045	3.031E+05	0.000E+00	0.000E+00
2046	3.031E+05	0.000E+00	0.000E+00
2047	3.031E+05	0.000E+00	0.000E+00
2048	3.031E+05	0.000E+00	0.000E+00
2049	3.031E+05	0.000E+00	0.000E+00
2050	3.031E+05	0.000E+00	0.000E+00
2051	3.031E+05	0.000E+00	0.000E+00
2052	3.031E+05	0.000E+00	0.000E+00
2053	3.031E+05	0.000E+00	0.000E+00
2054	3.031E+05	0.000E+00	0.000E+00
2055	3.031E+05	0.000E+00	0.000E+00
2056	3.031E+05	0.000E+00	0.000E+00
2057	3.031E+05	0.000E+00	0.000E+00
2058	3.031E+05	0.000E+00	0.000E+00
2059	3.031E+05	0.000E+00	0.000E+00
2060	3.031E+05	0.000E+00	0.000E+00
2061	3.031E+05	0.000E+00	0.000E+00
2062	3.031E+05	0.000E+00	0.000E+00
2063	3.031E+05	0.000E+00	0.000E+00
2064	3.031E+05	0.000E+00	0.000E+00
2065	3.031E+05	0.000E+00	0.000E+00
2066	3.031E+05	0.000E+00	0.000E+00
2067	3.031E+05	0.000E+00	0.000E+00
2068	3.031E+05	0.000E+00	0.000E+00
2069	3.031E+05	0.000E+00	0.000E+00
2070	3.031E+05	0.000E+00	0.000E+00
2071	3.031E+05	0.000E+00	0.000E+00
2072	3.031E+05	0.000E+00	0.000E+00
2073	3.031E+05	0.000E+00	0.000E+00
2074	3.031E+05	0.000E+00	0.000E+00
2075	3.031E+05	0.000E+00	0.000E+00
2076	3.031E+05	0.000E+00	0.000E+00
2077	3.031E+05	0.000E+00	0.000E+00
2078	3.031E+05	0.000E+00	0.000E+00
2079	3.031E+05	0.000E+00	0.000E+00
2080	3.031E+05	0.000E+00	0.000E+00
2081	3.031E+05	0.000E+00	0.000E+00
2082	3.031E+05	0.000E+00	0.000E+00
2083	3.031E+05	0.000E+00	0.000E+00
2084	3.031E+05	0.000E+00	0.000E+00
2085	3.031E+05	0.000E+00	0.000E+00
2086	3.031E+05	0.000E+00	0.000E+00
2087	3.031E+05	0.000E+00	0.000E+00
2088	3.031E+05	0.000E+00	0.000E+00

continued

Table D-8. Emisson Rate of Carbon Tetrachloride from Parcel 1 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2089	3.031E+05	0.000E+00	0.000E+00
2090	3.031E+05	0.000E+00	0.000E+00
2091	3.031E+05	0.000E+00	0.000E+00
2092	3.031E+05	0.000E+00	0.000E+00
2093	3.031E+05	0.000E+00	0.000E+00
2094	3.031E+05	0.000E+00	0.000E+00
2095	3.031E+05	0.000E+00	0.000E+00
2096	3.031E+05	0.000E+00	0.000E+00
2097	3.031E+05	0.000E+00	0.000E+00
2098	3.031E+05	0.000E+00	0.000E+00
2099	3.031E+05	0.000E+00	0.000E+00
2100	3.031E+05	0.000E+00	0.000E+00
2101	3.031E+05	0.000E+00	0.000E+00
2102	3.031E+05	0.000E+00	0.000E+00
2103	3.031E+05	0.000E+00	0.000E+00
2104	3.031E+05	0.000E+00	0.000E+00
2105	3.031E+05	0.000E+00	0.000E+00
2106	3.031E+05	0.000E+00	0.000E+00
2107	3.031E+05	0.000E+00	0.000E+00
2108	3.031E+05	0.000E+00	0.000E+00
2109	3.031E+05	0.000E+00	0.000E+00
2110	3.031E+05	0.000E+00	0.000E+00
2111	3.031E+05	0.000E+00	0.000E+00
2112	3.031E+05	0.000E+00	0.000E+00
2113	3.031E+05	0.000E+00	0.000E+00
2114	3.031E+05	0.000E+00	0.000E+00
2115	3.031E+05	0.000E+00	0.000E+00
2116	3.031E+05	0.000E+00	0.000E+00
2117	3.031E+05	0.000E+00	0.000E+00
2118	3.031E+05	0.000E+00	0.000E+00
2119	3.031E+05	0.000E+00	0.000E+00
2120	3.031E+05	0.000E+00	0.000E+00
2121	3.031E+05	0.000E+00	0.000E+00
2122	3.031E+05	0.000E+00	0.000E+00
2123	3.031E+05	0.000E+00	0.000E+00
2124	3.031E+05	0.000E+00	0.000E+00
2125	3.031E+05	0.000E+00	0.000E+00
2126	3.031E+05	0.000E+00	0.000E+00
2127	3.031E+05	0.000E+00	0.000E+00
2128	3.031E+05	0.000E+00	0.000E+00
2129	3.031E+05	0.000E+00	0.000E+00
2130	3.031E+05	0.000E+00	0.000E+00
2131	3.031E+05	0.000E+00	0.000E+00
2132	3.031E+05	0.000E+00	0.000E+00
2133	3.031E+05	0.000E+00	0.000E+00
2134	3.031E+05	0.000E+00	0.000E+00
2135	3.031E+05	0.000E+00	0.000E+00
2136	3.031E+05	0.000E+00	0.000E+00
2137	3.031E+05	0.000E+00	0.000E+00
2138	3.031E+05	0.000E+00	0.000E+00
2139	3.031E+05	0.000E+00	0.000E+00
2140	3.031E+05	0.000E+00	0.000E+00
2141	3.031E+05	0.000E+00	0.000E+00
2142	3.031E+05	0.000E+00	0.000E+00
2143	3.031E+05	0.000E+00	0.000E+00
2144	3.031E+05	0.000E+00	0.000E+00
2145	3.031E+05	0.000E+00	0.000E+00
2146	3.031E+05	0.000E+00	0.000E+00
2147	3.031E+05	0.000E+00	0.000E+00
2148	3.031E+05	0.000E+00	0.000E+00
2149	3.031E+05	0.000E+00	0.000E+00
2150	3.031E+05	0.000E+00	0.000E+00
2151	3.031E+05	0.000E+00	0.000E+00
2152	3.031E+05	0.000E+00	0.000E+00
2153	3.031E+05	0.000E+00	0.000E+00
2154	3.031E+05	0.000E+00	0.000E+00
2155	3.031E+05	0.000E+00	0.000E+00
2156	3.031E+05	0.000E+00	0.000E+00
2157	3.031E+05	0.000E+00	0.000E+00
2158	3.031E+05	0.000E+00	0.000E+00

continued

Table D-8. Emisson Rate of Carbon Tetrachloride from Parcel 1 for Years 1975 to 2203 (concluded).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2159	3.031E+05	0.000E+00	0.000E+00
2160	3.031E+05	0.000E+00	0.000E+00
2161	3.031E+05	0.000E+00	0.000E+00
2162	3.031E+05	0.000E+00	0.000E+00
2163	3.031E+05	0.000E+00	0.000E+00
2164	3.031E+05	0.000E+00	0.000E+00
2165	3.031E+05	0.000E+00	0.000E+00
2166	3.031E+05	0.000E+00	0.000E+00
2167	3.031E+05	0.000E+00	0.000E+00
2168	3.031E+05	0.000E+00	0.000E+00
2169	3.031E+05	0.000E+00	0.000E+00
2170	3.031E+05	0.000E+00	0.000E+00
2171	3.031E+05	0.000E+00	0.000E+00
2172	3.031E+05	0.000E+00	0.000E+00
2173	3.031E+05	0.000E+00	0.000E+00
2174	3.031E+05	0.000E+00	0.000E+00
2175	3.031E+05	0.000E+00	0.000E+00
2176	3.031E+05	0.000E+00	0.000E+00
2177	3.031E+05	0.000E+00	0.000E+00
2178	3.031E+05	0.000E+00	0.000E+00
2179	3.031E+05	0.000E+00	0.000E+00
2180	3.031E+05	0.000E+00	0.000E+00
2181	3.031E+05	0.000E+00	0.000E+00
2182	3.031E+05	0.000E+00	0.000E+00
2183	3.031E+05	0.000E+00	0.000E+00
2184	3.031E+05	0.000E+00	0.000E+00
2185	3.031E+05	0.000E+00	0.000E+00
2186	3.031E+05	0.000E+00	0.000E+00
2187	3.031E+05	0.000E+00	0.000E+00
2188	3.031E+05	0.000E+00	0.000E+00
2189	3.031E+05	0.000E+00	0.000E+00
2190	3.031E+05	0.000E+00	0.000E+00
2191	3.031E+05	0.000E+00	0.000E+00
2192	3.031E+05	0.000E+00	0.000E+00
2193	3.031E+05	0.000E+00	0.000E+00
2194	3.031E+05	0.000E+00	0.000E+00
2195	3.031E+05	0.000E+00	0.000E+00
2196	3.031E+05	0.000E+00	0.000E+00
2197	3.031E+05	0.000E+00	0.000E+00
2198	3.031E+05	0.000E+00	0.000E+00
2199	3.031E+05	0.000E+00	0.000E+00
2200	3.031E+05	0.000E+00	0.000E+00
2201	3.031E+05	0.000E+00	0.000E+00
2202	3.031E+05	0.000E+00	0.000E+00
2203	3.031E+05	0.000E+00	0.000E+00

Table D-9. Emisson Rate of Chlorobenzene from Parcel 1 for Years 1975 to 2203.

Source: H:\3000\030177~2.000\030177~1.003\BUSHVA~1\STRATA1.PRM

Model Parameters

Lo : 170.00 m^3 / Mg
k : 0.0500 1/yr
NMOC : 2200.00 ppmv
Methane : 64.0000 % volume
Carbon Dioxide : 36.0000 % volume
Air Pollutant : Chlorobenzene (HAP/VOC)
Molecular Wt = 112.56 Concentration = 0.300000 ppmV

Landfill Parameters

Landfill type : Co-Disposal
Year Opened : 1974 Current Year : 2004 Closure Year: 2004
Capacity : 303128 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 0.00 Mg/year

Model Results

Year	Refuse In Place (Mg)	Chlorobenzene (HAP/VOC) Emission Rate (Mg/yr)	(Cubic m/yr)
1975	3.031E+04	5.654E-04	1.208E-01
1976	6.063E+04	1.103E-03	2.357E-01
1977	9.094E+04	1.615E-03	3.449E-01
1978	1.213E+05	2.102E-03	4.489E-01
1979	1.516E+05	2.565E-03	5.478E-01
1980	1.819E+05	3.005E-03	6.418E-01
1981	2.122E+05	3.424E-03	7.313E-01
1982	2.425E+05	3.822E-03	8.164E-01
1983	2.728E+05	4.201E-03	8.974E-01
1984	3.031E+05	4.562E-03	9.744E-01
1985	3.031E+05	4.339E-03	9.269E-01
1986	3.031E+05	4.128E-03	8.817E-01
1987	3.031E+05	3.926E-03	8.387E-01
1988	3.031E+05	3.735E-03	7.978E-01
1989	3.031E+05	3.553E-03	7.589E-01
1990	3.031E+05	3.380E-03	7.219E-01
1991	3.031E+05	3.215E-03	6.867E-01
1992	3.031E+05	3.058E-03	6.532E-01
1993	3.031E+05	2.909E-03	6.213E-01
1994	3.031E+05	2.767E-03	5.910E-01
1995	3.031E+05	2.632E-03	5.622E-01
1996	3.031E+05	2.504E-03	5.348E-01
1997	3.031E+05	2.381E-03	5.087E-01
1998	3.031E+05	2.265E-03	4.839E-01
1999	3.031E+05	2.155E-03	4.603E-01
2000	3.031E+05	2.050E-03	4.378E-01
2001	3.031E+05	1.950E-03	4.165E-01
2002	3.031E+05	1.855E-03	3.962E-01
2003	3.031E+05	1.764E-03	3.768E-01
2004	3.031E+05	1.678E-03	3.585E-01
2005	3.031E+05	1.596E-03	3.410E-01
2006	3.031E+05	1.519E-03	3.244E-01
2007	3.031E+05	1.444E-03	3.085E-01
2008	3.031E+05	1.374E-03	2.935E-01
2009	3.031E+05	1.307E-03	2.792E-01
2010	3.031E+05	1.243E-03	2.656E-01
2011	3.031E+05	1.183E-03	2.526E-01
2012	3.031E+05	1.125E-03	2.403E-01
2013	3.031E+05	1.070E-03	2.286E-01
2014	3.031E+05	1.018E-03	2.174E-01
2015	3.031E+05	9.682E-04	2.068E-01
2016	3.031E+05	9.210E-04	1.967E-01
2017	3.031E+05	8.761E-04	1.871E-01
2018	3.031E+05	8.334E-04	1.780E-01

continued

Table D-9. Emisson Rate of Chlorobenzene from Parcel 1 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2019	3.031E+05	7.927E-04	1.693E-01
2020	3.031E+05	7.541E-04	1.611E-01
2021	3.031E+05	7.173E-04	1.532E-01
2022	3.031E+05	6.823E-04	1.457E-01
2023	3.031E+05	6.490E-04	1.386E-01
2024	3.031E+05	6.174E-04	1.319E-01
2025	3.031E+05	5.873E-04	1.254E-01
2026	3.031E+05	5.586E-04	1.193E-01
2027	3.031E+05	5.314E-04	1.135E-01
2028	3.031E+05	5.055E-04	1.080E-01
2029	3.031E+05	4.808E-04	1.027E-01
2030	3.031E+05	4.574E-04	9.769E-02
2031	3.031E+05	4.351E-04	9.293E-02
2032	3.031E+05	4.138E-04	8.840E-02
2033	3.031E+05	3.937E-04	8.408E-02
2034	3.031E+05	3.745E-04	7.998E-02
2035	3.031E+05	3.562E-04	7.608E-02
2036	3.031E+05	3.388E-04	7.237E-02
2037	3.031E+05	3.223E-04	6.884E-02
2038	3.031E+05	3.066E-04	6.549E-02
2039	3.031E+05	2.916E-04	6.229E-02
2040	3.031E+05	2.774E-04	5.925E-02
2041	3.031E+05	2.639E-04	5.636E-02
2042	3.031E+05	2.510E-04	5.361E-02
2043	3.031E+05	2.388E-04	5.100E-02
2044	3.031E+05	2.271E-04	4.851E-02
2045	3.031E+05	2.160E-04	4.615E-02
2046	3.031E+05	2.055E-04	4.390E-02
2047	3.031E+05	1.955E-04	4.176E-02
2048	3.031E+05	1.860E-04	3.972E-02
2049	3.031E+05	1.769E-04	3.778E-02
2050	3.031E+05	1.683E-04	3.594E-02
2051	3.031E+05	1.600E-04	3.419E-02
2052	3.031E+05	1.522E-04	3.252E-02
2053	3.031E+05	1.448E-04	3.093E-02
2054	3.031E+05	1.378E-04	2.942E-02
2055	3.031E+05	1.310E-04	2.799E-02
2056	3.031E+05	1.246E-04	2.662E-02
2057	3.031E+05	1.186E-04	2.533E-02
2058	3.031E+05	1.128E-04	2.409E-02
2059	3.031E+05	1.073E-04	2.292E-02
2060	3.031E+05	1.021E-04	2.180E-02
2061	3.031E+05	9.708E-05	2.074E-02
2062	3.031E+05	9.234E-05	1.972E-02
2063	3.031E+05	8.784E-05	1.876E-02
2064	3.031E+05	8.355E-05	1.785E-02
2065	3.031E+05	7.948E-05	1.698E-02
2066	3.031E+05	7.560E-05	1.615E-02
2067	3.031E+05	7.192E-05	1.536E-02
2068	3.031E+05	6.841E-05	1.461E-02
2069	3.031E+05	6.507E-05	1.390E-02
2070	3.031E+05	6.190E-05	1.322E-02
2071	3.031E+05	5.888E-05	1.258E-02
2072	3.031E+05	5.601E-05	1.196E-02
2073	3.031E+05	5.328E-05	1.138E-02
2074	3.031E+05	5.068E-05	1.082E-02
2075	3.031E+05	4.821E-05	1.030E-02
2076	3.031E+05	4.586E-05	9.795E-03
2077	3.031E+05	4.362E-05	9.317E-03
2078	3.031E+05	4.149E-05	8.862E-03
2079	3.031E+05	3.947E-05	8.430E-03
2080	3.031E+05	3.754E-05	8.019E-03
2081	3.031E+05	3.571E-05	7.628E-03
2082	3.031E+05	3.397E-05	7.256E-03
2083	3.031E+05	3.231E-05	6.902E-03
2084	3.031E+05	3.074E-05	6.565E-03
2085	3.031E+05	2.924E-05	6.245E-03
2086	3.031E+05	2.781E-05	5.941E-03
2087	3.031E+05	2.646E-05	5.651E-03
2088	3.031E+05	2.517E-05	5.375E-03

continued

Table D-9. Emisson Rate of Chlorobenzene from Parcel 1 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2089	3.031E+05	2.394E-05	5.113E-03
2090	3.031E+05	2.277E-05	4.864E-03
2091	3.031E+05	2.166E-05	4.627E-03
2092	3.031E+05	2.060E-05	4.401E-03
2093	3.031E+05	1.960E-05	4.186E-03
2094	3.031E+05	1.864E-05	3.982E-03
2095	3.031E+05	1.773E-05	3.788E-03
2096	3.031E+05	1.687E-05	3.603E-03
2097	3.031E+05	1.605E-05	3.427E-03
2098	3.031E+05	1.526E-05	3.260E-03
2099	3.031E+05	1.452E-05	3.101E-03
2100	3.031E+05	1.381E-05	2.950E-03
2101	3.031E+05	1.314E-05	2.806E-03
2102	3.031E+05	1.250E-05	2.669E-03
2103	3.031E+05	1.189E-05	2.539E-03
2104	3.031E+05	1.131E-05	2.415E-03
2105	3.031E+05	1.076E-05	2.298E-03
2106	3.031E+05	1.023E-05	2.185E-03
2107	3.031E+05	9.733E-06	2.079E-03
2108	3.031E+05	9.258E-06	1.977E-03
2109	3.031E+05	8.806E-06	1.881E-03
2110	3.031E+05	8.377E-06	1.789E-03
2111	3.031E+05	7.968E-06	1.702E-03
2112	3.031E+05	7.580E-06	1.619E-03
2113	3.031E+05	7.210E-06	1.540E-03
2114	3.031E+05	6.858E-06	1.465E-03
2115	3.031E+05	6.524E-06	1.394E-03
2116	3.031E+05	6.206E-06	1.326E-03
2117	3.031E+05	5.903E-06	1.261E-03
2118	3.031E+05	5.615E-06	1.199E-03
2119	3.031E+05	5.341E-06	1.141E-03
2120	3.031E+05	5.081E-06	1.085E-03
2121	3.031E+05	4.833E-06	1.032E-03
2122	3.031E+05	4.597E-06	9.820E-04
2123	3.031E+05	4.373E-06	9.341E-04
2124	3.031E+05	4.160E-06	8.885E-04
2125	3.031E+05	3.957E-06	8.452E-04
2126	3.031E+05	3.764E-06	8.040E-04
2127	3.031E+05	3.580E-06	7.648E-04
2128	3.031E+05	3.406E-06	7.275E-04
2129	3.031E+05	3.240E-06	6.920E-04
2130	3.031E+05	3.082E-06	6.582E-04
2131	3.031E+05	2.931E-06	6.261E-04
2132	3.031E+05	2.788E-06	5.956E-04
2133	3.031E+05	2.652E-06	5.666E-04
2134	3.031E+05	2.523E-06	5.389E-04
2135	3.031E+05	2.400E-06	5.126E-04
2136	3.031E+05	2.283E-06	4.876E-04
2137	3.031E+05	2.172E-06	4.639E-04
2138	3.031E+05	2.066E-06	4.412E-04
2139	3.031E+05	1.965E-06	4.197E-04
2140	3.031E+05	1.869E-06	3.992E-04
2141	3.031E+05	1.778E-06	3.798E-04
2142	3.031E+05	1.691E-06	3.613E-04
2143	3.031E+05	1.609E-06	3.436E-04
2144	3.031E+05	1.530E-06	3.269E-04
2145	3.031E+05	1.456E-06	3.109E-04
2146	3.031E+05	1.385E-06	2.958E-04
2147	3.031E+05	1.317E-06	2.813E-04
2148	3.031E+05	1.253E-06	2.676E-04
2149	3.031E+05	1.192E-06	2.546E-04
2150	3.031E+05	1.134E-06	2.422E-04
2151	3.031E+05	1.078E-06	2.303E-04
2152	3.031E+05	1.026E-06	2.191E-04
2153	3.031E+05	9.758E-07	2.084E-04
2154	3.031E+05	9.282E-07	1.983E-04
2155	3.031E+05	8.829E-07	1.886E-04
2156	3.031E+05	8.399E-07	1.794E-04
2157	3.031E+05	7.989E-07	1.706E-04
2158	3.031E+05	7.599E-07	1.623E-04

continued

Table D-9. Emisson Rate of Chlorobenzene from Parcel 1 for Years 1975 to 2203 (concluded).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2159	3.031E+05	7.229E-07	1.544E-04
2160	3.031E+05	6.876E-07	1.469E-04
2161	3.031E+05	6.541E-07	1.397E-04
2162	3.031E+05	6.222E-07	1.329E-04
2163	3.031E+05	5.918E-07	1.264E-04
2164	3.031E+05	5.630E-07	1.203E-04
2165	3.031E+05	5.355E-07	1.144E-04
2166	3.031E+05	5.094E-07	1.088E-04
2167	3.031E+05	4.846E-07	1.035E-04
2168	3.031E+05	4.609E-07	9.845E-05
2169	3.031E+05	4.384E-07	9.365E-05
2170	3.031E+05	4.171E-07	8.908E-05
2171	3.031E+05	3.967E-07	8.474E-05
2172	3.031E+05	3.774E-07	8.061E-05
2173	3.031E+05	3.590E-07	7.668E-05
2174	3.031E+05	3.415E-07	7.294E-05
2175	3.031E+05	3.248E-07	6.938E-05
2176	3.031E+05	3.090E-07	6.600E-05
2177	3.031E+05	2.939E-07	6.278E-05
2178	3.031E+05	2.796E-07	5.971E-05
2179	3.031E+05	2.659E-07	5.680E-05
2180	3.031E+05	2.530E-07	5.403E-05
2181	3.031E+05	2.406E-07	5.140E-05
2182	3.031E+05	2.289E-07	4.889E-05
2183	3.031E+05	2.177E-07	4.651E-05
2184	3.031E+05	2.071E-07	4.424E-05
2185	3.031E+05	1.970E-07	4.208E-05
2186	3.031E+05	1.874E-07	4.003E-05
2187	3.031E+05	1.783E-07	3.808E-05
2188	3.031E+05	1.696E-07	3.622E-05
2189	3.031E+05	1.613E-07	3.445E-05
2190	3.031E+05	1.534E-07	3.277E-05
2191	3.031E+05	1.459E-07	3.117E-05
2192	3.031E+05	1.388E-07	2.965E-05
2193	3.031E+05	1.321E-07	2.821E-05
2194	3.031E+05	1.256E-07	2.683E-05
2195	3.031E+05	1.195E-07	2.552E-05
2196	3.031E+05	1.137E-07	2.428E-05
2197	3.031E+05	1.081E-07	2.309E-05
2198	3.031E+05	1.028E-07	2.197E-05
2199	3.031E+05	9.783E-08	2.090E-05
2200	3.031E+05	9.306E-08	1.988E-05
2201	3.031E+05	8.852E-08	1.891E-05
2202	3.031E+05	8.420E-08	1.799E-05
2203	3.031E+05	8.010E-08	1.711E-05

Table D-10. Emisson Rate of Chloroethane from Parcel 1 for Years 1975 to 2203.

Source: H:\3000\030177~2.000\030177~1.003\BUSHVA~1\STRATA1.PRM

Model Parameters

Lo : 170.00 m^3 / Mg
k : 0.0500 1/yr
NMOC : 2200.00 ppmv
Methane : 64.0000 % volume
Carbon Dioxide : 36.0000 % volume
Air Pollutant : Chloroethane (HAP/VOC)
Molecular Wt = 64.52 Concentration = 0.550000 ppmV

Landfill Parameters

Landfill type : Co-Disposal
Year Opened : 1974 Current Year : 2004 Closure Year: 2004
Capacity : 303128 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 0.00 Mg/year

Model Results

Year	Refuse In Place (Mg)	Chloroethane (HAP/VOC) Emission Rate (Mg/yr)	(Cubic m/yr)
1975	3.031E+04	5.942E-04	2.214E-01
1976	6.063E+04	1.159E-03	4.321E-01
1977	9.094E+04	1.697E-03	6.324E-01
1978	1.213E+05	2.209E-03	8.230E-01
1979	1.516E+05	2.695E-03	1.004E+00
1980	1.819E+05	3.158E-03	1.177E+00
1981	2.122E+05	3.598E-03	1.341E+00
1982	2.425E+05	4.017E-03	1.497E+00
1983	2.728E+05	4.415E-03	1.645E+00
1984	3.031E+05	4.794E-03	1.786E+00
1985	3.031E+05	4.560E-03	1.699E+00
1986	3.031E+05	4.338E-03	1.616E+00
1987	3.031E+05	4.126E-03	1.538E+00
1988	3.031E+05	3.925E-03	1.463E+00
1989	3.031E+05	3.734E-03	1.391E+00
1990	3.031E+05	3.551E-03	1.323E+00
1991	3.031E+05	3.378E-03	1.259E+00
1992	3.031E+05	3.213E-03	1.197E+00
1993	3.031E+05	3.057E-03	1.139E+00
1994	3.031E+05	2.908E-03	1.084E+00
1995	3.031E+05	2.766E-03	1.031E+00
1996	3.031E+05	2.631E-03	9.804E-01
1997	3.031E+05	2.503E-03	9.326E-01
1998	3.031E+05	2.381E-03	8.871E-01
1999	3.031E+05	2.265E-03	8.438E-01
2000	3.031E+05	2.154E-03	8.027E-01
2001	3.031E+05	2.049E-03	7.635E-01
2002	3.031E+05	1.949E-03	7.263E-01
2003	3.031E+05	1.854E-03	6.909E-01
2004	3.031E+05	1.764E-03	6.572E-01
2005	3.031E+05	1.678E-03	6.251E-01
2006	3.031E+05	1.596E-03	5.946E-01
2007	3.031E+05	1.518E-03	5.656E-01
2008	3.031E+05	1.444E-03	5.381E-01
2009	3.031E+05	1.373E-03	5.118E-01
2010	3.031E+05	1.307E-03	4.869E-01
2011	3.031E+05	1.243E-03	4.631E-01
2012	3.031E+05	1.182E-03	4.405E-01
2013	3.031E+05	1.125E-03	4.190E-01
2014	3.031E+05	1.070E-03	3.986E-01
2015	3.031E+05	1.018E-03	3.792E-01
2016	3.031E+05	9.679E-04	3.607E-01
2017	3.031E+05	9.207E-04	3.431E-01
2018	3.031E+05	8.758E-04	3.263E-01

continued

Table D-10. Emisson Rate of Chloroethane from Parcel 1 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2019	3.031E+05	8.331E-04	3.104E-01
2020	3.031E+05	7.924E-04	2.953E-01
2021	3.031E+05	7.538E-04	2.809E-01
2022	3.031E+05	7.170E-04	2.672E-01
2023	3.031E+05	6.821E-04	2.542E-01
2024	3.031E+05	6.488E-04	2.418E-01
2025	3.031E+05	6.171E-04	2.300E-01
2026	3.031E+05	5.870E-04	2.188E-01
2027	3.031E+05	5.584E-04	2.081E-01
2028	3.031E+05	5.312E-04	1.979E-01
2029	3.031E+05	5.053E-04	1.883E-01
2030	3.031E+05	4.806E-04	1.791E-01
2031	3.031E+05	4.572E-04	1.704E-01
2032	3.031E+05	4.349E-04	1.621E-01
2033	3.031E+05	4.137E-04	1.542E-01
2034	3.031E+05	3.935E-04	1.466E-01
2035	3.031E+05	3.743E-04	1.395E-01
2036	3.031E+05	3.561E-04	1.327E-01
2037	3.031E+05	3.387E-04	1.262E-01
2038	3.031E+05	3.222E-04	1.201E-01
2039	3.031E+05	3.065E-04	1.142E-01
2040	3.031E+05	2.915E-04	1.086E-01
2041	3.031E+05	2.773E-04	1.033E-01
2042	3.031E+05	2.638E-04	9.829E-02
2043	3.031E+05	2.509E-04	9.350E-02
2044	3.031E+05	2.387E-04	8.894E-02
2045	3.031E+05	2.270E-04	8.460E-02
2046	3.031E+05	2.160E-04	8.048E-02
2047	3.031E+05	2.054E-04	7.655E-02
2048	3.031E+05	1.954E-04	7.282E-02
2049	3.031E+05	1.859E-04	6.927E-02
2050	3.031E+05	1.768E-04	6.589E-02
2051	3.031E+05	1.682E-04	6.268E-02
2052	3.031E+05	1.600E-04	5.962E-02
2053	3.031E+05	1.522E-04	5.671E-02
2054	3.031E+05	1.448E-04	5.394E-02
2055	3.031E+05	1.377E-04	5.131E-02
2056	3.031E+05	1.310E-04	4.881E-02
2057	3.031E+05	1.246E-04	4.643E-02
2058	3.031E+05	1.185E-04	4.417E-02
2059	3.031E+05	1.127E-04	4.201E-02
2060	3.031E+05	1.072E-04	3.996E-02
2061	3.031E+05	1.020E-04	3.801E-02
2062	3.031E+05	9.704E-05	3.616E-02
2063	3.031E+05	9.231E-05	3.440E-02
2064	3.031E+05	8.780E-05	3.272E-02
2065	3.031E+05	8.352E-05	3.112E-02
2066	3.031E+05	7.945E-05	2.961E-02
2067	3.031E+05	7.557E-05	2.816E-02
2068	3.031E+05	7.189E-05	2.679E-02
2069	3.031E+05	6.838E-05	2.548E-02
2070	3.031E+05	6.505E-05	2.424E-02
2071	3.031E+05	6.187E-05	2.306E-02
2072	3.031E+05	5.886E-05	2.193E-02
2073	3.031E+05	5.599E-05	2.086E-02
2074	3.031E+05	5.326E-05	1.985E-02
2075	3.031E+05	5.066E-05	1.888E-02
2076	3.031E+05	4.819E-05	1.796E-02
2077	3.031E+05	4.584E-05	1.708E-02
2078	3.031E+05	4.360E-05	1.625E-02
2079	3.031E+05	4.148E-05	1.546E-02
2080	3.031E+05	3.945E-05	1.470E-02
2081	3.031E+05	3.753E-05	1.398E-02
2082	3.031E+05	3.570E-05	1.330E-02
2083	3.031E+05	3.396E-05	1.265E-02
2084	3.031E+05	3.230E-05	1.204E-02
2085	3.031E+05	3.073E-05	1.145E-02
2086	3.031E+05	2.923E-05	1.089E-02
2087	3.031E+05	2.780E-05	1.036E-02
2088	3.031E+05	2.645E-05	9.855E-03

continued

Table D-10. Emisson Rate of Chloroethane from Parcel 1 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2089	3.031E+05	2.516E-05	9.374E-03
2090	3.031E+05	2.393E-05	8.917E-03
2091	3.031E+05	2.276E-05	8.482E-03
2092	3.031E+05	2.165E-05	8.068E-03
2093	3.031E+05	2.060E-05	7.675E-03
2094	3.031E+05	1.959E-05	7.301E-03
2095	3.031E+05	1.864E-05	6.945E-03
2096	3.031E+05	1.773E-05	6.606E-03
2097	3.031E+05	1.686E-05	6.284E-03
2098	3.031E+05	1.604E-05	5.977E-03
2099	3.031E+05	1.526E-05	5.686E-03
2100	3.031E+05	1.451E-05	5.408E-03
2101	3.031E+05	1.381E-05	5.145E-03
2102	3.031E+05	1.313E-05	4.894E-03
2103	3.031E+05	1.249E-05	4.655E-03
2104	3.031E+05	1.188E-05	4.428E-03
2105	3.031E+05	1.130E-05	4.212E-03
2106	3.031E+05	1.075E-05	4.007E-03
2107	3.031E+05	1.023E-05	3.811E-03
2108	3.031E+05	9.729E-06	3.625E-03
2109	3.031E+05	9.254E-06	3.449E-03
2110	3.031E+05	8.803E-06	3.280E-03
2111	3.031E+05	8.374E-06	3.120E-03
2112	3.031E+05	7.965E-06	2.968E-03
2113	3.031E+05	7.577E-06	2.823E-03
2114	3.031E+05	7.207E-06	2.686E-03
2115	3.031E+05	6.856E-06	2.555E-03
2116	3.031E+05	6.522E-06	2.430E-03
2117	3.031E+05	6.203E-06	2.312E-03
2118	3.031E+05	5.901E-06	2.199E-03
2119	3.031E+05	5.613E-06	2.092E-03
2120	3.031E+05	5.339E-06	1.990E-03
2121	3.031E+05	5.079E-06	1.893E-03
2122	3.031E+05	4.831E-06	1.800E-03
2123	3.031E+05	4.596E-06	1.713E-03
2124	3.031E+05	4.372E-06	1.629E-03
2125	3.031E+05	4.158E-06	1.550E-03
2126	3.031E+05	3.956E-06	1.474E-03
2127	3.031E+05	3.763E-06	1.402E-03
2128	3.031E+05	3.579E-06	1.334E-03
2129	3.031E+05	3.405E-06	1.269E-03
2130	3.031E+05	3.238E-06	1.207E-03
2131	3.031E+05	3.081E-06	1.148E-03
2132	3.031E+05	2.930E-06	1.092E-03
2133	3.031E+05	2.787E-06	1.039E-03
2134	3.031E+05	2.651E-06	9.880E-04
2135	3.031E+05	2.522E-06	9.398E-04
2136	3.031E+05	2.399E-06	8.940E-04
2137	3.031E+05	2.282E-06	8.504E-04
2138	3.031E+05	2.171E-06	8.089E-04
2139	3.031E+05	2.065E-06	7.695E-04
2140	3.031E+05	1.964E-06	7.320E-04
2141	3.031E+05	1.868E-06	6.963E-04
2142	3.031E+05	1.777E-06	6.623E-04
2143	3.031E+05	1.691E-06	6.300E-04
2144	3.031E+05	1.608E-06	5.993E-04
2145	3.031E+05	1.530E-06	5.700E-04
2146	3.031E+05	1.455E-06	5.422E-04
2147	3.031E+05	1.384E-06	5.158E-04
2148	3.031E+05	1.317E-06	4.906E-04
2149	3.031E+05	1.252E-06	4.667E-04
2150	3.031E+05	1.191E-06	4.440E-04
2151	3.031E+05	1.133E-06	4.223E-04
2152	3.031E+05	1.078E-06	4.017E-04
2153	3.031E+05	1.025E-06	3.821E-04
2154	3.031E+05	9.754E-07	3.635E-04
2155	3.031E+05	9.278E-07	3.458E-04
2156	3.031E+05	8.826E-07	3.289E-04
2157	3.031E+05	8.395E-07	3.128E-04
2158	3.031E+05	7.986E-07	2.976E-04

continued

Table D-10. Emisson Rate of Chloroethane from Parcel 1 for Years 1975 to 2203 (concluded).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2159	3.031E+05	7.597E-07	2.831E-04
2160	3.031E+05	7.226E-07	2.693E-04
2161	3.031E+05	6.874E-07	2.561E-04
2162	3.031E+05	6.538E-07	2.436E-04
2163	3.031E+05	6.220E-07	2.318E-04
2164	3.031E+05	5.916E-07	2.205E-04
2165	3.031E+05	5.628E-07	2.097E-04
2166	3.031E+05	5.353E-07	1.995E-04
2167	3.031E+05	5.092E-07	1.898E-04
2168	3.031E+05	4.844E-07	1.805E-04
2169	3.031E+05	4.608E-07	1.717E-04
2170	3.031E+05	4.383E-07	1.633E-04
2171	3.031E+05	4.169E-07	1.554E-04
2172	3.031E+05	3.966E-07	1.478E-04
2173	3.031E+05	3.772E-07	1.406E-04
2174	3.031E+05	3.588E-07	1.337E-04
2175	3.031E+05	3.413E-07	1.272E-04
2176	3.031E+05	3.247E-07	1.210E-04
2177	3.031E+05	3.089E-07	1.151E-04
2178	3.031E+05	2.938E-07	1.095E-04
2179	3.031E+05	2.795E-07	1.041E-04
2180	3.031E+05	2.658E-07	9.906E-05
2181	3.031E+05	2.529E-07	9.423E-05
2182	3.031E+05	2.405E-07	8.963E-05
2183	3.031E+05	2.288E-07	8.526E-05
2184	3.031E+05	2.176E-07	8.110E-05
2185	3.031E+05	2.070E-07	7.715E-05
2186	3.031E+05	1.969E-07	7.338E-05
2187	3.031E+05	1.873E-07	6.981E-05
2188	3.031E+05	1.782E-07	6.640E-05
2189	3.031E+05	1.695E-07	6.316E-05
2190	3.031E+05	1.612E-07	6.008E-05
2191	3.031E+05	1.534E-07	5.715E-05
2192	3.031E+05	1.459E-07	5.436E-05
2193	3.031E+05	1.388E-07	5.171E-05
2194	3.031E+05	1.320E-07	4.919E-05
2195	3.031E+05	1.256E-07	4.679E-05
2196	3.031E+05	1.194E-07	4.451E-05
2197	3.031E+05	1.136E-07	4.234E-05
2198	3.031E+05	1.081E-07	4.027E-05
2199	3.031E+05	1.028E-07	3.831E-05
2200	3.031E+05	9.779E-08	3.644E-05
2201	3.031E+05	9.302E-08	3.466E-05
2202	3.031E+05	8.849E-08	3.297E-05
2203	3.031E+05	8.417E-08	3.137E-05

Table D-11. Emisson Rate of Chloroform from Parcel 1 for Years 1975 to 2203.

Source: H:\3000\030177~2.000\030177~1.003\BUSHVA~1\STRATA1.PRM

Model Parameters

Lo : 170.00 m^3 / Mg
k : 0.0500 1/yr
NMOC : 2200.00 ppmv
Methane : 64.0000 % volume
Carbon Dioxide : 36.0000 % volume
Air Pollutant : Chloroform (HAP/VOC)
Molecular Wt = 119.38 Concentration = 0.000000 ppmV

Landfill Parameters

Landfill type : Co-Disposal
Year Opened : 1974 Current Year : 2004 Closure Year: 2004
Capacity : 303128 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 0.00 Mg/year

Model Results

Year	Refuse In Place (Mg)	Chloroform (HAP/VOC) Emission Rate (Mg/yr)	(Cubic m/yr)
1975	3.031E+04	0.000E+00	0.000E+00
1976	6.063E+04	0.000E+00	0.000E+00
1977	9.094E+04	0.000E+00	0.000E+00
1978	1.213E+05	0.000E+00	0.000E+00
1979	1.516E+05	0.000E+00	0.000E+00
1980	1.819E+05	0.000E+00	0.000E+00
1981	2.122E+05	0.000E+00	0.000E+00
1982	2.425E+05	0.000E+00	0.000E+00
1983	2.728E+05	0.000E+00	0.000E+00
1984	3.031E+05	0.000E+00	0.000E+00
1985	3.031E+05	0.000E+00	0.000E+00
1986	3.031E+05	0.000E+00	0.000E+00
1987	3.031E+05	0.000E+00	0.000E+00
1988	3.031E+05	0.000E+00	0.000E+00
1989	3.031E+05	0.000E+00	0.000E+00
1990	3.031E+05	0.000E+00	0.000E+00
1991	3.031E+05	0.000E+00	0.000E+00
1992	3.031E+05	0.000E+00	0.000E+00
1993	3.031E+05	0.000E+00	0.000E+00
1994	3.031E+05	0.000E+00	0.000E+00
1995	3.031E+05	0.000E+00	0.000E+00
1996	3.031E+05	0.000E+00	0.000E+00
1997	3.031E+05	0.000E+00	0.000E+00
1998	3.031E+05	0.000E+00	0.000E+00
1999	3.031E+05	0.000E+00	0.000E+00
2000	3.031E+05	0.000E+00	0.000E+00
2001	3.031E+05	0.000E+00	0.000E+00
2002	3.031E+05	0.000E+00	0.000E+00
2003	3.031E+05	0.000E+00	0.000E+00
2004	3.031E+05	0.000E+00	0.000E+00
2005	3.031E+05	0.000E+00	0.000E+00
2006	3.031E+05	0.000E+00	0.000E+00
2007	3.031E+05	0.000E+00	0.000E+00
2008	3.031E+05	0.000E+00	0.000E+00
2009	3.031E+05	0.000E+00	0.000E+00
2010	3.031E+05	0.000E+00	0.000E+00
2011	3.031E+05	0.000E+00	0.000E+00
2012	3.031E+05	0.000E+00	0.000E+00
2013	3.031E+05	0.000E+00	0.000E+00
2014	3.031E+05	0.000E+00	0.000E+00
2015	3.031E+05	0.000E+00	0.000E+00
2016	3.031E+05	0.000E+00	0.000E+00
2017	3.031E+05	0.000E+00	0.000E+00
2018	3.031E+05	0.000E+00	0.000E+00

continued

Table D-11. Emisson Rate of Chloroform from Parcel 1 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2019	3.031E+05	0.000E+00	0.000E+00
2020	3.031E+05	0.000E+00	0.000E+00
2021	3.031E+05	0.000E+00	0.000E+00
2022	3.031E+05	0.000E+00	0.000E+00
2023	3.031E+05	0.000E+00	0.000E+00
2024	3.031E+05	0.000E+00	0.000E+00
2025	3.031E+05	0.000E+00	0.000E+00
2026	3.031E+05	0.000E+00	0.000E+00
2027	3.031E+05	0.000E+00	0.000E+00
2028	3.031E+05	0.000E+00	0.000E+00
2029	3.031E+05	0.000E+00	0.000E+00
2030	3.031E+05	0.000E+00	0.000E+00
2031	3.031E+05	0.000E+00	0.000E+00
2032	3.031E+05	0.000E+00	0.000E+00
2033	3.031E+05	0.000E+00	0.000E+00
2034	3.031E+05	0.000E+00	0.000E+00
2035	3.031E+05	0.000E+00	0.000E+00
2036	3.031E+05	0.000E+00	0.000E+00
2037	3.031E+05	0.000E+00	0.000E+00
2038	3.031E+05	0.000E+00	0.000E+00
2039	3.031E+05	0.000E+00	0.000E+00
2040	3.031E+05	0.000E+00	0.000E+00
2041	3.031E+05	0.000E+00	0.000E+00
2042	3.031E+05	0.000E+00	0.000E+00
2043	3.031E+05	0.000E+00	0.000E+00
2044	3.031E+05	0.000E+00	0.000E+00
2045	3.031E+05	0.000E+00	0.000E+00
2046	3.031E+05	0.000E+00	0.000E+00
2047	3.031E+05	0.000E+00	0.000E+00
2048	3.031E+05	0.000E+00	0.000E+00
2049	3.031E+05	0.000E+00	0.000E+00
2050	3.031E+05	0.000E+00	0.000E+00
2051	3.031E+05	0.000E+00	0.000E+00
2052	3.031E+05	0.000E+00	0.000E+00
2053	3.031E+05	0.000E+00	0.000E+00
2054	3.031E+05	0.000E+00	0.000E+00
2055	3.031E+05	0.000E+00	0.000E+00
2056	3.031E+05	0.000E+00	0.000E+00
2057	3.031E+05	0.000E+00	0.000E+00
2058	3.031E+05	0.000E+00	0.000E+00
2059	3.031E+05	0.000E+00	0.000E+00
2060	3.031E+05	0.000E+00	0.000E+00
2061	3.031E+05	0.000E+00	0.000E+00
2062	3.031E+05	0.000E+00	0.000E+00
2063	3.031E+05	0.000E+00	0.000E+00
2064	3.031E+05	0.000E+00	0.000E+00
2065	3.031E+05	0.000E+00	0.000E+00
2066	3.031E+05	0.000E+00	0.000E+00
2067	3.031E+05	0.000E+00	0.000E+00
2068	3.031E+05	0.000E+00	0.000E+00
2069	3.031E+05	0.000E+00	0.000E+00
2070	3.031E+05	0.000E+00	0.000E+00
2071	3.031E+05	0.000E+00	0.000E+00
2072	3.031E+05	0.000E+00	0.000E+00
2073	3.031E+05	0.000E+00	0.000E+00
2074	3.031E+05	0.000E+00	0.000E+00
2075	3.031E+05	0.000E+00	0.000E+00
2076	3.031E+05	0.000E+00	0.000E+00
2077	3.031E+05	0.000E+00	0.000E+00
2078	3.031E+05	0.000E+00	0.000E+00
2079	3.031E+05	0.000E+00	0.000E+00
2080	3.031E+05	0.000E+00	0.000E+00
2081	3.031E+05	0.000E+00	0.000E+00
2082	3.031E+05	0.000E+00	0.000E+00
2083	3.031E+05	0.000E+00	0.000E+00
2084	3.031E+05	0.000E+00	0.000E+00
2085	3.031E+05	0.000E+00	0.000E+00
2086	3.031E+05	0.000E+00	0.000E+00
2087	3.031E+05	0.000E+00	0.000E+00
2088	3.031E+05	0.000E+00	0.000E+00

continued

Table D-11. Emisson Rate of Chloroform from Parcel 1 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2089	3.031E+05	0.000E+00	0.000E+00
2090	3.031E+05	0.000E+00	0.000E+00
2091	3.031E+05	0.000E+00	0.000E+00
2092	3.031E+05	0.000E+00	0.000E+00
2093	3.031E+05	0.000E+00	0.000E+00
2094	3.031E+05	0.000E+00	0.000E+00
2095	3.031E+05	0.000E+00	0.000E+00
2096	3.031E+05	0.000E+00	0.000E+00
2097	3.031E+05	0.000E+00	0.000E+00
2098	3.031E+05	0.000E+00	0.000E+00
2099	3.031E+05	0.000E+00	0.000E+00
2100	3.031E+05	0.000E+00	0.000E+00
2101	3.031E+05	0.000E+00	0.000E+00
2102	3.031E+05	0.000E+00	0.000E+00
2103	3.031E+05	0.000E+00	0.000E+00
2104	3.031E+05	0.000E+00	0.000E+00
2105	3.031E+05	0.000E+00	0.000E+00
2106	3.031E+05	0.000E+00	0.000E+00
2107	3.031E+05	0.000E+00	0.000E+00
2108	3.031E+05	0.000E+00	0.000E+00
2109	3.031E+05	0.000E+00	0.000E+00
2110	3.031E+05	0.000E+00	0.000E+00
2111	3.031E+05	0.000E+00	0.000E+00
2112	3.031E+05	0.000E+00	0.000E+00
2113	3.031E+05	0.000E+00	0.000E+00
2114	3.031E+05	0.000E+00	0.000E+00
2115	3.031E+05	0.000E+00	0.000E+00
2116	3.031E+05	0.000E+00	0.000E+00
2117	3.031E+05	0.000E+00	0.000E+00
2118	3.031E+05	0.000E+00	0.000E+00
2119	3.031E+05	0.000E+00	0.000E+00
2120	3.031E+05	0.000E+00	0.000E+00
2121	3.031E+05	0.000E+00	0.000E+00
2122	3.031E+05	0.000E+00	0.000E+00
2123	3.031E+05	0.000E+00	0.000E+00
2124	3.031E+05	0.000E+00	0.000E+00
2125	3.031E+05	0.000E+00	0.000E+00
2126	3.031E+05	0.000E+00	0.000E+00
2127	3.031E+05	0.000E+00	0.000E+00
2128	3.031E+05	0.000E+00	0.000E+00
2129	3.031E+05	0.000E+00	0.000E+00
2130	3.031E+05	0.000E+00	0.000E+00
2131	3.031E+05	0.000E+00	0.000E+00
2132	3.031E+05	0.000E+00	0.000E+00
2133	3.031E+05	0.000E+00	0.000E+00
2134	3.031E+05	0.000E+00	0.000E+00
2135	3.031E+05	0.000E+00	0.000E+00
2136	3.031E+05	0.000E+00	0.000E+00
2137	3.031E+05	0.000E+00	0.000E+00
2138	3.031E+05	0.000E+00	0.000E+00
2139	3.031E+05	0.000E+00	0.000E+00
2140	3.031E+05	0.000E+00	0.000E+00
2141	3.031E+05	0.000E+00	0.000E+00
2142	3.031E+05	0.000E+00	0.000E+00
2143	3.031E+05	0.000E+00	0.000E+00
2144	3.031E+05	0.000E+00	0.000E+00
2145	3.031E+05	0.000E+00	0.000E+00
2146	3.031E+05	0.000E+00	0.000E+00
2147	3.031E+05	0.000E+00	0.000E+00
2148	3.031E+05	0.000E+00	0.000E+00
2149	3.031E+05	0.000E+00	0.000E+00
2150	3.031E+05	0.000E+00	0.000E+00
2151	3.031E+05	0.000E+00	0.000E+00
2152	3.031E+05	0.000E+00	0.000E+00
2153	3.031E+05	0.000E+00	0.000E+00
2154	3.031E+05	0.000E+00	0.000E+00
2155	3.031E+05	0.000E+00	0.000E+00
2156	3.031E+05	0.000E+00	0.000E+00
2157	3.031E+05	0.000E+00	0.000E+00
2158	3.031E+05	0.000E+00	0.000E+00

continued

Table D-11. Emisson Rate of Chloroform from Parcel 1 for Years 1975 to 2203 (concluded).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2159	3.031E+05	0.000E+00	0.000E+00
2160	3.031E+05	0.000E+00	0.000E+00
2161	3.031E+05	0.000E+00	0.000E+00
2162	3.031E+05	0.000E+00	0.000E+00
2163	3.031E+05	0.000E+00	0.000E+00
2164	3.031E+05	0.000E+00	0.000E+00
2165	3.031E+05	0.000E+00	0.000E+00
2166	3.031E+05	0.000E+00	0.000E+00
2167	3.031E+05	0.000E+00	0.000E+00
2168	3.031E+05	0.000E+00	0.000E+00
2169	3.031E+05	0.000E+00	0.000E+00
2170	3.031E+05	0.000E+00	0.000E+00
2171	3.031E+05	0.000E+00	0.000E+00
2172	3.031E+05	0.000E+00	0.000E+00
2173	3.031E+05	0.000E+00	0.000E+00
2174	3.031E+05	0.000E+00	0.000E+00
2175	3.031E+05	0.000E+00	0.000E+00
2176	3.031E+05	0.000E+00	0.000E+00
2177	3.031E+05	0.000E+00	0.000E+00
2178	3.031E+05	0.000E+00	0.000E+00
2179	3.031E+05	0.000E+00	0.000E+00
2180	3.031E+05	0.000E+00	0.000E+00
2181	3.031E+05	0.000E+00	0.000E+00
2182	3.031E+05	0.000E+00	0.000E+00
2183	3.031E+05	0.000E+00	0.000E+00
2184	3.031E+05	0.000E+00	0.000E+00
2185	3.031E+05	0.000E+00	0.000E+00
2186	3.031E+05	0.000E+00	0.000E+00
2187	3.031E+05	0.000E+00	0.000E+00
2188	3.031E+05	0.000E+00	0.000E+00
2189	3.031E+05	0.000E+00	0.000E+00
2190	3.031E+05	0.000E+00	0.000E+00
2191	3.031E+05	0.000E+00	0.000E+00
2192	3.031E+05	0.000E+00	0.000E+00
2193	3.031E+05	0.000E+00	0.000E+00
2194	3.031E+05	0.000E+00	0.000E+00
2195	3.031E+05	0.000E+00	0.000E+00
2196	3.031E+05	0.000E+00	0.000E+00
2197	3.031E+05	0.000E+00	0.000E+00
2198	3.031E+05	0.000E+00	0.000E+00
2199	3.031E+05	0.000E+00	0.000E+00
2200	3.031E+05	0.000E+00	0.000E+00
2201	3.031E+05	0.000E+00	0.000E+00
2202	3.031E+05	0.000E+00	0.000E+00
2203	3.031E+05	0.000E+00	0.000E+00

Table D-12. Emisson Rate of 1,4-Dichlorobenzene from Parcel 1 for Years 1975 to 2203.

Source: H:\3000\030177~2.000\030177~1.003\BUSHVA~1\STRATA1.PRM

Model Parameters

Lo : 170.00 m^3 / Mg
k : 0.0500 1/yr
NMOC : 2200.00 ppmv
Methane : 64.0000 % volume
Carbon Dioxide : 36.0000 % volume
Air Pollutant : Dichlorobenzene (VOC/HAP for 1,4 isomer)
Molecular Wt = 147.00 Concentration = 0.280000 ppmV

Landfill Parameters

Landfill type : Co-Disposal
Year Opened : 1974 Current Year : 2004 Closure Year: 2004
Capacity : 303128 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 0.00 Mg/year

Model Results

Year	Refuse In Place (Mg)	Dichlorobenzene (VOC/HAP for 1,4 isomer) Emission R (Mg/yr)	(Cubic m/yr)
1975	3.031E+04	6.892E-04	1.127E-01
1976	6.063E+04	1.345E-03	2.200E-01
1977	9.094E+04	1.968E-03	3.220E-01
1978	1.213E+05	2.562E-03	4.190E-01
1979	1.516E+05	3.126E-03	5.113E-01
1980	1.819E+05	3.663E-03	5.991E-01
1981	2.122E+05	4.173E-03	6.826E-01
1982	2.425E+05	4.659E-03	7.620E-01
1983	2.728E+05	5.121E-03	8.376E-01
1984	3.031E+05	5.560E-03	9.094E-01
1985	3.031E+05	5.289E-03	8.651E-01
1986	3.031E+05	5.031E-03	8.229E-01
1987	3.031E+05	4.786E-03	7.828E-01
1988	3.031E+05	4.553E-03	7.446E-01
1989	3.031E+05	4.331E-03	7.083E-01
1990	3.031E+05	4.119E-03	6.737E-01
1991	3.031E+05	3.918E-03	6.409E-01
1992	3.031E+05	3.727E-03	6.096E-01
1993	3.031E+05	3.546E-03	5.799E-01
1994	3.031E+05	3.373E-03	5.516E-01
1995	3.031E+05	3.208E-03	5.247E-01
1996	3.031E+05	3.052E-03	4.991E-01
1997	3.031E+05	2.903E-03	4.748E-01
1998	3.031E+05	2.761E-03	4.516E-01
1999	3.031E+05	2.627E-03	4.296E-01
2000	3.031E+05	2.498E-03	4.086E-01
2001	3.031E+05	2.377E-03	3.887E-01
2002	3.031E+05	2.261E-03	3.698E-01
2003	3.031E+05	2.150E-03	3.517E-01
2004	3.031E+05	2.046E-03	3.346E-01
2005	3.031E+05	1.946E-03	3.182E-01
2006	3.031E+05	1.851E-03	3.027E-01
2007	3.031E+05	1.761E-03	2.880E-01
2008	3.031E+05	1.675E-03	2.739E-01
2009	3.031E+05	1.593E-03	2.606E-01
2010	3.031E+05	1.515E-03	2.479E-01
2011	3.031E+05	1.441E-03	2.358E-01
2012	3.031E+05	1.371E-03	2.243E-01
2013	3.031E+05	1.304E-03	2.133E-01
2014	3.031E+05	1.241E-03	2.029E-01
2015	3.031E+05	1.180E-03	1.930E-01
2016	3.031E+05	1.123E-03	1.836E-01
2017	3.031E+05	1.068E-03	1.747E-01
2018	3.031E+05	1.016E-03	1.661E-01

continued

Table D-12. Emisson Rate of 1,4-Dichlorobenzene from Parcel 1 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2019	3.031E+05	9.663E-04	1.580E-01
2020	3.031E+05	9.191E-04	1.503E-01
2021	3.031E+05	8.743E-04	1.430E-01
2022	3.031E+05	8.317E-04	1.360E-01
2023	3.031E+05	7.911E-04	1.294E-01
2024	3.031E+05	7.525E-04	1.231E-01
2025	3.031E+05	7.158E-04	1.171E-01
2026	3.031E+05	6.809E-04	1.114E-01
2027	3.031E+05	6.477E-04	1.059E-01
2028	3.031E+05	6.161E-04	1.008E-01
2029	3.031E+05	5.861E-04	9.585E-02
2030	3.031E+05	5.575E-04	9.118E-02
2031	3.031E+05	5.303E-04	8.673E-02
2032	3.031E+05	5.044E-04	8.250E-02
2033	3.031E+05	4.798E-04	7.848E-02
2034	3.031E+05	4.564E-04	7.465E-02
2035	3.031E+05	4.342E-04	7.101E-02
2036	3.031E+05	4.130E-04	6.755E-02
2037	3.031E+05	3.929E-04	6.425E-02
2038	3.031E+05	3.737E-04	6.112E-02
2039	3.031E+05	3.555E-04	5.814E-02
2040	3.031E+05	3.381E-04	5.530E-02
2041	3.031E+05	3.216E-04	5.261E-02
2042	3.031E+05	3.060E-04	5.004E-02
2043	3.031E+05	2.910E-04	4.760E-02
2044	3.031E+05	2.768E-04	4.528E-02
2045	3.031E+05	2.633E-04	4.307E-02
2046	3.031E+05	2.505E-04	4.097E-02
2047	3.031E+05	2.383E-04	3.897E-02
2048	3.031E+05	2.267E-04	3.707E-02
2049	3.031E+05	2.156E-04	3.526E-02
2050	3.031E+05	2.051E-04	3.354E-02
2051	3.031E+05	1.951E-04	3.191E-02
2052	3.031E+05	1.856E-04	3.035E-02
2053	3.031E+05	1.765E-04	2.887E-02
2054	3.031E+05	1.679E-04	2.746E-02
2055	3.031E+05	1.597E-04	2.612E-02
2056	3.031E+05	1.519E-04	2.485E-02
2057	3.031E+05	1.445E-04	2.364E-02
2058	3.031E+05	1.375E-04	2.248E-02
2059	3.031E+05	1.308E-04	2.139E-02
2060	3.031E+05	1.244E-04	2.034E-02
2061	3.031E+05	1.183E-04	1.935E-02
2062	3.031E+05	1.126E-04	1.841E-02
2063	3.031E+05	1.071E-04	1.751E-02
2064	3.031E+05	1.018E-04	1.666E-02
2065	3.031E+05	9.688E-05	1.584E-02
2066	3.031E+05	9.215E-05	1.507E-02
2067	3.031E+05	8.766E-05	1.434E-02
2068	3.031E+05	8.338E-05	1.364E-02
2069	3.031E+05	7.932E-05	1.297E-02
2070	3.031E+05	7.545E-05	1.234E-02
2071	3.031E+05	7.177E-05	1.174E-02
2072	3.031E+05	6.827E-05	1.117E-02
2073	3.031E+05	6.494E-05	1.062E-02
2074	3.031E+05	6.177E-05	1.010E-02
2075	3.031E+05	5.876E-05	9.610E-03
2076	3.031E+05	5.589E-05	9.142E-03
2077	3.031E+05	5.317E-05	8.696E-03
2078	3.031E+05	5.057E-05	8.272E-03
2079	3.031E+05	4.811E-05	7.868E-03
2080	3.031E+05	4.576E-05	7.485E-03
2081	3.031E+05	4.353E-05	7.119E-03
2082	3.031E+05	4.141E-05	6.772E-03
2083	3.031E+05	3.939E-05	6.442E-03
2084	3.031E+05	3.747E-05	6.128E-03
2085	3.031E+05	3.564E-05	5.829E-03
2086	3.031E+05	3.390E-05	5.545E-03
2087	3.031E+05	3.225E-05	5.274E-03
2088	3.031E+05	3.067E-05	5.017E-03

continued

Table D-12. Emisson Rate of 1,4-Dichlorobenzene from Parcel 1 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2089	3.031E+05	2.918E-05	4.772E-03
2090	3.031E+05	2.776E-05	4.540E-03
2091	3.031E+05	2.640E-05	4.318E-03
2092	3.031E+05	2.511E-05	4.108E-03
2093	3.031E+05	2.389E-05	3.907E-03
2094	3.031E+05	2.272E-05	3.717E-03
2095	3.031E+05	2.162E-05	3.535E-03
2096	3.031E+05	2.056E-05	3.363E-03
2097	3.031E+05	1.956E-05	3.199E-03
2098	3.031E+05	1.861E-05	3.043E-03
2099	3.031E+05	1.770E-05	2.895E-03
2100	3.031E+05	1.683E-05	2.753E-03
2101	3.031E+05	1.601E-05	2.619E-03
2102	3.031E+05	1.523E-05	2.491E-03
2103	3.031E+05	1.449E-05	2.370E-03
2104	3.031E+05	1.378E-05	2.254E-03
2105	3.031E+05	1.311E-05	2.144E-03
2106	3.031E+05	1.247E-05	2.040E-03
2107	3.031E+05	1.186E-05	1.940E-03
2108	3.031E+05	1.128E-05	1.846E-03
2109	3.031E+05	1.073E-05	1.756E-03
2110	3.031E+05	1.021E-05	1.670E-03
2111	3.031E+05	9.713E-06	1.589E-03
2112	3.031E+05	9.239E-06	1.511E-03
2113	3.031E+05	8.788E-06	1.437E-03
2114	3.031E+05	8.360E-06	1.367E-03
2115	3.031E+05	7.952E-06	1.301E-03
2116	3.031E+05	7.564E-06	1.237E-03
2117	3.031E+05	7.195E-06	1.177E-03
2118	3.031E+05	6.844E-06	1.119E-03
2119	3.031E+05	6.511E-06	1.065E-03
2120	3.031E+05	6.193E-06	1.013E-03
2121	3.031E+05	5.891E-06	9.635E-04
2122	3.031E+05	5.604E-06	9.165E-04
2123	3.031E+05	5.330E-06	8.718E-04
2124	3.031E+05	5.070E-06	8.293E-04
2125	3.031E+05	4.823E-06	7.889E-04
2126	3.031E+05	4.588E-06	7.504E-04
2127	3.031E+05	4.364E-06	7.138E-04
2128	3.031E+05	4.151E-06	6.790E-04
2129	3.031E+05	3.949E-06	6.459E-04
2130	3.031E+05	3.756E-06	6.144E-04
2131	3.031E+05	3.573E-06	5.844E-04
2132	3.031E+05	3.399E-06	5.559E-04
2133	3.031E+05	3.233E-06	5.288E-04
2134	3.031E+05	3.075E-06	5.030E-04
2135	3.031E+05	2.925E-06	4.785E-04
2136	3.031E+05	2.783E-06	4.551E-04
2137	3.031E+05	2.647E-06	4.329E-04
2138	3.031E+05	2.518E-06	4.118E-04
2139	3.031E+05	2.395E-06	3.917E-04
2140	3.031E+05	2.278E-06	3.726E-04
2141	3.031E+05	2.167E-06	3.545E-04
2142	3.031E+05	2.062E-06	3.372E-04
2143	3.031E+05	1.961E-06	3.207E-04
2144	3.031E+05	1.865E-06	3.051E-04
2145	3.031E+05	1.774E-06	2.902E-04
2146	3.031E+05	1.688E-06	2.761E-04
2147	3.031E+05	1.606E-06	2.626E-04
2148	3.031E+05	1.527E-06	2.498E-04
2149	3.031E+05	1.453E-06	2.376E-04
2150	3.031E+05	1.382E-06	2.260E-04
2151	3.031E+05	1.314E-06	2.150E-04
2152	3.031E+05	1.250E-06	2.045E-04
2153	3.031E+05	1.189E-06	1.945E-04
2154	3.031E+05	1.131E-06	1.850E-04
2155	3.031E+05	1.076E-06	1.760E-04
2156	3.031E+05	1.024E-06	1.674E-04
2157	3.031E+05	9.738E-07	1.593E-04
2158	3.031E+05	9.263E-07	1.515E-04

continued

Table D-12. Emisson Rate of 1,4-Dichlorobenzene from Parcel 1 for Years 1975 to 2203 (concluded).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2159	3.031E+05	8.811E-07	1.441E-04
2160	3.031E+05	8.381E-07	1.371E-04
2161	3.031E+05	7.973E-07	1.304E-04
2162	3.031E+05	7.584E-07	1.240E-04
2163	3.031E+05	7.214E-07	1.180E-04
2164	3.031E+05	6.862E-07	1.122E-04
2165	3.031E+05	6.527E-07	1.068E-04
2166	3.031E+05	6.209E-07	1.016E-04
2167	3.031E+05	5.906E-07	9.660E-05
2168	3.031E+05	5.618E-07	9.189E-05
2169	3.031E+05	5.344E-07	8.741E-05
2170	3.031E+05	5.084E-07	8.315E-05
2171	3.031E+05	4.836E-07	7.909E-05
2172	3.031E+05	4.600E-07	7.523E-05
2173	3.031E+05	4.376E-07	7.156E-05
2174	3.031E+05	4.162E-07	6.807E-05
2175	3.031E+05	3.959E-07	6.475E-05
2176	3.031E+05	3.766E-07	6.160E-05
2177	3.031E+05	3.582E-07	5.859E-05
2178	3.031E+05	3.408E-07	5.573E-05
2179	3.031E+05	3.241E-07	5.302E-05
2180	3.031E+05	3.083E-07	5.043E-05
2181	3.031E+05	2.933E-07	4.797E-05
2182	3.031E+05	2.790E-07	4.563E-05
2183	3.031E+05	2.654E-07	4.341E-05
2184	3.031E+05	2.524E-07	4.129E-05
2185	3.031E+05	2.401E-07	3.928E-05
2186	3.031E+05	2.284E-07	3.736E-05
2187	3.031E+05	2.173E-07	3.554E-05
2188	3.031E+05	2.067E-07	3.380E-05
2189	3.031E+05	1.966E-07	3.216E-05
2190	3.031E+05	1.870E-07	3.059E-05
2191	3.031E+05	1.779E-07	2.910E-05
2192	3.031E+05	1.692E-07	2.768E-05
2193	3.031E+05	1.610E-07	2.633E-05
2194	3.031E+05	1.531E-07	2.504E-05
2195	3.031E+05	1.456E-07	2.382E-05
2196	3.031E+05	1.385E-07	2.266E-05
2197	3.031E+05	1.318E-07	2.155E-05
2198	3.031E+05	1.254E-07	2.050E-05
2199	3.031E+05	1.192E-07	1.950E-05
2200	3.031E+05	1.134E-07	1.855E-05
2201	3.031E+05	1.079E-07	1.765E-05
2202	3.031E+05	1.026E-07	1.679E-05
2203	3.031E+05	9.763E-08	1.597E-05

Table D-13. Emisson Rate of Methylene Chloride from Parcel 1 for Years 1975 to 2203.

Source: H:\3000\030177~2.000\030177~1.003\BUSHVA~1\STRATA1.PRM

Model Parameters

Lo : 170.00 m^3 / Mg
k : 0.0500 1/yr
NMOC : 2200.00 ppmv
Methane : 64.0000 % volume
Carbon Dioxide : 36.0000 % volume
Air Pollutant : Methylene Chloride
Molecular Wt = 84.90 Concentration = 0.190000 ppmV

Landfill Parameters

Landfill type : Co-Disposal
Year Opened : 1974 Current Year : 2004 Closure Year: 2004
Capacity : 303128 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 0.00 Mg/year

Model Results

Year	Refuse In Place (Mg)	Methylene Chloride Emission Rate (Mg/yr)	(Cubic m/yr)
1975	3.031E+04	2.701E-04	7.649E-02
1976	6.063E+04	5.271E-04	1.493E-01
1977	9.094E+04	7.715E-04	2.185E-01
1978	1.213E+05	1.004E-03	2.843E-01
1979	1.516E+05	1.225E-03	3.469E-01
1980	1.819E+05	1.435E-03	4.065E-01
1981	2.122E+05	1.636E-03	4.632E-01
1982	2.425E+05	1.826E-03	5.171E-01
1983	2.728E+05	2.007E-03	5.683E-01
1984	3.031E+05	2.179E-03	6.171E-01
1985	3.031E+05	2.073E-03	5.870E-01
1986	3.031E+05	1.972E-03	5.584E-01
1987	3.031E+05	1.876E-03	5.312E-01
1988	3.031E+05	1.784E-03	5.053E-01
1989	3.031E+05	1.697E-03	4.806E-01
1990	3.031E+05	1.614E-03	4.572E-01
1991	3.031E+05	1.536E-03	4.349E-01
1992	3.031E+05	1.461E-03	4.137E-01
1993	3.031E+05	1.390E-03	3.935E-01
1994	3.031E+05	1.322E-03	3.743E-01
1995	3.031E+05	1.257E-03	3.560E-01
1996	3.031E+05	1.196E-03	3.387E-01
1997	3.031E+05	1.138E-03	3.222E-01
1998	3.031E+05	1.082E-03	3.065E-01
1999	3.031E+05	1.029E-03	2.915E-01
2000	3.031E+05	9.792E-04	2.773E-01
2001	3.031E+05	9.314E-04	2.638E-01
2002	3.031E+05	8.860E-04	2.509E-01
2003	3.031E+05	8.428E-04	2.387E-01
2004	3.031E+05	8.017E-04	2.270E-01
2005	3.031E+05	7.626E-04	2.160E-01
2006	3.031E+05	7.254E-04	2.054E-01
2007	3.031E+05	6.900E-04	1.954E-01
2008	3.031E+05	6.564E-04	1.859E-01
2009	3.031E+05	6.244E-04	1.768E-01
2010	3.031E+05	5.939E-04	1.682E-01
2011	3.031E+05	5.649E-04	1.600E-01
2012	3.031E+05	5.374E-04	1.522E-01
2013	3.031E+05	5.112E-04	1.448E-01
2014	3.031E+05	4.862E-04	1.377E-01
2015	3.031E+05	4.625E-04	1.310E-01
2016	3.031E+05	4.400E-04	1.246E-01
2017	3.031E+05	4.185E-04	1.185E-01
2018	3.031E+05	3.981E-04	1.127E-01

continued

Table D-13. Emisson Rate of Methylene Chloride from Parcel 1 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2019	3.031E+05	3.787E-04	1.072E-01
2020	3.031E+05	3.602E-04	1.020E-01
2021	3.031E+05	3.427E-04	9.703E-02
2022	3.031E+05	3.259E-04	9.230E-02
2023	3.031E+05	3.100E-04	8.780E-02
2024	3.031E+05	2.949E-04	8.352E-02
2025	3.031E+05	2.805E-04	7.945E-02
2026	3.031E+05	2.669E-04	7.557E-02
2027	3.031E+05	2.538E-04	7.189E-02
2028	3.031E+05	2.415E-04	6.838E-02
2029	3.031E+05	2.297E-04	6.504E-02
2030	3.031E+05	2.185E-04	6.187E-02
2031	3.031E+05	2.078E-04	5.885E-02
2032	3.031E+05	1.977E-04	5.598E-02
2033	3.031E+05	1.881E-04	5.325E-02
2034	3.031E+05	1.789E-04	5.066E-02
2035	3.031E+05	1.702E-04	4.819E-02
2036	3.031E+05	1.619E-04	4.584E-02
2037	3.031E+05	1.540E-04	4.360E-02
2038	3.031E+05	1.465E-04	4.147E-02
2039	3.031E+05	1.393E-04	3.945E-02
2040	3.031E+05	1.325E-04	3.753E-02
2041	3.031E+05	1.261E-04	3.570E-02
2042	3.031E+05	1.199E-04	3.396E-02
2043	3.031E+05	1.141E-04	3.230E-02
2044	3.031E+05	1.085E-04	3.072E-02
2045	3.031E+05	1.032E-04	2.923E-02
2046	3.031E+05	9.817E-05	2.780E-02
2047	3.031E+05	9.338E-05	2.645E-02
2048	3.031E+05	8.883E-05	2.516E-02
2049	3.031E+05	8.450E-05	2.393E-02
2050	3.031E+05	8.038E-05	2.276E-02
2051	3.031E+05	7.646E-05	2.165E-02
2052	3.031E+05	7.273E-05	2.060E-02
2053	3.031E+05	6.918E-05	1.959E-02
2054	3.031E+05	6.581E-05	1.864E-02
2055	3.031E+05	6.260E-05	1.773E-02
2056	3.031E+05	5.954E-05	1.686E-02
2057	3.031E+05	5.664E-05	1.604E-02
2058	3.031E+05	5.388E-05	1.526E-02
2059	3.031E+05	5.125E-05	1.451E-02
2060	3.031E+05	4.875E-05	1.381E-02
2061	3.031E+05	4.637E-05	1.313E-02
2062	3.031E+05	4.411E-05	1.249E-02
2063	3.031E+05	4.196E-05	1.188E-02
2064	3.031E+05	3.991E-05	1.130E-02
2065	3.031E+05	3.797E-05	1.075E-02
2066	3.031E+05	3.612E-05	1.023E-02
2067	3.031E+05	3.435E-05	9.729E-03
2068	3.031E+05	3.268E-05	9.254E-03
2069	3.031E+05	3.108E-05	8.803E-03
2070	3.031E+05	2.957E-05	8.373E-03
2071	3.031E+05	2.813E-05	7.965E-03
2072	3.031E+05	2.675E-05	7.577E-03
2073	3.031E+05	2.545E-05	7.207E-03
2074	3.031E+05	2.421E-05	6.856E-03
2075	3.031E+05	2.303E-05	6.521E-03
2076	3.031E+05	2.190E-05	6.203E-03
2077	3.031E+05	2.084E-05	5.901E-03
2078	3.031E+05	1.982E-05	5.613E-03
2079	3.031E+05	1.885E-05	5.339E-03
2080	3.031E+05	1.793E-05	5.079E-03
2081	3.031E+05	1.706E-05	4.831E-03
2082	3.031E+05	1.623E-05	4.595E-03
2083	3.031E+05	1.544E-05	4.371E-03
2084	3.031E+05	1.468E-05	4.158E-03
2085	3.031E+05	1.397E-05	3.955E-03
2086	3.031E+05	1.329E-05	3.762E-03
2087	3.031E+05	1.264E-05	3.579E-03
2088	3.031E+05	1.202E-05	3.404E-03

continued

Table D-13. Emisson Rate of Methylene Chloride from Parcel 1 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2089	3.031E+05	1.144E-05	3.238E-03
2090	3.031E+05	1.088E-05	3.080E-03
2091	3.031E+05	1.035E-05	2.930E-03
2092	3.031E+05	9.843E-06	2.787E-03
2093	3.031E+05	9.363E-06	2.651E-03
2094	3.031E+05	8.906E-06	2.522E-03
2095	3.031E+05	8.472E-06	2.399E-03
2096	3.031E+05	8.058E-06	2.282E-03
2097	3.031E+05	7.665E-06	2.171E-03
2098	3.031E+05	7.292E-06	2.065E-03
2099	3.031E+05	6.936E-06	1.964E-03
2100	3.031E+05	6.598E-06	1.868E-03
2101	3.031E+05	6.276E-06	1.777E-03
2102	3.031E+05	5.970E-06	1.691E-03
2103	3.031E+05	5.679E-06	1.608E-03
2104	3.031E+05	5.402E-06	1.530E-03
2105	3.031E+05	5.138E-06	1.455E-03
2106	3.031E+05	4.888E-06	1.384E-03
2107	3.031E+05	4.649E-06	1.317E-03
2108	3.031E+05	4.423E-06	1.252E-03
2109	3.031E+05	4.207E-06	1.191E-03
2110	3.031E+05	4.002E-06	1.133E-03
2111	3.031E+05	3.807E-06	1.078E-03
2112	3.031E+05	3.621E-06	1.025E-03
2113	3.031E+05	3.444E-06	9.754E-04
2114	3.031E+05	3.276E-06	9.278E-04
2115	3.031E+05	3.117E-06	8.826E-04
2116	3.031E+05	2.965E-06	8.395E-04
2117	3.031E+05	2.820E-06	7.986E-04
2118	3.031E+05	2.682E-06	7.596E-04
2119	3.031E+05	2.552E-06	7.226E-04
2120	3.031E+05	2.427E-06	6.873E-04
2121	3.031E+05	2.309E-06	6.538E-04
2122	3.031E+05	2.196E-06	6.219E-04
2123	3.031E+05	2.089E-06	5.916E-04
2124	3.031E+05	1.987E-06	5.627E-04
2125	3.031E+05	1.890E-06	5.353E-04
2126	3.031E+05	1.798E-06	5.092E-04
2127	3.031E+05	1.710E-06	4.844E-04
2128	3.031E+05	1.627E-06	4.607E-04
2129	3.031E+05	1.548E-06	4.383E-04
2130	3.031E+05	1.472E-06	4.169E-04
2131	3.031E+05	1.400E-06	3.966E-04
2132	3.031E+05	1.332E-06	3.772E-04
2133	3.031E+05	1.267E-06	3.588E-04
2134	3.031E+05	1.205E-06	3.413E-04
2135	3.031E+05	1.147E-06	3.247E-04
2136	3.031E+05	1.091E-06	3.088E-04
2137	3.031E+05	1.037E-06	2.938E-04
2138	3.031E+05	9.868E-07	2.795E-04
2139	3.031E+05	9.387E-07	2.658E-04
2140	3.031E+05	8.929E-07	2.529E-04
2141	3.031E+05	8.493E-07	2.405E-04
2142	3.031E+05	8.079E-07	2.288E-04
2143	3.031E+05	7.685E-07	2.176E-04
2144	3.031E+05	7.310E-07	2.070E-04
2145	3.031E+05	6.954E-07	1.969E-04
2146	3.031E+05	6.615E-07	1.873E-04
2147	3.031E+05	6.292E-07	1.782E-04
2148	3.031E+05	5.985E-07	1.695E-04
2149	3.031E+05	5.693E-07	1.612E-04
2150	3.031E+05	5.416E-07	1.534E-04
2151	3.031E+05	5.152E-07	1.459E-04
2152	3.031E+05	4.900E-07	1.388E-04
2153	3.031E+05	4.661E-07	1.320E-04
2154	3.031E+05	4.434E-07	1.256E-04
2155	3.031E+05	4.218E-07	1.194E-04
2156	3.031E+05	4.012E-07	1.136E-04
2157	3.031E+05	3.816E-07	1.081E-04
2158	3.031E+05	3.630E-07	1.028E-04

continued

Table D-13. Emisson Rate of Methylene Chloride from Parcel 1 for Years 1975 to 2203 (concluded).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2159	3.031E+05	3.453E-07	9.779E-05
2160	3.031E+05	3.285E-07	9.302E-05
2161	3.031E+05	3.125E-07	8.848E-05
2162	3.031E+05	2.972E-07	8.417E-05
2163	3.031E+05	2.827E-07	8.006E-05
2164	3.031E+05	2.689E-07	7.616E-05
2165	3.031E+05	2.558E-07	7.244E-05
2166	3.031E+05	2.433E-07	6.891E-05
2167	3.031E+05	2.315E-07	6.555E-05
2168	3.031E+05	2.202E-07	6.235E-05
2169	3.031E+05	2.094E-07	5.931E-05
2170	3.031E+05	1.992E-07	5.642E-05
2171	3.031E+05	1.895E-07	5.367E-05
2172	3.031E+05	1.803E-07	5.105E-05
2173	3.031E+05	1.715E-07	4.856E-05
2174	3.031E+05	1.631E-07	4.619E-05
2175	3.031E+05	1.552E-07	4.394E-05
2176	3.031E+05	1.476E-07	4.180E-05
2177	3.031E+05	1.404E-07	3.976E-05
2178	3.031E+05	1.335E-07	3.782E-05
2179	3.031E+05	1.270E-07	3.597E-05
2180	3.031E+05	1.208E-07	3.422E-05
2181	3.031E+05	1.149E-07	3.255E-05
2182	3.031E+05	1.093E-07	3.096E-05
2183	3.031E+05	1.040E-07	2.945E-05
2184	3.031E+05	9.894E-08	2.802E-05
2185	3.031E+05	9.411E-08	2.665E-05
2186	3.031E+05	8.952E-08	2.535E-05
2187	3.031E+05	8.515E-08	2.411E-05
2188	3.031E+05	8.100E-08	2.294E-05
2189	3.031E+05	7.705E-08	2.182E-05
2190	3.031E+05	7.329E-08	2.076E-05
2191	3.031E+05	6.972E-08	1.974E-05
2192	3.031E+05	6.632E-08	1.878E-05
2193	3.031E+05	6.308E-08	1.786E-05
2194	3.031E+05	6.001E-08	1.699E-05
2195	3.031E+05	5.708E-08	1.616E-05
2196	3.031E+05	5.430E-08	1.538E-05
2197	3.031E+05	5.165E-08	1.463E-05
2198	3.031E+05	4.913E-08	1.391E-05
2199	3.031E+05	4.673E-08	1.323E-05
2200	3.031E+05	4.445E-08	1.259E-05
2201	3.031E+05	4.229E-08	1.198E-05
2202	3.031E+05	4.022E-08	1.139E-05
2203	3.031E+05	3.826E-08	1.084E-05

Table D-14. Emisson Rate of Tetrachloroethene from Parcel 1 for Years 1975 to 2203.

Source: H:\3000\030177~2.000\030177~1.003\BUSHVA~1\STRATA1.PRM

Model Parameters

Lo : 170.00 m^3 / Mg
k : 0.0500 1/yr
NMOC : 2200.00 ppmv
Methane : 64.0000 % volume
Carbon Dioxide : 36.0000 % volume
Air Pollutant : Tetrachloroethene
Molecular Wt = 165.83 Concentration = 0.610000 ppmV

Landfill Parameters

Landfill type : Co-Disposal
Year Opened : 1974 Current Year : 2004 Closure Year: 2004
Capacity : 303128 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 0.00 Mg/year

Model Results

Year	Refuse In Place (Mg)	Tetrachloroethene Emission Rate (Mg/yr)	(Cubic m/yr)
1975	3.031E+04	1.694E-03	2.456E-01
1976	6.063E+04	3.305E-03	4.792E-01
1977	9.094E+04	4.838E-03	7.014E-01
1978	1.213E+05	6.296E-03	9.128E-01
1979	1.516E+05	7.682E-03	1.114E+00
1980	1.819E+05	9.002E-03	1.305E+00
1981	2.122E+05	1.026E-02	1.487E+00
1982	2.425E+05	1.145E-02	1.660E+00
1983	2.728E+05	1.259E-02	1.825E+00
1984	3.031E+05	1.367E-02	1.981E+00
1985	3.031E+05	1.300E-02	1.885E+00
1986	3.031E+05	1.237E-02	1.793E+00
1987	3.031E+05	1.176E-02	1.705E+00
1988	3.031E+05	1.119E-02	1.622E+00
1989	3.031E+05	1.064E-02	1.543E+00
1990	3.031E+05	1.012E-02	1.468E+00
1991	3.031E+05	9.630E-03	1.396E+00
1992	3.031E+05	9.160E-03	1.328E+00
1993	3.031E+05	8.714E-03	1.263E+00
1994	3.031E+05	8.289E-03	1.202E+00
1995	3.031E+05	7.884E-03	1.143E+00
1996	3.031E+05	7.500E-03	1.087E+00
1997	3.031E+05	7.134E-03	1.034E+00
1998	3.031E+05	6.786E-03	9.839E-01
1999	3.031E+05	6.455E-03	9.359E-01
2000	3.031E+05	6.140E-03	8.903E-01
2001	3.031E+05	5.841E-03	8.468E-01
2002	3.031E+05	5.556E-03	8.055E-01
2003	3.031E+05	5.285E-03	7.662E-01
2004	3.031E+05	5.027E-03	7.289E-01
2005	3.031E+05	4.782E-03	6.933E-01
2006	3.031E+05	4.549E-03	6.595E-01
2007	3.031E+05	4.327E-03	6.273E-01
2008	3.031E+05	4.116E-03	5.968E-01
2009	3.031E+05	3.915E-03	5.676E-01
2010	3.031E+05	3.724E-03	5.400E-01
2011	3.031E+05	3.543E-03	5.136E-01
2012	3.031E+05	3.370E-03	4.886E-01
2013	3.031E+05	3.206E-03	4.648E-01
2014	3.031E+05	3.049E-03	4.421E-01
2015	3.031E+05	2.900E-03	4.205E-01
2016	3.031E+05	2.759E-03	4.000E-01
2017	3.031E+05	2.624E-03	3.805E-01
2018	3.031E+05	2.496E-03	3.619E-01

continued

Table D-14. Emisson Rate of Tetrachloroethene from Parcel 1 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2019	3.031E+05	2.375E-03	3.443E-01
2020	3.031E+05	2.259E-03	3.275E-01
2021	3.031E+05	2.149E-03	3.115E-01
2022	3.031E+05	2.044E-03	2.963E-01
2023	3.031E+05	1.944E-03	2.819E-01
2024	3.031E+05	1.849E-03	2.681E-01
2025	3.031E+05	1.759E-03	2.551E-01
2026	3.031E+05	1.673E-03	2.426E-01
2027	3.031E+05	1.592E-03	2.308E-01
2028	3.031E+05	1.514E-03	2.195E-01
2029	3.031E+05	1.440E-03	2.088E-01
2030	3.031E+05	1.370E-03	1.986E-01
2031	3.031E+05	1.303E-03	1.890E-01
2032	3.031E+05	1.240E-03	1.797E-01
2033	3.031E+05	1.179E-03	1.710E-01
2034	3.031E+05	1.122E-03	1.626E-01
2035	3.031E+05	1.067E-03	1.547E-01
2036	3.031E+05	1.015E-03	1.472E-01
2037	3.031E+05	9.655E-04	1.400E-01
2038	3.031E+05	9.184E-04	1.332E-01
2039	3.031E+05	8.736E-04	1.267E-01
2040	3.031E+05	8.310E-04	1.205E-01
2041	3.031E+05	7.905E-04	1.146E-01
2042	3.031E+05	7.519E-04	1.090E-01
2043	3.031E+05	7.153E-04	1.037E-01
2044	3.031E+05	6.804E-04	9.864E-02
2045	3.031E+05	6.472E-04	9.383E-02
2046	3.031E+05	6.156E-04	8.926E-02
2047	3.031E+05	5.856E-04	8.490E-02
2048	3.031E+05	5.570E-04	8.076E-02
2049	3.031E+05	5.299E-04	7.682E-02
2050	3.031E+05	5.040E-04	7.308E-02
2051	3.031E+05	4.794E-04	6.951E-02
2052	3.031E+05	4.561E-04	6.612E-02
2053	3.031E+05	4.338E-04	6.290E-02
2054	3.031E+05	4.127E-04	5.983E-02
2055	3.031E+05	3.925E-04	5.691E-02
2056	3.031E+05	3.734E-04	5.414E-02
2057	3.031E+05	3.552E-04	5.150E-02
2058	3.031E+05	3.379E-04	4.898E-02
2059	3.031E+05	3.214E-04	4.660E-02
2060	3.031E+05	3.057E-04	4.432E-02
2061	3.031E+05	2.908E-04	4.216E-02
2062	3.031E+05	2.766E-04	4.011E-02
2063	3.031E+05	2.631E-04	3.815E-02
2064	3.031E+05	2.503E-04	3.629E-02
2065	3.031E+05	2.381E-04	3.452E-02
2066	3.031E+05	2.265E-04	3.284E-02
2067	3.031E+05	2.154E-04	3.123E-02
2068	3.031E+05	2.049E-04	2.971E-02
2069	3.031E+05	1.949E-04	2.826E-02
2070	3.031E+05	1.854E-04	2.688E-02
2071	3.031E+05	1.764E-04	2.557E-02
2072	3.031E+05	1.678E-04	2.432E-02
2073	3.031E+05	1.596E-04	2.314E-02
2074	3.031E+05	1.518E-04	2.201E-02
2075	3.031E+05	1.444E-04	2.094E-02
2076	3.031E+05	1.374E-04	1.992E-02
2077	3.031E+05	1.307E-04	1.894E-02
2078	3.031E+05	1.243E-04	1.802E-02
2079	3.031E+05	1.182E-04	1.714E-02
2080	3.031E+05	1.125E-04	1.631E-02
2081	3.031E+05	1.070E-04	1.551E-02
2082	3.031E+05	1.018E-04	1.475E-02
2083	3.031E+05	9.680E-05	1.403E-02
2084	3.031E+05	9.208E-05	1.335E-02
2085	3.031E+05	8.759E-05	1.270E-02
2086	3.031E+05	8.332E-05	1.208E-02
2087	3.031E+05	7.925E-05	1.149E-02
2088	3.031E+05	7.539E-05	1.093E-02

continued

Table D-14. Emisson Rate of Tetrachloroethene from Parcel 1 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2089	3.031E+05	7.171E-05	1.040E-02
2090	3.031E+05	6.821E-05	9.890E-03
2091	3.031E+05	6.489E-05	9.407E-03
2092	3.031E+05	6.172E-05	8.949E-03
2093	3.031E+05	5.871E-05	8.512E-03
2094	3.031E+05	5.585E-05	8.097E-03
2095	3.031E+05	5.312E-05	7.702E-03
2096	3.031E+05	5.053E-05	7.327E-03
2097	3.031E+05	4.807E-05	6.969E-03
2098	3.031E+05	4.572E-05	6.629E-03
2099	3.031E+05	4.349E-05	6.306E-03
2100	3.031E+05	4.137E-05	5.998E-03
2101	3.031E+05	3.936E-05	5.706E-03
2102	3.031E+05	3.744E-05	5.428E-03
2103	3.031E+05	3.561E-05	5.163E-03
2104	3.031E+05	3.387E-05	4.911E-03
2105	3.031E+05	3.222E-05	4.672E-03
2106	3.031E+05	3.065E-05	4.444E-03
2107	3.031E+05	2.916E-05	4.227E-03
2108	3.031E+05	2.773E-05	4.021E-03
2109	3.031E+05	2.638E-05	3.825E-03
2110	3.031E+05	2.509E-05	3.638E-03
2111	3.031E+05	2.387E-05	3.461E-03
2112	3.031E+05	2.271E-05	3.292E-03
2113	3.031E+05	2.160E-05	3.131E-03
2114	3.031E+05	2.055E-05	2.979E-03
2115	3.031E+05	1.954E-05	2.833E-03
2116	3.031E+05	1.859E-05	2.695E-03
2117	3.031E+05	1.768E-05	2.564E-03
2118	3.031E+05	1.682E-05	2.439E-03
2119	3.031E+05	1.600E-05	2.320E-03
2120	3.031E+05	1.522E-05	2.207E-03
2121	3.031E+05	1.448E-05	2.099E-03
2122	3.031E+05	1.377E-05	1.997E-03
2123	3.031E+05	1.310E-05	1.899E-03
2124	3.031E+05	1.246E-05	1.807E-03
2125	3.031E+05	1.185E-05	1.719E-03
2126	3.031E+05	1.128E-05	1.635E-03
2127	3.031E+05	1.073E-05	1.555E-03
2128	3.031E+05	1.020E-05	1.479E-03
2129	3.031E+05	9.705E-06	1.407E-03
2130	3.031E+05	9.232E-06	1.338E-03
2131	3.031E+05	8.781E-06	1.273E-03
2132	3.031E+05	8.353E-06	1.211E-03
2133	3.031E+05	7.946E-06	1.152E-03
2134	3.031E+05	7.558E-06	1.096E-03
2135	3.031E+05	7.190E-06	1.042E-03
2136	3.031E+05	6.839E-06	9.915E-04
2137	3.031E+05	6.505E-06	9.432E-04
2138	3.031E+05	6.188E-06	8.972E-04
2139	3.031E+05	5.886E-06	8.534E-04
2140	3.031E+05	5.599E-06	8.118E-04
2141	3.031E+05	5.326E-06	7.722E-04
2142	3.031E+05	5.066E-06	7.346E-04
2143	3.031E+05	4.819E-06	6.987E-04
2144	3.031E+05	4.584E-06	6.646E-04
2145	3.031E+05	4.361E-06	6.322E-04
2146	3.031E+05	4.148E-06	6.014E-04
2147	3.031E+05	3.946E-06	5.721E-04
2148	3.031E+05	3.753E-06	5.442E-04
2149	3.031E+05	3.570E-06	5.176E-04
2150	3.031E+05	3.396E-06	4.924E-04
2151	3.031E+05	3.231E-06	4.684E-04
2152	3.031E+05	3.073E-06	4.455E-04
2153	3.031E+05	2.923E-06	4.238E-04
2154	3.031E+05	2.781E-06	4.031E-04
2155	3.031E+05	2.645E-06	3.835E-04
2156	3.031E+05	2.516E-06	3.648E-04
2157	3.031E+05	2.393E-06	3.470E-04
2158	3.031E+05	2.276E-06	3.301E-04

continued

Table D-14. Emisson Rate of Tetrachloroethene from Parcel 1 for Years 1975 to 2203 (concluded).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2159	3.031E+05	2.165E-06	3.140E-04
2160	3.031E+05	2.060E-06	2.986E-04
2161	3.031E+05	1.959E-06	2.841E-04
2162	3.031E+05	1.864E-06	2.702E-04
2163	3.031E+05	1.773E-06	2.570E-04
2164	3.031E+05	1.686E-06	2.445E-04
2165	3.031E+05	1.604E-06	2.326E-04
2166	3.031E+05	1.526E-06	2.212E-04
2167	3.031E+05	1.452E-06	2.105E-04
2168	3.031E+05	1.381E-06	2.002E-04
2169	3.031E+05	1.313E-06	1.904E-04
2170	3.031E+05	1.249E-06	1.811E-04
2171	3.031E+05	1.188E-06	1.723E-04
2172	3.031E+05	1.130E-06	1.639E-04
2173	3.031E+05	1.075E-06	1.559E-04
2174	3.031E+05	1.023E-06	1.483E-04
2175	3.031E+05	9.730E-07	1.411E-04
2176	3.031E+05	9.256E-07	1.342E-04
2177	3.031E+05	8.804E-07	1.276E-04
2178	3.031E+05	8.375E-07	1.214E-04
2179	3.031E+05	7.966E-07	1.155E-04
2180	3.031E+05	7.578E-07	1.099E-04
2181	3.031E+05	7.208E-07	1.045E-04
2182	3.031E+05	6.857E-07	9.941E-05
2183	3.031E+05	6.522E-07	9.456E-05
2184	3.031E+05	6.204E-07	8.995E-05
2185	3.031E+05	5.902E-07	8.556E-05
2186	3.031E+05	5.614E-07	8.139E-05
2187	3.031E+05	5.340E-07	7.742E-05
2188	3.031E+05	5.080E-07	7.365E-05
2189	3.031E+05	4.832E-07	7.005E-05
2190	3.031E+05	4.596E-07	6.664E-05
2191	3.031E+05	4.372E-07	6.339E-05
2192	3.031E+05	4.159E-07	6.030E-05
2193	3.031E+05	3.956E-07	5.735E-05
2194	3.031E+05	3.763E-07	5.456E-05
2195	3.031E+05	3.580E-07	5.190E-05
2196	3.031E+05	3.405E-07	4.937E-05
2197	3.031E+05	3.239E-07	4.696E-05
2198	3.031E+05	3.081E-07	4.467E-05
2199	3.031E+05	2.931E-07	4.249E-05
2200	3.031E+05	2.788E-07	4.042E-05
2201	3.031E+05	2.652E-07	3.845E-05
2202	3.031E+05	2.522E-07	3.657E-05
2203	3.031E+05	2.399E-07	3.479E-05

Table D-15. Emisson Rate of Toluene from Parcel 1 for Years 1975 to 2203.

Source: H:\3000\030177~2.000\030177~1.003\BUSHVA~1\STRATA1.PRM

Model Parameters

Lo : 170.00 m^3 / Mg
k : 0.0500 1/yr
NMOC : 2200.00 ppmv
Methane : 64.0000 % volume
Carbon Dioxide : 36.0000 % volume
Air Pollutant : Toluene (HAP/VOC)
Molecular Wt = 92.14 Concentration = 11.200000 ppmV

Landfill Parameters

Landfill type : Co-Disposal
Year Opened : 1974 Current Year : 2004 Closure Year: 2004
Capacity : 303128 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 0.00 Mg/year

Model Results

Year	Refuse In Place (Mg)	Toluene (HAP/VOC) Emission Rate (Mg/yr)	(Cubic m/yr)
1975	3.031E+04	1.728E-02	4.509E+00
1976	6.063E+04	3.372E-02	8.798E+00
1977	9.094E+04	4.935E-02	1.288E+01
1978	1.213E+05	6.423E-02	1.676E+01
1979	1.516E+05	7.837E-02	2.045E+01
1980	1.819E+05	9.183E-02	2.396E+01
1981	2.122E+05	1.046E-01	2.730E+01
1982	2.425E+05	1.168E-01	3.048E+01
1983	2.728E+05	1.284E-01	3.350E+01
1984	3.031E+05	1.394E-01	3.638E+01
1985	3.031E+05	1.326E-01	3.460E+01
1986	3.031E+05	1.261E-01	3.292E+01
1987	3.031E+05	1.200E-01	3.131E+01
1988	3.031E+05	1.141E-01	2.978E+01
1989	3.031E+05	1.086E-01	2.833E+01
1990	3.031E+05	1.033E-01	2.695E+01
1991	3.031E+05	9.824E-02	2.563E+01
1992	3.031E+05	9.345E-02	2.438E+01
1993	3.031E+05	8.889E-02	2.320E+01
1994	3.031E+05	8.456E-02	2.206E+01
1995	3.031E+05	8.043E-02	2.099E+01
1996	3.031E+05	7.651E-02	1.996E+01
1997	3.031E+05	7.278E-02	1.899E+01
1998	3.031E+05	6.923E-02	1.806E+01
1999	3.031E+05	6.585E-02	1.718E+01
2000	3.031E+05	6.264E-02	1.635E+01
2001	3.031E+05	5.959E-02	1.555E+01
2002	3.031E+05	5.668E-02	1.479E+01
2003	3.031E+05	5.392E-02	1.407E+01
2004	3.031E+05	5.129E-02	1.338E+01
2005	3.031E+05	4.879E-02	1.273E+01
2006	3.031E+05	4.641E-02	1.211E+01
2007	3.031E+05	4.414E-02	1.152E+01
2008	3.031E+05	4.199E-02	1.096E+01
2009	3.031E+05	3.994E-02	1.042E+01
2010	3.031E+05	3.799E-02	9.914E+00
2011	3.031E+05	3.614E-02	9.431E+00
2012	3.031E+05	3.438E-02	8.971E+00
2013	3.031E+05	3.270E-02	8.533E+00
2014	3.031E+05	3.111E-02	8.117E+00
2015	3.031E+05	2.959E-02	7.721E+00
2016	3.031E+05	2.815E-02	7.345E+00
2017	3.031E+05	2.677E-02	6.986E+00
2018	3.031E+05	2.547E-02	6.646E+00

continued

Table D-15. Emisson Rate of Toluene from Parcel 1 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2019	3.031E+05	2.423E-02	6.322E+00
2020	3.031E+05	2.304E-02	6.013E+00
2021	3.031E+05	2.192E-02	5.720E+00
2022	3.031E+05	2.085E-02	5.441E+00
2023	3.031E+05	1.983E-02	5.176E+00
2024	3.031E+05	1.887E-02	4.923E+00
2025	3.031E+05	1.795E-02	4.683E+00
2026	3.031E+05	1.707E-02	4.455E+00
2027	3.031E+05	1.624E-02	4.237E+00
2028	3.031E+05	1.545E-02	4.031E+00
2029	3.031E+05	1.469E-02	3.834E+00
2030	3.031E+05	1.398E-02	3.647E+00
2031	3.031E+05	1.330E-02	3.469E+00
2032	3.031E+05	1.265E-02	3.300E+00
2033	3.031E+05	1.203E-02	3.139E+00
2034	3.031E+05	1.144E-02	2.986E+00
2035	3.031E+05	1.089E-02	2.840E+00
2036	3.031E+05	1.035E-02	2.702E+00
2037	3.031E+05	9.850E-03	2.570E+00
2038	3.031E+05	9.369E-03	2.445E+00
2039	3.031E+05	8.912E-03	2.326E+00
2040	3.031E+05	8.478E-03	2.212E+00
2041	3.031E+05	8.064E-03	2.104E+00
2042	3.031E+05	7.671E-03	2.002E+00
2043	3.031E+05	7.297E-03	1.904E+00
2044	3.031E+05	6.941E-03	1.811E+00
2045	3.031E+05	6.602E-03	1.723E+00
2046	3.031E+05	6.280E-03	1.639E+00
2047	3.031E+05	5.974E-03	1.559E+00
2048	3.031E+05	5.683E-03	1.483E+00
2049	3.031E+05	5.406E-03	1.411E+00
2050	3.031E+05	5.142E-03	1.342E+00
2051	3.031E+05	4.891E-03	1.276E+00
2052	3.031E+05	4.653E-03	1.214E+00
2053	3.031E+05	4.426E-03	1.155E+00
2054	3.031E+05	4.210E-03	1.099E+00
2055	3.031E+05	4.005E-03	1.045E+00
2056	3.031E+05	3.809E-03	9.940E-01
2057	3.031E+05	3.623E-03	9.455E-01
2058	3.031E+05	3.447E-03	8.994E-01
2059	3.031E+05	3.279E-03	8.555E-01
2060	3.031E+05	3.119E-03	8.138E-01
2061	3.031E+05	2.967E-03	7.741E-01
2062	3.031E+05	2.822E-03	7.364E-01
2063	3.031E+05	2.684E-03	7.004E-01
2064	3.031E+05	2.553E-03	6.663E-01
2065	3.031E+05	2.429E-03	6.338E-01
2066	3.031E+05	2.310E-03	6.029E-01
2067	3.031E+05	2.198E-03	5.735E-01
2068	3.031E+05	2.091E-03	5.455E-01
2069	3.031E+05	1.989E-03	5.189E-01
2070	3.031E+05	1.892E-03	4.936E-01
2071	3.031E+05	1.799E-03	4.695E-01
2072	3.031E+05	1.712E-03	4.466E-01
2073	3.031E+05	1.628E-03	4.248E-01
2074	3.031E+05	1.549E-03	4.041E-01
2075	3.031E+05	1.473E-03	3.844E-01
2076	3.031E+05	1.401E-03	3.657E-01
2077	3.031E+05	1.333E-03	3.478E-01
2078	3.031E+05	1.268E-03	3.309E-01
2079	3.031E+05	1.206E-03	3.147E-01
2080	3.031E+05	1.147E-03	2.994E-01
2081	3.031E+05	1.091E-03	2.848E-01
2082	3.031E+05	1.038E-03	2.709E-01
2083	3.031E+05	9.875E-04	2.577E-01
2084	3.031E+05	9.394E-04	2.451E-01
2085	3.031E+05	8.935E-04	2.332E-01
2086	3.031E+05	8.500E-04	2.218E-01
2087	3.031E+05	8.085E-04	2.110E-01
2088	3.031E+05	7.691E-04	2.007E-01

continued

Table D-15. Emisson Rate of Toluene from Parcel 1 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2089	3.031E+05	7.316E-04	1.909E-01
2090	3.031E+05	6.959E-04	1.816E-01
2091	3.031E+05	6.620E-04	1.727E-01
2092	3.031E+05	6.297E-04	1.643E-01
2093	3.031E+05	5.990E-04	1.563E-01
2094	3.031E+05	5.697E-04	1.487E-01
2095	3.031E+05	5.420E-04	1.414E-01
2096	3.031E+05	5.155E-04	1.345E-01
2097	3.031E+05	4.904E-04	1.280E-01
2098	3.031E+05	4.665E-04	1.217E-01
2099	3.031E+05	4.437E-04	1.158E-01
2100	3.031E+05	4.221E-04	1.101E-01
2101	3.031E+05	4.015E-04	1.048E-01
2102	3.031E+05	3.819E-04	9.965E-02
2103	3.031E+05	3.633E-04	9.479E-02
2104	3.031E+05	3.456E-04	9.017E-02
2105	3.031E+05	3.287E-04	8.577E-02
2106	3.031E+05	3.127E-04	8.159E-02
2107	3.031E+05	2.974E-04	7.761E-02
2108	3.031E+05	2.829E-04	7.383E-02
2109	3.031E+05	2.691E-04	7.023E-02
2110	3.031E+05	2.560E-04	6.680E-02
2111	3.031E+05	2.435E-04	6.354E-02
2112	3.031E+05	2.316E-04	6.044E-02
2113	3.031E+05	2.203E-04	5.750E-02
2114	3.031E+05	2.096E-04	5.469E-02
2115	3.031E+05	1.994E-04	5.202E-02
2116	3.031E+05	1.897E-04	4.949E-02
2117	3.031E+05	1.804E-04	4.707E-02
2118	3.031E+05	1.716E-04	4.478E-02
2119	3.031E+05	1.632E-04	4.259E-02
2120	3.031E+05	1.553E-04	4.052E-02
2121	3.031E+05	1.477E-04	3.854E-02
2122	3.031E+05	1.405E-04	3.666E-02
2123	3.031E+05	1.336E-04	3.487E-02
2124	3.031E+05	1.271E-04	3.317E-02
2125	3.031E+05	1.209E-04	3.155E-02
2126	3.031E+05	1.150E-04	3.002E-02
2127	3.031E+05	1.094E-04	2.855E-02
2128	3.031E+05	1.041E-04	2.716E-02
2129	3.031E+05	9.901E-05	2.583E-02
2130	3.031E+05	9.418E-05	2.457E-02
2131	3.031E+05	8.959E-05	2.338E-02
2132	3.031E+05	8.522E-05	2.224E-02
2133	3.031E+05	8.106E-05	2.115E-02
2134	3.031E+05	7.711E-05	2.012E-02
2135	3.031E+05	7.335E-05	1.914E-02
2136	3.031E+05	6.977E-05	1.821E-02
2137	3.031E+05	6.637E-05	1.732E-02
2138	3.031E+05	6.313E-05	1.647E-02
2139	3.031E+05	6.005E-05	1.567E-02
2140	3.031E+05	5.712E-05	1.491E-02
2141	3.031E+05	5.434E-05	1.418E-02
2142	3.031E+05	5.169E-05	1.349E-02
2143	3.031E+05	4.917E-05	1.283E-02
2144	3.031E+05	4.677E-05	1.220E-02
2145	3.031E+05	4.449E-05	1.161E-02
2146	3.031E+05	4.232E-05	1.104E-02
2147	3.031E+05	4.025E-05	1.050E-02
2148	3.031E+05	3.829E-05	9.991E-03
2149	3.031E+05	3.642E-05	9.504E-03
2150	3.031E+05	3.465E-05	9.040E-03
2151	3.031E+05	3.296E-05	8.600E-03
2152	3.031E+05	3.135E-05	8.180E-03
2153	3.031E+05	2.982E-05	7.781E-03
2154	3.031E+05	2.837E-05	7.402E-03
2155	3.031E+05	2.698E-05	7.041E-03
2156	3.031E+05	2.567E-05	6.697E-03
2157	3.031E+05	2.441E-05	6.371E-03
2158	3.031E+05	2.322E-05	6.060E-03

continued

Table D-15. Emisson Rate of Toluene from Parcel 1 for Years 1975 to 2203 (concluded).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2159	3.031E+05	2.209E-05	5.764E-03
2160	3.031E+05	2.101E-05	5.483E-03
2161	3.031E+05	1.999E-05	5.216E-03
2162	3.031E+05	1.901E-05	4.962E-03
2163	3.031E+05	1.809E-05	4.720E-03
2164	3.031E+05	1.720E-05	4.489E-03
2165	3.031E+05	1.637E-05	4.270E-03
2166	3.031E+05	1.557E-05	4.062E-03
2167	3.031E+05	1.481E-05	3.864E-03
2168	3.031E+05	1.409E-05	3.676E-03
2169	3.031E+05	1.340E-05	3.496E-03
2170	3.031E+05	1.275E-05	3.326E-03
2171	3.031E+05	1.212E-05	3.164E-03
2172	3.031E+05	1.153E-05	3.009E-03
2173	3.031E+05	1.097E-05	2.863E-03
2174	3.031E+05	1.044E-05	2.723E-03
2175	3.031E+05	9.926E-06	2.590E-03
2176	3.031E+05	9.442E-06	2.464E-03
2177	3.031E+05	8.982E-06	2.344E-03
2178	3.031E+05	8.544E-06	2.229E-03
2179	3.031E+05	8.127E-06	2.121E-03
2180	3.031E+05	7.731E-06	2.017E-03
2181	3.031E+05	7.354E-06	1.919E-03
2182	3.031E+05	6.995E-06	1.825E-03
2183	3.031E+05	6.654E-06	1.736E-03
2184	3.031E+05	6.329E-06	1.652E-03
2185	3.031E+05	6.021E-06	1.571E-03
2186	3.031E+05	5.727E-06	1.494E-03
2187	3.031E+05	5.448E-06	1.422E-03
2188	3.031E+05	5.182E-06	1.352E-03
2189	3.031E+05	4.929E-06	1.286E-03
2190	3.031E+05	4.689E-06	1.223E-03
2191	3.031E+05	4.460E-06	1.164E-03
2192	3.031E+05	4.243E-06	1.107E-03
2193	3.031E+05	4.036E-06	1.053E-03
2194	3.031E+05	3.839E-06	1.002E-03
2195	3.031E+05	3.652E-06	9.529E-04
2196	3.031E+05	3.474E-06	9.064E-04
2197	3.031E+05	3.304E-06	8.622E-04
2198	3.031E+05	3.143E-06	8.201E-04
2199	3.031E+05	2.990E-06	7.801E-04
2200	3.031E+05	2.844E-06	7.421E-04
2201	3.031E+05	2.705E-06	7.059E-04
2202	3.031E+05	2.573E-06	6.715E-04
2203	3.031E+05	2.448E-06	6.387E-04

Table D-16. Emisson Rate of Trichloroethene from Parcel 1 for Years 1975 to 2203.

Source: H:\3000\030177~2.000\030177~1.003\BUSHVA~1\STRATA1.PRM

Model Parameters

Lo : 170.00 m^3 / Mg
k : 0.0500 1/yr
NMOC : 2200.00 ppmv
Methane : 64.0000 % volume
Carbon Dioxide : 36.0000 % volume
Air Pollutant : Trichloroethene (HAP/VOC)
Molecular Wt = 131.38 Concentration = 0.590000 ppmV

Landfill Parameters

Landfill type : Co-Disposal
Year Opened : 1974 Current Year : 2004 Closure Year: 2004
Capacity : 303128 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 0.00 Mg/year

Model Results

Year	Refuse In Place (Mg)	Trichloroethene (HAP/VOC) Emission Rate (Mg/yr)	(Cubic m/yr)
1975	3.031E+04	1.298E-03	2.375E-01
1976	6.063E+04	2.533E-03	4.635E-01
1977	9.094E+04	3.707E-03	6.784E-01
1978	1.213E+05	4.824E-03	8.828E-01
1979	1.516E+05	5.887E-03	1.077E+00
1980	1.819E+05	6.898E-03	1.262E+00
1981	2.122E+05	7.859E-03	1.438E+00
1982	2.425E+05	8.774E-03	1.606E+00
1983	2.728E+05	9.644E-03	1.765E+00
1984	3.031E+05	1.047E-02	1.916E+00
1985	3.031E+05	9.961E-03	1.823E+00
1986	3.031E+05	9.475E-03	1.734E+00
1987	3.031E+05	9.013E-03	1.649E+00
1988	3.031E+05	8.574E-03	1.569E+00
1989	3.031E+05	8.155E-03	1.492E+00
1990	3.031E+05	7.758E-03	1.420E+00
1991	3.031E+05	7.379E-03	1.350E+00
1992	3.031E+05	7.019E-03	1.285E+00
1993	3.031E+05	6.677E-03	1.222E+00
1994	3.031E+05	6.351E-03	1.162E+00
1995	3.031E+05	6.042E-03	1.106E+00
1996	3.031E+05	5.747E-03	1.052E+00
1997	3.031E+05	5.467E-03	1.000E+00
1998	3.031E+05	5.200E-03	9.516E-01
1999	3.031E+05	4.946E-03	9.052E-01
2000	3.031E+05	4.705E-03	8.611E-01
2001	3.031E+05	4.476E-03	8.191E-01
2002	3.031E+05	4.257E-03	7.791E-01
2003	3.031E+05	4.050E-03	7.411E-01
2004	3.031E+05	3.852E-03	7.050E-01
2005	3.031E+05	3.664E-03	6.706E-01
2006	3.031E+05	3.486E-03	6.379E-01
2007	3.031E+05	3.316E-03	6.068E-01
2008	3.031E+05	3.154E-03	5.772E-01
2009	3.031E+05	3.000E-03	5.490E-01
2010	3.031E+05	2.854E-03	5.223E-01
2011	3.031E+05	2.715E-03	4.968E-01
2012	3.031E+05	2.582E-03	4.726E-01
2013	3.031E+05	2.456E-03	4.495E-01
2014	3.031E+05	2.337E-03	4.276E-01
2015	3.031E+05	2.223E-03	4.067E-01
2016	3.031E+05	2.114E-03	3.869E-01
2017	3.031E+05	2.011E-03	3.680E-01
2018	3.031E+05	1.913E-03	3.501E-01

continued

Table D-16. Emisson Rate of Trichloroethene from Parcel 1 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2019	3.031E+05	1.820E-03	3.330E-01
2020	3.031E+05	1.731E-03	3.168E-01
2021	3.031E+05	1.647E-03	3.013E-01
2022	3.031E+05	1.566E-03	2.866E-01
2023	3.031E+05	1.490E-03	2.726E-01
2024	3.031E+05	1.417E-03	2.593E-01
2025	3.031E+05	1.348E-03	2.467E-01
2026	3.031E+05	1.282E-03	2.347E-01
2027	3.031E+05	1.220E-03	2.232E-01
2028	3.031E+05	1.160E-03	2.123E-01
2029	3.031E+05	1.104E-03	2.020E-01
2030	3.031E+05	1.050E-03	1.921E-01
2031	3.031E+05	9.987E-04	1.828E-01
2032	3.031E+05	9.500E-04	1.738E-01
2033	3.031E+05	9.036E-04	1.654E-01
2034	3.031E+05	8.596E-04	1.573E-01
2035	3.031E+05	8.176E-04	1.496E-01
2036	3.031E+05	7.778E-04	1.423E-01
2037	3.031E+05	7.398E-04	1.354E-01
2038	3.031E+05	7.038E-04	1.288E-01
2039	3.031E+05	6.694E-04	1.225E-01
2040	3.031E+05	6.368E-04	1.165E-01
2041	3.031E+05	6.057E-04	1.108E-01
2042	3.031E+05	5.762E-04	1.054E-01
2043	3.031E+05	5.481E-04	1.003E-01
2044	3.031E+05	5.214E-04	9.541E-02
2045	3.031E+05	4.959E-04	9.076E-02
2046	3.031E+05	4.717E-04	8.633E-02
2047	3.031E+05	4.487E-04	8.212E-02
2048	3.031E+05	4.268E-04	7.811E-02
2049	3.031E+05	4.060E-04	7.430E-02
2050	3.031E+05	3.862E-04	7.068E-02
2051	3.031E+05	3.674E-04	6.723E-02
2052	3.031E+05	3.495E-04	6.395E-02
2053	3.031E+05	3.324E-04	6.084E-02
2054	3.031E+05	3.162E-04	5.787E-02
2055	3.031E+05	3.008E-04	5.505E-02
2056	3.031E+05	2.861E-04	5.236E-02
2057	3.031E+05	2.722E-04	4.981E-02
2058	3.031E+05	2.589E-04	4.738E-02
2059	3.031E+05	2.463E-04	4.507E-02
2060	3.031E+05	2.343E-04	4.287E-02
2061	3.031E+05	2.228E-04	4.078E-02
2062	3.031E+05	2.120E-04	3.879E-02
2063	3.031E+05	2.016E-04	3.690E-02
2064	3.031E+05	1.918E-04	3.510E-02
2065	3.031E+05	1.824E-04	3.339E-02
2066	3.031E+05	1.735E-04	3.176E-02
2067	3.031E+05	1.651E-04	3.021E-02
2068	3.031E+05	1.570E-04	2.874E-02
2069	3.031E+05	1.494E-04	2.733E-02
2070	3.031E+05	1.421E-04	2.600E-02
2071	3.031E+05	1.352E-04	2.473E-02
2072	3.031E+05	1.286E-04	2.353E-02
2073	3.031E+05	1.223E-04	2.238E-02
2074	3.031E+05	1.163E-04	2.129E-02
2075	3.031E+05	1.107E-04	2.025E-02
2076	3.031E+05	1.053E-04	1.926E-02
2077	3.031E+05	1.001E-04	1.832E-02
2078	3.031E+05	9.524E-05	1.743E-02
2079	3.031E+05	9.060E-05	1.658E-02
2080	3.031E+05	8.618E-05	1.577E-02
2081	3.031E+05	8.198E-05	1.500E-02
2082	3.031E+05	7.798E-05	1.427E-02
2083	3.031E+05	7.418E-05	1.357E-02
2084	3.031E+05	7.056E-05	1.291E-02
2085	3.031E+05	6.712E-05	1.228E-02
2086	3.031E+05	6.384E-05	1.168E-02
2087	3.031E+05	6.073E-05	1.111E-02
2088	3.031E+05	5.777E-05	1.057E-02

continued

Table D-16. Emisson Rate of Trichloroethene from Parcel 1 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2089	3.031E+05	5.495E-05	1.006E-02
2090	3.031E+05	5.227E-05	9.566E-03
2091	3.031E+05	4.972E-05	9.099E-03
2092	3.031E+05	4.730E-05	8.655E-03
2093	3.031E+05	4.499E-05	8.233E-03
2094	3.031E+05	4.280E-05	7.832E-03
2095	3.031E+05	4.071E-05	7.450E-03
2096	3.031E+05	3.872E-05	7.086E-03
2097	3.031E+05	3.683E-05	6.741E-03
2098	3.031E+05	3.504E-05	6.412E-03
2099	3.031E+05	3.333E-05	6.099E-03
2100	3.031E+05	3.170E-05	5.802E-03
2101	3.031E+05	3.016E-05	5.519E-03
2102	3.031E+05	2.869E-05	5.250E-03
2103	3.031E+05	2.729E-05	4.994E-03
2104	3.031E+05	2.596E-05	4.750E-03
2105	3.031E+05	2.469E-05	4.518E-03
2106	3.031E+05	2.349E-05	4.298E-03
2107	3.031E+05	2.234E-05	4.088E-03
2108	3.031E+05	2.125E-05	3.889E-03
2109	3.031E+05	2.022E-05	3.699E-03
2110	3.031E+05	1.923E-05	3.519E-03
2111	3.031E+05	1.829E-05	3.347E-03
2112	3.031E+05	1.740E-05	3.184E-03
2113	3.031E+05	1.655E-05	3.029E-03
2114	3.031E+05	1.574E-05	2.881E-03
2115	3.031E+05	1.498E-05	2.741E-03
2116	3.031E+05	1.425E-05	2.607E-03
2117	3.031E+05	1.355E-05	2.480E-03
2118	3.031E+05	1.289E-05	2.359E-03
2119	3.031E+05	1.226E-05	2.244E-03
2120	3.031E+05	1.166E-05	2.134E-03
2121	3.031E+05	1.109E-05	2.030E-03
2122	3.031E+05	1.055E-05	1.931E-03
2123	3.031E+05	1.004E-05	1.837E-03
2124	3.031E+05	9.549E-06	1.747E-03
2125	3.031E+05	9.083E-06	1.662E-03
2126	3.031E+05	8.640E-06	1.581E-03
2127	3.031E+05	8.219E-06	1.504E-03
2128	3.031E+05	7.818E-06	1.431E-03
2129	3.031E+05	7.437E-06	1.361E-03
2130	3.031E+05	7.074E-06	1.295E-03
2131	3.031E+05	6.729E-06	1.231E-03
2132	3.031E+05	6.401E-06	1.171E-03
2133	3.031E+05	6.089E-06	1.114E-03
2134	3.031E+05	5.792E-06	1.060E-03
2135	3.031E+05	5.509E-06	1.008E-03
2136	3.031E+05	5.241E-06	9.590E-04
2137	3.031E+05	4.985E-06	9.123E-04
2138	3.031E+05	4.742E-06	8.678E-04
2139	3.031E+05	4.511E-06	8.254E-04
2140	3.031E+05	4.291E-06	7.852E-04
2141	3.031E+05	4.081E-06	7.469E-04
2142	3.031E+05	3.882E-06	7.105E-04
2143	3.031E+05	3.693E-06	6.758E-04
2144	3.031E+05	3.513E-06	6.429E-04
2145	3.031E+05	3.342E-06	6.115E-04
2146	3.031E+05	3.179E-06	5.817E-04
2147	3.031E+05	3.024E-06	5.533E-04
2148	3.031E+05	2.876E-06	5.263E-04
2149	3.031E+05	2.736E-06	5.007E-04
2150	3.031E+05	2.602E-06	4.762E-04
2151	3.031E+05	2.475E-06	4.530E-04
2152	3.031E+05	2.355E-06	4.309E-04
2153	3.031E+05	2.240E-06	4.099E-04
2154	3.031E+05	2.131E-06	3.899E-04
2155	3.031E+05	2.027E-06	3.709E-04
2156	3.031E+05	1.928E-06	3.528E-04
2157	3.031E+05	1.834E-06	3.356E-04
2158	3.031E+05	1.744E-06	3.192E-04

continued

Table D-16. Emisson Rate of Trichloroethene from Parcel 1 for Years 1975 to 2203 (concluded).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2159	3.031E+05	1.659E-06	3.037E-04
2160	3.031E+05	1.578E-06	2.889E-04
2161	3.031E+05	1.501E-06	2.748E-04
2162	3.031E+05	1.428E-06	2.614E-04
2163	3.031E+05	1.359E-06	2.486E-04
2164	3.031E+05	1.292E-06	2.365E-04
2165	3.031E+05	1.229E-06	2.250E-04
2166	3.031E+05	1.169E-06	2.140E-04
2167	3.031E+05	1.112E-06	2.036E-04
2168	3.031E+05	1.058E-06	1.936E-04
2169	3.031E+05	1.006E-06	1.842E-04
2170	3.031E+05	9.574E-07	1.752E-04
2171	3.031E+05	9.107E-07	1.667E-04
2172	3.031E+05	8.663E-07	1.585E-04
2173	3.031E+05	8.240E-07	1.508E-04
2174	3.031E+05	7.838E-07	1.434E-04
2175	3.031E+05	7.456E-07	1.364E-04
2176	3.031E+05	7.092E-07	1.298E-04
2177	3.031E+05	6.746E-07	1.235E-04
2178	3.031E+05	6.417E-07	1.174E-04
2179	3.031E+05	6.104E-07	1.117E-04
2180	3.031E+05	5.807E-07	1.063E-04
2181	3.031E+05	5.524E-07	1.011E-04
2182	3.031E+05	5.254E-07	9.615E-05
2183	3.031E+05	4.998E-07	9.146E-05
2184	3.031E+05	4.754E-07	8.700E-05
2185	3.031E+05	4.522E-07	8.276E-05
2186	3.031E+05	4.302E-07	7.872E-05
2187	3.031E+05	4.092E-07	7.488E-05
2188	3.031E+05	3.892E-07	7.123E-05
2189	3.031E+05	3.703E-07	6.776E-05
2190	3.031E+05	3.522E-07	6.445E-05
2191	3.031E+05	3.350E-07	6.131E-05
2192	3.031E+05	3.187E-07	5.832E-05
2193	3.031E+05	3.031E-07	5.547E-05
2194	3.031E+05	2.884E-07	5.277E-05
2195	3.031E+05	2.743E-07	5.020E-05
2196	3.031E+05	2.609E-07	4.775E-05
2197	3.031E+05	2.482E-07	4.542E-05
2198	3.031E+05	2.361E-07	4.320E-05
2199	3.031E+05	2.246E-07	4.110E-05
2200	3.031E+05	2.136E-07	3.909E-05
2201	3.031E+05	2.032E-07	3.719E-05
2202	3.031E+05	1.933E-07	3.537E-05
2203	3.031E+05	1.839E-07	3.365E-05

Table D-17. Emisson Rate of Vinyl Chloride from Parcel 1 for Years 1975 to 2203.

Source: H:\3000\030177~2.000\030177~1.003\BUSHVA~1\STRATA1.PRM

Model Parameters

Lo : 170.00 m^3 / Mg
k : 0.0500 1/yr
NMOC : 2200.00 ppmv
Methane : 64.0000 % volume
Carbon Dioxide : 36.0000 % volume
Air Pollutant : Vinyl Chloride (HAP/VOC)
Molecular Wt = 62.50 Concentration = 2.660000 ppmV

Landfill Parameters

Landfill type : Co-Disposal
Year Opened : 1974 Current Year : 2004 Closure Year: 2004
Capacity : 303128 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 0.00 Mg/year

Model Results

Year	Refuse In Place (Mg)	Vinyl Chloride (HAP/VOC) Emission Rate (Mg/yr)	(Cubic m/yr)
1975	3.031E+04	2.784E-03	1.071E+00
1976	6.063E+04	5.432E-03	2.090E+00
1977	9.094E+04	7.951E-03	3.059E+00
1978	1.213E+05	1.035E-02	3.980E+00
1979	1.516E+05	1.263E-02	4.857E+00
1980	1.819E+05	1.479E-02	5.691E+00
1981	2.122E+05	1.686E-02	6.484E+00
1982	2.425E+05	1.882E-02	7.239E+00
1983	2.728E+05	2.068E-02	7.957E+00
1984	3.031E+05	2.246E-02	8.640E+00
1985	3.031E+05	2.136E-02	8.218E+00
1986	3.031E+05	2.032E-02	7.818E+00
1987	3.031E+05	1.933E-02	7.436E+00
1988	3.031E+05	1.839E-02	7.074E+00
1989	3.031E+05	1.749E-02	6.729E+00
1990	3.031E+05	1.664E-02	6.400E+00
1991	3.031E+05	1.583E-02	6.088E+00
1992	3.031E+05	1.505E-02	5.791E+00
1993	3.031E+05	1.432E-02	5.509E+00
1994	3.031E+05	1.362E-02	5.240E+00
1995	3.031E+05	1.296E-02	4.985E+00
1996	3.031E+05	1.233E-02	4.742E+00
1997	3.031E+05	1.172E-02	4.510E+00
1998	3.031E+05	1.115E-02	4.290E+00
1999	3.031E+05	1.061E-02	4.081E+00
2000	3.031E+05	1.009E-02	3.882E+00
2001	3.031E+05	9.599E-03	3.693E+00
2002	3.031E+05	9.131E-03	3.513E+00
2003	3.031E+05	8.686E-03	3.341E+00
2004	3.031E+05	8.262E-03	3.178E+00
2005	3.031E+05	7.859E-03	3.023E+00
2006	3.031E+05	7.476E-03	2.876E+00
2007	3.031E+05	7.111E-03	2.736E+00
2008	3.031E+05	6.765E-03	2.602E+00
2009	3.031E+05	6.435E-03	2.475E+00
2010	3.031E+05	6.121E-03	2.355E+00
2011	3.031E+05	5.822E-03	2.240E+00
2012	3.031E+05	5.538E-03	2.131E+00
2013	3.031E+05	5.268E-03	2.027E+00
2014	3.031E+05	5.011E-03	1.928E+00
2015	3.031E+05	4.767E-03	1.834E+00
2016	3.031E+05	4.534E-03	1.744E+00
2017	3.031E+05	4.313E-03	1.659E+00
2018	3.031E+05	4.103E-03	1.578E+00

continued

Table D-17. Emisson Rate of Vinyl Chloride from Parcel 1 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2019	3.031E+05	3.903E-03	1.501E+00
2020	3.031E+05	3.713E-03	1.428E+00
2021	3.031E+05	3.531E-03	1.358E+00
2022	3.031E+05	3.359E-03	1.292E+00
2023	3.031E+05	3.195E-03	1.229E+00
2024	3.031E+05	3.040E-03	1.169E+00
2025	3.031E+05	2.891E-03	1.112E+00
2026	3.031E+05	2.750E-03	1.058E+00
2027	3.031E+05	2.616E-03	1.006E+00
2028	3.031E+05	2.489E-03	9.573E-01
2029	3.031E+05	2.367E-03	9.106E-01
2030	3.031E+05	2.252E-03	8.662E-01
2031	3.031E+05	2.142E-03	8.240E-01
2032	3.031E+05	2.037E-03	7.838E-01
2033	3.031E+05	1.938E-03	7.456E-01
2034	3.031E+05	1.844E-03	7.092E-01
2035	3.031E+05	1.754E-03	6.746E-01
2036	3.031E+05	1.668E-03	6.417E-01
2037	3.031E+05	1.587E-03	6.104E-01
2038	3.031E+05	1.509E-03	5.806E-01
2039	3.031E+05	1.436E-03	5.523E-01
2040	3.031E+05	1.366E-03	5.254E-01
2041	3.031E+05	1.299E-03	4.998E-01
2042	3.031E+05	1.236E-03	4.754E-01
2043	3.031E+05	1.176E-03	4.522E-01
2044	3.031E+05	1.118E-03	4.301E-01
2045	3.031E+05	1.064E-03	4.092E-01
2046	3.031E+05	1.012E-03	3.892E-01
2047	3.031E+05	9.624E-04	3.702E-01
2048	3.031E+05	9.155E-04	3.522E-01
2049	3.031E+05	8.708E-04	3.350E-01
2050	3.031E+05	8.284E-04	3.187E-01
2051	3.031E+05	7.880E-04	3.031E-01
2052	3.031E+05	7.495E-04	2.883E-01
2053	3.031E+05	7.130E-04	2.743E-01
2054	3.031E+05	6.782E-04	2.609E-01
2055	3.031E+05	6.451E-04	2.482E-01
2056	3.031E+05	6.137E-04	2.361E-01
2057	3.031E+05	5.837E-04	2.246E-01
2058	3.031E+05	5.553E-04	2.136E-01
2059	3.031E+05	5.282E-04	2.032E-01
2060	3.031E+05	5.024E-04	1.933E-01
2061	3.031E+05	4.779E-04	1.839E-01
2062	3.031E+05	4.546E-04	1.749E-01
2063	3.031E+05	4.324E-04	1.664E-01
2064	3.031E+05	4.114E-04	1.582E-01
2065	3.031E+05	3.913E-04	1.505E-01
2066	3.031E+05	3.722E-04	1.432E-01
2067	3.031E+05	3.541E-04	1.362E-01
2068	3.031E+05	3.368E-04	1.296E-01
2069	3.031E+05	3.204E-04	1.232E-01
2070	3.031E+05	3.047E-04	1.172E-01
2071	3.031E+05	2.899E-04	1.115E-01
2072	3.031E+05	2.757E-04	1.061E-01
2073	3.031E+05	2.623E-04	1.009E-01
2074	3.031E+05	2.495E-04	9.598E-02
2075	3.031E+05	2.373E-04	9.130E-02
2076	3.031E+05	2.258E-04	8.685E-02
2077	3.031E+05	2.147E-04	8.261E-02
2078	3.031E+05	2.043E-04	7.858E-02
2079	3.031E+05	1.943E-04	7.475E-02
2080	3.031E+05	1.848E-04	7.110E-02
2081	3.031E+05	1.758E-04	6.764E-02
2082	3.031E+05	1.672E-04	6.434E-02
2083	3.031E+05	1.591E-04	6.120E-02
2084	3.031E+05	1.513E-04	5.821E-02
2085	3.031E+05	1.439E-04	5.537E-02
2086	3.031E+05	1.369E-04	5.267E-02
2087	3.031E+05	1.303E-04	5.011E-02
2088	3.031E+05	1.239E-04	4.766E-02

continued

Table D-17. Emisson Rate of Vinyl Chloride from Parcel 1 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2089	3.031E+05	1.179E-04	4.534E-02
2090	3.031E+05	1.121E-04	4.313E-02
2091	3.031E+05	1.066E-04	4.102E-02
2092	3.031E+05	1.014E-04	3.902E-02
2093	3.031E+05	9.649E-05	3.712E-02
2094	3.031E+05	9.179E-05	3.531E-02
2095	3.031E+05	8.731E-05	3.359E-02
2096	3.031E+05	8.305E-05	3.195E-02
2097	3.031E+05	7.900E-05	3.039E-02
2098	3.031E+05	7.515E-05	2.891E-02
2099	3.031E+05	7.148E-05	2.750E-02
2100	3.031E+05	6.800E-05	2.616E-02
2101	3.031E+05	6.468E-05	2.488E-02
2102	3.031E+05	6.153E-05	2.367E-02
2103	3.031E+05	5.853E-05	2.251E-02
2104	3.031E+05	5.567E-05	2.142E-02
2105	3.031E+05	5.296E-05	2.037E-02
2106	3.031E+05	5.037E-05	1.938E-02
2107	3.031E+05	4.792E-05	1.843E-02
2108	3.031E+05	4.558E-05	1.753E-02
2109	3.031E+05	4.336E-05	1.668E-02
2110	3.031E+05	4.124E-05	1.587E-02
2111	3.031E+05	3.923E-05	1.509E-02
2112	3.031E+05	3.732E-05	1.436E-02
2113	3.031E+05	3.550E-05	1.366E-02
2114	3.031E+05	3.377E-05	1.299E-02
2115	3.031E+05	3.212E-05	1.236E-02
2116	3.031E+05	3.055E-05	1.175E-02
2117	3.031E+05	2.906E-05	1.118E-02
2118	3.031E+05	2.765E-05	1.063E-02
2119	3.031E+05	2.630E-05	1.012E-02
2120	3.031E+05	2.501E-05	9.623E-03
2121	3.031E+05	2.379E-05	9.153E-03
2122	3.031E+05	2.263E-05	8.707E-03
2123	3.031E+05	2.153E-05	8.282E-03
2124	3.031E+05	2.048E-05	7.878E-03
2125	3.031E+05	1.948E-05	7.494E-03
2126	3.031E+05	1.853E-05	7.129E-03
2127	3.031E+05	1.763E-05	6.781E-03
2128	3.031E+05	1.677E-05	6.450E-03
2129	3.031E+05	1.595E-05	6.136E-03
2130	3.031E+05	1.517E-05	5.836E-03
2131	3.031E+05	1.443E-05	5.552E-03
2132	3.031E+05	1.373E-05	5.281E-03
2133	3.031E+05	1.306E-05	5.023E-03
2134	3.031E+05	1.242E-05	4.778E-03
2135	3.031E+05	1.182E-05	4.545E-03
2136	3.031E+05	1.124E-05	4.324E-03
2137	3.031E+05	1.069E-05	4.113E-03
2138	3.031E+05	1.017E-05	3.912E-03
2139	3.031E+05	9.674E-06	3.721E-03
2140	3.031E+05	9.202E-06	3.540E-03
2141	3.031E+05	8.754E-06	3.367E-03
2142	3.031E+05	8.327E-06	3.203E-03
2143	3.031E+05	7.921E-06	3.047E-03
2144	3.031E+05	7.534E-06	2.898E-03
2145	3.031E+05	7.167E-06	2.757E-03
2146	3.031E+05	6.817E-06	2.622E-03
2147	3.031E+05	6.485E-06	2.495E-03
2148	3.031E+05	6.169E-06	2.373E-03
2149	3.031E+05	5.868E-06	2.257E-03
2150	3.031E+05	5.582E-06	2.147E-03
2151	3.031E+05	5.309E-06	2.042E-03
2152	3.031E+05	5.050E-06	1.943E-03
2153	3.031E+05	4.804E-06	1.848E-03
2154	3.031E+05	4.570E-06	1.758E-03
2155	3.031E+05	4.347E-06	1.672E-03
2156	3.031E+05	4.135E-06	1.591E-03
2157	3.031E+05	3.933E-06	1.513E-03
2158	3.031E+05	3.741E-06	1.439E-03

continued

Table D-17. Emisson Rate of Vinyl Chloride from Parcel 1 for Years 1975 to 2203 (concluded).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2159	3.031E+05	3.559E-06	1.369E-03
2160	3.031E+05	3.385E-06	1.302E-03
2161	3.031E+05	3.220E-06	1.239E-03
2162	3.031E+05	3.063E-06	1.178E-03
2163	3.031E+05	2.914E-06	1.121E-03
2164	3.031E+05	2.772E-06	1.066E-03
2165	3.031E+05	2.637E-06	1.014E-03
2166	3.031E+05	2.508E-06	9.648E-04
2167	3.031E+05	2.386E-06	9.177E-04
2168	3.031E+05	2.269E-06	8.730E-04
2169	3.031E+05	2.159E-06	8.304E-04
2170	3.031E+05	2.053E-06	7.899E-04
2171	3.031E+05	1.953E-06	7.514E-04
2172	3.031E+05	1.858E-06	7.147E-04
2173	3.031E+05	1.767E-06	6.799E-04
2174	3.031E+05	1.681E-06	6.467E-04
2175	3.031E+05	1.599E-06	6.152E-04
2176	3.031E+05	1.521E-06	5.852E-04
2177	3.031E+05	1.447E-06	5.566E-04
2178	3.031E+05	1.376E-06	5.295E-04
2179	3.031E+05	1.309E-06	5.036E-04
2180	3.031E+05	1.245E-06	4.791E-04
2181	3.031E+05	1.185E-06	4.557E-04
2182	3.031E+05	1.127E-06	4.335E-04
2183	3.031E+05	1.072E-06	4.124E-04
2184	3.031E+05	1.020E-06	3.922E-04
2185	3.031E+05	9.699E-07	3.731E-04
2186	3.031E+05	9.226E-07	3.549E-04
2187	3.031E+05	8.776E-07	3.376E-04
2188	3.031E+05	8.348E-07	3.211E-04
2189	3.031E+05	7.941E-07	3.055E-04
2190	3.031E+05	7.554E-07	2.906E-04
2191	3.031E+05	7.185E-07	2.764E-04
2192	3.031E+05	6.835E-07	2.629E-04
2193	3.031E+05	6.502E-07	2.501E-04
2194	3.031E+05	6.185E-07	2.379E-04
2195	3.031E+05	5.883E-07	2.263E-04
2196	3.031E+05	5.596E-07	2.153E-04
2197	3.031E+05	5.323E-07	2.048E-04
2198	3.031E+05	5.063E-07	1.948E-04
2199	3.031E+05	4.817E-07	1.853E-04
2200	3.031E+05	4.582E-07	1.762E-04
2201	3.031E+05	4.358E-07	1.677E-04
2202	3.031E+05	4.146E-07	1.595E-04
2203	3.031E+05	3.943E-07	1.517E-04

Table D-18. Emisson Rate of m,p-Xylene from Parcel 1 for Years 1975 to 2203.

Source: H:\3000\030177~2.000\030177~1.003\BUSHVA~1\STRATA1.PRM

Model Parameters

Lo : 170.00 m^3 / Mg
k : 0.0500 1/yr
NMOC : 2200.00 ppmv
Methane : 64.0000 % volume
Carbon Dioxide : 36.0000 % volume
Air Pollutant : mpXylene (HAP/VOC)
Molecular Wt = 106.17 Concentration = 8.860000 ppmV

Landfill Parameters

Landfill type : Co-Disposal
Year Opened : 1974 Current Year : 2004 Closure Year: 2004
Capacity : 303128 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 0.00 Mg/year

Model Results

Year	Refuse In Place (Mg)	mpXylene (HAP/VOC) Emission Rate (Mg/yr)	(Cubic m/yr)
1975	3.031E+04	1.575E-02	3.567E+00
1976	6.063E+04	3.073E-02	6.960E+00
1977	9.094E+04	4.499E-02	1.019E+01
1978	1.213E+05	5.854E-02	1.326E+01
1979	1.516E+05	7.144E-02	1.618E+01
1980	1.819E+05	8.371E-02	1.896E+01
1981	2.122E+05	9.538E-02	2.160E+01
1982	2.425E+05	1.065E-01	2.411E+01
1983	2.728E+05	1.170E-01	2.650E+01
1984	3.031E+05	1.271E-01	2.878E+01
1985	3.031E+05	1.209E-01	2.737E+01
1986	3.031E+05	1.150E-01	2.604E+01
1987	3.031E+05	1.094E-01	2.477E+01
1988	3.031E+05	1.040E-01	2.356E+01
1989	3.031E+05	9.897E-02	2.241E+01
1990	3.031E+05	9.414E-02	2.132E+01
1991	3.031E+05	8.955E-02	2.028E+01
1992	3.031E+05	8.518E-02	1.929E+01
1993	3.031E+05	8.103E-02	1.835E+01
1994	3.031E+05	7.708E-02	1.745E+01
1995	3.031E+05	7.332E-02	1.660E+01
1996	3.031E+05	6.974E-02	1.579E+01
1997	3.031E+05	6.634E-02	1.502E+01
1998	3.031E+05	6.311E-02	1.429E+01
1999	3.031E+05	6.003E-02	1.359E+01
2000	3.031E+05	5.710E-02	1.293E+01
2001	3.031E+05	5.432E-02	1.230E+01
2002	3.031E+05	5.167E-02	1.170E+01
2003	3.031E+05	4.915E-02	1.113E+01
2004	3.031E+05	4.675E-02	1.059E+01
2005	3.031E+05	4.447E-02	1.007E+01
2006	3.031E+05	4.230E-02	9.579E+00
2007	3.031E+05	4.024E-02	9.112E+00
2008	3.031E+05	3.828E-02	8.668E+00
2009	3.031E+05	3.641E-02	8.245E+00
2010	3.031E+05	3.463E-02	7.843E+00
2011	3.031E+05	3.294E-02	7.460E+00
2012	3.031E+05	3.134E-02	7.096E+00
2013	3.031E+05	2.981E-02	6.750E+00
2014	3.031E+05	2.836E-02	6.421E+00
2015	3.031E+05	2.697E-02	6.108E+00
2016	3.031E+05	2.566E-02	5.810E+00
2017	3.031E+05	2.441E-02	5.527E+00
2018	3.031E+05	2.322E-02	5.257E+00

continued

Table D-18. Emisson Rate of m,p-Xylene from Parcel 1 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2019	3.031E+05	2.208E-02	5.001E+00
2020	3.031E+05	2.101E-02	4.757E+00
2021	3.031E+05	1.998E-02	4.525E+00
2022	3.031E+05	1.901E-02	4.304E+00
2023	3.031E+05	1.808E-02	4.094E+00
2024	3.031E+05	1.720E-02	3.895E+00
2025	3.031E+05	1.636E-02	3.705E+00
2026	3.031E+05	1.556E-02	3.524E+00
2027	3.031E+05	1.480E-02	3.352E+00
2028	3.031E+05	1.408E-02	3.189E+00
2029	3.031E+05	1.339E-02	3.033E+00
2030	3.031E+05	1.274E-02	2.885E+00
2031	3.031E+05	1.212E-02	2.744E+00
2032	3.031E+05	1.153E-02	2.611E+00
2033	3.031E+05	1.097E-02	2.483E+00
2034	3.031E+05	1.043E-02	2.362E+00
2035	3.031E+05	9.922E-03	2.247E+00
2036	3.031E+05	9.439E-03	2.137E+00
2037	3.031E+05	8.978E-03	2.033E+00
2038	3.031E+05	8.540E-03	1.934E+00
2039	3.031E+05	8.124E-03	1.840E+00
2040	3.031E+05	7.728E-03	1.750E+00
2041	3.031E+05	7.351E-03	1.665E+00
2042	3.031E+05	6.992E-03	1.583E+00
2043	3.031E+05	6.651E-03	1.506E+00
2044	3.031E+05	6.327E-03	1.433E+00
2045	3.031E+05	6.018E-03	1.363E+00
2046	3.031E+05	5.725E-03	1.296E+00
2047	3.031E+05	5.446E-03	1.233E+00
2048	3.031E+05	5.180E-03	1.173E+00
2049	3.031E+05	4.927E-03	1.116E+00
2050	3.031E+05	4.687E-03	1.061E+00
2051	3.031E+05	4.458E-03	1.010E+00
2052	3.031E+05	4.241E-03	9.604E-01
2053	3.031E+05	4.034E-03	9.136E-01
2054	3.031E+05	3.837E-03	8.690E-01
2055	3.031E+05	3.650E-03	8.266E-01
2056	3.031E+05	3.472E-03	7.863E-01
2057	3.031E+05	3.303E-03	7.480E-01
2058	3.031E+05	3.142E-03	7.115E-01
2059	3.031E+05	2.989E-03	6.768E-01
2060	3.031E+05	2.843E-03	6.438E-01
2061	3.031E+05	2.704E-03	6.124E-01
2062	3.031E+05	2.572E-03	5.825E-01
2063	3.031E+05	2.447E-03	5.541E-01
2064	3.031E+05	2.328E-03	5.271E-01
2065	3.031E+05	2.214E-03	5.014E-01
2066	3.031E+05	2.106E-03	4.769E-01
2067	3.031E+05	2.003E-03	4.537E-01
2068	3.031E+05	1.906E-03	4.315E-01
2069	3.031E+05	1.813E-03	4.105E-01
2070	3.031E+05	1.724E-03	3.905E-01
2071	3.031E+05	1.640E-03	3.714E-01
2072	3.031E+05	1.560E-03	3.533E-01
2073	3.031E+05	1.484E-03	3.361E-01
2074	3.031E+05	1.412E-03	3.197E-01
2075	3.031E+05	1.343E-03	3.041E-01
2076	3.031E+05	1.277E-03	2.893E-01
2077	3.031E+05	1.215E-03	2.752E-01
2078	3.031E+05	1.156E-03	2.617E-01
2079	3.031E+05	1.099E-03	2.490E-01
2080	3.031E+05	1.046E-03	2.368E-01
2081	3.031E+05	9.948E-04	2.253E-01
2082	3.031E+05	9.463E-04	2.143E-01
2083	3.031E+05	9.001E-04	2.038E-01
2084	3.031E+05	8.562E-04	1.939E-01
2085	3.031E+05	8.145E-04	1.844E-01
2086	3.031E+05	7.748E-04	1.754E-01
2087	3.031E+05	7.370E-04	1.669E-01
2088	3.031E+05	7.010E-04	1.588E-01

continued

Table D-18. Emisson Rate of m,p-Xylene from Parcel 1 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2089	3.031E+05	6.668E-04	1.510E-01
2090	3.031E+05	6.343E-04	1.436E-01
2091	3.031E+05	6.034E-04	1.366E-01
2092	3.031E+05	5.740E-04	1.300E-01
2093	3.031E+05	5.460E-04	1.236E-01
2094	3.031E+05	5.193E-04	1.176E-01
2095	3.031E+05	4.940E-04	1.119E-01
2096	3.031E+05	4.699E-04	1.064E-01
2097	3.031E+05	4.470E-04	1.012E-01
2098	3.031E+05	4.252E-04	9.629E-02
2099	3.031E+05	4.045E-04	9.159E-02
2100	3.031E+05	3.847E-04	8.713E-02
2101	3.031E+05	3.660E-04	8.288E-02
2102	3.031E+05	3.481E-04	7.883E-02
2103	3.031E+05	3.311E-04	7.499E-02
2104	3.031E+05	3.150E-04	7.133E-02
2105	3.031E+05	2.996E-04	6.785E-02
2106	3.031E+05	2.850E-04	6.454E-02
2107	3.031E+05	2.711E-04	6.140E-02
2108	3.031E+05	2.579E-04	5.840E-02
2109	3.031E+05	2.453E-04	5.555E-02
2110	3.031E+05	2.334E-04	5.284E-02
2111	3.031E+05	2.220E-04	5.027E-02
2112	3.031E+05	2.111E-04	4.782E-02
2113	3.031E+05	2.009E-04	4.548E-02
2114	3.031E+05	1.911E-04	4.327E-02
2115	3.031E+05	1.817E-04	4.116E-02
2116	3.031E+05	1.729E-04	3.915E-02
2117	3.031E+05	1.644E-04	3.724E-02
2118	3.031E+05	1.564E-04	3.542E-02
2119	3.031E+05	1.488E-04	3.369E-02
2120	3.031E+05	1.415E-04	3.205E-02
2121	3.031E+05	1.346E-04	3.049E-02
2122	3.031E+05	1.281E-04	2.900E-02
2123	3.031E+05	1.218E-04	2.759E-02
2124	3.031E+05	1.159E-04	2.624E-02
2125	3.031E+05	1.102E-04	2.496E-02
2126	3.031E+05	1.049E-04	2.374E-02
2127	3.031E+05	9.974E-05	2.259E-02
2128	3.031E+05	9.487E-05	2.148E-02
2129	3.031E+05	9.025E-05	2.044E-02
2130	3.031E+05	8.585E-05	1.944E-02
2131	3.031E+05	8.166E-05	1.849E-02
2132	3.031E+05	7.768E-05	1.759E-02
2133	3.031E+05	7.389E-05	1.673E-02
2134	3.031E+05	7.029E-05	1.592E-02
2135	3.031E+05	6.686E-05	1.514E-02
2136	3.031E+05	6.360E-05	1.440E-02
2137	3.031E+05	6.049E-05	1.370E-02
2138	3.031E+05	5.754E-05	1.303E-02
2139	3.031E+05	5.474E-05	1.240E-02
2140	3.031E+05	5.207E-05	1.179E-02
2141	3.031E+05	4.953E-05	1.122E-02
2142	3.031E+05	4.711E-05	1.067E-02
2143	3.031E+05	4.482E-05	1.015E-02
2144	3.031E+05	4.263E-05	9.654E-03
2145	3.031E+05	4.055E-05	9.183E-03
2146	3.031E+05	3.857E-05	8.735E-03
2147	3.031E+05	3.669E-05	8.309E-03
2148	3.031E+05	3.490E-05	7.904E-03
2149	3.031E+05	3.320E-05	7.518E-03
2150	3.031E+05	3.158E-05	7.152E-03
2151	3.031E+05	3.004E-05	6.803E-03
2152	3.031E+05	2.858E-05	6.471E-03
2153	3.031E+05	2.718E-05	6.156E-03
2154	3.031E+05	2.586E-05	5.855E-03
2155	3.031E+05	2.460E-05	5.570E-03
2156	3.031E+05	2.340E-05	5.298E-03
2157	3.031E+05	2.225E-05	5.040E-03
2158	3.031E+05	2.117E-05	4.794E-03

continued

Table D-18. Emisson Rate of m,p-Xylene from Parcel 1 for Years 1975 to 2203 (concluded).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2159	3.031E+05	2.014E-05	4.560E-03
2160	3.031E+05	1.915E-05	4.338E-03
2161	3.031E+05	1.822E-05	4.126E-03
2162	3.031E+05	1.733E-05	3.925E-03
2163	3.031E+05	1.649E-05	3.734E-03
2164	3.031E+05	1.568E-05	3.551E-03
2165	3.031E+05	1.492E-05	3.378E-03
2166	3.031E+05	1.419E-05	3.213E-03
2167	3.031E+05	1.350E-05	3.057E-03
2168	3.031E+05	1.284E-05	2.908E-03
2169	3.031E+05	1.221E-05	2.766E-03
2170	3.031E+05	1.162E-05	2.631E-03
2171	3.031E+05	1.105E-05	2.503E-03
2172	3.031E+05	1.051E-05	2.381E-03
2173	3.031E+05	1.000E-05	2.264E-03
2174	3.031E+05	9.512E-06	2.154E-03
2175	3.031E+05	9.048E-06	2.049E-03
2176	3.031E+05	8.607E-06	1.949E-03
2177	3.031E+05	8.187E-06	1.854E-03
2178	3.031E+05	7.788E-06	1.764E-03
2179	3.031E+05	7.408E-06	1.678E-03
2180	3.031E+05	7.047E-06	1.596E-03
2181	3.031E+05	6.703E-06	1.518E-03
2182	3.031E+05	6.376E-06	1.444E-03
2183	3.031E+05	6.065E-06	1.373E-03
2184	3.031E+05	5.769E-06	1.306E-03
2185	3.031E+05	5.488E-06	1.243E-03
2186	3.031E+05	5.220E-06	1.182E-03
2187	3.031E+05	4.966E-06	1.125E-03
2188	3.031E+05	4.724E-06	1.070E-03
2189	3.031E+05	4.493E-06	1.017E-03
2190	3.031E+05	4.274E-06	9.679E-04
2191	3.031E+05	4.066E-06	9.207E-04
2192	3.031E+05	3.867E-06	8.758E-04
2193	3.031E+05	3.679E-06	8.331E-04
2194	3.031E+05	3.499E-06	7.924E-04
2195	3.031E+05	3.329E-06	7.538E-04
2196	3.031E+05	3.166E-06	7.170E-04
2197	3.031E+05	3.012E-06	6.820E-04
2198	3.031E+05	2.865E-06	6.488E-04
2199	3.031E+05	2.725E-06	6.171E-04
2200	3.031E+05	2.592E-06	5.870E-04
2201	3.031E+05	2.466E-06	5.584E-04
2202	3.031E+05	2.346E-06	5.312E-04
2203	3.031E+05	2.231E-06	5.053E-04

Table D-19. Emisson Rate of o-Xylene from Parcel 1 for Years 1975 to 2203.

Source: H:\3000\030177~2.000\030177~1.003\BUSHVA~1\STRATA1.PRM

Model Parameters

Lo : 170.00 m^3 / Mg
k : 0.0500 1/yr
NMOC : 2200.00 ppmv
Methane : 64.0000 % volume
Carbon Dioxide : 36.0000 % volume
Air Pollutant : oXylene (HAP/VOC)
Molecular Wt = 106.17 Concentration = 2.660000 ppmV

Landfill Parameters

Landfill type : Co-Disposal
Year Opened : 1974 Current Year : 2004 Closure Year: 2004
Capacity : 303128 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 0.00 Mg/year

Model Results

Year	Refuse In Place (Mg)	oXylene (HAP/VOC) Emission Rate (Mg/yr)	(Cubic m/yr)
1975	3.031E+04	4.729E-03	1.071E+00
1976	6.063E+04	9.227E-03	2.090E+00
1977	9.094E+04	1.351E-02	3.059E+00
1978	1.213E+05	1.758E-02	3.980E+00
1979	1.516E+05	2.145E-02	4.857E+00
1980	1.819E+05	2.513E-02	5.691E+00
1981	2.122E+05	2.863E-02	6.484E+00
1982	2.425E+05	3.197E-02	7.239E+00
1983	2.728E+05	3.514E-02	7.957E+00
1984	3.031E+05	3.815E-02	8.640E+00
1985	3.031E+05	3.629E-02	8.218E+00
1986	3.031E+05	3.452E-02	7.818E+00
1987	3.031E+05	3.284E-02	7.436E+00
1988	3.031E+05	3.124E-02	7.074E+00
1989	3.031E+05	2.971E-02	6.729E+00
1990	3.031E+05	2.826E-02	6.400E+00
1991	3.031E+05	2.689E-02	6.088E+00
1992	3.031E+05	2.557E-02	5.791E+00
1993	3.031E+05	2.433E-02	5.509E+00
1994	3.031E+05	2.314E-02	5.240E+00
1995	3.031E+05	2.201E-02	4.985E+00
1996	3.031E+05	2.094E-02	4.742E+00
1997	3.031E+05	1.992E-02	4.510E+00
1998	3.031E+05	1.895E-02	4.290E+00
1999	3.031E+05	1.802E-02	4.081E+00
2000	3.031E+05	1.714E-02	3.882E+00
2001	3.031E+05	1.631E-02	3.693E+00
2002	3.031E+05	1.551E-02	3.513E+00
2003	3.031E+05	1.476E-02	3.341E+00
2004	3.031E+05	1.404E-02	3.178E+00
2005	3.031E+05	1.335E-02	3.023E+00
2006	3.031E+05	1.270E-02	2.876E+00
2007	3.031E+05	1.208E-02	2.736E+00
2008	3.031E+05	1.149E-02	2.602E+00
2009	3.031E+05	1.093E-02	2.475E+00
2010	3.031E+05	1.040E-02	2.355E+00
2011	3.031E+05	9.891E-03	2.240E+00
2012	3.031E+05	9.408E-03	2.131E+00
2013	3.031E+05	8.949E-03	2.027E+00
2014	3.031E+05	8.513E-03	1.928E+00
2015	3.031E+05	8.098E-03	1.834E+00
2016	3.031E+05	7.703E-03	1.744E+00
2017	3.031E+05	7.327E-03	1.659E+00
2018	3.031E+05	6.970E-03	1.578E+00

continued

Table D-19. Emisson Rate of o-Xylene from Parcel 1 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2019	3.031E+05	6.630E-03	1.501E+00
2020	3.031E+05	6.307E-03	1.428E+00
2021	3.031E+05	5.999E-03	1.358E+00
2022	3.031E+05	5.706E-03	1.292E+00
2023	3.031E+05	5.428E-03	1.229E+00
2024	3.031E+05	5.163E-03	1.169E+00
2025	3.031E+05	4.912E-03	1.112E+00
2026	3.031E+05	4.672E-03	1.058E+00
2027	3.031E+05	4.444E-03	1.006E+00
2028	3.031E+05	4.227E-03	9.573E-01
2029	3.031E+05	4.021E-03	9.106E-01
2030	3.031E+05	3.825E-03	8.662E-01
2031	3.031E+05	3.639E-03	8.240E-01
2032	3.031E+05	3.461E-03	7.838E-01
2033	3.031E+05	3.292E-03	7.456E-01
2034	3.031E+05	3.132E-03	7.092E-01
2035	3.031E+05	2.979E-03	6.746E-01
2036	3.031E+05	2.834E-03	6.417E-01
2037	3.031E+05	2.696E-03	6.104E-01
2038	3.031E+05	2.564E-03	5.806E-01
2039	3.031E+05	2.439E-03	5.523E-01
2040	3.031E+05	2.320E-03	5.254E-01
2041	3.031E+05	2.207E-03	4.998E-01
2042	3.031E+05	2.099E-03	4.754E-01
2043	3.031E+05	1.997E-03	4.522E-01
2044	3.031E+05	1.899E-03	4.301E-01
2045	3.031E+05	1.807E-03	4.092E-01
2046	3.031E+05	1.719E-03	3.892E-01
2047	3.031E+05	1.635E-03	3.702E-01
2048	3.031E+05	1.555E-03	3.522E-01
2049	3.031E+05	1.479E-03	3.350E-01
2050	3.031E+05	1.407E-03	3.187E-01
2051	3.031E+05	1.339E-03	3.031E-01
2052	3.031E+05	1.273E-03	2.883E-01
2053	3.031E+05	1.211E-03	2.743E-01
2054	3.031E+05	1.152E-03	2.609E-01
2055	3.031E+05	1.096E-03	2.482E-01
2056	3.031E+05	1.042E-03	2.361E-01
2057	3.031E+05	9.916E-04	2.246E-01
2058	3.031E+05	9.433E-04	2.136E-01
2059	3.031E+05	8.973E-04	2.032E-01
2060	3.031E+05	8.535E-04	1.933E-01
2061	3.031E+05	8.119E-04	1.839E-01
2062	3.031E+05	7.723E-04	1.749E-01
2063	3.031E+05	7.346E-04	1.664E-01
2064	3.031E+05	6.988E-04	1.582E-01
2065	3.031E+05	6.647E-04	1.505E-01
2066	3.031E+05	6.323E-04	1.432E-01
2067	3.031E+05	6.014E-04	1.362E-01
2068	3.031E+05	5.721E-04	1.296E-01
2069	3.031E+05	5.442E-04	1.232E-01
2070	3.031E+05	5.177E-04	1.172E-01
2071	3.031E+05	4.924E-04	1.115E-01
2072	3.031E+05	4.684E-04	1.061E-01
2073	3.031E+05	4.456E-04	1.009E-01
2074	3.031E+05	4.238E-04	9.598E-02
2075	3.031E+05	4.032E-04	9.130E-02
2076	3.031E+05	3.835E-04	8.685E-02
2077	3.031E+05	3.648E-04	8.261E-02
2078	3.031E+05	3.470E-04	7.858E-02
2079	3.031E+05	3.301E-04	7.475E-02
2080	3.031E+05	3.140E-04	7.110E-02
2081	3.031E+05	2.987E-04	6.764E-02
2082	3.031E+05	2.841E-04	6.434E-02
2083	3.031E+05	2.702E-04	6.120E-02
2084	3.031E+05	2.571E-04	5.821E-02
2085	3.031E+05	2.445E-04	5.537E-02
2086	3.031E+05	2.326E-04	5.267E-02
2087	3.031E+05	2.213E-04	5.011E-02
2088	3.031E+05	2.105E-04	4.766E-02

continued

Table D-19. Emisson Rate of o-Xylene from Parcel 1 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2089	3.031E+05	2.002E-04	4.534E-02
2090	3.031E+05	1.904E-04	4.313E-02
2091	3.031E+05	1.812E-04	4.102E-02
2092	3.031E+05	1.723E-04	3.902E-02
2093	3.031E+05	1.639E-04	3.712E-02
2094	3.031E+05	1.559E-04	3.531E-02
2095	3.031E+05	1.483E-04	3.359E-02
2096	3.031E+05	1.411E-04	3.195E-02
2097	3.031E+05	1.342E-04	3.039E-02
2098	3.031E+05	1.277E-04	2.891E-02
2099	3.031E+05	1.214E-04	2.750E-02
2100	3.031E+05	1.155E-04	2.616E-02
2101	3.031E+05	1.099E-04	2.488E-02
2102	3.031E+05	1.045E-04	2.367E-02
2103	3.031E+05	9.942E-05	2.251E-02
2104	3.031E+05	9.457E-05	2.142E-02
2105	3.031E+05	8.996E-05	2.037E-02
2106	3.031E+05	8.557E-05	1.938E-02
2107	3.031E+05	8.140E-05	1.843E-02
2108	3.031E+05	7.743E-05	1.753E-02
2109	3.031E+05	7.365E-05	1.668E-02
2110	3.031E+05	7.006E-05	1.587E-02
2111	3.031E+05	6.664E-05	1.509E-02
2112	3.031E+05	6.339E-05	1.436E-02
2113	3.031E+05	6.030E-05	1.366E-02
2114	3.031E+05	5.736E-05	1.299E-02
2115	3.031E+05	5.456E-05	1.236E-02
2116	3.031E+05	5.190E-05	1.175E-02
2117	3.031E+05	4.937E-05	1.118E-02
2118	3.031E+05	4.696E-05	1.063E-02
2119	3.031E+05	4.467E-05	1.012E-02
2120	3.031E+05	4.249E-05	9.623E-03
2121	3.031E+05	4.042E-05	9.153E-03
2122	3.031E+05	3.845E-05	8.707E-03
2123	3.031E+05	3.657E-05	8.282E-03
2124	3.031E+05	3.479E-05	7.878E-03
2125	3.031E+05	3.309E-05	7.494E-03
2126	3.031E+05	3.148E-05	7.129E-03
2127	3.031E+05	2.994E-05	6.781E-03
2128	3.031E+05	2.848E-05	6.450E-03
2129	3.031E+05	2.709E-05	6.136E-03
2130	3.031E+05	2.577E-05	5.836E-03
2131	3.031E+05	2.452E-05	5.552E-03
2132	3.031E+05	2.332E-05	5.281E-03
2133	3.031E+05	2.218E-05	5.023E-03
2134	3.031E+05	2.110E-05	4.778E-03
2135	3.031E+05	2.007E-05	4.545E-03
2136	3.031E+05	1.909E-05	4.324E-03
2137	3.031E+05	1.816E-05	4.113E-03
2138	3.031E+05	1.728E-05	3.912E-03
2139	3.031E+05	1.643E-05	3.721E-03
2140	3.031E+05	1.563E-05	3.540E-03
2141	3.031E+05	1.487E-05	3.367E-03
2142	3.031E+05	1.414E-05	3.203E-03
2143	3.031E+05	1.345E-05	3.047E-03
2144	3.031E+05	1.280E-05	2.898E-03
2145	3.031E+05	1.217E-05	2.757E-03
2146	3.031E+05	1.158E-05	2.622E-03
2147	3.031E+05	1.102E-05	2.495E-03
2148	3.031E+05	1.048E-05	2.373E-03
2149	3.031E+05	9.968E-06	2.257E-03
2150	3.031E+05	9.481E-06	2.147E-03
2151	3.031E+05	9.019E-06	2.042E-03
2152	3.031E+05	8.579E-06	1.943E-03
2153	3.031E+05	8.161E-06	1.848E-03
2154	3.031E+05	7.763E-06	1.758E-03
2155	3.031E+05	7.384E-06	1.672E-03
2156	3.031E+05	7.024E-06	1.591E-03
2157	3.031E+05	6.681E-06	1.513E-03
2158	3.031E+05	6.356E-06	1.439E-03

continued

Table D-19. Emisson Rate of o-Xylene from Parcel 1 for Years 1975 to 2203 (concluded).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2159	3.031E+05	6.046E-06	1.369E-03
2160	3.031E+05	5.751E-06	1.302E-03
2161	3.031E+05	5.470E-06	1.239E-03
2162	3.031E+05	5.204E-06	1.178E-03
2163	3.031E+05	4.950E-06	1.121E-03
2164	3.031E+05	4.708E-06	1.066E-03
2165	3.031E+05	4.479E-06	1.014E-03
2166	3.031E+05	4.260E-06	9.648E-04
2167	3.031E+05	4.053E-06	9.177E-04
2168	3.031E+05	3.855E-06	8.730E-04
2169	3.031E+05	3.667E-06	8.304E-04
2170	3.031E+05	3.488E-06	7.899E-04
2171	3.031E+05	3.318E-06	7.514E-04
2172	3.031E+05	3.156E-06	7.147E-04
2173	3.031E+05	3.002E-06	6.799E-04
2174	3.031E+05	2.856E-06	6.467E-04
2175	3.031E+05	2.716E-06	6.152E-04
2176	3.031E+05	2.584E-06	5.852E-04
2177	3.031E+05	2.458E-06	5.566E-04
2178	3.031E+05	2.338E-06	5.295E-04
2179	3.031E+05	2.224E-06	5.036E-04
2180	3.031E+05	2.116E-06	4.791E-04
2181	3.031E+05	2.012E-06	4.557E-04
2182	3.031E+05	1.914E-06	4.335E-04
2183	3.031E+05	1.821E-06	4.124E-04
2184	3.031E+05	1.732E-06	3.922E-04
2185	3.031E+05	1.648E-06	3.731E-04
2186	3.031E+05	1.567E-06	3.549E-04
2187	3.031E+05	1.491E-06	3.376E-04
2188	3.031E+05	1.418E-06	3.211E-04
2189	3.031E+05	1.349E-06	3.055E-04
2190	3.031E+05	1.283E-06	2.906E-04
2191	3.031E+05	1.221E-06	2.764E-04
2192	3.031E+05	1.161E-06	2.629E-04
2193	3.031E+05	1.104E-06	2.501E-04
2194	3.031E+05	1.051E-06	2.379E-04
2195	3.031E+05	9.993E-07	2.263E-04
2196	3.031E+05	9.506E-07	2.153E-04
2197	3.031E+05	9.042E-07	2.048E-04
2198	3.031E+05	8.601E-07	1.948E-04
2199	3.031E+05	8.182E-07	1.853E-04
2200	3.031E+05	7.783E-07	1.762E-04
2201	3.031E+05	7.403E-07	1.677E-04
2202	3.031E+05	7.042E-07	1.595E-04
2203	3.031E+05	6.699E-07	1.517E-04

Table D-20. Emisson Rate of Methane from Parcel 2 for Years 1975 to 2203.

Source: H:\3000\030177~2.000\030177~1.003\BUSHVA~1\STRATA2.PRM

Model Parameters

Lo : 170.00 m^3 / Mg
k : 0.0500 1/yr
NMOC : 2000.00 ppmv
Methane : 62.0000 % volume
Carbon Dioxide : 38.0000 % volume

Landfill Parameters

Landfill type : Co-Disposal
Year Opened : 1974 Current Year : 2004 Closure Year: 2004
Capacity : 48325 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 0.00 Mg/year

Model Results

Year	Refuse In Place (Mg)	Methane Emission Rate (Mg/yr)	Methane Emission Rate (Cubic m/yr)
1975	4.832E+03	2.740E+01	4.108E+04
1976	9.665E+03	5.347E+01	8.015E+04
1977	1.450E+04	7.827E+01	1.173E+05
1978	1.933E+04	1.019E+02	1.527E+05
1979	2.416E+04	1.243E+02	1.863E+05
1980	2.899E+04	1.456E+02	2.183E+05
1981	3.383E+04	1.659E+02	2.487E+05
1982	3.866E+04	1.852E+02	2.777E+05
1983	4.349E+04	2.036E+02	3.052E+05
1984	4.832E+04	2.211E+02	3.314E+05
1985	4.832E+04	2.103E+02	3.152E+05
1986	4.832E+04	2.000E+02	2.999E+05
1987	4.832E+04	1.903E+02	2.852E+05
1988	4.832E+04	1.810E+02	2.713E+05
1989	4.832E+04	1.722E+02	2.581E+05
1990	4.832E+04	1.638E+02	2.455E+05
1991	4.832E+04	1.558E+02	2.335E+05
1992	4.832E+04	1.482E+02	2.221E+05
1993	4.832E+04	1.410E+02	2.113E+05
1994	4.832E+04	1.341E+02	2.010E+05
1995	4.832E+04	1.276E+02	1.912E+05
1996	4.832E+04	1.213E+02	1.819E+05
1997	4.832E+04	1.154E+02	1.730E+05
1998	4.832E+04	1.098E+02	1.646E+05
1999	4.832E+04	1.044E+02	1.565E+05
2000	4.832E+04	9.934E+01	1.489E+05
2001	4.832E+04	9.450E+01	1.416E+05
2002	4.832E+04	8.989E+01	1.347E+05
2003	4.832E+04	8.550E+01	1.282E+05
2004	4.832E+04	8.133E+01	1.219E+05
2005	4.832E+04	7.737E+01	1.160E+05
2006	4.832E+04	7.359E+01	1.103E+05
2007	4.832E+04	7.000E+01	1.049E+05
2008	4.832E+04	6.659E+01	9.981E+04
2009	4.832E+04	6.334E+01	9.495E+04
2010	4.832E+04	6.025E+01	9.031E+04
2011	4.832E+04	5.731E+01	8.591E+04
2012	4.832E+04	5.452E+01	8.172E+04
2013	4.832E+04	5.186E+01	7.773E+04
2014	4.832E+04	4.933E+01	7.394E+04
2015	4.832E+04	4.693E+01	7.034E+04
2016	4.832E+04	4.464E+01	6.691E+04
2017	4.832E+04	4.246E+01	6.364E+04
2018	4.832E+04	4.039E+01	6.054E+04
2019	4.832E+04	3.842E+01	5.759E+04
2020	4.832E+04	3.655E+01	5.478E+04

continued

Table D-20. Emisson Rate of Methane from Parcel 2 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2021	4.832E+04	3.476E+01	5.211E+04
2022	4.832E+04	3.307E+01	4.957E+04
2023	4.832E+04	3.146E+01	4.715E+04
2024	4.832E+04	2.992E+01	4.485E+04
2025	4.832E+04	2.846E+01	4.266E+04
2026	4.832E+04	2.707E+01	4.058E+04
2027	4.832E+04	2.575E+01	3.860E+04
2028	4.832E+04	2.450E+01	3.672E+04
2029	4.832E+04	2.330E+01	3.493E+04
2030	4.832E+04	2.217E+01	3.322E+04
2031	4.832E+04	2.108E+01	3.160E+04
2032	4.832E+04	2.006E+01	3.006E+04
2033	4.832E+04	1.908E+01	2.860E+04
2034	4.832E+04	1.815E+01	2.720E+04
2035	4.832E+04	1.726E+01	2.588E+04
2036	4.832E+04	1.642E+01	2.461E+04
2037	4.832E+04	1.562E+01	2.341E+04
2038	4.832E+04	1.486E+01	2.227E+04
2039	4.832E+04	1.413E+01	2.119E+04
2040	4.832E+04	1.344E+01	2.015E+04
2041	4.832E+04	1.279E+01	1.917E+04
2042	4.832E+04	1.216E+01	1.823E+04
2043	4.832E+04	1.157E+01	1.734E+04
2044	4.832E+04	1.101E+01	1.650E+04
2045	4.832E+04	1.047E+01	1.569E+04
2046	4.832E+04	9.960E+00	1.493E+04
2047	4.832E+04	9.474E+00	1.420E+04
2048	4.832E+04	9.012E+00	1.351E+04
2049	4.832E+04	8.572E+00	1.285E+04
2050	4.832E+04	8.154E+00	1.222E+04
2051	4.832E+04	7.757E+00	1.163E+04
2052	4.832E+04	7.378E+00	1.106E+04
2053	4.832E+04	7.019E+00	1.052E+04
2054	4.832E+04	6.676E+00	1.001E+04
2055	4.832E+04	6.351E+00	9.519E+03
2056	4.832E+04	6.041E+00	9.055E+03
2057	4.832E+04	5.746E+00	8.613E+03
2058	4.832E+04	5.466E+00	8.193E+03
2059	4.832E+04	5.199E+00	7.794E+03
2060	4.832E+04	4.946E+00	7.413E+03
2061	4.832E+04	4.705E+00	7.052E+03
2062	4.832E+04	4.475E+00	6.708E+03
2063	4.832E+04	4.257E+00	6.381E+03
2064	4.832E+04	4.049E+00	6.070E+03
2065	4.832E+04	3.852E+00	5.774E+03
2066	4.832E+04	3.664E+00	5.492E+03
2067	4.832E+04	3.485E+00	5.224E+03
2068	4.832E+04	3.315E+00	4.969E+03
2069	4.832E+04	3.154E+00	4.727E+03
2070	4.832E+04	3.000E+00	4.497E+03
2071	4.832E+04	2.854E+00	4.277E+03
2072	4.832E+04	2.714E+00	4.069E+03
2073	4.832E+04	2.582E+00	3.870E+03
2074	4.832E+04	2.456E+00	3.681E+03
2075	4.832E+04	2.336E+00	3.502E+03
2076	4.832E+04	2.222E+00	3.331E+03
2077	4.832E+04	2.114E+00	3.169E+03
2078	4.832E+04	2.011E+00	3.014E+03
2079	4.832E+04	1.913E+00	2.867E+03
2080	4.832E+04	1.819E+00	2.727E+03
2081	4.832E+04	1.731E+00	2.594E+03
2082	4.832E+04	1.646E+00	2.468E+03
2083	4.832E+04	1.566E+00	2.347E+03
2084	4.832E+04	1.490E+00	2.233E+03
2085	4.832E+04	1.417E+00	2.124E+03
2086	4.832E+04	1.348E+00	2.020E+03
2087	4.832E+04	1.282E+00	1.922E+03
2088	4.832E+04	1.220E+00	1.828E+03
2089	4.832E+04	1.160E+00	1.739E+03
2090	4.832E+04	1.104E+00	1.654E+03

continued

Table D-20. Emisson Rate of Methane from Parcel 2 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2091	4.832E+04	1.050E+00	1.573E+03
2092	4.832E+04	9.986E-01	1.497E+03
2093	4.832E+04	9.499E-01	1.424E+03
2094	4.832E+04	9.035E-01	1.354E+03
2095	4.832E+04	8.595E-01	1.288E+03
2096	4.832E+04	8.176E-01	1.225E+03
2097	4.832E+04	7.777E-01	1.166E+03
2098	4.832E+04	7.398E-01	1.109E+03
2099	4.832E+04	7.037E-01	1.055E+03
2100	4.832E+04	6.694E-01	1.003E+03
2101	4.832E+04	6.367E-01	9.544E+02
2102	4.832E+04	6.057E-01	9.078E+02
2103	4.832E+04	5.761E-01	8.636E+02
2104	4.832E+04	5.480E-01	8.214E+02
2105	4.832E+04	5.213E-01	7.814E+02
2106	4.832E+04	4.959E-01	7.433E+02
2107	4.832E+04	4.717E-01	7.070E+02
2108	4.832E+04	4.487E-01	6.725E+02
2109	4.832E+04	4.268E-01	6.397E+02
2110	4.832E+04	4.060E-01	6.085E+02
2111	4.832E+04	3.862E-01	5.789E+02
2112	4.832E+04	3.673E-01	5.506E+02
2113	4.832E+04	3.494E-01	5.238E+02
2114	4.832E+04	3.324E-01	4.982E+02
2115	4.832E+04	3.162E-01	4.739E+02
2116	4.832E+04	3.008E-01	4.508E+02
2117	4.832E+04	2.861E-01	4.288E+02
2118	4.832E+04	2.721E-01	4.079E+02
2119	4.832E+04	2.589E-01	3.880E+02
2120	4.832E+04	2.462E-01	3.691E+02
2121	4.832E+04	2.342E-01	3.511E+02
2122	4.832E+04	2.228E-01	3.340E+02
2123	4.832E+04	2.119E-01	3.177E+02
2124	4.832E+04	2.016E-01	3.022E+02
2125	4.832E+04	1.918E-01	2.875E+02
2126	4.832E+04	1.824E-01	2.734E+02
2127	4.832E+04	1.735E-01	2.601E+02
2128	4.832E+04	1.651E-01	2.474E+02
2129	4.832E+04	1.570E-01	2.353E+02
2130	4.832E+04	1.494E-01	2.239E+02
2131	4.832E+04	1.421E-01	2.129E+02
2132	4.832E+04	1.351E-01	2.026E+02
2133	4.832E+04	1.285E-01	1.927E+02
2134	4.832E+04	1.223E-01	1.833E+02
2135	4.832E+04	1.163E-01	1.743E+02
2136	4.832E+04	1.106E-01	1.658E+02
2137	4.832E+04	1.052E-01	1.578E+02
2138	4.832E+04	1.001E-01	1.501E+02
2139	4.832E+04	9.523E-02	1.427E+02
2140	4.832E+04	9.059E-02	1.358E+02
2141	4.832E+04	8.617E-02	1.292E+02
2142	4.832E+04	8.197E-02	1.229E+02
2143	4.832E+04	7.797E-02	1.169E+02
2144	4.832E+04	7.417E-02	1.112E+02
2145	4.832E+04	7.055E-02	1.057E+02
2146	4.832E+04	6.711E-02	1.006E+02
2147	4.832E+04	6.384E-02	9.568E+01
2148	4.832E+04	6.072E-02	9.102E+01
2149	4.832E+04	5.776E-02	8.658E+01
2150	4.832E+04	5.494E-02	8.236E+01
2151	4.832E+04	5.226E-02	7.834E+01
2152	4.832E+04	4.972E-02	7.452E+01
2153	4.832E+04	4.729E-02	7.088E+01
2154	4.832E+04	4.498E-02	6.743E+01
2155	4.832E+04	4.279E-02	6.414E+01
2156	4.832E+04	4.070E-02	6.101E+01
2157	4.832E+04	3.872E-02	5.804E+01
2158	4.832E+04	3.683E-02	5.521E+01
2159	4.832E+04	3.503E-02	5.251E+01
2160	4.832E+04	3.333E-02	4.995E+01

continued

Table D-20. Emisson Rate of Methane from Parcel 2 for Years 1975 to 2203 (concluded).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2161	4.832E+04	3.170E-02	4.752E+01
2162	4.832E+04	3.015E-02	4.520E+01
2163	4.832E+04	2.868E-02	4.299E+01
2164	4.832E+04	2.728E-02	4.090E+01
2165	4.832E+04	2.595E-02	3.890E+01
2166	4.832E+04	2.469E-02	3.701E+01
2167	4.832E+04	2.348E-02	3.520E+01
2168	4.832E+04	2.234E-02	3.348E+01
2169	4.832E+04	2.125E-02	3.185E+01
2170	4.832E+04	2.021E-02	3.030E+01
2171	4.832E+04	1.923E-02	2.882E+01
2172	4.832E+04	1.829E-02	2.741E+01
2173	4.832E+04	1.740E-02	2.608E+01
2174	4.832E+04	1.655E-02	2.481E+01
2175	4.832E+04	1.574E-02	2.360E+01
2176	4.832E+04	1.497E-02	2.244E+01
2177	4.832E+04	1.424E-02	2.135E+01
2178	4.832E+04	1.355E-02	2.031E+01
2179	4.832E+04	1.289E-02	1.932E+01
2180	4.832E+04	1.226E-02	1.838E+01
2181	4.832E+04	1.166E-02	1.748E+01
2182	4.832E+04	1.109E-02	1.663E+01
2183	4.832E+04	1.055E-02	1.582E+01
2184	4.832E+04	1.004E-02	1.505E+01
2185	4.832E+04	9.548E-03	1.431E+01
2186	4.832E+04	9.082E-03	1.361E+01
2187	4.832E+04	8.639E-03	1.295E+01
2188	4.832E+04	8.218E-03	1.232E+01
2189	4.832E+04	7.817E-03	1.172E+01
2190	4.832E+04	7.436E-03	1.115E+01
2191	4.832E+04	7.073E-03	1.060E+01
2192	4.832E+04	6.728E-03	1.009E+01
2193	4.832E+04	6.400E-03	9.593E+00
2194	4.832E+04	6.088E-03	9.125E+00
2195	4.832E+04	5.791E-03	8.680E+00
2196	4.832E+04	5.509E-03	8.257E+00
2197	4.832E+04	5.240E-03	7.854E+00
2198	4.832E+04	4.984E-03	7.471E+00
2199	4.832E+04	4.741E-03	7.107E+00
2200	4.832E+04	4.510E-03	6.760E+00
2201	4.832E+04	4.290E-03	6.431E+00
2202	4.832E+04	4.081E-03	6.117E+00
2203	4.832E+04	3.882E-03	5.819E+00

Table D-21. Emisson Rate of Carbon Dioxide from Parcel 2 for Years 1975 to 2203.

Source: H:\3000\030177~2.000\030177~1.003\BUSHVA~1\STRATA2.PRM

Model Parameters

Lo : 170.00 m^3 / Mg
k : 0.0500 1/yr
NMOC : 2000.00 ppmv
Methane : 62.0000 % volume
Carbon Dioxide : 38.0000 % volume

Landfill Parameters

Landfill type : Co-Disposal
Year Opened : 1974 Current Year : 2004 Closure Year: 2004
Capacity : 48325 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 0.00 Mg/year

Model Results

Year	Refuse In Place (Mg)	Carbon Dioxide Emission Rate (Mg/yr)	(Cubic m/yr)
1975	4.832E+03	4.608E+01	2.518E+04
1976	9.665E+03	8.992E+01	4.912E+04
1977	1.450E+04	1.316E+02	7.190E+04
1978	1.933E+04	1.713E+02	9.357E+04
1979	2.416E+04	2.090E+02	1.142E+05
1980	2.899E+04	2.449E+02	1.338E+05
1981	3.383E+04	2.790E+02	1.524E+05
1982	3.866E+04	3.115E+02	1.702E+05
1983	4.349E+04	3.424E+02	1.871E+05
1984	4.832E+04	3.718E+02	2.031E+05
1985	4.832E+04	3.537E+02	1.932E+05
1986	4.832E+04	3.364E+02	1.838E+05
1987	4.832E+04	3.200E+02	1.748E+05
1988	4.832E+04	3.044E+02	1.663E+05
1989	4.832E+04	2.896E+02	1.582E+05
1990	4.832E+04	2.754E+02	1.505E+05
1991	4.832E+04	2.620E+02	1.431E+05
1992	4.832E+04	2.492E+02	1.361E+05
1993	4.832E+04	2.371E+02	1.295E+05
1994	4.832E+04	2.255E+02	1.232E+05
1995	4.832E+04	2.145E+02	1.172E+05
1996	4.832E+04	2.040E+02	1.115E+05
1997	4.832E+04	1.941E+02	1.060E+05
1998	4.832E+04	1.846E+02	1.009E+05
1999	4.832E+04	1.756E+02	9.594E+04
2000	4.832E+04	1.671E+02	9.126E+04
2001	4.832E+04	1.589E+02	8.681E+04
2002	4.832E+04	1.512E+02	8.258E+04
2003	4.832E+04	1.438E+02	7.855E+04
2004	4.832E+04	1.368E+02	7.472E+04
2005	4.832E+04	1.301E+02	7.108E+04
2006	4.832E+04	1.238E+02	6.761E+04
2007	4.832E+04	1.177E+02	6.431E+04
2008	4.832E+04	1.120E+02	6.118E+04
2009	4.832E+04	1.065E+02	5.819E+04
2010	4.832E+04	1.013E+02	5.535E+04
2011	4.832E+04	9.638E+01	5.265E+04
2012	4.832E+04	9.168E+01	5.009E+04
2013	4.832E+04	8.721E+01	4.764E+04
2014	4.832E+04	8.296E+01	4.532E+04
2015	4.832E+04	7.891E+01	4.311E+04
2016	4.832E+04	7.506E+01	4.101E+04
2017	4.832E+04	7.140E+01	3.901E+04
2018	4.832E+04	6.792E+01	3.711E+04
2019	4.832E+04	6.461E+01	3.530E+04
2020	4.832E+04	6.146E+01	3.357E+04

continued

Table D-21. Emisson Rate of Carbon Dioxide from Parcel 2 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2021	4.832E+04	5.846E+01	3.194E+04
2022	4.832E+04	5.561E+01	3.038E+04
2023	4.832E+04	5.290E+01	2.890E+04
2024	4.832E+04	5.032E+01	2.749E+04
2025	4.832E+04	4.786E+01	2.615E+04
2026	4.832E+04	4.553E+01	2.487E+04
2027	4.832E+04	4.331E+01	2.366E+04
2028	4.832E+04	4.120E+01	2.251E+04
2029	4.832E+04	3.919E+01	2.141E+04
2030	4.832E+04	3.728E+01	2.036E+04
2031	4.832E+04	3.546E+01	1.937E+04
2032	4.832E+04	3.373E+01	1.843E+04
2033	4.832E+04	3.208E+01	1.753E+04
2034	4.832E+04	3.052E+01	1.667E+04
2035	4.832E+04	2.903E+01	1.586E+04
2036	4.832E+04	2.761E+01	1.509E+04
2037	4.832E+04	2.627E+01	1.435E+04
2038	4.832E+04	2.499E+01	1.365E+04
2039	4.832E+04	2.377E+01	1.298E+04
2040	4.832E+04	2.261E+01	1.235E+04
2041	4.832E+04	2.151E+01	1.175E+04
2042	4.832E+04	2.046E+01	1.118E+04
2043	4.832E+04	1.946E+01	1.063E+04
2044	4.832E+04	1.851E+01	1.011E+04
2045	4.832E+04	1.761E+01	9.619E+03
2046	4.832E+04	1.675E+01	9.150E+03
2047	4.832E+04	1.593E+01	8.704E+03
2048	4.832E+04	1.516E+01	8.279E+03
2049	4.832E+04	1.442E+01	7.875E+03
2050	4.832E+04	1.371E+01	7.491E+03
2051	4.832E+04	1.304E+01	7.126E+03
2052	4.832E+04	1.241E+01	6.778E+03
2053	4.832E+04	1.180E+01	6.448E+03
2054	4.832E+04	1.123E+01	6.133E+03
2055	4.832E+04	1.068E+01	5.834E+03
2056	4.832E+04	1.016E+01	5.550E+03
2057	4.832E+04	9.663E+00	5.279E+03
2058	4.832E+04	9.192E+00	5.022E+03
2059	4.832E+04	8.744E+00	4.777E+03
2060	4.832E+04	8.317E+00	4.544E+03
2061	4.832E+04	7.912E+00	4.322E+03
2062	4.832E+04	7.526E+00	4.111E+03
2063	4.832E+04	7.159E+00	3.911E+03
2064	4.832E+04	6.810E+00	3.720E+03
2065	4.832E+04	6.478E+00	3.539E+03
2066	4.832E+04	6.162E+00	3.366E+03
2067	4.832E+04	5.861E+00	3.202E+03
2068	4.832E+04	5.575E+00	3.046E+03
2069	4.832E+04	5.303E+00	2.897E+03
2070	4.832E+04	5.045E+00	2.756E+03
2071	4.832E+04	4.799E+00	2.622E+03
2072	4.832E+04	4.565E+00	2.494E+03
2073	4.832E+04	4.342E+00	2.372E+03
2074	4.832E+04	4.130E+00	2.256E+03
2075	4.832E+04	3.929E+00	2.146E+03
2076	4.832E+04	3.737E+00	2.042E+03
2077	4.832E+04	3.555E+00	1.942E+03
2078	4.832E+04	3.382E+00	1.847E+03
2079	4.832E+04	3.217E+00	1.757E+03
2080	4.832E+04	3.060E+00	1.672E+03
2081	4.832E+04	2.911E+00	1.590E+03
2082	4.832E+04	2.769E+00	1.512E+03
2083	4.832E+04	2.634E+00	1.439E+03
2084	4.832E+04	2.505E+00	1.369E+03
2085	4.832E+04	2.383E+00	1.302E+03
2086	4.832E+04	2.267E+00	1.238E+03
2087	4.832E+04	2.156E+00	1.178E+03
2088	4.832E+04	2.051E+00	1.120E+03
2089	4.832E+04	1.951E+00	1.066E+03
2090	4.832E+04	1.856E+00	1.014E+03

continued

Table D-21. Emisson Rate of Carbon Dioxide from Parcel 2 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2091	4.832E+04	1.765E+00	9.644E+02
2092	4.832E+04	1.679E+00	9.174E+02
2093	4.832E+04	1.597E+00	8.726E+02
2094	4.832E+04	1.519E+00	8.301E+02
2095	4.832E+04	1.445E+00	7.896E+02
2096	4.832E+04	1.375E+00	7.511E+02
2097	4.832E+04	1.308E+00	7.144E+02
2098	4.832E+04	1.244E+00	6.796E+02
2099	4.832E+04	1.183E+00	6.465E+02
2100	4.832E+04	1.126E+00	6.149E+02
2101	4.832E+04	1.071E+00	5.849E+02
2102	4.832E+04	1.019E+00	5.564E+02
2103	4.832E+04	9.688E-01	5.293E+02
2104	4.832E+04	9.216E-01	5.035E+02
2105	4.832E+04	8.766E-01	4.789E+02
2106	4.832E+04	8.339E-01	4.556E+02
2107	4.832E+04	7.932E-01	4.333E+02
2108	4.832E+04	7.545E-01	4.122E+02
2109	4.832E+04	7.177E-01	3.921E+02
2110	4.832E+04	6.827E-01	3.730E+02
2111	4.832E+04	6.494E-01	3.548E+02
2112	4.832E+04	6.178E-01	3.375E+02
2113	4.832E+04	5.876E-01	3.210E+02
2114	4.832E+04	5.590E-01	3.054E+02
2115	4.832E+04	5.317E-01	2.905E+02
2116	4.832E+04	5.058E-01	2.763E+02
2117	4.832E+04	4.811E-01	2.628E+02
2118	4.832E+04	4.576E-01	2.500E+02
2119	4.832E+04	4.353E-01	2.378E+02
2120	4.832E+04	4.141E-01	2.262E+02
2121	4.832E+04	3.939E-01	2.152E+02
2122	4.832E+04	3.747E-01	2.047E+02
2123	4.832E+04	3.564E-01	1.947E+02
2124	4.832E+04	3.390E-01	1.852E+02
2125	4.832E+04	3.225E-01	1.762E+02
2126	4.832E+04	3.068E-01	1.676E+02
2127	4.832E+04	2.918E-01	1.594E+02
2128	4.832E+04	2.776E-01	1.516E+02
2129	4.832E+04	2.640E-01	1.442E+02
2130	4.832E+04	2.512E-01	1.372E+02
2131	4.832E+04	2.389E-01	1.305E+02
2132	4.832E+04	2.273E-01	1.242E+02
2133	4.832E+04	2.162E-01	1.181E+02
2134	4.832E+04	2.056E-01	1.123E+02
2135	4.832E+04	1.956E-01	1.069E+02
2136	4.832E+04	1.861E-01	1.016E+02
2137	4.832E+04	1.770E-01	9.669E+01
2138	4.832E+04	1.684E-01	9.197E+01
2139	4.832E+04	1.601E-01	8.749E+01
2140	4.832E+04	1.523E-01	8.322E+01
2141	4.832E+04	1.449E-01	7.916E+01
2142	4.832E+04	1.378E-01	7.530E+01
2143	4.832E+04	1.311E-01	7.163E+01
2144	4.832E+04	1.247E-01	6.814E+01
2145	4.832E+04	1.186E-01	6.481E+01
2146	4.832E+04	1.129E-01	6.165E+01
2147	4.832E+04	1.074E-01	5.865E+01
2148	4.832E+04	1.021E-01	5.579E+01
2149	4.832E+04	9.713E-02	5.306E+01
2150	4.832E+04	9.240E-02	5.048E+01
2151	4.832E+04	8.789E-02	4.801E+01
2152	4.832E+04	8.360E-02	4.567E+01
2153	4.832E+04	7.953E-02	4.345E+01
2154	4.832E+04	7.565E-02	4.133E+01
2155	4.832E+04	7.196E-02	3.931E+01
2156	4.832E+04	6.845E-02	3.739E+01
2157	4.832E+04	6.511E-02	3.557E+01
2158	4.832E+04	6.194E-02	3.384E+01
2159	4.832E+04	5.892E-02	3.219E+01
2160	4.832E+04	5.604E-02	3.062E+01

continued

Table D-21. Emisson Rate of Carbon Dioxide from Parcel 2 for Years 1975 to 2203 (concluded).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2161	4.832E+04	5.331E-02	2.912E+01
2162	4.832E+04	5.071E-02	2.770E+01
2163	4.832E+04	4.824E-02	2.635E+01
2164	4.832E+04	4.588E-02	2.507E+01
2165	4.832E+04	4.365E-02	2.384E+01
2166	4.832E+04	4.152E-02	2.268E+01
2167	4.832E+04	3.949E-02	2.157E+01
2168	4.832E+04	3.757E-02	2.052E+01
2169	4.832E+04	3.573E-02	1.952E+01
2170	4.832E+04	3.399E-02	1.857E+01
2171	4.832E+04	3.233E-02	1.766E+01
2172	4.832E+04	3.076E-02	1.680E+01
2173	4.832E+04	2.926E-02	1.598E+01
2174	4.832E+04	2.783E-02	1.520E+01
2175	4.832E+04	2.647E-02	1.446E+01
2176	4.832E+04	2.518E-02	1.376E+01
2177	4.832E+04	2.395E-02	1.309E+01
2178	4.832E+04	2.278E-02	1.245E+01
2179	4.832E+04	2.167E-02	1.184E+01
2180	4.832E+04	2.062E-02	1.126E+01
2181	4.832E+04	1.961E-02	1.071E+01
2182	4.832E+04	1.865E-02	1.019E+01
2183	4.832E+04	1.774E-02	9.694E+00
2184	4.832E+04	1.688E-02	9.221E+00
2185	4.832E+04	1.606E-02	8.772E+00
2186	4.832E+04	1.527E-02	8.344E+00
2187	4.832E+04	1.453E-02	7.937E+00
2188	4.832E+04	1.382E-02	7.550E+00
2189	4.832E+04	1.315E-02	7.182E+00
2190	4.832E+04	1.250E-02	6.831E+00
2191	4.832E+04	1.189E-02	6.498E+00
2192	4.832E+04	1.131E-02	6.181E+00
2193	4.832E+04	1.076E-02	5.880E+00
2194	4.832E+04	1.024E-02	5.593E+00
2195	4.832E+04	9.739E-03	5.320E+00
2196	4.832E+04	9.264E-03	5.061E+00
2197	4.832E+04	8.812E-03	4.814E+00
2198	4.832E+04	8.382E-03	4.579E+00
2199	4.832E+04	7.973E-03	4.356E+00
2200	4.832E+04	7.584E-03	4.143E+00
2201	4.832E+04	7.215E-03	3.941E+00
2202	4.832E+04	6.863E-03	3.749E+00
2203	4.832E+04	6.528E-03	3.566E+00

Table D-22. Emisson Rate of NMOCs from Parcel 2 for Years 1975 to 2203.

Source: H:\3000\030177~2.000\030177~1.003\BUSHVA~1\STRATA2.PRM

Model Parameters

Lo : 170.00 m^3 / Mg
k : 0.0500 1/yr
NMOC : 2000.00 ppmv
Methane : 62.0000 % volume
Carbon Dioxide : 38.0000 % volume

Landfill Parameters

Landfill type : Co-Disposal
Year Opened : 1974 Current Year : 2004 Closure Year: 2004
Capacity : 48325 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 0.00 Mg/year

Model Results

Year	Refuse In Place (Mg)	NMOC Emission Rate (Mg/yr)	NMOC Emission Rate (Cubic m/yr)
1975	4.832E+03	4.750E-01	1.325E+02
1976	9.665E+03	9.267E-01	2.585E+02
1977	1.450E+04	1.357E+00	3.784E+02
1978	1.933E+04	1.765E+00	4.925E+02
1979	2.416E+04	2.154E+00	6.010E+02
1980	2.899E+04	2.524E+00	7.042E+02
1981	3.383E+04	2.876E+00	8.023E+02
1982	3.866E+04	3.211E+00	8.957E+02
1983	4.349E+04	3.529E+00	9.845E+02
1984	4.832E+04	3.832E+00	1.069E+03
1985	4.832E+04	3.645E+00	1.017E+03
1986	4.832E+04	3.467E+00	9.673E+02
1987	4.832E+04	3.298E+00	9.201E+02
1988	4.832E+04	3.137E+00	8.752E+02
1989	4.832E+04	2.984E+00	8.325E+02
1990	4.832E+04	2.839E+00	7.919E+02
1991	4.832E+04	2.700E+00	7.533E+02
1992	4.832E+04	2.569E+00	7.166E+02
1993	4.832E+04	2.443E+00	6.816E+02
1994	4.832E+04	2.324E+00	6.484E+02
1995	4.832E+04	2.211E+00	6.168E+02
1996	4.832E+04	2.103E+00	5.867E+02
1997	4.832E+04	2.000E+00	5.581E+02
1998	4.832E+04	1.903E+00	5.309E+02
1999	4.832E+04	1.810E+00	5.050E+02
2000	4.832E+04	1.722E+00	4.803E+02
2001	4.832E+04	1.638E+00	4.569E+02
2002	4.832E+04	1.558E+00	4.346E+02
2003	4.832E+04	1.482E+00	4.134E+02
2004	4.832E+04	1.410E+00	3.933E+02
2005	4.832E+04	1.341E+00	3.741E+02
2006	4.832E+04	1.276E+00	3.558E+02
2007	4.832E+04	1.213E+00	3.385E+02
2008	4.832E+04	1.154E+00	3.220E+02
2009	4.832E+04	1.098E+00	3.063E+02
2010	4.832E+04	1.044E+00	2.913E+02
2011	4.832E+04	9.934E-01	2.771E+02
2012	4.832E+04	9.449E-01	2.636E+02
2013	4.832E+04	8.988E-01	2.508E+02
2014	4.832E+04	8.550E-01	2.385E+02
2015	4.832E+04	8.133E-01	2.269E+02
2016	4.832E+04	7.736E-01	2.158E+02
2017	4.832E+04	7.359E-01	2.053E+02
2018	4.832E+04	7.000E-01	1.953E+02
2019	4.832E+04	6.659E-01	1.858E+02
2020	4.832E+04	6.334E-01	1.767E+02

continued

Table D-22. Emisson Rate of NMOCs from Parcel 2 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2021	4.832E+04	6.025E-01	1.681E+02
2022	4.832E+04	5.731E-01	1.599E+02
2023	4.832E+04	5.452E-01	1.521E+02
2024	4.832E+04	5.186E-01	1.447E+02
2025	4.832E+04	4.933E-01	1.376E+02
2026	4.832E+04	4.692E-01	1.309E+02
2027	4.832E+04	4.463E-01	1.245E+02
2028	4.832E+04	4.246E-01	1.184E+02
2029	4.832E+04	4.039E-01	1.127E+02
2030	4.832E+04	3.842E-01	1.072E+02
2031	4.832E+04	3.654E-01	1.020E+02
2032	4.832E+04	3.476E-01	9.698E+01
2033	4.832E+04	3.307E-01	9.225E+01
2034	4.832E+04	3.145E-01	8.775E+01
2035	4.832E+04	2.992E-01	8.347E+01
2036	4.832E+04	2.846E-01	7.940E+01
2037	4.832E+04	2.707E-01	7.553E+01
2038	4.832E+04	2.575E-01	7.184E+01
2039	4.832E+04	2.450E-01	6.834E+01
2040	4.832E+04	2.330E-01	6.501E+01
2041	4.832E+04	2.216E-01	6.184E+01
2042	4.832E+04	2.108E-01	5.882E+01
2043	4.832E+04	2.006E-01	5.595E+01
2044	4.832E+04	1.908E-01	5.322E+01
2045	4.832E+04	1.815E-01	5.063E+01
2046	4.832E+04	1.726E-01	4.816E+01
2047	4.832E+04	1.642E-01	4.581E+01
2048	4.832E+04	1.562E-01	4.358E+01
2049	4.832E+04	1.486E-01	4.145E+01
2050	4.832E+04	1.413E-01	3.943E+01
2051	4.832E+04	1.344E-01	3.751E+01
2052	4.832E+04	1.279E-01	3.568E+01
2053	4.832E+04	1.216E-01	3.394E+01
2054	4.832E+04	1.157E-01	3.228E+01
2055	4.832E+04	1.101E-01	3.071E+01
2056	4.832E+04	1.047E-01	2.921E+01
2057	4.832E+04	9.959E-02	2.778E+01
2058	4.832E+04	9.474E-02	2.643E+01
2059	4.832E+04	9.012E-02	2.514E+01
2060	4.832E+04	8.572E-02	2.391E+01
2061	4.832E+04	8.154E-02	2.275E+01
2062	4.832E+04	7.756E-02	2.164E+01
2063	4.832E+04	7.378E-02	2.058E+01
2064	4.832E+04	7.018E-02	1.958E+01
2065	4.832E+04	6.676E-02	1.862E+01
2066	4.832E+04	6.350E-02	1.772E+01
2067	4.832E+04	6.041E-02	1.685E+01
2068	4.832E+04	5.746E-02	1.603E+01
2069	4.832E+04	5.466E-02	1.525E+01
2070	4.832E+04	5.199E-02	1.450E+01
2071	4.832E+04	4.946E-02	1.380E+01
2072	4.832E+04	4.704E-02	1.312E+01
2073	4.832E+04	4.475E-02	1.248E+01
2074	4.832E+04	4.257E-02	1.188E+01
2075	4.832E+04	4.049E-02	1.130E+01
2076	4.832E+04	3.852E-02	1.075E+01
2077	4.832E+04	3.664E-02	1.022E+01
2078	4.832E+04	3.485E-02	9.723E+00
2079	4.832E+04	3.315E-02	9.249E+00
2080	4.832E+04	3.153E-02	8.798E+00
2081	4.832E+04	3.000E-02	8.369E+00
2082	4.832E+04	2.853E-02	7.960E+00
2083	4.832E+04	2.714E-02	7.572E+00
2084	4.832E+04	2.582E-02	7.203E+00
2085	4.832E+04	2.456E-02	6.852E+00
2086	4.832E+04	2.336E-02	6.517E+00
2087	4.832E+04	2.222E-02	6.200E+00
2088	4.832E+04	2.114E-02	5.897E+00
2089	4.832E+04	2.011E-02	5.610E+00
2090	4.832E+04	1.913E-02	5.336E+00

continued

Table D-22. Emisson Rate of NMOCs from Parcel 2 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2091	4.832E+04	1.819E-02	5.076E+00
2092	4.832E+04	1.731E-02	4.828E+00
2093	4.832E+04	1.646E-02	4.593E+00
2094	4.832E+04	1.566E-02	4.369E+00
2095	4.832E+04	1.490E-02	4.156E+00
2096	4.832E+04	1.417E-02	3.953E+00
2097	4.832E+04	1.348E-02	3.760E+00
2098	4.832E+04	1.282E-02	3.577E+00
2099	4.832E+04	1.220E-02	3.402E+00
2100	4.832E+04	1.160E-02	3.236E+00
2101	4.832E+04	1.104E-02	3.079E+00
2102	4.832E+04	1.050E-02	2.928E+00
2103	4.832E+04	9.985E-03	2.786E+00
2104	4.832E+04	9.498E-03	2.650E+00
2105	4.832E+04	9.035E-03	2.521E+00
2106	4.832E+04	8.594E-03	2.398E+00
2107	4.832E+04	8.175E-03	2.281E+00
2108	4.832E+04	7.776E-03	2.169E+00
2109	4.832E+04	7.397E-03	2.064E+00
2110	4.832E+04	7.036E-03	1.963E+00
2111	4.832E+04	6.693E-03	1.867E+00
2112	4.832E+04	6.367E-03	1.776E+00
2113	4.832E+04	6.056E-03	1.690E+00
2114	4.832E+04	5.761E-03	1.607E+00
2115	4.832E+04	5.480E-03	1.529E+00
2116	4.832E+04	5.213E-03	1.454E+00
2117	4.832E+04	4.958E-03	1.383E+00
2118	4.832E+04	4.717E-03	1.316E+00
2119	4.832E+04	4.487E-03	1.252E+00
2120	4.832E+04	4.268E-03	1.191E+00
2121	4.832E+04	4.060E-03	1.133E+00
2122	4.832E+04	3.862E-03	1.077E+00
2123	4.832E+04	3.673E-03	1.025E+00
2124	4.832E+04	3.494E-03	9.748E-01
2125	4.832E+04	3.324E-03	9.273E-01
2126	4.832E+04	3.162E-03	8.820E-01
2127	4.832E+04	3.007E-03	8.390E-01
2128	4.832E+04	2.861E-03	7.981E-01
2129	4.832E+04	2.721E-03	7.592E-01
2130	4.832E+04	2.589E-03	7.222E-01
2131	4.832E+04	2.462E-03	6.869E-01
2132	4.832E+04	2.342E-03	6.534E-01
2133	4.832E+04	2.228E-03	6.216E-01
2134	4.832E+04	2.119E-03	5.913E-01
2135	4.832E+04	2.016E-03	5.624E-01
2136	4.832E+04	1.918E-03	5.350E-01
2137	4.832E+04	1.824E-03	5.089E-01
2138	4.832E+04	1.735E-03	4.841E-01
2139	4.832E+04	1.651E-03	4.605E-01
2140	4.832E+04	1.570E-03	4.380E-01
2141	4.832E+04	1.493E-03	4.166E-01
2142	4.832E+04	1.421E-03	3.963E-01
2143	4.832E+04	1.351E-03	3.770E-01
2144	4.832E+04	1.285E-03	3.586E-01
2145	4.832E+04	1.223E-03	3.411E-01
2146	4.832E+04	1.163E-03	3.245E-01
2147	4.832E+04	1.106E-03	3.087E-01
2148	4.832E+04	1.052E-03	2.936E-01
2149	4.832E+04	1.001E-03	2.793E-01
2150	4.832E+04	9.523E-04	2.657E-01
2151	4.832E+04	9.058E-04	2.527E-01
2152	4.832E+04	8.617E-04	2.404E-01
2153	4.832E+04	8.196E-04	2.287E-01
2154	4.832E+04	7.797E-04	2.175E-01
2155	4.832E+04	7.416E-04	2.069E-01
2156	4.832E+04	7.055E-04	1.968E-01
2157	4.832E+04	6.711E-04	1.872E-01
2158	4.832E+04	6.383E-04	1.781E-01
2159	4.832E+04	6.072E-04	1.694E-01
2160	4.832E+04	5.776E-04	1.611E-01

continued

Table D-22. Emisson Rate of NMOCs from Parcel 2 for Years 1975 to 2203 (concluded).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2161	4.832E+04	5.494E-04	1.533E-01
2162	4.832E+04	5.226E-04	1.458E-01
2163	4.832E+04	4.971E-04	1.387E-01
2164	4.832E+04	4.729E-04	1.319E-01
2165	4.832E+04	4.498E-04	1.255E-01
2166	4.832E+04	4.279E-04	1.194E-01
2167	4.832E+04	4.070E-04	1.135E-01
2168	4.832E+04	3.872E-04	1.080E-01
2169	4.832E+04	3.683E-04	1.027E-01
2170	4.832E+04	3.503E-04	9.773E-02
2171	4.832E+04	3.332E-04	9.297E-02
2172	4.832E+04	3.170E-04	8.843E-02
2173	4.832E+04	3.015E-04	8.412E-02
2174	4.832E+04	2.868E-04	8.002E-02
2175	4.832E+04	2.728E-04	7.611E-02
2176	4.832E+04	2.595E-04	7.240E-02
2177	4.832E+04	2.469E-04	6.887E-02
2178	4.832E+04	2.348E-04	6.551E-02
2179	4.832E+04	2.234E-04	6.232E-02
2180	4.832E+04	2.125E-04	5.928E-02
2181	4.832E+04	2.021E-04	5.639E-02
2182	4.832E+04	1.923E-04	5.364E-02
2183	4.832E+04	1.829E-04	5.102E-02
2184	4.832E+04	1.740E-04	4.853E-02
2185	4.832E+04	1.655E-04	4.617E-02
2186	4.832E+04	1.574E-04	4.391E-02
2187	4.832E+04	1.497E-04	4.177E-02
2188	4.832E+04	1.424E-04	3.974E-02
2189	4.832E+04	1.355E-04	3.780E-02
2190	4.832E+04	1.289E-04	3.595E-02
2191	4.832E+04	1.226E-04	3.420E-02
2192	4.832E+04	1.166E-04	3.253E-02
2193	4.832E+04	1.109E-04	3.095E-02
2194	4.832E+04	1.055E-04	2.944E-02
2195	4.832E+04	1.004E-04	2.800E-02
2196	4.832E+04	9.547E-05	2.664E-02
2197	4.832E+04	9.082E-05	2.534E-02
2198	4.832E+04	8.639E-05	2.410E-02
2199	4.832E+04	8.217E-05	2.293E-02
2200	4.832E+04	7.817E-05	2.181E-02
2201	4.832E+04	7.435E-05	2.074E-02
2202	4.832E+04	7.073E-05	1.973E-02
2203	4.832E+04	6.728E-05	1.877E-02

Table D-23. Emisson Rate of Benzene from Parcel 2 for Years 1975 to 2203.

Source: H:\3000\030177~2.000\030177~1.003\BUSHVA~1\STRATA2.PRM

Model Parameters

Lo : 170.00 m^3 / Mg
k : 0.0500 1/yr
NMOC : 2000.00 ppmv
Methane : 62.0000 % volume
Carbon Dioxide : 38.0000 % volume
Air Pollutant : Benzene (HAP/VOC)
Molecular Wt = 78.12 Concentration = 0.310000 ppmV

Landfill Parameters

Landfill type : Co-Disposal
Year Opened : 1974 Current Year : 2004 Closure Year: 2004
Capacity : 48325 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 0.00 Mg/year

Model Results

Year	Refuse In Place (Mg)	Benzene (HAP/VOC) Emission Rate (Mg/yr)	(Cubic m/yr)
1975	4.832E+03	6.673E-05	2.054E-02
1976	9.665E+03	1.302E-04	4.007E-02
1977	1.450E+04	1.906E-04	5.866E-02
1978	1.933E+04	2.480E-04	7.634E-02
1979	2.416E+04	3.027E-04	9.315E-02
1980	2.899E+04	3.546E-04	1.091E-01
1981	3.383E+04	4.041E-04	1.244E-01
1982	3.866E+04	4.511E-04	1.388E-01
1983	4.349E+04	4.958E-04	1.526E-01
1984	4.832E+04	5.384E-04	1.657E-01
1985	4.832E+04	5.121E-04	1.576E-01
1986	4.832E+04	4.871E-04	1.499E-01
1987	4.832E+04	4.634E-04	1.426E-01
1988	4.832E+04	4.408E-04	1.357E-01
1989	4.832E+04	4.193E-04	1.290E-01
1990	4.832E+04	3.988E-04	1.228E-01
1991	4.832E+04	3.794E-04	1.168E-01
1992	4.832E+04	3.609E-04	1.111E-01
1993	4.832E+04	3.433E-04	1.057E-01
1994	4.832E+04	3.265E-04	1.005E-01
1995	4.832E+04	3.106E-04	9.560E-02
1996	4.832E+04	2.955E-04	9.094E-02
1997	4.832E+04	2.811E-04	8.650E-02
1998	4.832E+04	2.674E-04	8.228E-02
1999	4.832E+04	2.543E-04	7.827E-02
2000	4.832E+04	2.419E-04	7.445E-02
2001	4.832E+04	2.301E-04	7.082E-02
2002	4.832E+04	2.189E-04	6.737E-02
2003	4.832E+04	2.082E-04	6.408E-02
2004	4.832E+04	1.981E-04	6.096E-02
2005	4.832E+04	1.884E-04	5.798E-02
2006	4.832E+04	1.792E-04	5.516E-02
2007	4.832E+04	1.705E-04	5.247E-02
2008	4.832E+04	1.622E-04	4.991E-02
2009	4.832E+04	1.542E-04	4.747E-02
2010	4.832E+04	1.467E-04	4.516E-02
2011	4.832E+04	1.396E-04	4.296E-02
2012	4.832E+04	1.328E-04	4.086E-02
2013	4.832E+04	1.263E-04	3.887E-02
2014	4.832E+04	1.201E-04	3.697E-02
2015	4.832E+04	1.143E-04	3.517E-02
2016	4.832E+04	1.087E-04	3.345E-02
2017	4.832E+04	1.034E-04	3.182E-02
2018	4.832E+04	9.835E-05	3.027E-02

continued

Table D-23. Emisson Rate of Benzene from Parcel 2 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2019	4.832E+04	9.356E-05	2.879E-02
2020	4.832E+04	8.899E-05	2.739E-02
2021	4.832E+04	8.465E-05	2.605E-02
2022	4.832E+04	8.053E-05	2.478E-02
2023	4.832E+04	7.660E-05	2.357E-02
2024	4.832E+04	7.286E-05	2.242E-02
2025	4.832E+04	6.931E-05	2.133E-02
2026	4.832E+04	6.593E-05	2.029E-02
2027	4.832E+04	6.271E-05	1.930E-02
2028	4.832E+04	5.965E-05	1.836E-02
2029	4.832E+04	5.675E-05	1.746E-02
2030	4.832E+04	5.398E-05	1.661E-02
2031	4.832E+04	5.135E-05	1.580E-02
2032	4.832E+04	4.884E-05	1.503E-02
2033	4.832E+04	4.646E-05	1.430E-02
2034	4.832E+04	4.419E-05	1.360E-02
2035	4.832E+04	4.204E-05	1.294E-02
2036	4.832E+04	3.999E-05	1.231E-02
2037	4.832E+04	3.804E-05	1.171E-02
2038	4.832E+04	3.618E-05	1.114E-02
2039	4.832E+04	3.442E-05	1.059E-02
2040	4.832E+04	3.274E-05	1.008E-02
2041	4.832E+04	3.114E-05	9.585E-03
2042	4.832E+04	2.962E-05	9.117E-03
2043	4.832E+04	2.818E-05	8.672E-03
2044	4.832E+04	2.680E-05	8.250E-03
2045	4.832E+04	2.550E-05	7.847E-03
2046	4.832E+04	2.425E-05	7.464E-03
2047	4.832E+04	2.307E-05	7.100E-03
2048	4.832E+04	2.195E-05	6.754E-03
2049	4.832E+04	2.088E-05	6.425E-03
2050	4.832E+04	1.986E-05	6.111E-03
2051	4.832E+04	1.889E-05	5.813E-03
2052	4.832E+04	1.797E-05	5.530E-03
2053	4.832E+04	1.709E-05	5.260E-03
2054	4.832E+04	1.626E-05	5.004E-03
2055	4.832E+04	1.546E-05	4.760E-03
2056	4.832E+04	1.471E-05	4.527E-03
2057	4.832E+04	1.399E-05	4.307E-03
2058	4.832E+04	1.331E-05	4.097E-03
2059	4.832E+04	1.266E-05	3.897E-03
2060	4.832E+04	1.204E-05	3.707E-03
2061	4.832E+04	1.146E-05	3.526E-03
2062	4.832E+04	1.090E-05	3.354E-03
2063	4.832E+04	1.037E-05	3.190E-03
2064	4.832E+04	9.861E-06	3.035E-03
2065	4.832E+04	9.380E-06	2.887E-03
2066	4.832E+04	8.922E-06	2.746E-03
2067	4.832E+04	8.487E-06	2.612E-03
2068	4.832E+04	8.073E-06	2.485E-03
2069	4.832E+04	7.680E-06	2.364E-03
2070	4.832E+04	7.305E-06	2.248E-03
2071	4.832E+04	6.949E-06	2.139E-03
2072	4.832E+04	6.610E-06	2.034E-03
2073	4.832E+04	6.288E-06	1.935E-03
2074	4.832E+04	5.981E-06	1.841E-03
2075	4.832E+04	5.689E-06	1.751E-03
2076	4.832E+04	5.412E-06	1.666E-03
2077	4.832E+04	5.148E-06	1.584E-03
2078	4.832E+04	4.897E-06	1.507E-03
2079	4.832E+04	4.658E-06	1.434E-03
2080	4.832E+04	4.431E-06	1.364E-03
2081	4.832E+04	4.215E-06	1.297E-03
2082	4.832E+04	4.009E-06	1.234E-03
2083	4.832E+04	3.814E-06	1.174E-03
2084	4.832E+04	3.628E-06	1.116E-03
2085	4.832E+04	3.451E-06	1.062E-03
2086	4.832E+04	3.282E-06	1.010E-03
2087	4.832E+04	3.122E-06	9.609E-04
2088	4.832E+04	2.970E-06	9.141E-04

continued

Table D-23. Emisson Rate of Benzene from Parcel 2 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2089	4.832E+04	2.825E-06	8.695E-04
2090	4.832E+04	2.687E-06	8.271E-04
2091	4.832E+04	2.556E-06	7.867E-04
2092	4.832E+04	2.432E-06	7.484E-04
2093	4.832E+04	2.313E-06	7.119E-04
2094	4.832E+04	2.200E-06	6.772E-04
2095	4.832E+04	2.093E-06	6.441E-04
2096	4.832E+04	1.991E-06	6.127E-04
2097	4.832E+04	1.894E-06	5.828E-04
2098	4.832E+04	1.801E-06	5.544E-04
2099	4.832E+04	1.714E-06	5.274E-04
2100	4.832E+04	1.630E-06	5.017E-04
2101	4.832E+04	1.550E-06	4.772E-04
2102	4.832E+04	1.475E-06	4.539E-04
2103	4.832E+04	1.403E-06	4.318E-04
2104	4.832E+04	1.335E-06	4.107E-04
2105	4.832E+04	1.269E-06	3.907E-04
2106	4.832E+04	1.208E-06	3.716E-04
2107	4.832E+04	1.149E-06	3.535E-04
2108	4.832E+04	1.093E-06	3.363E-04
2109	4.832E+04	1.039E-06	3.199E-04
2110	4.832E+04	9.886E-07	3.043E-04
2111	4.832E+04	9.404E-07	2.894E-04
2112	4.832E+04	8.946E-07	2.753E-04
2113	4.832E+04	8.509E-07	2.619E-04
2114	4.832E+04	8.094E-07	2.491E-04
2115	4.832E+04	7.700E-07	2.370E-04
2116	4.832E+04	7.324E-07	2.254E-04
2117	4.832E+04	6.967E-07	2.144E-04
2118	4.832E+04	6.627E-07	2.040E-04
2119	4.832E+04	6.304E-07	1.940E-04
2120	4.832E+04	5.996E-07	1.845E-04
2121	4.832E+04	5.704E-07	1.755E-04
2122	4.832E+04	5.426E-07	1.670E-04
2123	4.832E+04	5.161E-07	1.588E-04
2124	4.832E+04	4.909E-07	1.511E-04
2125	4.832E+04	4.670E-07	1.437E-04
2126	4.832E+04	4.442E-07	1.367E-04
2127	4.832E+04	4.226E-07	1.300E-04
2128	4.832E+04	4.019E-07	1.237E-04
2129	4.832E+04	3.823E-07	1.177E-04
2130	4.832E+04	3.637E-07	1.119E-04
2131	4.832E+04	3.460E-07	1.065E-04
2132	4.832E+04	3.291E-07	1.013E-04
2133	4.832E+04	3.130E-07	9.634E-05
2134	4.832E+04	2.978E-07	9.164E-05
2135	4.832E+04	2.832E-07	8.717E-05
2136	4.832E+04	2.694E-07	8.292E-05
2137	4.832E+04	2.563E-07	7.888E-05
2138	4.832E+04	2.438E-07	7.503E-05
2139	4.832E+04	2.319E-07	7.137E-05
2140	4.832E+04	2.206E-07	6.789E-05
2141	4.832E+04	2.098E-07	6.458E-05
2142	4.832E+04	1.996E-07	6.143E-05
2143	4.832E+04	1.899E-07	5.843E-05
2144	4.832E+04	1.806E-07	5.558E-05
2145	4.832E+04	1.718E-07	5.287E-05
2146	4.832E+04	1.634E-07	5.030E-05
2147	4.832E+04	1.555E-07	4.784E-05
2148	4.832E+04	1.479E-07	4.551E-05
2149	4.832E+04	1.407E-07	4.329E-05
2150	4.832E+04	1.338E-07	4.118E-05
2151	4.832E+04	1.273E-07	3.917E-05
2152	4.832E+04	1.211E-07	3.726E-05
2153	4.832E+04	1.152E-07	3.544E-05
2154	4.832E+04	1.095E-07	3.371E-05
2155	4.832E+04	1.042E-07	3.207E-05
2156	4.832E+04	9.912E-08	3.051E-05
2157	4.832E+04	9.429E-08	2.902E-05
2158	4.832E+04	8.969E-08	2.760E-05

continued

Table D-23. Emisson Rate of Benzene from Parcel 2 for Years 1975 to 2203 (concluded).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2159	4.832E+04	8.531E-08	2.626E-05
2160	4.832E+04	8.115E-08	2.498E-05
2161	4.832E+04	7.719E-08	2.376E-05
2162	4.832E+04	7.343E-08	2.260E-05
2163	4.832E+04	6.985E-08	2.150E-05
2164	4.832E+04	6.644E-08	2.045E-05
2165	4.832E+04	6.320E-08	1.945E-05
2166	4.832E+04	6.012E-08	1.850E-05
2167	4.832E+04	5.719E-08	1.760E-05
2168	4.832E+04	5.440E-08	1.674E-05
2169	4.832E+04	5.174E-08	1.593E-05
2170	4.832E+04	4.922E-08	1.515E-05
2171	4.832E+04	4.682E-08	1.441E-05
2172	4.832E+04	4.454E-08	1.371E-05
2173	4.832E+04	4.237E-08	1.304E-05
2174	4.832E+04	4.030E-08	1.240E-05
2175	4.832E+04	3.833E-08	1.180E-05
2176	4.832E+04	3.646E-08	1.122E-05
2177	4.832E+04	3.469E-08	1.068E-05
2178	4.832E+04	3.299E-08	1.015E-05
2179	4.832E+04	3.138E-08	9.659E-06
2180	4.832E+04	2.985E-08	9.188E-06
2181	4.832E+04	2.840E-08	8.740E-06
2182	4.832E+04	2.701E-08	8.314E-06
2183	4.832E+04	2.570E-08	7.908E-06
2184	4.832E+04	2.444E-08	7.523E-06
2185	4.832E+04	2.325E-08	7.156E-06
2186	4.832E+04	2.212E-08	6.807E-06
2187	4.832E+04	2.104E-08	6.475E-06
2188	4.832E+04	2.001E-08	6.159E-06
2189	4.832E+04	1.904E-08	5.859E-06
2190	4.832E+04	1.811E-08	5.573E-06
2191	4.832E+04	1.722E-08	5.301E-06
2192	4.832E+04	1.638E-08	5.043E-06
2193	4.832E+04	1.559E-08	4.797E-06
2194	4.832E+04	1.483E-08	4.563E-06
2195	4.832E+04	1.410E-08	4.340E-06
2196	4.832E+04	1.341E-08	4.128E-06
2197	4.832E+04	1.276E-08	3.927E-06
2198	4.832E+04	1.214E-08	3.736E-06
2199	4.832E+04	1.155E-08	3.553E-06
2200	4.832E+04	1.098E-08	3.380E-06
2201	4.832E+04	1.045E-08	3.215E-06
2202	4.832E+04	9.938E-09	3.058E-06
2203	4.832E+04	9.453E-09	2.909E-06

Table D-24. Emisson Rate of Chlorobenzene from Parcel 2 for Years 1975 to 2203.

Source: H:\3000\030177~2.000\030177~1.003\BUSHVA~1\STRATA2.PRM

Model Parameters

Lo : 170.00 m^3 / Mg
k : 0.0500 1/yr
NMOC : 2000.00 ppmv
Methane : 62.0000 % volume
Carbon Dioxide : 38.0000 % volume
Air Pollutant : Chlorobenzene (HAP/VOC)
Molecular Wt = 112.56 Concentration = 0.210000 ppmV

Landfill Parameters

Landfill type : Co-Disposal
Year Opened : 1974 Current Year : 2004 Closure Year: 2004
Capacity : 48325 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 0.00 Mg/year

Model Results

Year	Refuse In Place (Mg)	Chlorobenzene (HAP/VOC) Emission Rate (Mg/yr)	(Cubic m/yr)
1975	4.832E+03	6.514E-05	1.391E-02
1976	9.665E+03	1.271E-04	2.715E-02
1977	1.450E+04	1.860E-04	3.974E-02
1978	1.933E+04	2.421E-04	5.171E-02
1979	2.416E+04	2.954E-04	6.310E-02
1980	2.899E+04	3.462E-04	7.394E-02
1981	3.383E+04	3.944E-04	8.424E-02
1982	3.866E+04	4.403E-04	9.405E-02
1983	4.349E+04	4.840E-04	1.034E-01
1984	4.832E+04	5.255E-04	1.122E-01
1985	4.832E+04	4.999E-04	1.068E-01
1986	4.832E+04	4.755E-04	1.016E-01
1987	4.832E+04	4.523E-04	9.661E-02
1988	4.832E+04	4.302E-04	9.190E-02
1989	4.832E+04	4.093E-04	8.742E-02
1990	4.832E+04	3.893E-04	8.315E-02
1991	4.832E+04	3.703E-04	7.910E-02
1992	4.832E+04	3.523E-04	7.524E-02
1993	4.832E+04	3.351E-04	7.157E-02
1994	4.832E+04	3.187E-04	6.808E-02
1995	4.832E+04	3.032E-04	6.476E-02
1996	4.832E+04	2.884E-04	6.160E-02
1997	4.832E+04	2.743E-04	5.860E-02
1998	4.832E+04	2.610E-04	5.574E-02
1999	4.832E+04	2.482E-04	5.302E-02
2000	4.832E+04	2.361E-04	5.044E-02
2001	4.832E+04	2.246E-04	4.798E-02
2002	4.832E+04	2.137E-04	4.564E-02
2003	4.832E+04	2.032E-04	4.341E-02
2004	4.832E+04	1.933E-04	4.129E-02
2005	4.832E+04	1.839E-04	3.928E-02
2006	4.832E+04	1.749E-04	3.736E-02
2007	4.832E+04	1.664E-04	3.554E-02
2008	4.832E+04	1.583E-04	3.381E-02
2009	4.832E+04	1.506E-04	3.216E-02
2010	4.832E+04	1.432E-04	3.059E-02
2011	4.832E+04	1.362E-04	2.910E-02
2012	4.832E+04	1.296E-04	2.768E-02
2013	4.832E+04	1.233E-04	2.633E-02
2014	4.832E+04	1.173E-04	2.505E-02
2015	4.832E+04	1.115E-04	2.382E-02
2016	4.832E+04	1.061E-04	2.266E-02
2017	4.832E+04	1.009E-04	2.156E-02
2018	4.832E+04	9.600E-05	2.051E-02

continued

Table D-24. Emisson Rate of Chlorobenzene from Parcel 2 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2019	4.832E+04	9.132E-05	1.951E-02
2020	4.832E+04	8.686E-05	1.855E-02
2021	4.832E+04	8.263E-05	1.765E-02
2022	4.832E+04	7.860E-05	1.679E-02
2023	4.832E+04	7.476E-05	1.597E-02
2024	4.832E+04	7.112E-05	1.519E-02
2025	4.832E+04	6.765E-05	1.445E-02
2026	4.832E+04	6.435E-05	1.375E-02
2027	4.832E+04	6.121E-05	1.307E-02
2028	4.832E+04	5.823E-05	1.244E-02
2029	4.832E+04	5.539E-05	1.183E-02
2030	4.832E+04	5.269E-05	1.125E-02
2031	4.832E+04	5.012E-05	1.070E-02
2032	4.832E+04	4.767E-05	1.018E-02
2033	4.832E+04	4.535E-05	9.686E-03
2034	4.832E+04	4.314E-05	9.214E-03
2035	4.832E+04	4.103E-05	8.764E-03
2036	4.832E+04	3.903E-05	8.337E-03
2037	4.832E+04	3.713E-05	7.930E-03
2038	4.832E+04	3.532E-05	7.544E-03
2039	4.832E+04	3.359E-05	7.176E-03
2040	4.832E+04	3.196E-05	6.826E-03
2041	4.832E+04	3.040E-05	6.493E-03
2042	4.832E+04	2.891E-05	6.176E-03
2043	4.832E+04	2.750E-05	5.875E-03
2044	4.832E+04	2.616E-05	5.588E-03
2045	4.832E+04	2.489E-05	5.316E-03
2046	4.832E+04	2.367E-05	5.057E-03
2047	4.832E+04	2.252E-05	4.810E-03
2048	4.832E+04	2.142E-05	4.575E-03
2049	4.832E+04	2.038E-05	4.352E-03
2050	4.832E+04	1.938E-05	4.140E-03
2051	4.832E+04	1.844E-05	3.938E-03
2052	4.832E+04	1.754E-05	3.746E-03
2053	4.832E+04	1.668E-05	3.563E-03
2054	4.832E+04	1.587E-05	3.390E-03
2055	4.832E+04	1.509E-05	3.224E-03
2056	4.832E+04	1.436E-05	3.067E-03
2057	4.832E+04	1.366E-05	2.917E-03
2058	4.832E+04	1.299E-05	2.775E-03
2059	4.832E+04	1.236E-05	2.640E-03
2060	4.832E+04	1.176E-05	2.511E-03
2061	4.832E+04	1.118E-05	2.389E-03
2062	4.832E+04	1.064E-05	2.272E-03
2063	4.832E+04	1.012E-05	2.161E-03
2064	4.832E+04	9.625E-06	2.056E-03
2065	4.832E+04	9.155E-06	1.956E-03
2066	4.832E+04	8.709E-06	1.860E-03
2067	4.832E+04	8.284E-06	1.769E-03
2068	4.832E+04	7.880E-06	1.683E-03
2069	4.832E+04	7.496E-06	1.601E-03
2070	4.832E+04	7.130E-06	1.523E-03
2071	4.832E+04	6.783E-06	1.449E-03
2072	4.832E+04	6.452E-06	1.378E-03
2073	4.832E+04	6.137E-06	1.311E-03
2074	4.832E+04	5.838E-06	1.247E-03
2075	4.832E+04	5.553E-06	1.186E-03
2076	4.832E+04	5.282E-06	1.128E-03
2077	4.832E+04	5.025E-06	1.073E-03
2078	4.832E+04	4.780E-06	1.021E-03
2079	4.832E+04	4.546E-06	9.711E-04
2080	4.832E+04	4.325E-06	9.238E-04
2081	4.832E+04	4.114E-06	8.787E-04
2082	4.832E+04	3.913E-06	8.358E-04
2083	4.832E+04	3.722E-06	7.951E-04
2084	4.832E+04	3.541E-06	7.563E-04
2085	4.832E+04	3.368E-06	7.194E-04
2086	4.832E+04	3.204E-06	6.843E-04
2087	4.832E+04	3.048E-06	6.510E-04
2088	4.832E+04	2.899E-06	6.192E-04

continued

Table D-24. Emisson Rate of Chlorobenzene from Parcel 2 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2089	4.832E+04	2.758E-06	5.890E-04
2090	4.832E+04	2.623E-06	5.603E-04
2091	4.832E+04	2.495E-06	5.330E-04
2092	4.832E+04	2.373E-06	5.070E-04
2093	4.832E+04	2.258E-06	4.822E-04
2094	4.832E+04	2.148E-06	4.587E-04
2095	4.832E+04	2.043E-06	4.364E-04
2096	4.832E+04	1.943E-06	4.151E-04
2097	4.832E+04	1.848E-06	3.948E-04
2098	4.832E+04	1.758E-06	3.756E-04
2099	4.832E+04	1.673E-06	3.573E-04
2100	4.832E+04	1.591E-06	3.398E-04
2101	4.832E+04	1.513E-06	3.233E-04
2102	4.832E+04	1.440E-06	3.075E-04
2103	4.832E+04	1.369E-06	2.925E-04
2104	4.832E+04	1.303E-06	2.782E-04
2105	4.832E+04	1.239E-06	2.647E-04
2106	4.832E+04	1.179E-06	2.518E-04
2107	4.832E+04	1.121E-06	2.395E-04
2108	4.832E+04	1.066E-06	2.278E-04
2109	4.832E+04	1.014E-06	2.167E-04
2110	4.832E+04	9.650E-07	2.061E-04
2111	4.832E+04	9.179E-07	1.961E-04
2112	4.832E+04	8.731E-07	1.865E-04
2113	4.832E+04	8.306E-07	1.774E-04
2114	4.832E+04	7.901E-07	1.688E-04
2115	4.832E+04	7.515E-07	1.605E-04
2116	4.832E+04	7.149E-07	1.527E-04
2117	4.832E+04	6.800E-07	1.452E-04
2118	4.832E+04	6.468E-07	1.382E-04
2119	4.832E+04	6.153E-07	1.314E-04
2120	4.832E+04	5.853E-07	1.250E-04
2121	4.832E+04	5.567E-07	1.189E-04
2122	4.832E+04	5.296E-07	1.131E-04
2123	4.832E+04	5.038E-07	1.076E-04
2124	4.832E+04	4.792E-07	1.024E-04
2125	4.832E+04	4.558E-07	9.736E-05
2126	4.832E+04	4.336E-07	9.261E-05
2127	4.832E+04	4.124E-07	8.810E-05
2128	4.832E+04	3.923E-07	8.380E-05
2129	4.832E+04	3.732E-07	7.971E-05
2130	4.832E+04	3.550E-07	7.583E-05
2131	4.832E+04	3.377E-07	7.213E-05
2132	4.832E+04	3.212E-07	6.861E-05
2133	4.832E+04	3.055E-07	6.526E-05
2134	4.832E+04	2.906E-07	6.208E-05
2135	4.832E+04	2.765E-07	5.905E-05
2136	4.832E+04	2.630E-07	5.617E-05
2137	4.832E+04	2.502E-07	5.343E-05
2138	4.832E+04	2.380E-07	5.083E-05
2139	4.832E+04	2.264E-07	4.835E-05
2140	4.832E+04	2.153E-07	4.599E-05
2141	4.832E+04	2.048E-07	4.375E-05
2142	4.832E+04	1.948E-07	4.161E-05
2143	4.832E+04	1.853E-07	3.958E-05
2144	4.832E+04	1.763E-07	3.765E-05
2145	4.832E+04	1.677E-07	3.582E-05
2146	4.832E+04	1.595E-07	3.407E-05
2147	4.832E+04	1.517E-07	3.241E-05
2148	4.832E+04	1.443E-07	3.083E-05
2149	4.832E+04	1.373E-07	2.933E-05
2150	4.832E+04	1.306E-07	2.789E-05
2151	4.832E+04	1.242E-07	2.653E-05
2152	4.832E+04	1.182E-07	2.524E-05
2153	4.832E+04	1.124E-07	2.401E-05
2154	4.832E+04	1.069E-07	2.284E-05
2155	4.832E+04	1.017E-07	2.172E-05
2156	4.832E+04	9.675E-08	2.067E-05
2157	4.832E+04	9.203E-08	1.966E-05
2158	4.832E+04	8.754E-08	1.870E-05

continued

Table D-24. Emisson Rate of Chlorobenzene from Parcel 2 for Years 1975 to 2203 (concluded).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2159	4.832E+04	8.327E-08	1.779E-05
2160	4.832E+04	7.921E-08	1.692E-05
2161	4.832E+04	7.535E-08	1.609E-05
2162	4.832E+04	7.167E-08	1.531E-05
2163	4.832E+04	6.818E-08	1.456E-05
2164	4.832E+04	6.485E-08	1.385E-05
2165	4.832E+04	6.169E-08	1.318E-05
2166	4.832E+04	5.868E-08	1.253E-05
2167	4.832E+04	5.582E-08	1.192E-05
2168	4.832E+04	5.310E-08	1.134E-05
2169	4.832E+04	5.051E-08	1.079E-05
2170	4.832E+04	4.804E-08	1.026E-05
2171	4.832E+04	4.570E-08	9.761E-06
2172	4.832E+04	4.347E-08	9.285E-06
2173	4.832E+04	4.135E-08	8.833E-06
2174	4.832E+04	3.933E-08	8.402E-06
2175	4.832E+04	3.742E-08	7.992E-06
2176	4.832E+04	3.559E-08	7.602E-06
2177	4.832E+04	3.386E-08	7.231E-06
2178	4.832E+04	3.220E-08	6.879E-06
2179	4.832E+04	3.063E-08	6.543E-06
2180	4.832E+04	2.914E-08	6.224E-06
2181	4.832E+04	2.772E-08	5.921E-06
2182	4.832E+04	2.637E-08	5.632E-06
2183	4.832E+04	2.508E-08	5.357E-06
2184	4.832E+04	2.386E-08	5.096E-06
2185	4.832E+04	2.269E-08	4.847E-06
2186	4.832E+04	2.159E-08	4.611E-06
2187	4.832E+04	2.053E-08	4.386E-06
2188	4.832E+04	1.953E-08	4.172E-06
2189	4.832E+04	1.858E-08	3.969E-06
2190	4.832E+04	1.767E-08	3.775E-06
2191	4.832E+04	1.681E-08	3.591E-06
2192	4.832E+04	1.599E-08	3.416E-06
2193	4.832E+04	1.521E-08	3.249E-06
2194	4.832E+04	1.447E-08	3.091E-06
2195	4.832E+04	1.376E-08	2.940E-06
2196	4.832E+04	1.309E-08	2.797E-06
2197	4.832E+04	1.245E-08	2.660E-06
2198	4.832E+04	1.185E-08	2.531E-06
2199	4.832E+04	1.127E-08	2.407E-06
2200	4.832E+04	1.072E-08	2.290E-06
2201	4.832E+04	1.020E-08	2.178E-06
2202	4.832E+04	9.700E-09	2.072E-06
2203	4.832E+04	9.227E-09	1.971E-06

Table D-25. Emisson Rate of Chloroethane from Parcel 2 for Years 1975 to 2203.

Source: H:\3000\030177~2.000\030177~1.003\BUSHVA~1\STRATA2.PRM

Model Parameters

Lo : 170.00 m^3 / Mg
k : 0.0500 1/yr
NMOC : 2000.00 ppmv
Methane : 62.0000 % volume
Carbon Dioxide : 38.0000 % volume
Air Pollutant : Chloroethane (HAP/VOC)
Molecular Wt = 64.52 Concentration = 0.160000 ppmV

Landfill Parameters

Landfill type : Co-Disposal
Year Opened : 1974 Current Year : 2004 Closure Year: 2004
Capacity : 48325 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 0.00 Mg/year

Model Results

Year	Refuse In Place (Mg)	Chloroethane (HAP/VOC) Emission Rate (Mg/yr)	(Cubic m/yr)
1975	4.832E+03	2.845E-05	1.060E-02
1976	9.665E+03	5.551E-05	2.068E-02
1977	1.450E+04	8.125E-05	3.028E-02
1978	1.933E+04	1.057E-04	3.940E-02
1979	2.416E+04	1.290E-04	4.808E-02
1980	2.899E+04	1.512E-04	5.633E-02
1981	3.383E+04	1.722E-04	6.419E-02
1982	3.866E+04	1.923E-04	7.166E-02
1983	4.349E+04	2.114E-04	7.876E-02
1984	4.832E+04	2.295E-04	8.552E-02
1985	4.832E+04	2.183E-04	8.135E-02
1986	4.832E+04	2.077E-04	7.738E-02
1987	4.832E+04	1.975E-04	7.361E-02
1988	4.832E+04	1.879E-04	7.002E-02
1989	4.832E+04	1.787E-04	6.660E-02
1990	4.832E+04	1.700E-04	6.336E-02
1991	4.832E+04	1.617E-04	6.027E-02
1992	4.832E+04	1.538E-04	5.733E-02
1993	4.832E+04	1.463E-04	5.453E-02
1994	4.832E+04	1.392E-04	5.187E-02
1995	4.832E+04	1.324E-04	4.934E-02
1996	4.832E+04	1.260E-04	4.693E-02
1997	4.832E+04	1.198E-04	4.465E-02
1998	4.832E+04	1.140E-04	4.247E-02
1999	4.832E+04	1.084E-04	4.040E-02
2000	4.832E+04	1.031E-04	3.843E-02
2001	4.832E+04	9.809E-05	3.655E-02
2002	4.832E+04	9.331E-05	3.477E-02
2003	4.832E+04	8.876E-05	3.307E-02
2004	4.832E+04	8.443E-05	3.146E-02
2005	4.832E+04	8.031E-05	2.993E-02
2006	4.832E+04	7.639E-05	2.847E-02
2007	4.832E+04	7.267E-05	2.708E-02
2008	4.832E+04	6.912E-05	2.576E-02
2009	4.832E+04	6.575E-05	2.450E-02
2010	4.832E+04	6.255E-05	2.331E-02
2011	4.832E+04	5.950E-05	2.217E-02
2012	4.832E+04	5.659E-05	2.109E-02
2013	4.832E+04	5.383E-05	2.006E-02
2014	4.832E+04	5.121E-05	1.908E-02
2015	4.832E+04	4.871E-05	1.815E-02
2016	4.832E+04	4.634E-05	1.727E-02
2017	4.832E+04	4.408E-05	1.642E-02
2018	4.832E+04	4.193E-05	1.562E-02

continued

Table D-25. Emisson Rate of Chloroethane from Parcel 2 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2019	4.832E+04	3.988E-05	1.486E-02
2020	4.832E+04	3.794E-05	1.414E-02
2021	4.832E+04	3.609E-05	1.345E-02
2022	4.832E+04	3.433E-05	1.279E-02
2023	4.832E+04	3.265E-05	1.217E-02
2024	4.832E+04	3.106E-05	1.157E-02
2025	4.832E+04	2.954E-05	1.101E-02
2026	4.832E+04	2.810E-05	1.047E-02
2027	4.832E+04	2.673E-05	9.962E-03
2028	4.832E+04	2.543E-05	9.476E-03
2029	4.832E+04	2.419E-05	9.014E-03
2030	4.832E+04	2.301E-05	8.574E-03
2031	4.832E+04	2.189E-05	8.156E-03
2032	4.832E+04	2.082E-05	7.758E-03
2033	4.832E+04	1.980E-05	7.380E-03
2034	4.832E+04	1.884E-05	7.020E-03
2035	4.832E+04	1.792E-05	6.678E-03
2036	4.832E+04	1.705E-05	6.352E-03
2037	4.832E+04	1.621E-05	6.042E-03
2038	4.832E+04	1.542E-05	5.747E-03
2039	4.832E+04	1.467E-05	5.467E-03
2040	4.832E+04	1.396E-05	5.201E-03
2041	4.832E+04	1.328E-05	4.947E-03
2042	4.832E+04	1.263E-05	4.706E-03
2043	4.832E+04	1.201E-05	4.476E-03
2044	4.832E+04	1.143E-05	4.258E-03
2045	4.832E+04	1.087E-05	4.050E-03
2046	4.832E+04	1.034E-05	3.853E-03
2047	4.832E+04	9.835E-06	3.665E-03
2048	4.832E+04	9.355E-06	3.486E-03
2049	4.832E+04	8.899E-06	3.316E-03
2050	4.832E+04	8.465E-06	3.154E-03
2051	4.832E+04	8.052E-06	3.000E-03
2052	4.832E+04	7.659E-06	2.854E-03
2053	4.832E+04	7.286E-06	2.715E-03
2054	4.832E+04	6.930E-06	2.582E-03
2055	4.832E+04	6.592E-06	2.457E-03
2056	4.832E+04	6.271E-06	2.337E-03
2057	4.832E+04	5.965E-06	2.223E-03
2058	4.832E+04	5.674E-06	2.114E-03
2059	4.832E+04	5.397E-06	2.011E-03
2060	4.832E+04	5.134E-06	1.913E-03
2061	4.832E+04	4.884E-06	1.820E-03
2062	4.832E+04	4.646E-06	1.731E-03
2063	4.832E+04	4.419E-06	1.647E-03
2064	4.832E+04	4.203E-06	1.566E-03
2065	4.832E+04	3.998E-06	1.490E-03
2066	4.832E+04	3.803E-06	1.417E-03
2067	4.832E+04	3.618E-06	1.348E-03
2068	4.832E+04	3.441E-06	1.282E-03
2069	4.832E+04	3.274E-06	1.220E-03
2070	4.832E+04	3.114E-06	1.160E-03
2071	4.832E+04	2.962E-06	1.104E-03
2072	4.832E+04	2.818E-06	1.050E-03
2073	4.832E+04	2.680E-06	9.988E-04
2074	4.832E+04	2.550E-06	9.500E-04
2075	4.832E+04	2.425E-06	9.037E-04
2076	4.832E+04	2.307E-06	8.596E-04
2077	4.832E+04	2.194E-06	8.177E-04
2078	4.832E+04	2.087E-06	7.778E-04
2079	4.832E+04	1.986E-06	7.399E-04
2080	4.832E+04	1.889E-06	7.038E-04
2081	4.832E+04	1.797E-06	6.695E-04
2082	4.832E+04	1.709E-06	6.368E-04
2083	4.832E+04	1.626E-06	6.058E-04
2084	4.832E+04	1.546E-06	5.762E-04
2085	4.832E+04	1.471E-06	5.481E-04
2086	4.832E+04	1.399E-06	5.214E-04
2087	4.832E+04	1.331E-06	4.960E-04
2088	4.832E+04	1.266E-06	4.718E-04

continued

Table D-25. Emisson Rate of Chloroethane from Parcel 2 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2089	4.832E+04	1.204E-06	4.488E-04
2090	4.832E+04	1.146E-06	4.269E-04
2091	4.832E+04	1.090E-06	4.061E-04
2092	4.832E+04	1.037E-06	3.863E-04
2093	4.832E+04	9.860E-07	3.674E-04
2094	4.832E+04	9.379E-07	3.495E-04
2095	4.832E+04	8.922E-07	3.325E-04
2096	4.832E+04	8.487E-07	3.162E-04
2097	4.832E+04	8.073E-07	3.008E-04
2098	4.832E+04	7.679E-07	2.861E-04
2099	4.832E+04	7.304E-07	2.722E-04
2100	4.832E+04	6.948E-07	2.589E-04
2101	4.832E+04	6.609E-07	2.463E-04
2102	4.832E+04	6.287E-07	2.343E-04
2103	4.832E+04	5.980E-07	2.229E-04
2104	4.832E+04	5.689E-07	2.120E-04
2105	4.832E+04	5.411E-07	2.016E-04
2106	4.832E+04	5.147E-07	1.918E-04
2107	4.832E+04	4.896E-07	1.825E-04
2108	4.832E+04	4.658E-07	1.736E-04
2109	4.832E+04	4.430E-07	1.651E-04
2110	4.832E+04	4.214E-07	1.570E-04
2111	4.832E+04	4.009E-07	1.494E-04
2112	4.832E+04	3.813E-07	1.421E-04
2113	4.832E+04	3.627E-07	1.352E-04
2114	4.832E+04	3.450E-07	1.286E-04
2115	4.832E+04	3.282E-07	1.223E-04
2116	4.832E+04	3.122E-07	1.163E-04
2117	4.832E+04	2.970E-07	1.107E-04
2118	4.832E+04	2.825E-07	1.053E-04
2119	4.832E+04	2.687E-07	1.001E-04
2120	4.832E+04	2.556E-07	9.525E-05
2121	4.832E+04	2.431E-07	9.061E-05
2122	4.832E+04	2.313E-07	8.619E-05
2123	4.832E+04	2.200E-07	8.198E-05
2124	4.832E+04	2.093E-07	7.798E-05
2125	4.832E+04	1.991E-07	7.418E-05
2126	4.832E+04	1.894E-07	7.056E-05
2127	4.832E+04	1.801E-07	6.712E-05
2128	4.832E+04	1.713E-07	6.385E-05
2129	4.832E+04	1.630E-07	6.073E-05
2130	4.832E+04	1.550E-07	5.777E-05
2131	4.832E+04	1.475E-07	5.495E-05
2132	4.832E+04	1.403E-07	5.227E-05
2133	4.832E+04	1.334E-07	4.973E-05
2134	4.832E+04	1.269E-07	4.730E-05
2135	4.832E+04	1.207E-07	4.499E-05
2136	4.832E+04	1.149E-07	4.280E-05
2137	4.832E+04	1.093E-07	4.071E-05
2138	4.832E+04	1.039E-07	3.873E-05
2139	4.832E+04	9.886E-08	3.684E-05
2140	4.832E+04	9.403E-08	3.504E-05
2141	4.832E+04	8.945E-08	3.333E-05
2142	4.832E+04	8.509E-08	3.171E-05
2143	4.832E+04	8.094E-08	3.016E-05
2144	4.832E+04	7.699E-08	2.869E-05
2145	4.832E+04	7.323E-08	2.729E-05
2146	4.832E+04	6.966E-08	2.596E-05
2147	4.832E+04	6.626E-08	2.469E-05
2148	4.832E+04	6.303E-08	2.349E-05
2149	4.832E+04	5.996E-08	2.234E-05
2150	4.832E+04	5.703E-08	2.125E-05
2151	4.832E+04	5.425E-08	2.022E-05
2152	4.832E+04	5.161E-08	1.923E-05
2153	4.832E+04	4.909E-08	1.829E-05
2154	4.832E+04	4.670E-08	1.740E-05
2155	4.832E+04	4.442E-08	1.655E-05
2156	4.832E+04	4.225E-08	1.574E-05
2157	4.832E+04	4.019E-08	1.498E-05
2158	4.832E+04	3.823E-08	1.425E-05

continued

Table D-25. Emisson Rate of Chloroethane from Parcel 2 for Years 1975 to 2203 (concluded).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2159	4.832E+04	3.637E-08	1.355E-05
2160	4.832E+04	3.459E-08	1.289E-05
2161	4.832E+04	3.291E-08	1.226E-05
2162	4.832E+04	3.130E-08	1.166E-05
2163	4.832E+04	2.977E-08	1.110E-05
2164	4.832E+04	2.832E-08	1.055E-05
2165	4.832E+04	2.694E-08	1.004E-05
2166	4.832E+04	2.563E-08	9.550E-06
2167	4.832E+04	2.438E-08	9.084E-06
2168	4.832E+04	2.319E-08	8.641E-06
2169	4.832E+04	2.206E-08	8.220E-06
2170	4.832E+04	2.098E-08	7.819E-06
2171	4.832E+04	1.996E-08	7.437E-06
2172	4.832E+04	1.899E-08	7.075E-06
2173	4.832E+04	1.806E-08	6.730E-06
2174	4.832E+04	1.718E-08	6.401E-06
2175	4.832E+04	1.634E-08	6.089E-06
2176	4.832E+04	1.554E-08	5.792E-06
2177	4.832E+04	1.479E-08	5.510E-06
2178	4.832E+04	1.406E-08	5.241E-06
2179	4.832E+04	1.338E-08	4.985E-06
2180	4.832E+04	1.273E-08	4.742E-06
2181	4.832E+04	1.211E-08	4.511E-06
2182	4.832E+04	1.152E-08	4.291E-06
2183	4.832E+04	1.095E-08	4.082E-06
2184	4.832E+04	1.042E-08	3.883E-06
2185	4.832E+04	9.911E-09	3.693E-06
2186	4.832E+04	9.428E-09	3.513E-06
2187	4.832E+04	8.968E-09	3.342E-06
2188	4.832E+04	8.531E-09	3.179E-06
2189	4.832E+04	8.115E-09	3.024E-06
2190	4.832E+04	7.719E-09	2.876E-06
2191	4.832E+04	7.342E-09	2.736E-06
2192	4.832E+04	6.984E-09	2.603E-06
2193	4.832E+04	6.644E-09	2.476E-06
2194	4.832E+04	6.320E-09	2.355E-06
2195	4.832E+04	6.011E-09	2.240E-06
2196	4.832E+04	5.718E-09	2.131E-06
2197	4.832E+04	5.439E-09	2.027E-06
2198	4.832E+04	5.174E-09	1.928E-06
2199	4.832E+04	4.922E-09	1.834E-06
2200	4.832E+04	4.682E-09	1.745E-06
2201	4.832E+04	4.453E-09	1.659E-06
2202	4.832E+04	4.236E-09	1.579E-06
2203	4.832E+04	4.030E-09	1.502E-06

Table D-26. Emisson Rate of 1,4-Dichlorobenzene from Parcel 2 for Years 1975 to 2203.

Source: H:\3000\030177~2.000\030177~1.003\BUSHVA~1\STRATA2.PRM

Model Parameters

Lo : 170.00 m^3 / Mg
k : 0.0500 1/yr
NMOC : 2000.00 ppmv
Methane : 62.0000 % volume
Carbon Dioxide : 38.0000 % volume
Air Pollutant : Dichlorobenzene (VOC/HAP for 1,4 isomer)
Molecular Wt = 147.00 Concentration = 0.290000 ppmV

Landfill Parameters

Landfill type : Co-Disposal
Year Opened : 1974 Current Year : 2004 Closure Year: 2004
Capacity : 48325 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 0.00 Mg/year

Model Results

Year	Refuse In Place (Mg)	Dichlorobenzene (VOC/HAP for 1,4 isomer) Emission Ra (Mg/yr)	(Cubic m/yr)
1975	4.832E+03	1.175E-04	1.921E-02
1976	9.665E+03	2.292E-04	3.749E-02
1977	1.450E+04	3.355E-04	5.487E-02
1978	1.933E+04	4.366E-04	7.141E-02
1979	2.416E+04	5.328E-04	8.714E-02
1980	2.899E+04	6.243E-04	1.021E-01
1981	3.383E+04	7.113E-04	1.163E-01
1982	3.866E+04	7.941E-04	1.299E-01
1983	4.349E+04	8.728E-04	1.428E-01
1984	4.832E+04	9.477E-04	1.550E-01
1985	4.832E+04	9.015E-04	1.474E-01
1986	4.832E+04	8.575E-04	1.403E-01
1987	4.832E+04	8.157E-04	1.334E-01
1988	4.832E+04	7.759E-04	1.269E-01
1989	4.832E+04	7.381E-04	1.207E-01
1990	4.832E+04	7.021E-04	1.148E-01
1991	4.832E+04	6.679E-04	1.092E-01
1992	4.832E+04	6.353E-04	1.039E-01
1993	4.832E+04	6.043E-04	9.884E-02
1994	4.832E+04	5.748E-04	9.402E-02
1995	4.832E+04	5.468E-04	8.943E-02
1996	4.832E+04	5.201E-04	8.507E-02
1997	4.832E+04	4.948E-04	8.092E-02
1998	4.832E+04	4.706E-04	7.697E-02
1999	4.832E+04	4.477E-04	7.322E-02
2000	4.832E+04	4.258E-04	6.965E-02
2001	4.832E+04	4.051E-04	6.625E-02
2002	4.832E+04	3.853E-04	6.302E-02
2003	4.832E+04	3.665E-04	5.995E-02
2004	4.832E+04	3.486E-04	5.702E-02
2005	4.832E+04	3.316E-04	5.424E-02
2006	4.832E+04	3.155E-04	5.160E-02
2007	4.832E+04	3.001E-04	4.908E-02
2008	4.832E+04	2.855E-04	4.669E-02
2009	4.832E+04	2.715E-04	4.441E-02
2010	4.832E+04	2.583E-04	4.224E-02
2011	4.832E+04	2.457E-04	4.018E-02
2012	4.832E+04	2.337E-04	3.822E-02
2013	4.832E+04	2.223E-04	3.636E-02
2014	4.832E+04	2.115E-04	3.459E-02
2015	4.832E+04	2.012E-04	3.290E-02
2016	4.832E+04	1.913E-04	3.130E-02
2017	4.832E+04	1.820E-04	2.977E-02
2018	4.832E+04	1.731E-04	2.832E-02

continued

Table D-26. Emisson Rate of 1,4-Dichlorobenzene from Parcel 2 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2019	4.832E+04	1.647E-04	2.694E-02
2020	4.832E+04	1.567E-04	2.562E-02
2021	4.832E+04	1.490E-04	2.437E-02
2022	4.832E+04	1.418E-04	2.318E-02
2023	4.832E+04	1.348E-04	2.205E-02
2024	4.832E+04	1.283E-04	2.098E-02
2025	4.832E+04	1.220E-04	1.995E-02
2026	4.832E+04	1.161E-04	1.898E-02
2027	4.832E+04	1.104E-04	1.806E-02
2028	4.832E+04	1.050E-04	1.718E-02
2029	4.832E+04	9.989E-05	1.634E-02
2030	4.832E+04	9.502E-05	1.554E-02
2031	4.832E+04	9.038E-05	1.478E-02
2032	4.832E+04	8.598E-05	1.406E-02
2033	4.832E+04	8.178E-05	1.338E-02
2034	4.832E+04	7.779E-05	1.272E-02
2035	4.832E+04	7.400E-05	1.210E-02
2036	4.832E+04	7.039E-05	1.151E-02
2037	4.832E+04	6.696E-05	1.095E-02
2038	4.832E+04	6.369E-05	1.042E-02
2039	4.832E+04	6.059E-05	9.909E-03
2040	4.832E+04	5.763E-05	9.426E-03
2041	4.832E+04	5.482E-05	8.966E-03
2042	4.832E+04	5.215E-05	8.529E-03
2043	4.832E+04	4.960E-05	8.113E-03
2044	4.832E+04	4.718E-05	7.717E-03
2045	4.832E+04	4.488E-05	7.341E-03
2046	4.832E+04	4.269E-05	6.983E-03
2047	4.832E+04	4.061E-05	6.642E-03
2048	4.832E+04	3.863E-05	6.318E-03
2049	4.832E+04	3.675E-05	6.010E-03
2050	4.832E+04	3.496E-05	5.717E-03
2051	4.832E+04	3.325E-05	5.438E-03
2052	4.832E+04	3.163E-05	5.173E-03
2053	4.832E+04	3.009E-05	4.921E-03
2054	4.832E+04	2.862E-05	4.681E-03
2055	4.832E+04	2.722E-05	4.452E-03
2056	4.832E+04	2.590E-05	4.235E-03
2057	4.832E+04	2.463E-05	4.029E-03
2058	4.832E+04	2.343E-05	3.832E-03
2059	4.832E+04	2.229E-05	3.645E-03
2060	4.832E+04	2.120E-05	3.468E-03
2061	4.832E+04	2.017E-05	3.298E-03
2062	4.832E+04	1.918E-05	3.138E-03
2063	4.832E+04	1.825E-05	2.985E-03
2064	4.832E+04	1.736E-05	2.839E-03
2065	4.832E+04	1.651E-05	2.701E-03
2066	4.832E+04	1.571E-05	2.569E-03
2067	4.832E+04	1.494E-05	2.444E-03
2068	4.832E+04	1.421E-05	2.324E-03
2069	4.832E+04	1.352E-05	2.211E-03
2070	4.832E+04	1.286E-05	2.103E-03
2071	4.832E+04	1.223E-05	2.001E-03
2072	4.832E+04	1.164E-05	1.903E-03
2073	4.832E+04	1.107E-05	1.810E-03
2074	4.832E+04	1.053E-05	1.722E-03
2075	4.832E+04	1.001E-05	1.638E-03
2076	4.832E+04	9.526E-06	1.558E-03
2077	4.832E+04	9.062E-06	1.482E-03
2078	4.832E+04	8.620E-06	1.410E-03
2079	4.832E+04	8.199E-06	1.341E-03
2080	4.832E+04	7.800E-06	1.276E-03
2081	4.832E+04	7.419E-06	1.213E-03
2082	4.832E+04	7.057E-06	1.154E-03
2083	4.832E+04	6.713E-06	1.098E-03
2084	4.832E+04	6.386E-06	1.044E-03
2085	4.832E+04	6.074E-06	9.935E-04
2086	4.832E+04	5.778E-06	9.450E-04
2087	4.832E+04	5.496E-06	8.989E-04
2088	4.832E+04	5.228E-06	8.551E-04

continued

Table D-26. Emisson Rate of 1,4-Dichlorobenzene from Parcel 2 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2089	4.832E+04	4.973E-06	8.134E-04
2090	4.832E+04	4.731E-06	7.737E-04
2091	4.832E+04	4.500E-06	7.360E-04
2092	4.832E+04	4.280E-06	7.001E-04
2093	4.832E+04	4.072E-06	6.660E-04
2094	4.832E+04	3.873E-06	6.335E-04
2095	4.832E+04	3.684E-06	6.026E-04
2096	4.832E+04	3.505E-06	5.732E-04
2097	4.832E+04	3.334E-06	5.452E-04
2098	4.832E+04	3.171E-06	5.186E-04
2099	4.832E+04	3.016E-06	4.933E-04
2100	4.832E+04	2.869E-06	4.693E-04
2101	4.832E+04	2.729E-06	4.464E-04
2102	4.832E+04	2.596E-06	4.246E-04
2103	4.832E+04	2.470E-06	4.039E-04
2104	4.832E+04	2.349E-06	3.842E-04
2105	4.832E+04	2.235E-06	3.655E-04
2106	4.832E+04	2.126E-06	3.477E-04
2107	4.832E+04	2.022E-06	3.307E-04
2108	4.832E+04	1.923E-06	3.146E-04
2109	4.832E+04	1.830E-06	2.992E-04
2110	4.832E+04	1.740E-06	2.846E-04
2111	4.832E+04	1.655E-06	2.708E-04
2112	4.832E+04	1.575E-06	2.576E-04
2113	4.832E+04	1.498E-06	2.450E-04
2114	4.832E+04	1.425E-06	2.330E-04
2115	4.832E+04	1.355E-06	2.217E-04
2116	4.832E+04	1.289E-06	2.109E-04
2117	4.832E+04	1.226E-06	2.006E-04
2118	4.832E+04	1.167E-06	1.908E-04
2119	4.832E+04	1.110E-06	1.815E-04
2120	4.832E+04	1.056E-06	1.726E-04
2121	4.832E+04	1.004E-06	1.642E-04
2122	4.832E+04	9.551E-07	1.562E-04
2123	4.832E+04	9.085E-07	1.486E-04
2124	4.832E+04	8.642E-07	1.413E-04
2125	4.832E+04	8.221E-07	1.345E-04
2126	4.832E+04	7.820E-07	1.279E-04
2127	4.832E+04	7.438E-07	1.217E-04
2128	4.832E+04	7.076E-07	1.157E-04
2129	4.832E+04	6.731E-07	1.101E-04
2130	4.832E+04	6.402E-07	1.047E-04
2131	4.832E+04	6.090E-07	9.961E-05
2132	4.832E+04	5.793E-07	9.475E-05
2133	4.832E+04	5.510E-07	9.013E-05
2134	4.832E+04	5.242E-07	8.573E-05
2135	4.832E+04	4.986E-07	8.155E-05
2136	4.832E+04	4.743E-07	7.757E-05
2137	4.832E+04	4.512E-07	7.379E-05
2138	4.832E+04	4.292E-07	7.019E-05
2139	4.832E+04	4.082E-07	6.677E-05
2140	4.832E+04	3.883E-07	6.351E-05
2141	4.832E+04	3.694E-07	6.041E-05
2142	4.832E+04	3.514E-07	5.747E-05
2143	4.832E+04	3.342E-07	5.466E-05
2144	4.832E+04	3.179E-07	5.200E-05
2145	4.832E+04	3.024E-07	4.946E-05
2146	4.832E+04	2.877E-07	4.705E-05
2147	4.832E+04	2.736E-07	4.476E-05
2148	4.832E+04	2.603E-07	4.257E-05
2149	4.832E+04	2.476E-07	4.050E-05
2150	4.832E+04	2.355E-07	3.852E-05
2151	4.832E+04	2.240E-07	3.664E-05
2152	4.832E+04	2.131E-07	3.486E-05
2153	4.832E+04	2.027E-07	3.316E-05
2154	4.832E+04	1.928E-07	3.154E-05
2155	4.832E+04	1.834E-07	3.000E-05
2156	4.832E+04	1.745E-07	2.854E-05
2157	4.832E+04	1.660E-07	2.715E-05
2158	4.832E+04	1.579E-07	2.582E-05

continued

Table D-26. Emisson Rate of 1,4-Dichlorobenzene from Parcel 2 for Years 1975 to 2203 (concluded).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2159	4.832E+04	1.502E-07	2.456E-05
2160	4.832E+04	1.429E-07	2.336E-05
2161	4.832E+04	1.359E-07	2.223E-05
2162	4.832E+04	1.293E-07	2.114E-05
2163	4.832E+04	1.230E-07	2.011E-05
2164	4.832E+04	1.170E-07	1.913E-05
2165	4.832E+04	1.113E-07	1.820E-05
2166	4.832E+04	1.058E-07	1.731E-05
2167	4.832E+04	1.007E-07	1.646E-05
2168	4.832E+04	9.576E-08	1.566E-05
2169	4.832E+04	9.109E-08	1.490E-05
2170	4.832E+04	8.665E-08	1.417E-05
2171	4.832E+04	8.242E-08	1.348E-05
2172	4.832E+04	7.840E-08	1.282E-05
2173	4.832E+04	7.458E-08	1.220E-05
2174	4.832E+04	7.094E-08	1.160E-05
2175	4.832E+04	6.748E-08	1.104E-05
2176	4.832E+04	6.419E-08	1.050E-05
2177	4.832E+04	6.106E-08	9.986E-06
2178	4.832E+04	5.808E-08	9.499E-06
2179	4.832E+04	5.525E-08	9.036E-06
2180	4.832E+04	5.255E-08	8.595E-06
2181	4.832E+04	4.999E-08	8.176E-06
2182	4.832E+04	4.755E-08	7.777E-06
2183	4.832E+04	4.523E-08	7.398E-06
2184	4.832E+04	4.303E-08	7.037E-06
2185	4.832E+04	4.093E-08	6.694E-06
2186	4.832E+04	3.893E-08	6.368E-06
2187	4.832E+04	3.703E-08	6.057E-06
2188	4.832E+04	3.523E-08	5.762E-06
2189	4.832E+04	3.351E-08	5.481E-06
2190	4.832E+04	3.188E-08	5.213E-06
2191	4.832E+04	3.032E-08	4.959E-06
2192	4.832E+04	2.884E-08	4.717E-06
2193	4.832E+04	2.744E-08	4.487E-06
2194	4.832E+04	2.610E-08	4.268E-06
2195	4.832E+04	2.482E-08	4.060E-06
2196	4.832E+04	2.361E-08	3.862E-06
2197	4.832E+04	2.246E-08	3.674E-06
2198	4.832E+04	2.137E-08	3.495E-06
2199	4.832E+04	2.032E-08	3.324E-06
2200	4.832E+04	1.933E-08	3.162E-06
2201	4.832E+04	1.839E-08	3.008E-06
2202	4.832E+04	1.749E-08	2.861E-06
2203	4.832E+04	1.664E-08	2.722E-06

Table D-27. Emisson Rate of Toluene from Parcel 2 for Years 1975 to 2203.

Source: H:\3000\030177~2.000\030177~1.003\BUSHVA~1\STRATA2.PRM

Model Parameters

Lo : 170.00 m^3 / Mg
k : 0.0500 1/yr
NMOC : 2000.00 ppmv
Methane : 62.0000 % volume
Carbon Dioxide : 38.0000 % volume
Air Pollutant : Toluene (HAP/VOC)
Molecular Wt = 92.14 Concentration = 0.550000 ppmV

Landfill Parameters

Landfill type : Co-Disposal
Year Opened : 1974 Current Year : 2004 Closure Year: 2004
Capacity : 48325 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 0.00 Mg/year

Model Results

Year	Refuse In Place (Mg)	Toluene (HAP/VOC) Emission Rate (Mg/yr)	(Cubic m/yr)
1975	4.832E+03	1.396E-04	3.644E-02
1976	9.665E+03	2.725E-04	7.110E-02
1977	1.450E+04	3.988E-04	1.041E-01
1978	1.933E+04	5.190E-04	1.354E-01
1979	2.416E+04	6.334E-04	1.653E-01
1980	2.899E+04	7.421E-04	1.936E-01
1981	3.383E+04	8.456E-04	2.206E-01
1982	3.866E+04	9.440E-04	2.463E-01
1983	4.349E+04	1.038E-03	2.707E-01
1984	4.832E+04	1.127E-03	2.940E-01
1985	4.832E+04	1.072E-03	2.796E-01
1986	4.832E+04	1.019E-03	2.660E-01
1987	4.832E+04	9.697E-04	2.530E-01
1988	4.832E+04	9.224E-04	2.407E-01
1989	4.832E+04	8.774E-04	2.289E-01
1990	4.832E+04	8.346E-04	2.178E-01
1991	4.832E+04	7.939E-04	2.072E-01
1992	4.832E+04	7.552E-04	1.971E-01
1993	4.832E+04	7.184E-04	1.874E-01
1994	4.832E+04	6.833E-04	1.783E-01
1995	4.832E+04	6.500E-04	1.696E-01
1996	4.832E+04	6.183E-04	1.613E-01
1997	4.832E+04	5.881E-04	1.535E-01
1998	4.832E+04	5.595E-04	1.460E-01
1999	4.832E+04	5.322E-04	1.389E-01
2000	4.832E+04	5.062E-04	1.321E-01
2001	4.832E+04	4.815E-04	1.257E-01
2002	4.832E+04	4.581E-04	1.195E-01
2003	4.832E+04	4.357E-04	1.137E-01
2004	4.832E+04	4.145E-04	1.081E-01
2005	4.832E+04	3.942E-04	1.029E-01
2006	4.832E+04	3.750E-04	9.786E-02
2007	4.832E+04	3.567E-04	9.308E-02
2008	4.832E+04	3.393E-04	8.854E-02
2009	4.832E+04	3.228E-04	8.423E-02
2010	4.832E+04	3.070E-04	8.012E-02
2011	4.832E+04	2.921E-04	7.621E-02
2012	4.832E+04	2.778E-04	7.249E-02
2013	4.832E+04	2.643E-04	6.896E-02
2014	4.832E+04	2.514E-04	6.560E-02
2015	4.832E+04	2.391E-04	6.240E-02
2016	4.832E+04	2.275E-04	5.935E-02
2017	4.832E+04	2.164E-04	5.646E-02
2018	4.832E+04	2.058E-04	5.370E-02

continued

Table D-27. Emisson Rate of Toluene from Parcel 2 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2019	4.832E+04	1.958E-04	5.109E-02
2020	4.832E+04	1.862E-04	4.859E-02
2021	4.832E+04	1.771E-04	4.622E-02
2022	4.832E+04	1.685E-04	4.397E-02
2023	4.832E+04	1.603E-04	4.183E-02
2024	4.832E+04	1.525E-04	3.979E-02
2025	4.832E+04	1.450E-04	3.785E-02
2026	4.832E+04	1.380E-04	3.600E-02
2027	4.832E+04	1.312E-04	3.424E-02
2028	4.832E+04	1.248E-04	3.257E-02
2029	4.832E+04	1.187E-04	3.098E-02
2030	4.832E+04	1.130E-04	2.947E-02
2031	4.832E+04	1.074E-04	2.804E-02
2032	4.832E+04	1.022E-04	2.667E-02
2033	4.832E+04	9.722E-05	2.537E-02
2034	4.832E+04	9.248E-05	2.413E-02
2035	4.832E+04	8.797E-05	2.295E-02
2036	4.832E+04	8.368E-05	2.183E-02
2037	4.832E+04	7.960E-05	2.077E-02
2038	4.832E+04	7.572E-05	1.976E-02
2039	4.832E+04	7.202E-05	1.879E-02
2040	4.832E+04	6.851E-05	1.788E-02
2041	4.832E+04	6.517E-05	1.700E-02
2042	4.832E+04	6.199E-05	1.618E-02
2043	4.832E+04	5.897E-05	1.539E-02
2044	4.832E+04	5.609E-05	1.464E-02
2045	4.832E+04	5.336E-05	1.392E-02
2046	4.832E+04	5.075E-05	1.324E-02
2047	4.832E+04	4.828E-05	1.260E-02
2048	4.832E+04	4.592E-05	1.198E-02
2049	4.832E+04	4.368E-05	1.140E-02
2050	4.832E+04	4.155E-05	1.084E-02
2051	4.832E+04	3.953E-05	1.031E-02
2052	4.832E+04	3.760E-05	9.811E-03
2053	4.832E+04	3.577E-05	9.332E-03
2054	4.832E+04	3.402E-05	8.877E-03
2055	4.832E+04	3.236E-05	8.444E-03
2056	4.832E+04	3.078E-05	8.033E-03
2057	4.832E+04	2.928E-05	7.641E-03
2058	4.832E+04	2.785E-05	7.268E-03
2059	4.832E+04	2.650E-05	6.914E-03
2060	4.832E+04	2.520E-05	6.576E-03
2061	4.832E+04	2.397E-05	6.256E-03
2062	4.832E+04	2.281E-05	5.951E-03
2063	4.832E+04	2.169E-05	5.660E-03
2064	4.832E+04	2.063E-05	5.384E-03
2065	4.832E+04	1.963E-05	5.122E-03
2066	4.832E+04	1.867E-05	4.872E-03
2067	4.832E+04	1.776E-05	4.634E-03
2068	4.832E+04	1.689E-05	4.408E-03
2069	4.832E+04	1.607E-05	4.193E-03
2070	4.832E+04	1.529E-05	3.989E-03
2071	4.832E+04	1.454E-05	3.794E-03
2072	4.832E+04	1.383E-05	3.609E-03
2073	4.832E+04	1.316E-05	3.433E-03
2074	4.832E+04	1.252E-05	3.266E-03
2075	4.832E+04	1.191E-05	3.107E-03
2076	4.832E+04	1.132E-05	2.955E-03
2077	4.832E+04	1.077E-05	2.811E-03
2078	4.832E+04	1.025E-05	2.674E-03
2079	4.832E+04	9.747E-06	2.543E-03
2080	4.832E+04	9.272E-06	2.419E-03
2081	4.832E+04	8.820E-06	2.301E-03
2082	4.832E+04	8.390E-06	2.189E-03
2083	4.832E+04	7.980E-06	2.082E-03
2084	4.832E+04	7.591E-06	1.981E-03
2085	4.832E+04	7.221E-06	1.884E-03
2086	4.832E+04	6.869E-06	1.792E-03
2087	4.832E+04	6.534E-06	1.705E-03
2088	4.832E+04	6.215E-06	1.622E-03

continued

Table D-27. Emisson Rate of Toluene from Parcel 2 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2089	4.832E+04	5.912E-06	1.543E-03
2090	4.832E+04	5.624E-06	1.467E-03
2091	4.832E+04	5.349E-06	1.396E-03
2092	4.832E+04	5.088E-06	1.328E-03
2093	4.832E+04	4.840E-06	1.263E-03
2094	4.832E+04	4.604E-06	1.201E-03
2095	4.832E+04	4.380E-06	1.143E-03
2096	4.832E+04	4.166E-06	1.087E-03
2097	4.832E+04	3.963E-06	1.034E-03
2098	4.832E+04	3.770E-06	9.836E-04
2099	4.832E+04	3.586E-06	9.357E-04
2100	4.832E+04	3.411E-06	8.900E-04
2101	4.832E+04	3.245E-06	8.466E-04
2102	4.832E+04	3.086E-06	8.053E-04
2103	4.832E+04	2.936E-06	7.661E-04
2104	4.832E+04	2.793E-06	7.287E-04
2105	4.832E+04	2.656E-06	6.932E-04
2106	4.832E+04	2.527E-06	6.594E-04
2107	4.832E+04	2.404E-06	6.272E-04
2108	4.832E+04	2.286E-06	5.966E-04
2109	4.832E+04	2.175E-06	5.675E-04
2110	4.832E+04	2.069E-06	5.398E-04
2111	4.832E+04	1.968E-06	5.135E-04
2112	4.832E+04	1.872E-06	4.885E-04
2113	4.832E+04	1.781E-06	4.646E-04
2114	4.832E+04	1.694E-06	4.420E-04
2115	4.832E+04	1.611E-06	4.204E-04
2116	4.832E+04	1.533E-06	3.999E-04
2117	4.832E+04	1.458E-06	3.804E-04
2118	4.832E+04	1.387E-06	3.619E-04
2119	4.832E+04	1.319E-06	3.442E-04
2120	4.832E+04	1.255E-06	3.274E-04
2121	4.832E+04	1.194E-06	3.115E-04
2122	4.832E+04	1.135E-06	2.963E-04
2123	4.832E+04	1.080E-06	2.818E-04
2124	4.832E+04	1.027E-06	2.681E-04
2125	4.832E+04	9.772E-07	2.550E-04
2126	4.832E+04	9.296E-07	2.426E-04
2127	4.832E+04	8.842E-07	2.307E-04
2128	4.832E+04	8.411E-07	2.195E-04
2129	4.832E+04	8.001E-07	2.088E-04
2130	4.832E+04	7.611E-07	1.986E-04
2131	4.832E+04	7.240E-07	1.889E-04
2132	4.832E+04	6.887E-07	1.797E-04
2133	4.832E+04	6.551E-07	1.709E-04
2134	4.832E+04	6.231E-07	1.626E-04
2135	4.832E+04	5.927E-07	1.547E-04
2136	4.832E+04	5.638E-07	1.471E-04
2137	4.832E+04	5.363E-07	1.399E-04
2138	4.832E+04	5.102E-07	1.331E-04
2139	4.832E+04	4.853E-07	1.266E-04
2140	4.832E+04	4.616E-07	1.205E-04
2141	4.832E+04	4.391E-07	1.146E-04
2142	4.832E+04	4.177E-07	1.090E-04
2143	4.832E+04	3.973E-07	1.037E-04
2144	4.832E+04	3.779E-07	9.862E-05
2145	4.832E+04	3.595E-07	9.381E-05
2146	4.832E+04	3.420E-07	8.923E-05
2147	4.832E+04	3.253E-07	8.488E-05
2148	4.832E+04	3.094E-07	8.074E-05
2149	4.832E+04	2.943E-07	7.680E-05
2150	4.832E+04	2.800E-07	7.306E-05
2151	4.832E+04	2.663E-07	6.950E-05
2152	4.832E+04	2.533E-07	6.611E-05
2153	4.832E+04	2.410E-07	6.288E-05
2154	4.832E+04	2.292E-07	5.981E-05
2155	4.832E+04	2.181E-07	5.690E-05
2156	4.832E+04	2.074E-07	5.412E-05
2157	4.832E+04	1.973E-07	5.148E-05
2158	4.832E+04	1.877E-07	4.897E-05

continued

Table D-27. Emisson Rate of Toluene from Parcel 2 for Years 1975 to 2203 (concluded).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2159	4.832E+04	1.785E-07	4.658E-05
2160	4.832E+04	1.698E-07	4.431E-05
2161	4.832E+04	1.615E-07	4.215E-05
2162	4.832E+04	1.537E-07	4.010E-05
2163	4.832E+04	1.462E-07	3.814E-05
2164	4.832E+04	1.390E-07	3.628E-05
2165	4.832E+04	1.323E-07	3.451E-05
2166	4.832E+04	1.258E-07	3.283E-05
2167	4.832E+04	1.197E-07	3.123E-05
2168	4.832E+04	1.138E-07	2.970E-05
2169	4.832E+04	1.083E-07	2.825E-05
2170	4.832E+04	1.030E-07	2.688E-05
2171	4.832E+04	9.798E-08	2.557E-05
2172	4.832E+04	9.320E-08	2.432E-05
2173	4.832E+04	8.865E-08	2.313E-05
2174	4.832E+04	8.433E-08	2.200E-05
2175	4.832E+04	8.022E-08	2.093E-05
2176	4.832E+04	7.630E-08	1.991E-05
2177	4.832E+04	7.258E-08	1.894E-05
2178	4.832E+04	6.904E-08	1.802E-05
2179	4.832E+04	6.568E-08	1.714E-05
2180	4.832E+04	6.247E-08	1.630E-05
2181	4.832E+04	5.943E-08	1.551E-05
2182	4.832E+04	5.653E-08	1.475E-05
2183	4.832E+04	5.377E-08	1.403E-05
2184	4.832E+04	5.115E-08	1.335E-05
2185	4.832E+04	4.865E-08	1.270E-05
2186	4.832E+04	4.628E-08	1.208E-05
2187	4.832E+04	4.402E-08	1.149E-05
2188	4.832E+04	4.188E-08	1.093E-05
2189	4.832E+04	3.983E-08	1.039E-05
2190	4.832E+04	3.789E-08	9.887E-06
2191	4.832E+04	3.604E-08	9.405E-06
2192	4.832E+04	3.429E-08	8.946E-06
2193	4.832E+04	3.261E-08	8.510E-06
2194	4.832E+04	3.102E-08	8.095E-06
2195	4.832E+04	2.951E-08	7.700E-06
2196	4.832E+04	2.807E-08	7.325E-06
2197	4.832E+04	2.670E-08	6.967E-06
2198	4.832E+04	2.540E-08	6.628E-06
2199	4.832E+04	2.416E-08	6.304E-06
2200	4.832E+04	2.298E-08	5.997E-06
2201	4.832E+04	2.186E-08	5.705E-06
2202	4.832E+04	2.080E-08	5.426E-06
2203	4.832E+04	1.978E-08	5.162E-06

Table D-28. Emisson Rate of Vinyl Chloride from Parcel 2 for Years 1975 to 2203.

Source: H:\3000\030177~2.000\030177~1.003\BUSHVA~1\STRATA2.PRM

Model Parameters

Lo : 170.00 m^3 / Mg
k : 0.0500 1/yr
NMOC : 2000.00 ppmv
Methane : 62.0000 % volume
Carbon Dioxide : 38.0000 % volume
Air Pollutant : Vinyl Chloride (HAP/VOC)
Molecular Wt = 62.50 Concentration = 0.220000 ppmV

Landfill Parameters

Landfill type : Co-Disposal
Year Opened : 1974 Current Year : 2004 Closure Year: 2004
Capacity : 48325 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 0.00 Mg/year

Model Results

Year	Refuse In Place (Mg)	Vinyl Chloride (HAP/VOC) Emission Rate (Mg/yr)	(Cubic m/yr)
1975	4.832E+03	3.789E-05	1.458E-02
1976	9.665E+03	7.393E-05	2.844E-02
1977	1.450E+04	1.082E-04	4.163E-02
1978	1.933E+04	1.408E-04	5.417E-02
1979	2.416E+04	1.718E-04	6.611E-02
1980	2.899E+04	2.014E-04	7.746E-02
1981	3.383E+04	2.294E-04	8.826E-02
1982	3.866E+04	2.561E-04	9.853E-02
1983	4.349E+04	2.815E-04	1.083E-01
1984	4.832E+04	3.057E-04	1.176E-01
1985	4.832E+04	2.908E-04	1.119E-01
1986	4.832E+04	2.766E-04	1.064E-01
1987	4.832E+04	2.631E-04	1.012E-01
1988	4.832E+04	2.503E-04	9.628E-02
1989	4.832E+04	2.381E-04	9.158E-02
1990	4.832E+04	2.265E-04	8.711E-02
1991	4.832E+04	2.154E-04	8.286E-02
1992	4.832E+04	2.049E-04	7.882E-02
1993	4.832E+04	1.949E-04	7.498E-02
1994	4.832E+04	1.854E-04	7.132E-02
1995	4.832E+04	1.764E-04	6.784E-02
1996	4.832E+04	1.678E-04	6.454E-02
1997	4.832E+04	1.596E-04	6.139E-02
1998	4.832E+04	1.518E-04	5.839E-02
1999	4.832E+04	1.444E-04	5.555E-02
2000	4.832E+04	1.374E-04	5.284E-02
2001	4.832E+04	1.307E-04	5.026E-02
2002	4.832E+04	1.243E-04	4.781E-02
2003	4.832E+04	1.182E-04	4.548E-02
2004	4.832E+04	1.125E-04	4.326E-02
2005	4.832E+04	1.070E-04	4.115E-02
2006	4.832E+04	1.018E-04	3.914E-02
2007	4.832E+04	9.679E-05	3.723E-02
2008	4.832E+04	9.207E-05	3.542E-02
2009	4.832E+04	8.758E-05	3.369E-02
2010	4.832E+04	8.331E-05	3.205E-02
2011	4.832E+04	7.925E-05	3.048E-02
2012	4.832E+04	7.538E-05	2.900E-02
2013	4.832E+04	7.170E-05	2.758E-02
2014	4.832E+04	6.821E-05	2.624E-02
2015	4.832E+04	6.488E-05	2.496E-02
2016	4.832E+04	6.172E-05	2.374E-02
2017	4.832E+04	5.871E-05	2.258E-02
2018	4.832E+04	5.584E-05	2.148E-02

continued

Table D-28. Emisson Rate of Vinyl Chloride from Parcel 2 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2019	4.832E+04	5.312E-05	2.043E-02
2020	4.832E+04	5.053E-05	1.944E-02
2021	4.832E+04	4.806E-05	1.849E-02
2022	4.832E+04	4.572E-05	1.759E-02
2023	4.832E+04	4.349E-05	1.673E-02
2024	4.832E+04	4.137E-05	1.591E-02
2025	4.832E+04	3.935E-05	1.514E-02
2026	4.832E+04	3.743E-05	1.440E-02
2027	4.832E+04	3.561E-05	1.370E-02
2028	4.832E+04	3.387E-05	1.303E-02
2029	4.832E+04	3.222E-05	1.239E-02
2030	4.832E+04	3.065E-05	1.179E-02
2031	4.832E+04	2.915E-05	1.121E-02
2032	4.832E+04	2.773E-05	1.067E-02
2033	4.832E+04	2.638E-05	1.015E-02
2034	4.832E+04	2.509E-05	9.652E-03
2035	4.832E+04	2.387E-05	9.182E-03
2036	4.832E+04	2.270E-05	8.734E-03
2037	4.832E+04	2.160E-05	8.308E-03
2038	4.832E+04	2.054E-05	7.903E-03
2039	4.832E+04	1.954E-05	7.517E-03
2040	4.832E+04	1.859E-05	7.151E-03
2041	4.832E+04	1.768E-05	6.802E-03
2042	4.832E+04	1.682E-05	6.470E-03
2043	4.832E+04	1.600E-05	6.155E-03
2044	4.832E+04	1.522E-05	5.854E-03
2045	4.832E+04	1.448E-05	5.569E-03
2046	4.832E+04	1.377E-05	5.297E-03
2047	4.832E+04	1.310E-05	5.039E-03
2048	4.832E+04	1.246E-05	4.793E-03
2049	4.832E+04	1.185E-05	4.559E-03
2050	4.832E+04	1.127E-05	4.337E-03
2051	4.832E+04	1.072E-05	4.126E-03
2052	4.832E+04	1.020E-05	3.924E-03
2053	4.832E+04	9.704E-06	3.733E-03
2054	4.832E+04	9.231E-06	3.551E-03
2055	4.832E+04	8.781E-06	3.378E-03
2056	4.832E+04	8.352E-06	3.213E-03
2057	4.832E+04	7.945E-06	3.056E-03
2058	4.832E+04	7.558E-06	2.907E-03
2059	4.832E+04	7.189E-06	2.765E-03
2060	4.832E+04	6.838E-06	2.631E-03
2061	4.832E+04	6.505E-06	2.502E-03
2062	4.832E+04	6.188E-06	2.380E-03
2063	4.832E+04	5.886E-06	2.264E-03
2064	4.832E+04	5.599E-06	2.154E-03
2065	4.832E+04	5.326E-06	2.049E-03
2066	4.832E+04	5.066E-06	1.949E-03
2067	4.832E+04	4.819E-06	1.854E-03
2068	4.832E+04	4.584E-06	1.763E-03
2069	4.832E+04	4.360E-06	1.677E-03
2070	4.832E+04	4.148E-06	1.596E-03
2071	4.832E+04	3.945E-06	1.518E-03
2072	4.832E+04	3.753E-06	1.444E-03
2073	4.832E+04	3.570E-06	1.373E-03
2074	4.832E+04	3.396E-06	1.306E-03
2075	4.832E+04	3.230E-06	1.243E-03
2076	4.832E+04	3.073E-06	1.182E-03
2077	4.832E+04	2.923E-06	1.124E-03
2078	4.832E+04	2.780E-06	1.070E-03
2079	4.832E+04	2.645E-06	1.017E-03
2080	4.832E+04	2.516E-06	9.677E-04
2081	4.832E+04	2.393E-06	9.205E-04
2082	4.832E+04	2.276E-06	8.756E-04
2083	4.832E+04	2.165E-06	8.329E-04
2084	4.832E+04	2.060E-06	7.923E-04
2085	4.832E+04	1.959E-06	7.537E-04
2086	4.832E+04	1.864E-06	7.169E-04
2087	4.832E+04	1.773E-06	6.820E-04
2088	4.832E+04	1.686E-06	6.487E-04

continued

Table D-28. Emisson Rate of Vinyl Chloride from Parcel 2 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2089	4.832E+04	1.604E-06	6.171E-04
2090	4.832E+04	1.526E-06	5.870E-04
2091	4.832E+04	1.451E-06	5.583E-04
2092	4.832E+04	1.381E-06	5.311E-04
2093	4.832E+04	1.313E-06	5.052E-04
2094	4.832E+04	1.249E-06	4.806E-04
2095	4.832E+04	1.188E-06	4.571E-04
2096	4.832E+04	1.130E-06	4.348E-04
2097	4.832E+04	1.075E-06	4.136E-04
2098	4.832E+04	1.023E-06	3.935E-04
2099	4.832E+04	9.729E-07	3.743E-04
2100	4.832E+04	9.255E-07	3.560E-04
2101	4.832E+04	8.803E-07	3.386E-04
2102	4.832E+04	8.374E-07	3.221E-04
2103	4.832E+04	7.966E-07	3.064E-04
2104	4.832E+04	7.577E-07	2.915E-04
2105	4.832E+04	7.208E-07	2.773E-04
2106	4.832E+04	6.856E-07	2.637E-04
2107	4.832E+04	6.522E-07	2.509E-04
2108	4.832E+04	6.204E-07	2.386E-04
2109	4.832E+04	5.901E-07	2.270E-04
2110	4.832E+04	5.613E-07	2.159E-04
2111	4.832E+04	5.340E-07	2.054E-04
2112	4.832E+04	5.079E-07	1.954E-04
2113	4.832E+04	4.831E-07	1.859E-04
2114	4.832E+04	4.596E-07	1.768E-04
2115	4.832E+04	4.372E-07	1.682E-04
2116	4.832E+04	4.158E-07	1.600E-04
2117	4.832E+04	3.956E-07	1.522E-04
2118	4.832E+04	3.763E-07	1.447E-04
2119	4.832E+04	3.579E-07	1.377E-04
2120	4.832E+04	3.405E-07	1.310E-04
2121	4.832E+04	3.239E-07	1.246E-04
2122	4.832E+04	3.081E-07	1.185E-04
2123	4.832E+04	2.930E-07	1.127E-04
2124	4.832E+04	2.787E-07	1.072E-04
2125	4.832E+04	2.652E-07	1.020E-04
2126	4.832E+04	2.522E-07	9.702E-05
2127	4.832E+04	2.399E-07	9.229E-05
2128	4.832E+04	2.282E-07	8.779E-05
2129	4.832E+04	2.171E-07	8.351E-05
2130	4.832E+04	2.065E-07	7.944E-05
2131	4.832E+04	1.964E-07	7.556E-05
2132	4.832E+04	1.868E-07	7.188E-05
2133	4.832E+04	1.777E-07	6.837E-05
2134	4.832E+04	1.691E-07	6.504E-05
2135	4.832E+04	1.608E-07	6.187E-05
2136	4.832E+04	1.530E-07	5.885E-05
2137	4.832E+04	1.455E-07	5.598E-05
2138	4.832E+04	1.384E-07	5.325E-05
2139	4.832E+04	1.317E-07	5.065E-05
2140	4.832E+04	1.252E-07	4.818E-05
2141	4.832E+04	1.191E-07	4.583E-05
2142	4.832E+04	1.133E-07	4.360E-05
2143	4.832E+04	1.078E-07	4.147E-05
2144	4.832E+04	1.025E-07	3.945E-05
2145	4.832E+04	9.754E-08	3.752E-05
2146	4.832E+04	9.279E-08	3.569E-05
2147	4.832E+04	8.826E-08	3.395E-05
2148	4.832E+04	8.396E-08	3.230E-05
2149	4.832E+04	7.986E-08	3.072E-05
2150	4.832E+04	7.597E-08	2.922E-05
2151	4.832E+04	7.226E-08	2.780E-05
2152	4.832E+04	6.874E-08	2.644E-05
2153	4.832E+04	6.539E-08	2.515E-05
2154	4.832E+04	6.220E-08	2.393E-05
2155	4.832E+04	5.916E-08	2.276E-05
2156	4.832E+04	5.628E-08	2.165E-05
2157	4.832E+04	5.353E-08	2.059E-05
2158	4.832E+04	5.092E-08	1.959E-05

continued

Table D-28. Emisson Rate of Vinyl Chloride from Parcel 2 for Years 1975 to 2203 (concluded).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2159	4.832E+04	4.844E-08	1.863E-05
2160	4.832E+04	4.608E-08	1.772E-05
2161	4.832E+04	4.383E-08	1.686E-05
2162	4.832E+04	4.169E-08	1.604E-05
2163	4.832E+04	3.966E-08	1.526E-05
2164	4.832E+04	3.772E-08	1.451E-05
2165	4.832E+04	3.588E-08	1.380E-05
2166	4.832E+04	3.413E-08	1.313E-05
2167	4.832E+04	3.247E-08	1.249E-05
2168	4.832E+04	3.089E-08	1.188E-05
2169	4.832E+04	2.938E-08	1.130E-05
2170	4.832E+04	2.795E-08	1.075E-05
2171	4.832E+04	2.658E-08	1.023E-05
2172	4.832E+04	2.529E-08	9.728E-06
2173	4.832E+04	2.405E-08	9.253E-06
2174	4.832E+04	2.288E-08	8.802E-06
2175	4.832E+04	2.176E-08	8.373E-06
2176	4.832E+04	2.070E-08	7.964E-06
2177	4.832E+04	1.969E-08	7.576E-06
2178	4.832E+04	1.873E-08	7.206E-06
2179	4.832E+04	1.782E-08	6.855E-06
2180	4.832E+04	1.695E-08	6.521E-06
2181	4.832E+04	1.612E-08	6.203E-06
2182	4.832E+04	1.534E-08	5.900E-06
2183	4.832E+04	1.459E-08	5.612E-06
2184	4.832E+04	1.388E-08	5.339E-06
2185	4.832E+04	1.320E-08	5.078E-06
2186	4.832E+04	1.256E-08	4.831E-06
2187	4.832E+04	1.194E-08	4.595E-06
2188	4.832E+04	1.136E-08	4.371E-06
2189	4.832E+04	1.081E-08	4.158E-06
2190	4.832E+04	1.028E-08	3.955E-06
2191	4.832E+04	9.780E-09	3.762E-06
2192	4.832E+04	9.303E-09	3.579E-06
2193	4.832E+04	8.849E-09	3.404E-06
2194	4.832E+04	8.417E-09	3.238E-06
2195	4.832E+04	8.007E-09	3.080E-06
2196	4.832E+04	7.616E-09	2.930E-06
2197	4.832E+04	7.245E-09	2.787E-06
2198	4.832E+04	6.892E-09	2.651E-06
2199	4.832E+04	6.555E-09	2.522E-06
2200	4.832E+04	6.236E-09	2.399E-06
2201	4.832E+04	5.932E-09	2.282E-06
2202	4.832E+04	5.642E-09	2.171E-06
2203	4.832E+04	5.367E-09	2.065E-06

Table D-29. Emisson Rate of m,p-Xylene from Parcel 2 for Years 1975 to 2203.

Source: H:\3000\030177~2.000\030177~1.003\BUSHVA~1\STRATA2.PRM

Model Parameters

Lo : 170.00 m^3 / Mg
k : 0.0500 1/yr
NMOC : 2000.00 ppmv
Methane : 62.0000 % volume
Carbon Dioxide : 38.0000 % volume
Air Pollutant : mpXylene (HAP/VOC)
Molecular Wt = 106.17 Concentration = 8.000000 ppmV

Landfill Parameters

Landfill type : Co-Disposal
Year Opened : 1974 Current Year : 2004 Closure Year: 2004
Capacity : 48325 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 0.00 Mg/year

Model Results

Year	Refuse In Place (Mg)	mpXylene (HAP/VOC) Emission Rate (Mg/yr)	(Cubic m/yr)
1975	4.832E+03	2.340E-03	5.300E-01
1976	9.665E+03	4.567E-03	1.034E+00
1977	1.450E+04	6.685E-03	1.514E+00
1978	1.933E+04	8.699E-03	1.970E+00
1979	2.416E+04	1.062E-02	2.404E+00
1980	2.899E+04	1.244E-02	2.817E+00
1981	3.383E+04	1.417E-02	3.209E+00
1982	3.866E+04	1.582E-02	3.583E+00
1983	4.349E+04	1.739E-02	3.938E+00
1984	4.832E+04	1.888E-02	4.276E+00
1985	4.832E+04	1.796E-02	4.067E+00
1986	4.832E+04	1.709E-02	3.869E+00
1987	4.832E+04	1.625E-02	3.680E+00
1988	4.832E+04	1.546E-02	3.501E+00
1989	4.832E+04	1.471E-02	3.330E+00
1990	4.832E+04	1.399E-02	3.168E+00
1991	4.832E+04	1.331E-02	3.013E+00
1992	4.832E+04	1.266E-02	2.866E+00
1993	4.832E+04	1.204E-02	2.727E+00
1994	4.832E+04	1.145E-02	2.594E+00
1995	4.832E+04	1.089E-02	2.467E+00
1996	4.832E+04	1.036E-02	2.347E+00
1997	4.832E+04	9.858E-03	2.232E+00
1998	4.832E+04	9.377E-03	2.123E+00
1999	4.832E+04	8.919E-03	2.020E+00
2000	4.832E+04	8.484E-03	1.921E+00
2001	4.832E+04	8.071E-03	1.828E+00
2002	4.832E+04	7.677E-03	1.739E+00
2003	4.832E+04	7.303E-03	1.654E+00
2004	4.832E+04	6.946E-03	1.573E+00
2005	4.832E+04	6.608E-03	1.496E+00
2006	4.832E+04	6.285E-03	1.423E+00
2007	4.832E+04	5.979E-03	1.354E+00
2008	4.832E+04	5.687E-03	1.288E+00
2009	4.832E+04	5.410E-03	1.225E+00
2010	4.832E+04	5.146E-03	1.165E+00
2011	4.832E+04	4.895E-03	1.109E+00
2012	4.832E+04	4.656E-03	1.054E+00
2013	4.832E+04	4.429E-03	1.003E+00
2014	4.832E+04	4.213E-03	9.541E-01
2015	4.832E+04	4.008E-03	9.076E-01
2016	4.832E+04	3.812E-03	8.633E-01
2017	4.832E+04	3.626E-03	8.212E-01
2018	4.832E+04	3.450E-03	7.812E-01

continued

Table D-29. Emisson Rate of m,p-Xylene from Parcel 2 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2019	4.832E+04	3.281E-03	7.431E-01
2020	4.832E+04	3.121E-03	7.068E-01
2021	4.832E+04	2.969E-03	6.723E-01
2022	4.832E+04	2.824E-03	6.396E-01
2023	4.832E+04	2.686E-03	6.084E-01
2024	4.832E+04	2.555E-03	5.787E-01
2025	4.832E+04	2.431E-03	5.505E-01
2026	4.832E+04	2.312E-03	5.236E-01
2027	4.832E+04	2.200E-03	4.981E-01
2028	4.832E+04	2.092E-03	4.738E-01
2029	4.832E+04	1.990E-03	4.507E-01
2030	4.832E+04	1.893E-03	4.287E-01
2031	4.832E+04	1.801E-03	4.078E-01
2032	4.832E+04	1.713E-03	3.879E-01
2033	4.832E+04	1.629E-03	3.690E-01
2034	4.832E+04	1.550E-03	3.510E-01
2035	4.832E+04	1.474E-03	3.339E-01
2036	4.832E+04	1.402E-03	3.176E-01
2037	4.832E+04	1.334E-03	3.021E-01
2038	4.832E+04	1.269E-03	2.874E-01
2039	4.832E+04	1.207E-03	2.734E-01
2040	4.832E+04	1.148E-03	2.600E-01
2041	4.832E+04	1.092E-03	2.473E-01
2042	4.832E+04	1.039E-03	2.353E-01
2043	4.832E+04	9.883E-04	2.238E-01
2044	4.832E+04	9.401E-04	2.129E-01
2045	4.832E+04	8.943E-04	2.025E-01
2046	4.832E+04	8.506E-04	1.926E-01
2047	4.832E+04	8.092E-04	1.832E-01
2048	4.832E+04	7.697E-04	1.743E-01
2049	4.832E+04	7.322E-04	1.658E-01
2050	4.832E+04	6.964E-04	1.577E-01
2051	4.832E+04	6.625E-04	1.500E-01
2052	4.832E+04	6.302E-04	1.427E-01
2053	4.832E+04	5.994E-04	1.357E-01
2054	4.832E+04	5.702E-04	1.291E-01
2055	4.832E+04	5.424E-04	1.228E-01
2056	4.832E+04	5.159E-04	1.168E-01
2057	4.832E+04	4.908E-04	1.111E-01
2058	4.832E+04	4.668E-04	1.057E-01
2059	4.832E+04	4.441E-04	1.006E-01
2060	4.832E+04	4.224E-04	9.566E-02
2061	4.832E+04	4.018E-04	9.099E-02
2062	4.832E+04	3.822E-04	8.655E-02
2063	4.832E+04	3.636E-04	8.233E-02
2064	4.832E+04	3.458E-04	7.832E-02
2065	4.832E+04	3.290E-04	7.450E-02
2066	4.832E+04	3.129E-04	7.087E-02
2067	4.832E+04	2.977E-04	6.741E-02
2068	4.832E+04	2.832E-04	6.412E-02
2069	4.832E+04	2.693E-04	6.099E-02
2070	4.832E+04	2.562E-04	5.802E-02
2071	4.832E+04	2.437E-04	5.519E-02
2072	4.832E+04	2.318E-04	5.250E-02
2073	4.832E+04	2.205E-04	4.994E-02
2074	4.832E+04	2.098E-04	4.750E-02
2075	4.832E+04	1.995E-04	4.519E-02
2076	4.832E+04	1.898E-04	4.298E-02
2077	4.832E+04	1.805E-04	4.089E-02
2078	4.832E+04	1.717E-04	3.889E-02
2079	4.832E+04	1.634E-04	3.699E-02
2080	4.832E+04	1.554E-04	3.519E-02
2081	4.832E+04	1.478E-04	3.347E-02
2082	4.832E+04	1.406E-04	3.184E-02
2083	4.832E+04	1.338E-04	3.029E-02
2084	4.832E+04	1.272E-04	2.881E-02
2085	4.832E+04	1.210E-04	2.741E-02
2086	4.832E+04	1.151E-04	2.607E-02
2087	4.832E+04	1.095E-04	2.480E-02
2088	4.832E+04	1.042E-04	2.359E-02

continued

Table D-29. Emisson Rate of m,p-Xylene from Parcel 2 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2089	4.832E+04	9.909E-05	2.244E-02
2090	4.832E+04	9.425E-05	2.134E-02
2091	4.832E+04	8.966E-05	2.030E-02
2092	4.832E+04	8.528E-05	1.931E-02
2093	4.832E+04	8.113E-05	1.837E-02
2094	4.832E+04	7.717E-05	1.748E-02
2095	4.832E+04	7.341E-05	1.662E-02
2096	4.832E+04	6.982E-05	1.581E-02
2097	4.832E+04	6.642E-05	1.504E-02
2098	4.832E+04	6.318E-05	1.431E-02
2099	4.832E+04	6.010E-05	1.361E-02
2100	4.832E+04	5.717E-05	1.295E-02
2101	4.832E+04	5.438E-05	1.231E-02
2102	4.832E+04	5.173E-05	1.171E-02
2103	4.832E+04	4.920E-05	1.114E-02
2104	4.832E+04	4.681E-05	1.060E-02
2105	4.832E+04	4.452E-05	1.008E-02
2106	4.832E+04	4.235E-05	9.591E-03
2107	4.832E+04	4.029E-05	9.123E-03
2108	4.832E+04	3.832E-05	8.678E-03
2109	4.832E+04	3.645E-05	8.255E-03
2110	4.832E+04	3.467E-05	7.852E-03
2111	4.832E+04	3.298E-05	7.469E-03
2112	4.832E+04	3.137E-05	7.105E-03
2113	4.832E+04	2.984E-05	6.758E-03
2114	4.832E+04	2.839E-05	6.429E-03
2115	4.832E+04	2.700E-05	6.115E-03
2116	4.832E+04	2.569E-05	5.817E-03
2117	4.832E+04	2.443E-05	5.533E-03
2118	4.832E+04	2.324E-05	5.263E-03
2119	4.832E+04	2.211E-05	5.007E-03
2120	4.832E+04	2.103E-05	4.763E-03
2121	4.832E+04	2.001E-05	4.530E-03
2122	4.832E+04	1.903E-05	4.309E-03
2123	4.832E+04	1.810E-05	4.099E-03
2124	4.832E+04	1.722E-05	3.899E-03
2125	4.832E+04	1.638E-05	3.709E-03
2126	4.832E+04	1.558E-05	3.528E-03
2127	4.832E+04	1.482E-05	3.356E-03
2128	4.832E+04	1.410E-05	3.192E-03
2129	4.832E+04	1.341E-05	3.037E-03
2130	4.832E+04	1.276E-05	2.889E-03
2131	4.832E+04	1.213E-05	2.748E-03
2132	4.832E+04	1.154E-05	2.614E-03
2133	4.832E+04	1.098E-05	2.486E-03
2134	4.832E+04	1.044E-05	2.365E-03
2135	4.832E+04	9.934E-06	2.250E-03
2136	4.832E+04	9.450E-06	2.140E-03
2137	4.832E+04	8.989E-06	2.036E-03
2138	4.832E+04	8.551E-06	1.936E-03
2139	4.832E+04	8.134E-06	1.842E-03
2140	4.832E+04	7.737E-06	1.752E-03
2141	4.832E+04	7.360E-06	1.667E-03
2142	4.832E+04	7.001E-06	1.585E-03
2143	4.832E+04	6.659E-06	1.508E-03
2144	4.832E+04	6.334E-06	1.434E-03
2145	4.832E+04	6.025E-06	1.364E-03
2146	4.832E+04	5.732E-06	1.298E-03
2147	4.832E+04	5.452E-06	1.235E-03
2148	4.832E+04	5.186E-06	1.174E-03
2149	4.832E+04	4.933E-06	1.117E-03
2150	4.832E+04	4.693E-06	1.063E-03
2151	4.832E+04	4.464E-06	1.011E-03
2152	4.832E+04	4.246E-06	9.615E-04
2153	4.832E+04	4.039E-06	9.146E-04
2154	4.832E+04	3.842E-06	8.700E-04
2155	4.832E+04	3.655E-06	8.276E-04
2156	4.832E+04	3.476E-06	7.872E-04
2157	4.832E+04	3.307E-06	7.488E-04
2158	4.832E+04	3.146E-06	7.123E-04

continued

Table D-29. Emisson Rate of m,p-Xylene from Parcel 2 for Years 1975 to 2203 (concluded).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2159	4.832E+04	2.992E-06	6.776E-04
2160	4.832E+04	2.846E-06	6.445E-04
2161	4.832E+04	2.707E-06	6.131E-04
2162	4.832E+04	2.575E-06	5.832E-04
2163	4.832E+04	2.450E-06	5.548E-04
2164	4.832E+04	2.330E-06	5.277E-04
2165	4.832E+04	2.217E-06	5.020E-04
2166	4.832E+04	2.109E-06	4.775E-04
2167	4.832E+04	2.006E-06	4.542E-04
2168	4.832E+04	1.908E-06	4.320E-04
2169	4.832E+04	1.815E-06	4.110E-04
2170	4.832E+04	1.726E-06	3.909E-04
2171	4.832E+04	1.642E-06	3.719E-04
2172	4.832E+04	1.562E-06	3.537E-04
2173	4.832E+04	1.486E-06	3.365E-04
2174	4.832E+04	1.413E-06	3.201E-04
2175	4.832E+04	1.344E-06	3.045E-04
2176	4.832E+04	1.279E-06	2.896E-04
2177	4.832E+04	1.217E-06	2.755E-04
2178	4.832E+04	1.157E-06	2.620E-04
2179	4.832E+04	1.101E-06	2.493E-04
2180	4.832E+04	1.047E-06	2.371E-04
2181	4.832E+04	9.960E-07	2.255E-04
2182	4.832E+04	9.474E-07	2.145E-04
2183	4.832E+04	9.012E-07	2.041E-04
2184	4.832E+04	8.573E-07	1.941E-04
2185	4.832E+04	8.155E-07	1.847E-04
2186	4.832E+04	7.757E-07	1.757E-04
2187	4.832E+04	7.379E-07	1.671E-04
2188	4.832E+04	7.019E-07	1.589E-04
2189	4.832E+04	6.676E-07	1.512E-04
2190	4.832E+04	6.351E-07	1.438E-04
2191	4.832E+04	6.041E-07	1.368E-04
2192	4.832E+04	5.746E-07	1.301E-04
2193	4.832E+04	5.466E-07	1.238E-04
2194	4.832E+04	5.200E-07	1.177E-04
2195	4.832E+04	4.946E-07	1.120E-04
2196	4.832E+04	4.705E-07	1.065E-04
2197	4.832E+04	4.475E-07	1.013E-04
2198	4.832E+04	4.257E-07	9.640E-05
2199	4.832E+04	4.049E-07	9.170E-05
2200	4.832E+04	3.852E-07	8.723E-05
2201	4.832E+04	3.664E-07	8.297E-05
2202	4.832E+04	3.485E-07	7.893E-05
2203	4.832E+04	3.315E-07	7.508E-05

Table D-30. Emisson Rate of o-Xylene from Parcel 2 for Years 1975 to 2203.

Source: H:\3000\030177~2.000\030177~1.003\BUSHVA~1\STRATA2.PRM

Model Parameters

Lo : 170.00 m^3 / Mg
k : 0.0500 1/yr
NMOC : 2000.00 ppmv
Methane : 62.0000 % volume
Carbon Dioxide : 38.0000 % volume
Air Pollutant : oXylene (HAP/VOC)
Molecular Wt = 106.17 Concentration = 2.400000 ppmV

Landfill Parameters

Landfill type : Co-Disposal
Year Opened : 1974 Current Year : 2004 Closure Year: 2004
Capacity : 48325 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 0.00 Mg/year

Model Results

Year	Refuse In Place (Mg)	oXylene (HAP/VOC) Emission Rate (Mg/yr)	(Cubic m/yr)
1975	4.832E+03	7.021E-04	1.590E-01
1976	9.665E+03	1.370E-03	3.103E-01
1977	1.450E+04	2.005E-03	4.541E-01
1978	1.933E+04	2.610E-03	5.910E-01
1979	2.416E+04	3.185E-03	7.212E-01
1980	2.899E+04	3.731E-03	8.450E-01
1981	3.383E+04	4.252E-03	9.628E-01
1982	3.866E+04	4.746E-03	1.075E+00
1983	4.349E+04	5.217E-03	1.181E+00
1984	4.832E+04	5.665E-03	1.283E+00
1985	4.832E+04	5.388E-03	1.220E+00
1986	4.832E+04	5.126E-03	1.161E+00
1987	4.832E+04	4.876E-03	1.104E+00
1988	4.832E+04	4.638E-03	1.050E+00
1989	4.832E+04	4.412E-03	9.991E-01
1990	4.832E+04	4.197E-03	9.503E-01
1991	4.832E+04	3.992E-03	9.040E-01
1992	4.832E+04	3.797E-03	8.599E-01
1993	4.832E+04	3.612E-03	8.180E-01
1994	4.832E+04	3.436E-03	7.781E-01
1995	4.832E+04	3.268E-03	7.401E-01
1996	4.832E+04	3.109E-03	7.040E-01
1997	4.832E+04	2.957E-03	6.697E-01
1998	4.832E+04	2.813E-03	6.370E-01
1999	4.832E+04	2.676E-03	6.060E-01
2000	4.832E+04	2.545E-03	5.764E-01
2001	4.832E+04	2.421E-03	5.483E-01
2002	4.832E+04	2.303E-03	5.216E-01
2003	4.832E+04	2.191E-03	4.961E-01
2004	4.832E+04	2.084E-03	4.719E-01
2005	4.832E+04	1.982E-03	4.489E-01
2006	4.832E+04	1.886E-03	4.270E-01
2007	4.832E+04	1.794E-03	4.062E-01
2008	4.832E+04	1.706E-03	3.864E-01
2009	4.832E+04	1.623E-03	3.675E-01
2010	4.832E+04	1.544E-03	3.496E-01
2011	4.832E+04	1.469E-03	3.326E-01
2012	4.832E+04	1.397E-03	3.163E-01
2013	4.832E+04	1.329E-03	3.009E-01
2014	4.832E+04	1.264E-03	2.862E-01
2015	4.832E+04	1.202E-03	2.723E-01
2016	4.832E+04	1.144E-03	2.590E-01
2017	4.832E+04	1.088E-03	2.464E-01
2018	4.832E+04	1.035E-03	2.343E-01

continued

Table D-30. Emisson Rate of o-Xylene from Parcel 2 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2019	4.832E+04	9.844E-04	2.229E-01
2020	4.832E+04	9.364E-04	2.120E-01
2021	4.832E+04	8.907E-04	2.017E-01
2022	4.832E+04	8.473E-04	1.919E-01
2023	4.832E+04	8.059E-04	1.825E-01
2024	4.832E+04	7.666E-04	1.736E-01
2025	4.832E+04	7.293E-04	1.651E-01
2026	4.832E+04	6.937E-04	1.571E-01
2027	4.832E+04	6.599E-04	1.494E-01
2028	4.832E+04	6.277E-04	1.421E-01
2029	4.832E+04	5.971E-04	1.352E-01
2030	4.832E+04	5.679E-04	1.286E-01
2031	4.832E+04	5.402E-04	1.223E-01
2032	4.832E+04	5.139E-04	1.164E-01
2033	4.832E+04	4.888E-04	1.107E-01
2034	4.832E+04	4.650E-04	1.053E-01
2035	4.832E+04	4.423E-04	1.002E-01
2036	4.832E+04	4.207E-04	9.528E-02
2037	4.832E+04	4.002E-04	9.063E-02
2038	4.832E+04	3.807E-04	8.621E-02
2039	4.832E+04	3.621E-04	8.201E-02
2040	4.832E+04	3.445E-04	7.801E-02
2041	4.832E+04	3.277E-04	7.420E-02
2042	4.832E+04	3.117E-04	7.058E-02
2043	4.832E+04	2.965E-04	6.714E-02
2044	4.832E+04	2.820E-04	6.387E-02
2045	4.832E+04	2.683E-04	6.075E-02
2046	4.832E+04	2.552E-04	5.779E-02
2047	4.832E+04	2.427E-04	5.497E-02
2048	4.832E+04	2.309E-04	5.229E-02
2049	4.832E+04	2.196E-04	4.974E-02
2050	4.832E+04	2.089E-04	4.731E-02
2051	4.832E+04	1.987E-04	4.501E-02
2052	4.832E+04	1.891E-04	4.281E-02
2053	4.832E+04	1.798E-04	4.072E-02
2054	4.832E+04	1.711E-04	3.874E-02
2055	4.832E+04	1.627E-04	3.685E-02
2056	4.832E+04	1.548E-04	3.505E-02
2057	4.832E+04	1.472E-04	3.334E-02
2058	4.832E+04	1.401E-04	3.172E-02
2059	4.832E+04	1.332E-04	3.017E-02
2060	4.832E+04	1.267E-04	2.870E-02
2061	4.832E+04	1.205E-04	2.730E-02
2062	4.832E+04	1.147E-04	2.597E-02
2063	4.832E+04	1.091E-04	2.470E-02
2064	4.832E+04	1.038E-04	2.350E-02
2065	4.832E+04	9.869E-05	2.235E-02
2066	4.832E+04	9.388E-05	2.126E-02
2067	4.832E+04	8.930E-05	2.022E-02
2068	4.832E+04	8.495E-05	1.924E-02
2069	4.832E+04	8.080E-05	1.830E-02
2070	4.832E+04	7.686E-05	1.741E-02
2071	4.832E+04	7.311E-05	1.656E-02
2072	4.832E+04	6.955E-05	1.575E-02
2073	4.832E+04	6.616E-05	1.498E-02
2074	4.832E+04	6.293E-05	1.425E-02
2075	4.832E+04	5.986E-05	1.356E-02
2076	4.832E+04	5.694E-05	1.289E-02
2077	4.832E+04	5.416E-05	1.227E-02
2078	4.832E+04	5.152E-05	1.167E-02
2079	4.832E+04	4.901E-05	1.110E-02
2080	4.832E+04	4.662E-05	1.056E-02
2081	4.832E+04	4.435E-05	1.004E-02
2082	4.832E+04	4.218E-05	9.553E-03
2083	4.832E+04	4.013E-05	9.087E-03
2084	4.832E+04	3.817E-05	8.643E-03
2085	4.832E+04	3.631E-05	8.222E-03
2086	4.832E+04	3.454E-05	7.821E-03
2087	4.832E+04	3.285E-05	7.440E-03
2088	4.832E+04	3.125E-05	7.077E-03

continued

Table D-30. Emisson Rate of o-Xylene from Parcel 2 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2089	4.832E+04	2.973E-05	6.732E-03
2090	4.832E+04	2.828E-05	6.403E-03
2091	4.832E+04	2.690E-05	6.091E-03
2092	4.832E+04	2.559E-05	5.794E-03
2093	4.832E+04	2.434E-05	5.511E-03
2094	4.832E+04	2.315E-05	5.243E-03
2095	4.832E+04	2.202E-05	4.987E-03
2096	4.832E+04	2.095E-05	4.744E-03
2097	4.832E+04	1.993E-05	4.512E-03
2098	4.832E+04	1.895E-05	4.292E-03
2099	4.832E+04	1.803E-05	4.083E-03
2100	4.832E+04	1.715E-05	3.884E-03
2101	4.832E+04	1.631E-05	3.694E-03
2102	4.832E+04	1.552E-05	3.514E-03
2103	4.832E+04	1.476E-05	3.343E-03
2104	4.832E+04	1.404E-05	3.180E-03
2105	4.832E+04	1.336E-05	3.025E-03
2106	4.832E+04	1.271E-05	2.877E-03
2107	4.832E+04	1.209E-05	2.737E-03
2108	4.832E+04	1.150E-05	2.603E-03
2109	4.832E+04	1.094E-05	2.476E-03
2110	4.832E+04	1.040E-05	2.356E-03
2111	4.832E+04	9.895E-06	2.241E-03
2112	4.832E+04	9.412E-06	2.131E-03
2113	4.832E+04	8.953E-06	2.028E-03
2114	4.832E+04	8.517E-06	1.929E-03
2115	4.832E+04	8.101E-06	1.835E-03
2116	4.832E+04	7.706E-06	1.745E-03
2117	4.832E+04	7.330E-06	1.660E-03
2118	4.832E+04	6.973E-06	1.579E-03
2119	4.832E+04	6.633E-06	1.502E-03
2120	4.832E+04	6.309E-06	1.429E-03
2121	4.832E+04	6.002E-06	1.359E-03
2122	4.832E+04	5.709E-06	1.293E-03
2123	4.832E+04	5.430E-06	1.230E-03
2124	4.832E+04	5.166E-06	1.170E-03
2125	4.832E+04	4.914E-06	1.113E-03
2126	4.832E+04	4.674E-06	1.058E-03
2127	4.832E+04	4.446E-06	1.007E-03
2128	4.832E+04	4.229E-06	9.577E-04
2129	4.832E+04	4.023E-06	9.110E-04
2130	4.832E+04	3.827E-06	8.666E-04
2131	4.832E+04	3.640E-06	8.243E-04
2132	4.832E+04	3.463E-06	7.841E-04
2133	4.832E+04	3.294E-06	7.459E-04
2134	4.832E+04	3.133E-06	7.095E-04
2135	4.832E+04	2.980E-06	6.749E-04
2136	4.832E+04	2.835E-06	6.420E-04
2137	4.832E+04	2.697E-06	6.107E-04
2138	4.832E+04	2.565E-06	5.809E-04
2139	4.832E+04	2.440E-06	5.526E-04
2140	4.832E+04	2.321E-06	5.256E-04
2141	4.832E+04	2.208E-06	5.000E-04
2142	4.832E+04	2.100E-06	4.756E-04
2143	4.832E+04	1.998E-06	4.524E-04
2144	4.832E+04	1.900E-06	4.303E-04
2145	4.832E+04	1.808E-06	4.093E-04
2146	4.832E+04	1.719E-06	3.894E-04
2147	4.832E+04	1.636E-06	3.704E-04
2148	4.832E+04	1.556E-06	3.523E-04
2149	4.832E+04	1.480E-06	3.351E-04
2150	4.832E+04	1.408E-06	3.188E-04
2151	4.832E+04	1.339E-06	3.033E-04
2152	4.832E+04	1.274E-06	2.885E-04
2153	4.832E+04	1.212E-06	2.744E-04
2154	4.832E+04	1.153E-06	2.610E-04
2155	4.832E+04	1.096E-06	2.483E-04
2156	4.832E+04	1.043E-06	2.362E-04
2157	4.832E+04	9.921E-07	2.247E-04
2158	4.832E+04	9.437E-07	2.137E-04

continued

Table D-30. Emisson Rate of o-Xylene from Parcel 2 for Years 1975 to 2203 (concluded).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2159	4.832E+04	8.976E-07	2.033E-04
2160	4.832E+04	8.539E-07	1.934E-04
2161	4.832E+04	8.122E-07	1.839E-04
2162	4.832E+04	7.726E-07	1.750E-04
2163	4.832E+04	7.349E-07	1.664E-04
2164	4.832E+04	6.991E-07	1.583E-04
2165	4.832E+04	6.650E-07	1.506E-04
2166	4.832E+04	6.326E-07	1.432E-04
2167	4.832E+04	6.017E-07	1.363E-04
2168	4.832E+04	5.724E-07	1.296E-04
2169	4.832E+04	5.444E-07	1.233E-04
2170	4.832E+04	5.179E-07	1.173E-04
2171	4.832E+04	4.926E-07	1.116E-04
2172	4.832E+04	4.686E-07	1.061E-04
2173	4.832E+04	4.458E-07	1.009E-04
2174	4.832E+04	4.240E-07	9.602E-05
2175	4.832E+04	4.033E-07	9.134E-05
2176	4.832E+04	3.837E-07	8.688E-05
2177	4.832E+04	3.650E-07	8.265E-05
2178	4.832E+04	3.472E-07	7.861E-05
2179	4.832E+04	3.302E-07	7.478E-05
2180	4.832E+04	3.141E-07	7.113E-05
2181	4.832E+04	2.988E-07	6.766E-05
2182	4.832E+04	2.842E-07	6.436E-05
2183	4.832E+04	2.704E-07	6.123E-05
2184	4.832E+04	2.572E-07	5.824E-05
2185	4.832E+04	2.446E-07	5.540E-05
2186	4.832E+04	2.327E-07	5.270E-05
2187	4.832E+04	2.214E-07	5.013E-05
2188	4.832E+04	2.106E-07	4.768E-05
2189	4.832E+04	2.003E-07	4.536E-05
2190	4.832E+04	1.905E-07	4.314E-05
2191	4.832E+04	1.812E-07	4.104E-05
2192	4.832E+04	1.724E-07	3.904E-05
2193	4.832E+04	1.640E-07	3.714E-05
2194	4.832E+04	1.560E-07	3.532E-05
2195	4.832E+04	1.484E-07	3.360E-05
2196	4.832E+04	1.411E-07	3.196E-05
2197	4.832E+04	1.343E-07	3.040E-05
2198	4.832E+04	1.277E-07	2.892E-05
2199	4.832E+04	1.215E-07	2.751E-05
2200	4.832E+04	1.156E-07	2.617E-05
2201	4.832E+04	1.099E-07	2.489E-05
2202	4.832E+04	1.046E-07	2.368E-05
2203	4.832E+04	9.946E-08	2.252E-05

Table D-31. Emisson Rate of Methane from Parcel 3 for Years 1975 to 2203.

Source: H:\3000\030177~2.000\030177~1.003\BUSHVA~1\STRATA3.PRM

Model Parameters

Lo : 170.00 m^3 / Mg
k : 0.0500 1/yr
NMOC : 1800.00 ppmv
Methane : 65.6000 % volume
Carbon Dioxide : 34.4000 % volume

Landfill Parameters

Landfill type : Co-Disposal
Year Opened : 1974 Current Year : 2004 Closure Year: 2004
Capacity : 52718 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 0.00 Mg/year

Model Results

Year	Refuse In Place (Mg)	Methane Emission Rate (Mg/yr)	(Cubic m/yr)
1975	5.272E+03	2.990E+01	4.481E+04
1976	1.054E+04	5.833E+01	8.744E+04
1977	1.582E+04	8.538E+01	1.280E+05
1978	2.109E+04	1.111E+02	1.665E+05
1979	2.636E+04	1.356E+02	2.032E+05
1980	3.163E+04	1.589E+02	2.381E+05
1981	3.690E+04	1.810E+02	2.713E+05
1982	4.217E+04	2.021E+02	3.029E+05
1983	4.745E+04	2.221E+02	3.329E+05
1984	5.272E+04	2.412E+02	3.615E+05
1985	5.272E+04	2.294E+02	3.439E+05
1986	5.272E+04	2.182E+02	3.271E+05
1987	5.272E+04	2.076E+02	3.112E+05
1988	5.272E+04	1.975E+02	2.960E+05
1989	5.272E+04	1.878E+02	2.816E+05
1990	5.272E+04	1.787E+02	2.678E+05
1991	5.272E+04	1.700E+02	2.548E+05
1992	5.272E+04	1.617E+02	2.423E+05
1993	5.272E+04	1.538E+02	2.305E+05
1994	5.272E+04	1.463E+02	2.193E+05
1995	5.272E+04	1.392E+02	2.086E+05
1996	5.272E+04	1.324E+02	1.984E+05
1997	5.272E+04	1.259E+02	1.887E+05
1998	5.272E+04	1.198E+02	1.795E+05
1999	5.272E+04	1.139E+02	1.708E+05
2000	5.272E+04	1.084E+02	1.624E+05
2001	5.272E+04	1.031E+02	1.545E+05
2002	5.272E+04	9.806E+01	1.470E+05
2003	5.272E+04	9.328E+01	1.398E+05
2004	5.272E+04	8.873E+01	1.330E+05
2005	5.272E+04	8.440E+01	1.265E+05
2006	5.272E+04	8.028E+01	1.203E+05
2007	5.272E+04	7.637E+01	1.145E+05
2008	5.272E+04	7.264E+01	1.089E+05
2009	5.272E+04	6.910E+01	1.036E+05
2010	5.272E+04	6.573E+01	9.853E+04
2011	5.272E+04	6.253E+01	9.372E+04
2012	5.272E+04	5.948E+01	8.915E+04
2013	5.272E+04	5.658E+01	8.480E+04
2014	5.272E+04	5.382E+01	8.067E+04
2015	5.272E+04	5.119E+01	7.673E+04
2016	5.272E+04	4.869E+01	7.299E+04
2017	5.272E+04	4.632E+01	6.943E+04
2018	5.272E+04	4.406E+01	6.604E+04
2019	5.272E+04	4.191E+01	6.282E+04
2020	5.272E+04	3.987E+01	5.976E+04

continued

Table D-31. Emisson Rate of Methane from Parcel 3 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2021	5.272E+04	3.792E+01	5.684E+04
2022	5.272E+04	3.607E+01	5.407E+04
2023	5.272E+04	3.431E+01	5.143E+04
2024	5.272E+04	3.264E+01	4.893E+04
2025	5.272E+04	3.105E+01	4.654E+04
2026	5.272E+04	2.953E+01	4.427E+04
2027	5.272E+04	2.809E+01	4.211E+04
2028	5.272E+04	2.672E+01	4.006E+04
2029	5.272E+04	2.542E+01	3.810E+04
2030	5.272E+04	2.418E+01	3.625E+04
2031	5.272E+04	2.300E+01	3.448E+04
2032	5.272E+04	2.188E+01	3.280E+04
2033	5.272E+04	2.081E+01	3.120E+04
2034	5.272E+04	1.980E+01	2.968E+04
2035	5.272E+04	1.883E+01	2.823E+04
2036	5.272E+04	1.791E+01	2.685E+04
2037	5.272E+04	1.704E+01	2.554E+04
2038	5.272E+04	1.621E+01	2.430E+04
2039	5.272E+04	1.542E+01	2.311E+04
2040	5.272E+04	1.467E+01	2.198E+04
2041	5.272E+04	1.395E+01	2.091E+04
2042	5.272E+04	1.327E+01	1.989E+04
2043	5.272E+04	1.262E+01	1.892E+04
2044	5.272E+04	1.201E+01	1.800E+04
2045	5.272E+04	1.142E+01	1.712E+04
2046	5.272E+04	1.087E+01	1.629E+04
2047	5.272E+04	1.034E+01	1.549E+04
2048	5.272E+04	9.831E+00	1.474E+04
2049	5.272E+04	9.352E+00	1.402E+04
2050	5.272E+04	8.896E+00	1.333E+04
2051	5.272E+04	8.462E+00	1.268E+04
2052	5.272E+04	8.049E+00	1.207E+04
2053	5.272E+04	7.657E+00	1.148E+04
2054	5.272E+04	7.283E+00	1.092E+04
2055	5.272E+04	6.928E+00	1.038E+04
2056	5.272E+04	6.590E+00	9.878E+03
2057	5.272E+04	6.269E+00	9.396E+03
2058	5.272E+04	5.963E+00	8.938E+03
2059	5.272E+04	5.672E+00	8.502E+03
2060	5.272E+04	5.396E+00	8.087E+03
2061	5.272E+04	5.132E+00	7.693E+03
2062	5.272E+04	4.882E+00	7.318E+03
2063	5.272E+04	4.644E+00	6.961E+03
2064	5.272E+04	4.417E+00	6.621E+03
2065	5.272E+04	4.202E+00	6.299E+03
2066	5.272E+04	3.997E+00	5.991E+03
2067	5.272E+04	3.802E+00	5.699E+03
2068	5.272E+04	3.617E+00	5.421E+03
2069	5.272E+04	3.440E+00	5.157E+03
2070	5.272E+04	3.273E+00	4.905E+03
2071	5.272E+04	3.113E+00	4.666E+03
2072	5.272E+04	2.961E+00	4.438E+03
2073	5.272E+04	2.817E+00	4.222E+03
2074	5.272E+04	2.679E+00	4.016E+03
2075	5.272E+04	2.549E+00	3.820E+03
2076	5.272E+04	2.424E+00	3.634E+03
2077	5.272E+04	2.306E+00	3.457E+03
2078	5.272E+04	2.194E+00	3.288E+03
2079	5.272E+04	2.087E+00	3.128E+03
2080	5.272E+04	1.985E+00	2.975E+03
2081	5.272E+04	1.888E+00	2.830E+03
2082	5.272E+04	1.796E+00	2.692E+03
2083	5.272E+04	1.708E+00	2.561E+03
2084	5.272E+04	1.625E+00	2.436E+03
2085	5.272E+04	1.546E+00	2.317E+03
2086	5.272E+04	1.470E+00	2.204E+03
2087	5.272E+04	1.399E+00	2.097E+03
2088	5.272E+04	1.331E+00	1.994E+03
2089	5.272E+04	1.266E+00	1.897E+03
2090	5.272E+04	1.204E+00	1.805E+03

continued

Table D-31. Emisson Rate of Methane from Parcel 3 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2091	5.272E+04	1.145E+00	1.717E+03
2092	5.272E+04	1.089E+00	1.633E+03
2093	5.272E+04	1.036E+00	1.553E+03
2094	5.272E+04	9.857E-01	1.477E+03
2095	5.272E+04	9.376E-01	1.405E+03
2096	5.272E+04	8.919E-01	1.337E+03
2097	5.272E+04	8.484E-01	1.272E+03
2098	5.272E+04	8.070E-01	1.210E+03
2099	5.272E+04	7.676E-01	1.151E+03
2100	5.272E+04	7.302E-01	1.095E+03
2101	5.272E+04	6.946E-01	1.041E+03
2102	5.272E+04	6.607E-01	9.904E+02
2103	5.272E+04	6.285E-01	9.421E+02
2104	5.272E+04	5.978E-01	8.961E+02
2105	5.272E+04	5.687E-01	8.524E+02
2106	5.272E+04	5.409E-01	8.108E+02
2107	5.272E+04	5.146E-01	7.713E+02
2108	5.272E+04	4.895E-01	7.337E+02
2109	5.272E+04	4.656E-01	6.979E+02
2110	5.272E+04	4.429E-01	6.639E+02
2111	5.272E+04	4.213E-01	6.315E+02
2112	5.272E+04	4.007E-01	6.007E+02
2113	5.272E+04	3.812E-01	5.714E+02
2114	5.272E+04	3.626E-01	5.435E+02
2115	5.272E+04	3.449E-01	5.170E+02
2116	5.272E+04	3.281E-01	4.918E+02
2117	5.272E+04	3.121E-01	4.678E+02
2118	5.272E+04	2.969E-01	4.450E+02
2119	5.272E+04	2.824E-01	4.233E+02
2120	5.272E+04	2.686E-01	4.027E+02
2121	5.272E+04	2.555E-01	3.830E+02
2122	5.272E+04	2.431E-01	3.643E+02
2123	5.272E+04	2.312E-01	3.466E+02
2124	5.272E+04	2.199E-01	3.297E+02
2125	5.272E+04	2.092E-01	3.136E+02
2126	5.272E+04	1.990E-01	2.983E+02
2127	5.272E+04	1.893E-01	2.837E+02
2128	5.272E+04	1.801E-01	2.699E+02
2129	5.272E+04	1.713E-01	2.567E+02
2130	5.272E+04	1.629E-01	2.442E+02
2131	5.272E+04	1.550E-01	2.323E+02
2132	5.272E+04	1.474E-01	2.210E+02
2133	5.272E+04	1.402E-01	2.102E+02
2134	5.272E+04	1.334E-01	2.000E+02
2135	5.272E+04	1.269E-01	1.902E+02
2136	5.272E+04	1.207E-01	1.809E+02
2137	5.272E+04	1.148E-01	1.721E+02
2138	5.272E+04	1.092E-01	1.637E+02
2139	5.272E+04	1.039E-01	1.557E+02
2140	5.272E+04	9.882E-02	1.481E+02
2141	5.272E+04	9.400E-02	1.409E+02
2142	5.272E+04	8.942E-02	1.340E+02
2143	5.272E+04	8.506E-02	1.275E+02
2144	5.272E+04	8.091E-02	1.213E+02
2145	5.272E+04	7.696E-02	1.154E+02
2146	5.272E+04	7.321E-02	1.097E+02
2147	5.272E+04	6.964E-02	1.044E+02
2148	5.272E+04	6.624E-02	9.929E+01
2149	5.272E+04	6.301E-02	9.445E+01
2150	5.272E+04	5.994E-02	8.984E+01
2151	5.272E+04	5.702E-02	8.546E+01
2152	5.272E+04	5.423E-02	8.129E+01
2153	5.272E+04	5.159E-02	7.733E+01
2154	5.272E+04	4.907E-02	7.356E+01
2155	5.272E+04	4.668E-02	6.997E+01
2156	5.272E+04	4.440E-02	6.656E+01
2157	5.272E+04	4.224E-02	6.331E+01
2158	5.272E+04	4.018E-02	6.022E+01
2159	5.272E+04	3.822E-02	5.729E+01
2160	5.272E+04	3.635E-02	5.449E+01

continued

Table D-31. Emisson Rate of Methane from Parcel 3 for Years 1975 to 2203 (concluded).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2161	5.272E+04	3.458E-02	5.184E+01
2162	5.272E+04	3.290E-02	4.931E+01
2163	5.272E+04	3.129E-02	4.690E+01
2164	5.272E+04	2.976E-02	4.461E+01
2165	5.272E+04	2.831E-02	4.244E+01
2166	5.272E+04	2.693E-02	4.037E+01
2167	5.272E+04	2.562E-02	3.840E+01
2168	5.272E+04	2.437E-02	3.653E+01
2169	5.272E+04	2.318E-02	3.475E+01
2170	5.272E+04	2.205E-02	3.305E+01
2171	5.272E+04	2.097E-02	3.144E+01
2172	5.272E+04	1.995E-02	2.991E+01
2173	5.272E+04	1.898E-02	2.845E+01
2174	5.272E+04	1.805E-02	2.706E+01
2175	5.272E+04	1.717E-02	2.574E+01
2176	5.272E+04	1.634E-02	2.449E+01
2177	5.272E+04	1.554E-02	2.329E+01
2178	5.272E+04	1.478E-02	2.216E+01
2179	5.272E+04	1.406E-02	2.107E+01
2180	5.272E+04	1.337E-02	2.005E+01
2181	5.272E+04	1.272E-02	1.907E+01
2182	5.272E+04	1.210E-02	1.814E+01
2183	5.272E+04	1.151E-02	1.725E+01
2184	5.272E+04	1.095E-02	1.641E+01
2185	5.272E+04	1.042E-02	1.561E+01
2186	5.272E+04	9.908E-03	1.485E+01
2187	5.272E+04	9.425E-03	1.413E+01
2188	5.272E+04	8.965E-03	1.344E+01
2189	5.272E+04	8.528E-03	1.278E+01
2190	5.272E+04	8.112E-03	1.216E+01
2191	5.272E+04	7.716E-03	1.157E+01
2192	5.272E+04	7.340E-03	1.100E+01
2193	5.272E+04	6.982E-03	1.047E+01
2194	5.272E+04	6.641E-03	9.955E+00
2195	5.272E+04	6.318E-03	9.469E+00
2196	5.272E+04	6.009E-03	9.008E+00
2197	5.272E+04	5.716E-03	8.568E+00
2198	5.272E+04	5.438E-03	8.150E+00
2199	5.272E+04	5.172E-03	7.753E+00
2200	5.272E+04	4.920E-03	7.375E+00
2201	5.272E+04	4.680E-03	7.015E+00
2202	5.272E+04	4.452E-03	6.673E+00
2203	5.272E+04	4.235E-03	6.348E+00

Table D-32. Emisson Rate of Carbon Dioxide from Parcel 3 for Years 1975 to 2203.

Source: H:\3000\030177~2.000\030177~1.003\BUSHVA~1\STRATA3.PRM

Model Parameters

Lo : 170.00 m^3 / Mg
k : 0.0500 1/yr
NMOC : 1800.00 ppmv
Methane : 65.6000 % volume
Carbon Dioxide : 34.4000 % volume

Landfill Parameters

Landfill type : Co-Disposal
Year Opened : 1974 Current Year : 2004 Closure Year: 2004
Capacity : 52718 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 0.00 Mg/year

Model Results

Year	Refuse In Place (Mg)	Carbon Dioxide Emission Rate (Mg/yr)	(Cubic m/yr)
1975	5.272E+03	4.301E+01	2.350E+04
1976	1.054E+04	8.393E+01	4.585E+04
1977	1.582E+04	1.228E+02	6.711E+04
1978	2.109E+04	1.599E+02	8.734E+04
1979	2.636E+04	1.951E+02	1.066E+05
1980	3.163E+04	2.286E+02	1.249E+05
1981	3.690E+04	2.605E+02	1.423E+05
1982	4.217E+04	2.908E+02	1.588E+05
1983	4.745E+04	3.196E+02	1.746E+05
1984	5.272E+04	3.470E+02	1.896E+05
1985	5.272E+04	3.301E+02	1.803E+05
1986	5.272E+04	3.140E+02	1.715E+05
1987	5.272E+04	2.987E+02	1.632E+05
1988	5.272E+04	2.841E+02	1.552E+05
1989	5.272E+04	2.703E+02	1.476E+05
1990	5.272E+04	2.571E+02	1.404E+05
1991	5.272E+04	2.445E+02	1.336E+05
1992	5.272E+04	2.326E+02	1.271E+05
1993	5.272E+04	2.213E+02	1.209E+05
1994	5.272E+04	2.105E+02	1.150E+05
1995	5.272E+04	2.002E+02	1.094E+05
1996	5.272E+04	1.904E+02	1.040E+05
1997	5.272E+04	1.812E+02	9.897E+04
1998	5.272E+04	1.723E+02	9.414E+04
1999	5.272E+04	1.639E+02	8.955E+04
2000	5.272E+04	1.559E+02	8.518E+04
2001	5.272E+04	1.483E+02	8.103E+04
2002	5.272E+04	1.411E+02	7.708E+04
2003	5.272E+04	1.342E+02	7.332E+04
2004	5.272E+04	1.277E+02	6.974E+04
2005	5.272E+04	1.214E+02	6.634E+04
2006	5.272E+04	1.155E+02	6.310E+04
2007	5.272E+04	1.099E+02	6.003E+04
2008	5.272E+04	1.045E+02	5.710E+04
2009	5.272E+04	9.942E+01	5.431E+04
2010	5.272E+04	9.457E+01	5.167E+04
2011	5.272E+04	8.996E+01	4.915E+04
2012	5.272E+04	8.557E+01	4.675E+04
2013	5.272E+04	8.140E+01	4.447E+04
2014	5.272E+04	7.743E+01	4.230E+04
2015	5.272E+04	7.365E+01	4.024E+04
2016	5.272E+04	7.006E+01	3.827E+04
2017	5.272E+04	6.665E+01	3.641E+04
2018	5.272E+04	6.339E+01	3.463E+04
2019	5.272E+04	6.030E+01	3.294E+04
2020	5.272E+04	5.736E+01	3.134E+04

continued

Table D-32. Emisson Rate of Carbon Dioxide from Parcel 3 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2021	5.272E+04	5.456E+01	2.981E+04
2022	5.272E+04	5.190E+01	2.835E+04
2023	5.272E+04	4.937E+01	2.697E+04
2024	5.272E+04	4.696E+01	2.566E+04
2025	5.272E+04	4.467E+01	2.441E+04
2026	5.272E+04	4.249E+01	2.321E+04
2027	5.272E+04	4.042E+01	2.208E+04
2028	5.272E+04	3.845E+01	2.101E+04
2029	5.272E+04	3.658E+01	1.998E+04
2030	5.272E+04	3.479E+01	1.901E+04
2031	5.272E+04	3.310E+01	1.808E+04
2032	5.272E+04	3.148E+01	1.720E+04
2033	5.272E+04	2.995E+01	1.636E+04
2034	5.272E+04	2.849E+01	1.556E+04
2035	5.272E+04	2.710E+01	1.480E+04
2036	5.272E+04	2.577E+01	1.408E+04
2037	5.272E+04	2.452E+01	1.339E+04
2038	5.272E+04	2.332E+01	1.274E+04
2039	5.272E+04	2.218E+01	1.212E+04
2040	5.272E+04	2.110E+01	1.153E+04
2041	5.272E+04	2.007E+01	1.097E+04
2042	5.272E+04	1.909E+01	1.043E+04
2043	5.272E+04	1.816E+01	9.922E+03
2044	5.272E+04	1.728E+01	9.438E+03
2045	5.272E+04	1.643E+01	8.978E+03
2046	5.272E+04	1.563E+01	8.540E+03
2047	5.272E+04	1.487E+01	8.124E+03
2048	5.272E+04	1.415E+01	7.728E+03
2049	5.272E+04	1.346E+01	7.351E+03
2050	5.272E+04	1.280E+01	6.992E+03
2051	5.272E+04	1.217E+01	6.651E+03
2052	5.272E+04	1.158E+01	6.327E+03
2053	5.272E+04	1.102E+01	6.018E+03
2054	5.272E+04	1.048E+01	5.725E+03
2055	5.272E+04	9.968E+00	5.446E+03
2056	5.272E+04	9.482E+00	5.180E+03
2057	5.272E+04	9.019E+00	4.927E+03
2058	5.272E+04	8.580E+00	4.687E+03
2059	5.272E+04	8.161E+00	4.458E+03
2060	5.272E+04	7.763E+00	4.241E+03
2061	5.272E+04	7.384E+00	4.034E+03
2062	5.272E+04	7.024E+00	3.837E+03
2063	5.272E+04	6.682E+00	3.650E+03
2064	5.272E+04	6.356E+00	3.472E+03
2065	5.272E+04	6.046E+00	3.303E+03
2066	5.272E+04	5.751E+00	3.142E+03
2067	5.272E+04	5.471E+00	2.989E+03
2068	5.272E+04	5.204E+00	2.843E+03
2069	5.272E+04	4.950E+00	2.704E+03
2070	5.272E+04	4.709E+00	2.572E+03
2071	5.272E+04	4.479E+00	2.447E+03
2072	5.272E+04	4.260E+00	2.327E+03
2073	5.272E+04	4.053E+00	2.214E+03
2074	5.272E+04	3.855E+00	2.106E+03
2075	5.272E+04	3.667E+00	2.003E+03
2076	5.272E+04	3.488E+00	1.906E+03
2077	5.272E+04	3.318E+00	1.813E+03
2078	5.272E+04	3.156E+00	1.724E+03
2079	5.272E+04	3.002E+00	1.640E+03
2080	5.272E+04	2.856E+00	1.560E+03
2081	5.272E+04	2.717E+00	1.484E+03
2082	5.272E+04	2.584E+00	1.412E+03
2083	5.272E+04	2.458E+00	1.343E+03
2084	5.272E+04	2.338E+00	1.277E+03
2085	5.272E+04	2.224E+00	1.215E+03
2086	5.272E+04	2.116E+00	1.156E+03
2087	5.272E+04	2.013E+00	1.099E+03
2088	5.272E+04	1.914E+00	1.046E+03
2089	5.272E+04	1.821E+00	9.948E+02
2090	5.272E+04	1.732E+00	9.463E+02

continued

Table D-32. Emisson Rate of Carbon Dioxide from Parcel 3 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2091	5.272E+04	1.648E+00	9.001E+02
2092	5.272E+04	1.567E+00	8.562E+02
2093	5.272E+04	1.491E+00	8.145E+02
2094	5.272E+04	1.418E+00	7.748E+02
2095	5.272E+04	1.349E+00	7.370E+02
2096	5.272E+04	1.283E+00	7.010E+02
2097	5.272E+04	1.221E+00	6.668E+02
2098	5.272E+04	1.161E+00	6.343E+02
2099	5.272E+04	1.104E+00	6.034E+02
2100	5.272E+04	1.051E+00	5.740E+02
2101	5.272E+04	9.994E-01	5.460E+02
2102	5.272E+04	9.506E-01	5.193E+02
2103	5.272E+04	9.043E-01	4.940E+02
2104	5.272E+04	8.602E-01	4.699E+02
2105	5.272E+04	8.182E-01	4.470E+02
2106	5.272E+04	7.783E-01	4.252E+02
2107	5.272E+04	7.404E-01	4.045E+02
2108	5.272E+04	7.043E-01	3.847E+02
2109	5.272E+04	6.699E-01	3.660E+02
2110	5.272E+04	6.372E-01	3.481E+02
2111	5.272E+04	6.062E-01	3.311E+02
2112	5.272E+04	5.766E-01	3.150E+02
2113	5.272E+04	5.485E-01	2.996E+02
2114	5.272E+04	5.217E-01	2.850E+02
2115	5.272E+04	4.963E-01	2.711E+02
2116	5.272E+04	4.721E-01	2.579E+02
2117	5.272E+04	4.491E-01	2.453E+02
2118	5.272E+04	4.272E-01	2.334E+02
2119	5.272E+04	4.063E-01	2.220E+02
2120	5.272E+04	3.865E-01	2.111E+02
2121	5.272E+04	3.677E-01	2.008E+02
2122	5.272E+04	3.497E-01	1.911E+02
2123	5.272E+04	3.327E-01	1.817E+02
2124	5.272E+04	3.164E-01	1.729E+02
2125	5.272E+04	3.010E-01	1.644E+02
2126	5.272E+04	2.863E-01	1.564E+02
2127	5.272E+04	2.724E-01	1.488E+02
2128	5.272E+04	2.591E-01	1.415E+02
2129	5.272E+04	2.464E-01	1.346E+02
2130	5.272E+04	2.344E-01	1.281E+02
2131	5.272E+04	2.230E-01	1.218E+02
2132	5.272E+04	2.121E-01	1.159E+02
2133	5.272E+04	2.018E-01	1.102E+02
2134	5.272E+04	1.919E-01	1.049E+02
2135	5.272E+04	1.826E-01	9.974E+01
2136	5.272E+04	1.737E-01	9.487E+01
2137	5.272E+04	1.652E-01	9.025E+01
2138	5.272E+04	1.571E-01	8.585E+01
2139	5.272E+04	1.495E-01	8.166E+01
2140	5.272E+04	1.422E-01	7.768E+01
2141	5.272E+04	1.353E-01	7.389E+01
2142	5.272E+04	1.287E-01	7.028E+01
2143	5.272E+04	1.224E-01	6.686E+01
2144	5.272E+04	1.164E-01	6.360E+01
2145	5.272E+04	1.107E-01	6.049E+01
2146	5.272E+04	1.053E-01	5.754E+01
2147	5.272E+04	1.002E-01	5.474E+01
2148	5.272E+04	9.531E-02	5.207E+01
2149	5.272E+04	9.066E-02	4.953E+01
2150	5.272E+04	8.624E-02	4.711E+01
2151	5.272E+04	8.203E-02	4.482E+01
2152	5.272E+04	7.803E-02	4.263E+01
2153	5.272E+04	7.423E-02	4.055E+01
2154	5.272E+04	7.061E-02	3.857E+01
2155	5.272E+04	6.716E-02	3.669E+01
2156	5.272E+04	6.389E-02	3.490E+01
2157	5.272E+04	6.077E-02	3.320E+01
2158	5.272E+04	5.781E-02	3.158E+01
2159	5.272E+04	5.499E-02	3.004E+01
2160	5.272E+04	5.231E-02	2.858E+01

continued

Table D-32. Emisson Rate of Carbon Dioxide from Parcel 3 for Years 1975 to 2203 (concluded).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2161	5.272E+04	4.976E-02	2.718E+01
2162	5.272E+04	4.733E-02	2.586E+01
2163	5.272E+04	4.502E-02	2.460E+01
2164	5.272E+04	4.283E-02	2.340E+01
2165	5.272E+04	4.074E-02	2.225E+01
2166	5.272E+04	3.875E-02	2.117E+01
2167	5.272E+04	3.686E-02	2.014E+01
2168	5.272E+04	3.506E-02	1.915E+01
2169	5.272E+04	3.335E-02	1.822E+01
2170	5.272E+04	3.173E-02	1.733E+01
2171	5.272E+04	3.018E-02	1.649E+01
2172	5.272E+04	2.871E-02	1.568E+01
2173	5.272E+04	2.731E-02	1.492E+01
2174	5.272E+04	2.598E-02	1.419E+01
2175	5.272E+04	2.471E-02	1.350E+01
2176	5.272E+04	2.350E-02	1.284E+01
2177	5.272E+04	2.236E-02	1.221E+01
2178	5.272E+04	2.127E-02	1.162E+01
2179	5.272E+04	2.023E-02	1.105E+01
2180	5.272E+04	1.924E-02	1.051E+01
2181	5.272E+04	1.830E-02	1.000E+01
2182	5.272E+04	1.741E-02	9.512E+00
2183	5.272E+04	1.656E-02	9.048E+00
2184	5.272E+04	1.575E-02	8.607E+00
2185	5.272E+04	1.499E-02	8.187E+00
2186	5.272E+04	1.426E-02	7.788E+00
2187	5.272E+04	1.356E-02	7.408E+00
2188	5.272E+04	1.290E-02	7.047E+00
2189	5.272E+04	1.227E-02	6.703E+00
2190	5.272E+04	1.167E-02	6.376E+00
2191	5.272E+04	1.110E-02	6.065E+00
2192	5.272E+04	1.056E-02	5.769E+00
2193	5.272E+04	1.005E-02	5.488E+00
2194	5.272E+04	9.556E-03	5.220E+00
2195	5.272E+04	9.090E-03	4.966E+00
2196	5.272E+04	8.646E-03	4.723E+00
2197	5.272E+04	8.225E-03	4.493E+00
2198	5.272E+04	7.824E-03	4.274E+00
2199	5.272E+04	7.442E-03	4.066E+00
2200	5.272E+04	7.079E-03	3.867E+00
2201	5.272E+04	6.734E-03	3.679E+00
2202	5.272E+04	6.405E-03	3.499E+00
2203	5.272E+04	6.093E-03	3.329E+00

Table D-33. Emisson Rate of NMOCs from Parcel 3 for Years 1975 to 2203.

Source: H:\3000\030177~2.000\030177~1.003\BUSHVA~1\STRATA3.PRM

Model Parameters

Lo : 170.00 m^3 / Mg
k : 0.0500 1/yr
NMOC : 1800.00 ppmv
Methane : 65.6000 % volume
Carbon Dioxide : 34.4000 % volume

Landfill Parameters

Landfill type : Co-Disposal
Year Opened : 1974 Current Year : 2004 Closure Year: 2004
Capacity : 52718 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 0.00 Mg/year

Model Results

Year	Refuse In Place (Mg)	NMOC Emission Rate (Mg/yr)	NMOC Emission Rate (Cubic m/yr)
1975	5.272E+03	4.407E-01	1.230E+02
1976	1.054E+04	8.600E-01	2.399E+02
1977	1.582E+04	1.259E+00	3.512E+02
1978	2.109E+04	1.638E+00	4.570E+02
1979	2.636E+04	1.999E+00	5.577E+02
1980	3.163E+04	2.342E+00	6.534E+02
1981	3.690E+04	2.669E+00	7.445E+02
1982	4.217E+04	2.979E+00	8.312E+02
1983	4.745E+04	3.275E+00	9.136E+02
1984	5.272E+04	3.556E+00	9.920E+02
1985	5.272E+04	3.382E+00	9.436E+02
1986	5.272E+04	3.217E+00	8.976E+02
1987	5.272E+04	3.060E+00	8.538E+02
1988	5.272E+04	2.911E+00	8.122E+02
1989	5.272E+04	2.769E+00	7.725E+02
1990	5.272E+04	2.634E+00	7.349E+02
1991	5.272E+04	2.506E+00	6.990E+02
1992	5.272E+04	2.383E+00	6.649E+02
1993	5.272E+04	2.267E+00	6.325E+02
1994	5.272E+04	2.157E+00	6.017E+02
1995	5.272E+04	2.051E+00	5.723E+02
1996	5.272E+04	1.951E+00	5.444E+02
1997	5.272E+04	1.856E+00	5.179E+02
1998	5.272E+04	1.766E+00	4.926E+02
1999	5.272E+04	1.680E+00	4.686E+02
2000	5.272E+04	1.598E+00	4.457E+02
2001	5.272E+04	1.520E+00	4.240E+02
2002	5.272E+04	1.446E+00	4.033E+02
2003	5.272E+04	1.375E+00	3.836E+02
2004	5.272E+04	1.308E+00	3.649E+02
2005	5.272E+04	1.244E+00	3.471E+02
2006	5.272E+04	1.184E+00	3.302E+02
2007	5.272E+04	1.126E+00	3.141E+02
2008	5.272E+04	1.071E+00	2.988E+02
2009	5.272E+04	1.019E+00	2.842E+02
2010	5.272E+04	9.690E-01	2.703E+02
2011	5.272E+04	9.218E-01	2.572E+02
2012	5.272E+04	8.768E-01	2.446E+02
2013	5.272E+04	8.341E-01	2.327E+02
2014	5.272E+04	7.934E-01	2.213E+02
2015	5.272E+04	7.547E-01	2.105E+02
2016	5.272E+04	7.179E-01	2.003E+02
2017	5.272E+04	6.829E-01	1.905E+02
2018	5.272E+04	6.496E-01	1.812E+02
2019	5.272E+04	6.179E-01	1.724E+02
2020	5.272E+04	5.878E-01	1.640E+02

continued

Table D-33. Emisson Rate of NMOCs from Parcel 3 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2021	5.272E+04	5.591E-01	1.560E+02
2022	5.272E+04	5.318E-01	1.484E+02
2023	5.272E+04	5.059E-01	1.411E+02
2024	5.272E+04	4.812E-01	1.342E+02
2025	5.272E+04	4.577E-01	1.277E+02
2026	5.272E+04	4.354E-01	1.215E+02
2027	5.272E+04	4.142E-01	1.155E+02
2028	5.272E+04	3.940E-01	1.099E+02
2029	5.272E+04	3.748E-01	1.046E+02
2030	5.272E+04	3.565E-01	9.945E+01
2031	5.272E+04	3.391E-01	9.460E+01
2032	5.272E+04	3.226E-01	8.999E+01
2033	5.272E+04	3.068E-01	8.560E+01
2034	5.272E+04	2.919E-01	8.143E+01
2035	5.272E+04	2.776E-01	7.745E+01
2036	5.272E+04	2.641E-01	7.368E+01
2037	5.272E+04	2.512E-01	7.008E+01
2038	5.272E+04	2.390E-01	6.667E+01
2039	5.272E+04	2.273E-01	6.341E+01
2040	5.272E+04	2.162E-01	6.032E+01
2041	5.272E+04	2.057E-01	5.738E+01
2042	5.272E+04	1.956E-01	5.458E+01
2043	5.272E+04	1.861E-01	5.192E+01
2044	5.272E+04	1.770E-01	4.939E+01
2045	5.272E+04	1.684E-01	4.698E+01
2046	5.272E+04	1.602E-01	4.469E+01
2047	5.272E+04	1.524E-01	4.251E+01
2048	5.272E+04	1.449E-01	4.043E+01
2049	5.272E+04	1.379E-01	3.846E+01
2050	5.272E+04	1.311E-01	3.659E+01
2051	5.272E+04	1.247E-01	3.480E+01
2052	5.272E+04	1.187E-01	3.311E+01
2053	5.272E+04	1.129E-01	3.149E+01
2054	5.272E+04	1.074E-01	2.995E+01
2055	5.272E+04	1.021E-01	2.849E+01
2056	5.272E+04	9.715E-02	2.710E+01
2057	5.272E+04	9.242E-02	2.578E+01
2058	5.272E+04	8.791E-02	2.453E+01
2059	5.272E+04	8.362E-02	2.333E+01
2060	5.272E+04	7.954E-02	2.219E+01
2061	5.272E+04	7.566E-02	2.111E+01
2062	5.272E+04	7.197E-02	2.008E+01
2063	5.272E+04	6.846E-02	1.910E+01
2064	5.272E+04	6.512E-02	1.817E+01
2065	5.272E+04	6.195E-02	1.728E+01
2066	5.272E+04	5.893E-02	1.644E+01
2067	5.272E+04	5.605E-02	1.564E+01
2068	5.272E+04	5.332E-02	1.488E+01
2069	5.272E+04	5.072E-02	1.415E+01
2070	5.272E+04	4.825E-02	1.346E+01
2071	5.272E+04	4.589E-02	1.280E+01
2072	5.272E+04	4.365E-02	1.218E+01
2073	5.272E+04	4.153E-02	1.158E+01
2074	5.272E+04	3.950E-02	1.102E+01
2075	5.272E+04	3.757E-02	1.048E+01
2076	5.272E+04	3.574E-02	9.971E+00
2077	5.272E+04	3.400E-02	9.485E+00
2078	5.272E+04	3.234E-02	9.022E+00
2079	5.272E+04	3.076E-02	8.582E+00
2080	5.272E+04	2.926E-02	8.164E+00
2081	5.272E+04	2.784E-02	7.766E+00
2082	5.272E+04	2.648E-02	7.387E+00
2083	5.272E+04	2.519E-02	7.027E+00
2084	5.272E+04	2.396E-02	6.684E+00
2085	5.272E+04	2.279E-02	6.358E+00
2086	5.272E+04	2.168E-02	6.048E+00
2087	5.272E+04	2.062E-02	5.753E+00
2088	5.272E+04	1.962E-02	5.472E+00
2089	5.272E+04	1.866E-02	5.205E+00
2090	5.272E+04	1.775E-02	4.952E+00

continued

Table D-33. Emisson Rate of NMOCs from Parcel 3 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2091	5.272E+04	1.688E-02	4.710E+00
2092	5.272E+04	1.606E-02	4.480E+00
2093	5.272E+04	1.528E-02	4.262E+00
2094	5.272E+04	1.453E-02	4.054E+00
2095	5.272E+04	1.382E-02	3.856E+00
2096	5.272E+04	1.315E-02	3.668E+00
2097	5.272E+04	1.251E-02	3.489E+00
2098	5.272E+04	1.190E-02	3.319E+00
2099	5.272E+04	1.132E-02	3.157E+00
2100	5.272E+04	1.077E-02	3.003E+00
2101	5.272E+04	1.024E-02	2.857E+00
2102	5.272E+04	9.741E-03	2.717E+00
2103	5.272E+04	9.266E-03	2.585E+00
2104	5.272E+04	8.814E-03	2.459E+00
2105	5.272E+04	8.384E-03	2.339E+00
2106	5.272E+04	7.975E-03	2.225E+00
2107	5.272E+04	7.586E-03	2.116E+00
2108	5.272E+04	7.216E-03	2.013E+00
2109	5.272E+04	6.864E-03	1.915E+00
2110	5.272E+04	6.529E-03	1.822E+00
2111	5.272E+04	6.211E-03	1.733E+00
2112	5.272E+04	5.908E-03	1.648E+00
2113	5.272E+04	5.620E-03	1.568E+00
2114	5.272E+04	5.346E-03	1.491E+00
2115	5.272E+04	5.085E-03	1.419E+00
2116	5.272E+04	4.837E-03	1.349E+00
2117	5.272E+04	4.601E-03	1.284E+00
2118	5.272E+04	4.377E-03	1.221E+00
2119	5.272E+04	4.163E-03	1.161E+00
2120	5.272E+04	3.960E-03	1.105E+00
2121	5.272E+04	3.767E-03	1.051E+00
2122	5.272E+04	3.583E-03	9.997E-01
2123	5.272E+04	3.409E-03	9.509E-01
2124	5.272E+04	3.242E-03	9.046E-01
2125	5.272E+04	3.084E-03	8.604E-01
2126	5.272E+04	2.934E-03	8.185E-01
2127	5.272E+04	2.791E-03	7.786E-01
2128	5.272E+04	2.655E-03	7.406E-01
2129	5.272E+04	2.525E-03	7.045E-01
2130	5.272E+04	2.402E-03	6.701E-01
2131	5.272E+04	2.285E-03	6.374E-01
2132	5.272E+04	2.173E-03	6.063E-01
2133	5.272E+04	2.067E-03	5.768E-01
2134	5.272E+04	1.967E-03	5.486E-01
2135	5.272E+04	1.871E-03	5.219E-01
2136	5.272E+04	1.779E-03	4.964E-01
2137	5.272E+04	1.693E-03	4.722E-01
2138	5.272E+04	1.610E-03	4.492E-01
2139	5.272E+04	1.532E-03	4.273E-01
2140	5.272E+04	1.457E-03	4.064E-01
2141	5.272E+04	1.386E-03	3.866E-01
2142	5.272E+04	1.318E-03	3.678E-01
2143	5.272E+04	1.254E-03	3.498E-01
2144	5.272E+04	1.193E-03	3.328E-01
2145	5.272E+04	1.135E-03	3.165E-01
2146	5.272E+04	1.079E-03	3.011E-01
2147	5.272E+04	1.027E-03	2.864E-01
2148	5.272E+04	9.766E-04	2.724E-01
2149	5.272E+04	9.290E-04	2.592E-01
2150	5.272E+04	8.836E-04	2.465E-01
2151	5.272E+04	8.406E-04	2.345E-01
2152	5.272E+04	7.996E-04	2.231E-01
2153	5.272E+04	7.606E-04	2.122E-01
2154	5.272E+04	7.235E-04	2.018E-01
2155	5.272E+04	6.882E-04	1.920E-01
2156	5.272E+04	6.546E-04	1.826E-01
2157	5.272E+04	6.227E-04	1.737E-01
2158	5.272E+04	5.923E-04	1.652E-01
2159	5.272E+04	5.634E-04	1.572E-01
2160	5.272E+04	5.360E-04	1.495E-01

continued

Table D-33. Emisson Rate of NMOCs from Parcel 3 for Years 1975 to 2203 (concluded).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2161	5.272E+04	5.098E-04	1.422E-01
2162	5.272E+04	4.850E-04	1.353E-01
2163	5.272E+04	4.613E-04	1.287E-01
2164	5.272E+04	4.388E-04	1.224E-01
2165	5.272E+04	4.174E-04	1.164E-01
2166	5.272E+04	3.970E-04	1.108E-01
2167	5.272E+04	3.777E-04	1.054E-01
2168	5.272E+04	3.593E-04	1.002E-01
2169	5.272E+04	3.417E-04	9.534E-02
2170	5.272E+04	3.251E-04	9.069E-02
2171	5.272E+04	3.092E-04	8.627E-02
2172	5.272E+04	2.941E-04	8.206E-02
2173	5.272E+04	2.798E-04	7.806E-02
2174	5.272E+04	2.661E-04	7.425E-02
2175	5.272E+04	2.532E-04	7.063E-02
2176	5.272E+04	2.408E-04	6.718E-02
2177	5.272E+04	2.291E-04	6.391E-02
2178	5.272E+04	2.179E-04	6.079E-02
2179	5.272E+04	2.073E-04	5.783E-02
2180	5.272E+04	1.972E-04	5.501E-02
2181	5.272E+04	1.876E-04	5.232E-02
2182	5.272E+04	1.784E-04	4.977E-02
2183	5.272E+04	1.697E-04	4.734E-02
2184	5.272E+04	1.614E-04	4.504E-02
2185	5.272E+04	1.536E-04	4.284E-02
2186	5.272E+04	1.461E-04	4.075E-02
2187	5.272E+04	1.389E-04	3.876E-02
2188	5.272E+04	1.322E-04	3.687E-02
2189	5.272E+04	1.257E-04	3.507E-02
2190	5.272E+04	1.196E-04	3.336E-02
2191	5.272E+04	1.138E-04	3.174E-02
2192	5.272E+04	1.082E-04	3.019E-02
2193	5.272E+04	1.029E-04	2.872E-02
2194	5.272E+04	9.791E-05	2.732E-02
2195	5.272E+04	9.314E-05	2.598E-02
2196	5.272E+04	8.859E-05	2.472E-02
2197	5.272E+04	8.427E-05	2.351E-02
2198	5.272E+04	8.016E-05	2.236E-02
2199	5.272E+04	7.625E-05	2.127E-02
2200	5.272E+04	7.253E-05	2.024E-02
2201	5.272E+04	6.900E-05	1.925E-02
2202	5.272E+04	6.563E-05	1.831E-02
2203	5.272E+04	6.243E-05	1.742E-02

Table D-34. Emisson Rate of 1,1,1-Trichloroethane from Parcel 3 for Years 1975 to 2203.

Source: H:\3000\030177~2.000\030177~1.003\BUSHVA~1\STRATA3.PRM

Model Parameters

Lo : 170.00 m^3 / Mg
k : 0.0500 1/yr
NMOC : 1800.00 ppmv
Methane : 65.6000 % volume
Carbon Dioxide : 34.4000 % volume
Air Pollutant : 1,1,1-Trichloroethane (HAP)
Molecular Wt = 133.41 Concentration = 0.030000 ppmV

Landfill Parameters

Landfill type : Co-Disposal
Year Opened : 1974 Current Year : 2004 Closure Year: 2004
Capacity : 52718 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 0.00 Mg/year

Model Results

Year	Refuse In Place (Mg)	1,1,1-Trichloroethane (HAP) Emission Rate (Mg/yr)	(Cubic m/yr)
1975	5.272E+03	1.137E-05	2.049E-03
1976	1.054E+04	2.219E-05	3.999E-03
1977	1.582E+04	3.248E-05	5.853E-03
1978	2.109E+04	4.226E-05	7.617E-03
1979	2.636E+04	5.157E-05	9.294E-03
1980	3.163E+04	6.043E-05	1.089E-02
1981	3.690E+04	6.885E-05	1.241E-02
1982	4.217E+04	7.687E-05	1.385E-02
1983	4.745E+04	8.449E-05	1.523E-02
1984	5.272E+04	9.174E-05	1.653E-02
1985	5.272E+04	8.726E-05	1.573E-02
1986	5.272E+04	8.301E-05	1.496E-02
1987	5.272E+04	7.896E-05	1.423E-02
1988	5.272E+04	7.511E-05	1.354E-02
1989	5.272E+04	7.145E-05	1.288E-02
1990	5.272E+04	6.796E-05	1.225E-02
1991	5.272E+04	6.465E-05	1.165E-02
1992	5.272E+04	6.149E-05	1.108E-02
1993	5.272E+04	5.850E-05	1.054E-02
1994	5.272E+04	5.564E-05	1.003E-02
1995	5.272E+04	5.293E-05	9.539E-03
1996	5.272E+04	5.035E-05	9.073E-03
1997	5.272E+04	4.789E-05	8.631E-03
1998	5.272E+04	4.556E-05	8.210E-03
1999	5.272E+04	4.333E-05	7.810E-03
2000	5.272E+04	4.122E-05	7.429E-03
2001	5.272E+04	3.921E-05	7.066E-03
2002	5.272E+04	3.730E-05	6.722E-03
2003	5.272E+04	3.548E-05	6.394E-03
2004	5.272E+04	3.375E-05	6.082E-03
2005	5.272E+04	3.210E-05	5.785E-03
2006	5.272E+04	3.054E-05	5.503E-03
2007	5.272E+04	2.905E-05	5.235E-03
2008	5.272E+04	2.763E-05	4.980E-03
2009	5.272E+04	2.628E-05	4.737E-03
2010	5.272E+04	2.500E-05	4.506E-03
2011	5.272E+04	2.378E-05	4.286E-03
2012	5.272E+04	2.262E-05	4.077E-03
2013	5.272E+04	2.152E-05	3.878E-03
2014	5.272E+04	2.047E-05	3.689E-03
2015	5.272E+04	1.947E-05	3.509E-03
2016	5.272E+04	1.852E-05	3.338E-03
2017	5.272E+04	1.762E-05	3.175E-03
2018	5.272E+04	1.676E-05	3.020E-03

continued

Table D-34. Emisson Rate of 1,1,1-Trichloroethane from Parcel 3 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2019	5.272E+04	1.594E-05	2.873E-03
2020	5.272E+04	1.516E-05	2.733E-03
2021	5.272E+04	1.442E-05	2.600E-03
2022	5.272E+04	1.372E-05	2.473E-03
2023	5.272E+04	1.305E-05	2.352E-03
2024	5.272E+04	1.242E-05	2.237E-03
2025	5.272E+04	1.181E-05	2.128E-03
2026	5.272E+04	1.123E-05	2.025E-03
2027	5.272E+04	1.069E-05	1.926E-03
2028	5.272E+04	1.016E-05	1.832E-03
2029	5.272E+04	9.669E-06	1.743E-03
2030	5.272E+04	9.198E-06	1.658E-03
2031	5.272E+04	8.749E-06	1.577E-03
2032	5.272E+04	8.322E-06	1.500E-03
2033	5.272E+04	7.916E-06	1.427E-03
2034	5.272E+04	7.530E-06	1.357E-03
2035	5.272E+04	7.163E-06	1.291E-03
2036	5.272E+04	6.814E-06	1.228E-03
2037	5.272E+04	6.481E-06	1.168E-03
2038	5.272E+04	6.165E-06	1.111E-03
2039	5.272E+04	5.865E-06	1.057E-03
2040	5.272E+04	5.579E-06	1.005E-03
2041	5.272E+04	5.307E-06	9.563E-04
2042	5.272E+04	5.048E-06	9.097E-04
2043	5.272E+04	4.802E-06	8.653E-04
2044	5.272E+04	4.567E-06	8.231E-04
2045	5.272E+04	4.345E-06	7.830E-04
2046	5.272E+04	4.133E-06	7.448E-04
2047	5.272E+04	3.931E-06	7.085E-04
2048	5.272E+04	3.739E-06	6.739E-04
2049	5.272E+04	3.557E-06	6.410E-04
2050	5.272E+04	3.384E-06	6.098E-04
2051	5.272E+04	3.219E-06	5.800E-04
2052	5.272E+04	3.062E-06	5.518E-04
2053	5.272E+04	2.912E-06	5.248E-04
2054	5.272E+04	2.770E-06	4.992E-04
2055	5.272E+04	2.635E-06	4.749E-04
2056	5.272E+04	2.507E-06	4.517E-04
2057	5.272E+04	2.384E-06	4.297E-04
2058	5.272E+04	2.268E-06	4.088E-04
2059	5.272E+04	2.157E-06	3.888E-04
2060	5.272E+04	2.052E-06	3.699E-04
2061	5.272E+04	1.952E-06	3.518E-04
2062	5.272E+04	1.857E-06	3.347E-04
2063	5.272E+04	1.766E-06	3.183E-04
2064	5.272E+04	1.680E-06	3.028E-04
2065	5.272E+04	1.598E-06	2.880E-04
2066	5.272E+04	1.520E-06	2.740E-04
2067	5.272E+04	1.446E-06	2.606E-04
2068	5.272E+04	1.376E-06	2.479E-04
2069	5.272E+04	1.309E-06	2.358E-04
2070	5.272E+04	1.245E-06	2.243E-04
2071	5.272E+04	1.184E-06	2.134E-04
2072	5.272E+04	1.126E-06	2.030E-04
2073	5.272E+04	1.071E-06	1.931E-04
2074	5.272E+04	1.019E-06	1.837E-04
2075	5.272E+04	9.694E-07	1.747E-04
2076	5.272E+04	9.221E-07	1.662E-04
2077	5.272E+04	8.772E-07	1.581E-04
2078	5.272E+04	8.344E-07	1.504E-04
2079	5.272E+04	7.937E-07	1.430E-04
2080	5.272E+04	7.550E-07	1.361E-04
2081	5.272E+04	7.182E-07	1.294E-04
2082	5.272E+04	6.831E-07	1.231E-04
2083	5.272E+04	6.498E-07	1.171E-04
2084	5.272E+04	6.181E-07	1.114E-04
2085	5.272E+04	5.880E-07	1.060E-04
2086	5.272E+04	5.593E-07	1.008E-04
2087	5.272E+04	5.320E-07	9.588E-05
2088	5.272E+04	5.061E-07	9.120E-05

continued

Table D-34. Emisson Rate of 1,1,1-Trichloroethane from Parcel 3 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2089	5.272E+04	4.814E-07	8.676E-05
2090	5.272E+04	4.579E-07	8.253E-05
2091	5.272E+04	4.356E-07	7.850E-05
2092	5.272E+04	4.143E-07	7.467E-05
2093	5.272E+04	3.941E-07	7.103E-05
2094	5.272E+04	3.749E-07	6.757E-05
2095	5.272E+04	3.566E-07	6.427E-05
2096	5.272E+04	3.392E-07	6.114E-05
2097	5.272E+04	3.227E-07	5.815E-05
2098	5.272E+04	3.070E-07	5.532E-05
2099	5.272E+04	2.920E-07	5.262E-05
2100	5.272E+04	2.777E-07	5.005E-05
2101	5.272E+04	2.642E-07	4.761E-05
2102	5.272E+04	2.513E-07	4.529E-05
2103	5.272E+04	2.391E-07	4.308E-05
2104	5.272E+04	2.274E-07	4.098E-05
2105	5.272E+04	2.163E-07	3.898E-05
2106	5.272E+04	2.058E-07	3.708E-05
2107	5.272E+04	1.957E-07	3.527E-05
2108	5.272E+04	1.862E-07	3.355E-05
2109	5.272E+04	1.771E-07	3.192E-05
2110	5.272E+04	1.685E-07	3.036E-05
2111	5.272E+04	1.602E-07	2.888E-05
2112	5.272E+04	1.524E-07	2.747E-05
2113	5.272E+04	1.450E-07	2.613E-05
2114	5.272E+04	1.379E-07	2.486E-05
2115	5.272E+04	1.312E-07	2.364E-05
2116	5.272E+04	1.248E-07	2.249E-05
2117	5.272E+04	1.187E-07	2.139E-05
2118	5.272E+04	1.129E-07	2.035E-05
2119	5.272E+04	1.074E-07	1.936E-05
2120	5.272E+04	1.022E-07	1.841E-05
2121	5.272E+04	9.719E-08	1.752E-05
2122	5.272E+04	9.245E-08	1.666E-05
2123	5.272E+04	8.794E-08	1.585E-05
2124	5.272E+04	8.366E-08	1.508E-05
2125	5.272E+04	7.958E-08	1.434E-05
2126	5.272E+04	7.569E-08	1.364E-05
2127	5.272E+04	7.200E-08	1.298E-05
2128	5.272E+04	6.849E-08	1.234E-05
2129	5.272E+04	6.515E-08	1.174E-05
2130	5.272E+04	6.197E-08	1.117E-05
2131	5.272E+04	5.895E-08	1.062E-05
2132	5.272E+04	5.608E-08	1.011E-05
2133	5.272E+04	5.334E-08	9.613E-06
2134	5.272E+04	5.074E-08	9.144E-06
2135	5.272E+04	4.826E-08	8.698E-06
2136	5.272E+04	4.591E-08	8.274E-06
2137	5.272E+04	4.367E-08	7.870E-06
2138	5.272E+04	4.154E-08	7.487E-06
2139	5.272E+04	3.952E-08	7.121E-06
2140	5.272E+04	3.759E-08	6.774E-06
2141	5.272E+04	3.576E-08	6.444E-06
2142	5.272E+04	3.401E-08	6.129E-06
2143	5.272E+04	3.235E-08	5.831E-06
2144	5.272E+04	3.078E-08	5.546E-06
2145	5.272E+04	2.927E-08	5.276E-06
2146	5.272E+04	2.785E-08	5.018E-06
2147	5.272E+04	2.649E-08	4.774E-06
2148	5.272E+04	2.520E-08	4.541E-06
2149	5.272E+04	2.397E-08	4.319E-06
2150	5.272E+04	2.280E-08	4.109E-06
2151	5.272E+04	2.169E-08	3.908E-06
2152	5.272E+04	2.063E-08	3.718E-06
2153	5.272E+04	1.962E-08	3.536E-06
2154	5.272E+04	1.867E-08	3.364E-06
2155	5.272E+04	1.776E-08	3.200E-06
2156	5.272E+04	1.689E-08	3.044E-06
2157	5.272E+04	1.607E-08	2.895E-06
2158	5.272E+04	1.528E-08	2.754E-06

continued

Table D-34. Emisson Rate of 1,1,1-Trichloroethane from Parcel 3 for Years 1975 to 2203 (concluded).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2159	5.272E+04	1.454E-08	2.620E-06
2160	5.272E+04	1.383E-08	2.492E-06
2161	5.272E+04	1.315E-08	2.371E-06
2162	5.272E+04	1.251E-08	2.255E-06
2163	5.272E+04	1.190E-08	2.145E-06
2164	5.272E+04	1.132E-08	2.040E-06
2165	5.272E+04	1.077E-08	1.941E-06
2166	5.272E+04	1.024E-08	1.846E-06
2167	5.272E+04	9.745E-09	1.756E-06
2168	5.272E+04	9.269E-09	1.670E-06
2169	5.272E+04	8.817E-09	1.589E-06
2170	5.272E+04	8.387E-09	1.512E-06
2171	5.272E+04	7.978E-09	1.438E-06
2172	5.272E+04	7.589E-09	1.368E-06
2173	5.272E+04	7.219E-09	1.301E-06
2174	5.272E+04	6.867E-09	1.238E-06
2175	5.272E+04	6.532E-09	1.177E-06
2176	5.272E+04	6.213E-09	1.120E-06
2177	5.272E+04	5.910E-09	1.065E-06
2178	5.272E+04	5.622E-09	1.013E-06
2179	5.272E+04	5.348E-09	9.638E-07
2180	5.272E+04	5.087E-09	9.168E-07
2181	5.272E+04	4.839E-09	8.721E-07
2182	5.272E+04	4.603E-09	8.295E-07
2183	5.272E+04	4.378E-09	7.891E-07
2184	5.272E+04	4.165E-09	7.506E-07
2185	5.272E+04	3.962E-09	7.140E-07
2186	5.272E+04	3.769E-09	6.792E-07
2187	5.272E+04	3.585E-09	6.460E-07
2188	5.272E+04	3.410E-09	6.145E-07
2189	5.272E+04	3.244E-09	5.846E-07
2190	5.272E+04	3.085E-09	5.561E-07
2191	5.272E+04	2.935E-09	5.289E-07
2192	5.272E+04	2.792E-09	5.031E-07
2193	5.272E+04	2.656E-09	4.786E-07
2194	5.272E+04	2.526E-09	4.553E-07
2195	5.272E+04	2.403E-09	4.331E-07
2196	5.272E+04	2.286E-09	4.119E-07
2197	5.272E+04	2.174E-09	3.918E-07
2198	5.272E+04	2.068E-09	3.727E-07
2199	5.272E+04	1.967E-09	3.546E-07
2200	5.272E+04	1.871E-09	3.373E-07
2201	5.272E+04	1.780E-09	3.208E-07
2202	5.272E+04	1.693E-09	3.052E-07
2203	5.272E+04	1.611E-09	2.903E-07

Table D-35. Emisson Rate of 1,1-Dichloroethene from Parcel 3 for Years 1975 to 2203.

Source: H:\3000\030177~2.000\030177~1.003\BUSHVA~1\STRATA3.PRM

Model Parameters

Lo : 170.00 m^3 / Mg
k : 0.0500 1/yr
NMOC : 1800.00 ppmv
Methane : 65.6000 % volume
Carbon Dioxide : 34.4000 % volume
Air Pollutant : 1,1-Dichloroethene (HAP/VOC)
Molecular Wt = 96.94 Concentration = 0.040000 ppmV

Landfill Parameters

Landfill type : Co-Disposal
Year Opened : 1974 Current Year : 2004 Closure Year: 2004
Capacity : 52718 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 0.00 Mg/year

Model Results

Year	Refuse In Place (Mg)	1,1-Dichloroethene (HAP/VOC) Emission Rate (Mg/yr)	(Cubic m/yr)
1975	5.272E+03	1.102E-05	2.732E-03
1976	1.054E+04	2.150E-05	5.331E-03
1977	1.582E+04	3.146E-05	7.804E-03
1978	2.109E+04	4.095E-05	1.016E-02
1979	2.636E+04	4.997E-05	1.239E-02
1980	3.163E+04	5.855E-05	1.452E-02
1981	3.690E+04	6.671E-05	1.654E-02
1982	4.217E+04	7.447E-05	1.847E-02
1983	4.745E+04	8.186E-05	2.030E-02
1984	5.272E+04	8.888E-05	2.204E-02
1985	5.272E+04	8.455E-05	2.097E-02
1986	5.272E+04	8.042E-05	1.995E-02
1987	5.272E+04	7.650E-05	1.897E-02
1988	5.272E+04	7.277E-05	1.805E-02
1989	5.272E+04	6.922E-05	1.717E-02
1990	5.272E+04	6.584E-05	1.633E-02
1991	5.272E+04	6.263E-05	1.553E-02
1992	5.272E+04	5.958E-05	1.478E-02
1993	5.272E+04	5.667E-05	1.406E-02
1994	5.272E+04	5.391E-05	1.337E-02
1995	5.272E+04	5.128E-05	1.272E-02
1996	5.272E+04	4.878E-05	1.210E-02
1997	5.272E+04	4.640E-05	1.151E-02
1998	5.272E+04	4.414E-05	1.095E-02
1999	5.272E+04	4.198E-05	1.041E-02
2000	5.272E+04	3.994E-05	9.905E-03
2001	5.272E+04	3.799E-05	9.422E-03
2002	5.272E+04	3.614E-05	8.962E-03
2003	5.272E+04	3.437E-05	8.525E-03
2004	5.272E+04	3.270E-05	8.109E-03
2005	5.272E+04	3.110E-05	7.714E-03
2006	5.272E+04	2.959E-05	7.338E-03
2007	5.272E+04	2.814E-05	6.980E-03
2008	5.272E+04	2.677E-05	6.639E-03
2009	5.272E+04	2.546E-05	6.316E-03
2010	5.272E+04	2.422E-05	6.008E-03
2011	5.272E+04	2.304E-05	5.715E-03
2012	5.272E+04	2.192E-05	5.436E-03
2013	5.272E+04	2.085E-05	5.171E-03
2014	5.272E+04	1.983E-05	4.919E-03
2015	5.272E+04	1.886E-05	4.679E-03
2016	5.272E+04	1.794E-05	4.451E-03
2017	5.272E+04	1.707E-05	4.234E-03
2018	5.272E+04	1.624E-05	4.027E-03

continued

Table D-35. Emisson Rate of 1,1-Dichloroethene from Parcel 3 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2019	5.272E+04	1.545E-05	3.831E-03
2020	5.272E+04	1.469E-05	3.644E-03
2021	5.272E+04	1.398E-05	3.466E-03
2022	5.272E+04	1.329E-05	3.297E-03
2023	5.272E+04	1.265E-05	3.136E-03
2024	5.272E+04	1.203E-05	2.983E-03
2025	5.272E+04	1.144E-05	2.838E-03
2026	5.272E+04	1.088E-05	2.699E-03
2027	5.272E+04	1.035E-05	2.568E-03
2028	5.272E+04	9.848E-06	2.443E-03
2029	5.272E+04	9.368E-06	2.323E-03
2030	5.272E+04	8.911E-06	2.210E-03
2031	5.272E+04	8.476E-06	2.102E-03
2032	5.272E+04	8.063E-06	2.000E-03
2033	5.272E+04	7.670E-06	1.902E-03
2034	5.272E+04	7.296E-06	1.809E-03
2035	5.272E+04	6.940E-06	1.721E-03
2036	5.272E+04	6.601E-06	1.637E-03
2037	5.272E+04	6.280E-06	1.557E-03
2038	5.272E+04	5.973E-06	1.481E-03
2039	5.272E+04	5.682E-06	1.409E-03
2040	5.272E+04	5.405E-06	1.340E-03
2041	5.272E+04	5.141E-06	1.275E-03
2042	5.272E+04	4.891E-06	1.213E-03
2043	5.272E+04	4.652E-06	1.154E-03
2044	5.272E+04	4.425E-06	1.097E-03
2045	5.272E+04	4.209E-06	1.044E-03
2046	5.272E+04	4.004E-06	9.931E-04
2047	5.272E+04	3.809E-06	9.446E-04
2048	5.272E+04	3.623E-06	8.986E-04
2049	5.272E+04	3.446E-06	8.547E-04
2050	5.272E+04	3.278E-06	8.130E-04
2051	5.272E+04	3.118E-06	7.734E-04
2052	5.272E+04	2.966E-06	7.357E-04
2053	5.272E+04	2.822E-06	6.998E-04
2054	5.272E+04	2.684E-06	6.657E-04
2055	5.272E+04	2.553E-06	6.332E-04
2056	5.272E+04	2.429E-06	6.023E-04
2057	5.272E+04	2.310E-06	5.729E-04
2058	5.272E+04	2.197E-06	5.450E-04
2059	5.272E+04	2.090E-06	5.184E-04
2060	5.272E+04	1.988E-06	4.931E-04
2061	5.272E+04	1.891E-06	4.691E-04
2062	5.272E+04	1.799E-06	4.462E-04
2063	5.272E+04	1.711E-06	4.244E-04
2064	5.272E+04	1.628E-06	4.037E-04
2065	5.272E+04	1.549E-06	3.841E-04
2066	5.272E+04	1.473E-06	3.653E-04
2067	5.272E+04	1.401E-06	3.475E-04
2068	5.272E+04	1.333E-06	3.306E-04
2069	5.272E+04	1.268E-06	3.144E-04
2070	5.272E+04	1.206E-06	2.991E-04
2071	5.272E+04	1.147E-06	2.845E-04
2072	5.272E+04	1.091E-06	2.706E-04
2073	5.272E+04	1.038E-06	2.574E-04
2074	5.272E+04	9.874E-07	2.449E-04
2075	5.272E+04	9.392E-07	2.329E-04
2076	5.272E+04	8.934E-07	2.216E-04
2077	5.272E+04	8.498E-07	2.108E-04
2078	5.272E+04	8.084E-07	2.005E-04
2079	5.272E+04	7.690E-07	1.907E-04
2080	5.272E+04	7.315E-07	1.814E-04
2081	5.272E+04	6.958E-07	1.726E-04
2082	5.272E+04	6.619E-07	1.642E-04
2083	5.272E+04	6.296E-07	1.561E-04
2084	5.272E+04	5.989E-07	1.485E-04
2085	5.272E+04	5.697E-07	1.413E-04
2086	5.272E+04	5.419E-07	1.344E-04
2087	5.272E+04	5.155E-07	1.278E-04
2088	5.272E+04	4.903E-07	1.216E-04

continued

Table D-35. Emisson Rate of 1,1-Dichloroethene from Parcel 3 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2089	5.272E+04	4.664E-07	1.157E-04
2090	5.272E+04	4.437E-07	1.100E-04
2091	5.272E+04	4.220E-07	1.047E-04
2092	5.272E+04	4.014E-07	9.956E-05
2093	5.272E+04	3.819E-07	9.471E-05
2094	5.272E+04	3.632E-07	9.009E-05
2095	5.272E+04	3.455E-07	8.569E-05
2096	5.272E+04	3.287E-07	8.151E-05
2097	5.272E+04	3.126E-07	7.754E-05
2098	5.272E+04	2.974E-07	7.376E-05
2099	5.272E+04	2.829E-07	7.016E-05
2100	5.272E+04	2.691E-07	6.674E-05
2101	5.272E+04	2.560E-07	6.348E-05
2102	5.272E+04	2.435E-07	6.039E-05
2103	5.272E+04	2.316E-07	5.744E-05
2104	5.272E+04	2.203E-07	5.464E-05
2105	5.272E+04	2.096E-07	5.198E-05
2106	5.272E+04	1.993E-07	4.944E-05
2107	5.272E+04	1.896E-07	4.703E-05
2108	5.272E+04	1.804E-07	4.474E-05
2109	5.272E+04	1.716E-07	4.255E-05
2110	5.272E+04	1.632E-07	4.048E-05
2111	5.272E+04	1.553E-07	3.850E-05
2112	5.272E+04	1.477E-07	3.663E-05
2113	5.272E+04	1.405E-07	3.484E-05
2114	5.272E+04	1.336E-07	3.314E-05
2115	5.272E+04	1.271E-07	3.153E-05
2116	5.272E+04	1.209E-07	2.999E-05
2117	5.272E+04	1.150E-07	2.853E-05
2118	5.272E+04	1.094E-07	2.713E-05
2119	5.272E+04	1.041E-07	2.581E-05
2120	5.272E+04	9.899E-08	2.455E-05
2121	5.272E+04	9.417E-08	2.335E-05
2122	5.272E+04	8.957E-08	2.222E-05
2123	5.272E+04	8.520E-08	2.113E-05
2124	5.272E+04	8.105E-08	2.010E-05
2125	5.272E+04	7.710E-08	1.912E-05
2126	5.272E+04	7.334E-08	1.819E-05
2127	5.272E+04	6.976E-08	1.730E-05
2128	5.272E+04	6.636E-08	1.646E-05
2129	5.272E+04	6.312E-08	1.565E-05
2130	5.272E+04	6.004E-08	1.489E-05
2131	5.272E+04	5.711E-08	1.417E-05
2132	5.272E+04	5.433E-08	1.347E-05
2133	5.272E+04	5.168E-08	1.282E-05
2134	5.272E+04	4.916E-08	1.219E-05
2135	5.272E+04	4.676E-08	1.160E-05
2136	5.272E+04	4.448E-08	1.103E-05
2137	5.272E+04	4.231E-08	1.049E-05
2138	5.272E+04	4.025E-08	9.982E-06
2139	5.272E+04	3.828E-08	9.495E-06
2140	5.272E+04	3.642E-08	9.032E-06
2141	5.272E+04	3.464E-08	8.592E-06
2142	5.272E+04	3.295E-08	8.173E-06
2143	5.272E+04	3.134E-08	7.774E-06
2144	5.272E+04	2.982E-08	7.395E-06
2145	5.272E+04	2.836E-08	7.034E-06
2146	5.272E+04	2.698E-08	6.691E-06
2147	5.272E+04	2.566E-08	6.365E-06
2148	5.272E+04	2.441E-08	6.054E-06
2149	5.272E+04	2.322E-08	5.759E-06
2150	5.272E+04	2.209E-08	5.478E-06
2151	5.272E+04	2.101E-08	5.211E-06
2152	5.272E+04	1.999E-08	4.957E-06
2153	5.272E+04	1.901E-08	4.715E-06
2154	5.272E+04	1.808E-08	4.485E-06
2155	5.272E+04	1.720E-08	4.266E-06
2156	5.272E+04	1.636E-08	4.058E-06
2157	5.272E+04	1.557E-08	3.860E-06
2158	5.272E+04	1.481E-08	3.672E-06

continued

Table D-35. Emisson Rate of 1,1-Dichloroethene from Parcel 3 for Years 1975 to 2203 (concluded).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2159	5.272E+04	1.408E-08	3.493E-06
2160	5.272E+04	1.340E-08	3.323E-06
2161	5.272E+04	1.274E-08	3.161E-06
2162	5.272E+04	1.212E-08	3.007E-06
2163	5.272E+04	1.153E-08	2.860E-06
2164	5.272E+04	1.097E-08	2.720E-06
2165	5.272E+04	1.043E-08	2.588E-06
2166	5.272E+04	9.925E-09	2.462E-06
2167	5.272E+04	9.441E-09	2.341E-06
2168	5.272E+04	8.980E-09	2.227E-06
2169	5.272E+04	8.542E-09	2.119E-06
2170	5.272E+04	8.126E-09	2.015E-06
2171	5.272E+04	7.730E-09	1.917E-06
2172	5.272E+04	7.353E-09	1.824E-06
2173	5.272E+04	6.994E-09	1.735E-06
2174	5.272E+04	6.653E-09	1.650E-06
2175	5.272E+04	6.328E-09	1.570E-06
2176	5.272E+04	6.020E-09	1.493E-06
2177	5.272E+04	5.726E-09	1.420E-06
2178	5.272E+04	5.447E-09	1.351E-06
2179	5.272E+04	5.181E-09	1.285E-06
2180	5.272E+04	4.929E-09	1.222E-06
2181	5.272E+04	4.688E-09	1.163E-06
2182	5.272E+04	4.460E-09	1.106E-06
2183	5.272E+04	4.242E-09	1.052E-06
2184	5.272E+04	4.035E-09	1.001E-06
2185	5.272E+04	3.838E-09	9.520E-07
2186	5.272E+04	3.651E-09	9.055E-07
2187	5.272E+04	3.473E-09	8.614E-07
2188	5.272E+04	3.304E-09	8.194E-07
2189	5.272E+04	3.143E-09	7.794E-07
2190	5.272E+04	2.989E-09	7.414E-07
2191	5.272E+04	2.844E-09	7.052E-07
2192	5.272E+04	2.705E-09	6.708E-07
2193	5.272E+04	2.573E-09	6.381E-07
2194	5.272E+04	2.447E-09	6.070E-07
2195	5.272E+04	2.328E-09	5.774E-07
2196	5.272E+04	2.215E-09	5.492E-07
2197	5.272E+04	2.107E-09	5.225E-07
2198	5.272E+04	2.004E-09	4.970E-07
2199	5.272E+04	1.906E-09	4.727E-07
2200	5.272E+04	1.813E-09	4.497E-07
2201	5.272E+04	1.725E-09	4.278E-07
2202	5.272E+04	1.641E-09	4.069E-07
2203	5.272E+04	1.561E-09	3.870E-07

Table D-36. Emisson Rate of 1,2-Dichloroethane from Parcel 3 for Years 1975 to 2203.

Source: H:\3000\030177~2.000\030177~1.003\BUSHVA~1\STRATA3.PRM

Model Parameters

Lo : 170.00 m^3 / Mg
k : 0.0500 1/yr
NMOC : 1800.00 ppmv
Methane : 65.6000 % volume
Carbon Dioxide : 34.4000 % volume
Air Pollutant : 1,2-Dichloroethane (HAP/VOC)
Molecular Wt = 98.96 Concentration = 0.280000 ppmV

Landfill Parameters

Landfill type : Co-Disposal
Year Opened : 1974 Current Year : 2004 Closure Year: 2004
Capacity : 52718 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 0.00 Mg/year

Model Results

Year	Refuse In Place (Mg)	1,2-Dichloroethane (HAP/VOC) Emission Rate (Mg/yr)	(Cubic m/yr)
1975	5.272E+03	7.872E-05	1.913E-02
1976	1.054E+04	1.536E-04	3.732E-02
1977	1.582E+04	2.248E-04	5.463E-02
1978	2.109E+04	2.926E-04	7.109E-02
1979	2.636E+04	3.571E-04	8.675E-02
1980	3.163E+04	4.184E-04	1.016E-01
1981	3.690E+04	4.767E-04	1.158E-01
1982	4.217E+04	5.322E-04	1.293E-01
1983	4.745E+04	5.849E-04	1.421E-01
1984	5.272E+04	6.351E-04	1.543E-01
1985	5.272E+04	6.042E-04	1.468E-01
1986	5.272E+04	5.747E-04	1.396E-01
1987	5.272E+04	5.467E-04	1.328E-01
1988	5.272E+04	5.200E-04	1.263E-01
1989	5.272E+04	4.946E-04	1.202E-01
1990	5.272E+04	4.705E-04	1.143E-01
1991	5.272E+04	4.476E-04	1.087E-01
1992	5.272E+04	4.257E-04	1.034E-01
1993	5.272E+04	4.050E-04	9.839E-02
1994	5.272E+04	3.852E-04	9.359E-02
1995	5.272E+04	3.664E-04	8.903E-02
1996	5.272E+04	3.486E-04	8.469E-02
1997	5.272E+04	3.316E-04	8.056E-02
1998	5.272E+04	3.154E-04	7.663E-02
1999	5.272E+04	3.000E-04	7.289E-02
2000	5.272E+04	2.854E-04	6.933E-02
2001	5.272E+04	2.715E-04	6.595E-02
2002	5.272E+04	2.582E-04	6.274E-02
2003	5.272E+04	2.456E-04	5.968E-02
2004	5.272E+04	2.337E-04	5.677E-02
2005	5.272E+04	2.223E-04	5.400E-02
2006	5.272E+04	2.114E-04	5.136E-02
2007	5.272E+04	2.011E-04	4.886E-02
2008	5.272E+04	1.913E-04	4.648E-02
2009	5.272E+04	1.820E-04	4.421E-02
2010	5.272E+04	1.731E-04	4.205E-02
2011	5.272E+04	1.647E-04	4.000E-02
2012	5.272E+04	1.566E-04	3.805E-02
2013	5.272E+04	1.490E-04	3.620E-02
2014	5.272E+04	1.417E-04	3.443E-02
2015	5.272E+04	1.348E-04	3.275E-02
2016	5.272E+04	1.282E-04	3.115E-02
2017	5.272E+04	1.220E-04	2.963E-02
2018	5.272E+04	1.160E-04	2.819E-02

continued

Table D-36. Emisson Rate of 1,2-Dichloroethane from Parcel 3 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2019	5.272E+04	1.104E-04	2.681E-02
2020	5.272E+04	1.050E-04	2.551E-02
2021	5.272E+04	9.987E-05	2.426E-02
2022	5.272E+04	9.500E-05	2.308E-02
2023	5.272E+04	9.036E-05	2.195E-02
2024	5.272E+04	8.596E-05	2.088E-02
2025	5.272E+04	8.176E-05	1.986E-02
2026	5.272E+04	7.778E-05	1.890E-02
2027	5.272E+04	7.398E-05	1.797E-02
2028	5.272E+04	7.037E-05	1.710E-02
2029	5.272E+04	6.694E-05	1.626E-02
2030	5.272E+04	6.368E-05	1.547E-02
2031	5.272E+04	6.057E-05	1.472E-02
2032	5.272E+04	5.762E-05	1.400E-02
2033	5.272E+04	5.481E-05	1.332E-02
2034	5.272E+04	5.213E-05	1.267E-02
2035	5.272E+04	4.959E-05	1.205E-02
2036	5.272E+04	4.717E-05	1.146E-02
2037	5.272E+04	4.487E-05	1.090E-02
2038	5.272E+04	4.268E-05	1.037E-02
2039	5.272E+04	4.060E-05	9.864E-03
2040	5.272E+04	3.862E-05	9.383E-03
2041	5.272E+04	3.674E-05	8.926E-03
2042	5.272E+04	3.495E-05	8.490E-03
2043	5.272E+04	3.324E-05	8.076E-03
2044	5.272E+04	3.162E-05	7.682E-03
2045	5.272E+04	3.008E-05	7.308E-03
2046	5.272E+04	2.861E-05	6.951E-03
2047	5.272E+04	2.722E-05	6.612E-03
2048	5.272E+04	2.589E-05	6.290E-03
2049	5.272E+04	2.463E-05	5.983E-03
2050	5.272E+04	2.343E-05	5.691E-03
2051	5.272E+04	2.228E-05	5.414E-03
2052	5.272E+04	2.120E-05	5.150E-03
2053	5.272E+04	2.016E-05	4.899E-03
2054	5.272E+04	1.918E-05	4.660E-03
2055	5.272E+04	1.824E-05	4.432E-03
2056	5.272E+04	1.735E-05	4.216E-03
2057	5.272E+04	1.651E-05	4.011E-03
2058	5.272E+04	1.570E-05	3.815E-03
2059	5.272E+04	1.494E-05	3.629E-03
2060	5.272E+04	1.421E-05	3.452E-03
2061	5.272E+04	1.352E-05	3.284E-03
2062	5.272E+04	1.286E-05	3.123E-03
2063	5.272E+04	1.223E-05	2.971E-03
2064	5.272E+04	1.163E-05	2.826E-03
2065	5.272E+04	1.107E-05	2.688E-03
2066	5.272E+04	1.053E-05	2.557E-03
2067	5.272E+04	1.001E-05	2.433E-03
2068	5.272E+04	9.524E-06	2.314E-03
2069	5.272E+04	9.060E-06	2.201E-03
2070	5.272E+04	8.618E-06	2.094E-03
2071	5.272E+04	8.197E-06	1.992E-03
2072	5.272E+04	7.798E-06	1.894E-03
2073	5.272E+04	7.417E-06	1.802E-03
2074	5.272E+04	7.056E-06	1.714E-03
2075	5.272E+04	6.712E-06	1.631E-03
2076	5.272E+04	6.384E-06	1.551E-03
2077	5.272E+04	6.073E-06	1.475E-03
2078	5.272E+04	5.777E-06	1.403E-03
2079	5.272E+04	5.495E-06	1.335E-03
2080	5.272E+04	5.227E-06	1.270E-03
2081	5.272E+04	4.972E-06	1.208E-03
2082	5.272E+04	4.730E-06	1.149E-03
2083	5.272E+04	4.499E-06	1.093E-03
2084	5.272E+04	4.279E-06	1.040E-03
2085	5.272E+04	4.071E-06	9.890E-04
2086	5.272E+04	3.872E-06	9.408E-04
2087	5.272E+04	3.683E-06	8.949E-04
2088	5.272E+04	3.504E-06	8.512E-04

continued

Table D-36. Emisson Rate of 1,2-Dichloroethane from Parcel 3 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2089	5.272E+04	3.333E-06	8.097E-04
2090	5.272E+04	3.170E-06	7.702E-04
2091	5.272E+04	3.016E-06	7.327E-04
2092	5.272E+04	2.869E-06	6.969E-04
2093	5.272E+04	2.729E-06	6.629E-04
2094	5.272E+04	2.596E-06	6.306E-04
2095	5.272E+04	2.469E-06	5.999E-04
2096	5.272E+04	2.349E-06	5.706E-04
2097	5.272E+04	2.234E-06	5.428E-04
2098	5.272E+04	2.125E-06	5.163E-04
2099	5.272E+04	2.021E-06	4.911E-04
2100	5.272E+04	1.923E-06	4.672E-04
2101	5.272E+04	1.829E-06	4.444E-04
2102	5.272E+04	1.740E-06	4.227E-04
2103	5.272E+04	1.655E-06	4.021E-04
2104	5.272E+04	1.574E-06	3.825E-04
2105	5.272E+04	1.498E-06	3.638E-04
2106	5.272E+04	1.425E-06	3.461E-04
2107	5.272E+04	1.355E-06	3.292E-04
2108	5.272E+04	1.289E-06	3.132E-04
2109	5.272E+04	1.226E-06	2.979E-04
2110	5.272E+04	1.166E-06	2.834E-04
2111	5.272E+04	1.109E-06	2.695E-04
2112	5.272E+04	1.055E-06	2.564E-04
2113	5.272E+04	1.004E-06	2.439E-04
2114	5.272E+04	9.549E-07	2.320E-04
2115	5.272E+04	9.083E-07	2.207E-04
2116	5.272E+04	8.640E-07	2.099E-04
2117	5.272E+04	8.219E-07	1.997E-04
2118	5.272E+04	7.818E-07	1.899E-04
2119	5.272E+04	7.437E-07	1.807E-04
2120	5.272E+04	7.074E-07	1.719E-04
2121	5.272E+04	6.729E-07	1.635E-04
2122	5.272E+04	6.401E-07	1.555E-04
2123	5.272E+04	6.089E-07	1.479E-04
2124	5.272E+04	5.792E-07	1.407E-04
2125	5.272E+04	5.509E-07	1.338E-04
2126	5.272E+04	5.240E-07	1.273E-04
2127	5.272E+04	4.985E-07	1.211E-04
2128	5.272E+04	4.742E-07	1.152E-04
2129	5.272E+04	4.511E-07	1.096E-04
2130	5.272E+04	4.291E-07	1.042E-04
2131	5.272E+04	4.081E-07	9.916E-05
2132	5.272E+04	3.882E-07	9.432E-05
2133	5.272E+04	3.693E-07	8.972E-05
2134	5.272E+04	3.513E-07	8.534E-05
2135	5.272E+04	3.341E-07	8.118E-05
2136	5.272E+04	3.179E-07	7.722E-05
2137	5.272E+04	3.023E-07	7.346E-05
2138	5.272E+04	2.876E-07	6.987E-05
2139	5.272E+04	2.736E-07	6.647E-05
2140	5.272E+04	2.602E-07	6.322E-05
2141	5.272E+04	2.475E-07	6.014E-05
2142	5.272E+04	2.355E-07	5.721E-05
2143	5.272E+04	2.240E-07	5.442E-05
2144	5.272E+04	2.131E-07	5.176E-05
2145	5.272E+04	2.027E-07	4.924E-05
2146	5.272E+04	1.928E-07	4.684E-05
2147	5.272E+04	1.834E-07	4.455E-05
2148	5.272E+04	1.744E-07	4.238E-05
2149	5.272E+04	1.659E-07	4.031E-05
2150	5.272E+04	1.578E-07	3.835E-05
2151	5.272E+04	1.501E-07	3.648E-05
2152	5.272E+04	1.428E-07	3.470E-05
2153	5.272E+04	1.359E-07	3.301E-05
2154	5.272E+04	1.292E-07	3.140E-05
2155	5.272E+04	1.229E-07	2.987E-05
2156	5.272E+04	1.169E-07	2.841E-05
2157	5.272E+04	1.112E-07	2.702E-05
2158	5.272E+04	1.058E-07	2.571E-05

continued

Table D-36. Emisson Rate of 1,2-Dichloroethane from Parcel 3 for Years 1975 to 2203 (concluded).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2159	5.272E+04	1.006E-07	2.445E-05
2160	5.272E+04	9.574E-08	2.326E-05
2161	5.272E+04	9.107E-08	2.212E-05
2162	5.272E+04	8.662E-08	2.105E-05
2163	5.272E+04	8.240E-08	2.002E-05
2164	5.272E+04	7.838E-08	1.904E-05
2165	5.272E+04	7.456E-08	1.811E-05
2166	5.272E+04	7.092E-08	1.723E-05
2167	5.272E+04	6.746E-08	1.639E-05
2168	5.272E+04	6.417E-08	1.559E-05
2169	5.272E+04	6.104E-08	1.483E-05
2170	5.272E+04	5.807E-08	1.411E-05
2171	5.272E+04	5.523E-08	1.342E-05
2172	5.272E+04	5.254E-08	1.276E-05
2173	5.272E+04	4.998E-08	1.214E-05
2174	5.272E+04	4.754E-08	1.155E-05
2175	5.272E+04	4.522E-08	1.099E-05
2176	5.272E+04	4.302E-08	1.045E-05
2177	5.272E+04	4.092E-08	9.941E-06
2178	5.272E+04	3.892E-08	9.456E-06
2179	5.272E+04	3.702E-08	8.995E-06
2180	5.272E+04	3.522E-08	8.557E-06
2181	5.272E+04	3.350E-08	8.139E-06
2182	5.272E+04	3.187E-08	7.742E-06
2183	5.272E+04	3.031E-08	7.365E-06
2184	5.272E+04	2.883E-08	7.006E-06
2185	5.272E+04	2.743E-08	6.664E-06
2186	5.272E+04	2.609E-08	6.339E-06
2187	5.272E+04	2.482E-08	6.030E-06
2188	5.272E+04	2.361E-08	5.736E-06
2189	5.272E+04	2.246E-08	5.456E-06
2190	5.272E+04	2.136E-08	5.190E-06
2191	5.272E+04	2.032E-08	4.937E-06
2192	5.272E+04	1.933E-08	4.696E-06
2193	5.272E+04	1.839E-08	4.467E-06
2194	5.272E+04	1.749E-08	4.249E-06
2195	5.272E+04	1.664E-08	4.042E-06
2196	5.272E+04	1.582E-08	3.845E-06
2197	5.272E+04	1.505E-08	3.657E-06
2198	5.272E+04	1.432E-08	3.479E-06
2199	5.272E+04	1.362E-08	3.309E-06
2200	5.272E+04	1.296E-08	3.148E-06
2201	5.272E+04	1.232E-08	2.994E-06
2202	5.272E+04	1.172E-08	2.848E-06
2203	5.272E+04	1.115E-08	2.709E-06

Table D-37. Emisson Rate of Benzene from Parcel 3 for Years 1975 to 2203.

Source: H:\3000\030177~2.000\030177~1.003\BUSHVA~1\STRATA3.PRM

Model Parameters

Lo : 170.00 m^3 / Mg
k : 0.0500 1/yr
NMOC : 1800.00 ppmv
Methane : 65.6000 % volume
Carbon Dioxide : 34.4000 % volume
Air Pollutant : Benzene (HAP/VOC)
Molecular Wt = 78.12 Concentration = 0.410000 ppmV

Landfill Parameters

Landfill type : Co-Disposal
Year Opened : 1974 Current Year : 2004 Closure Year: 2004
Capacity : 52718 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 0.00 Mg/year

Model Results

Year	Refuse In Place (Mg)	Benzene (HAP/VOC) Emission Rate (Mg/yr)	(Cubic m/yr)
1975	5.272E+03	9.100E-05	2.801E-02
1976	1.054E+04	1.776E-04	5.465E-02
1977	1.582E+04	2.599E-04	7.999E-02
1978	2.109E+04	3.382E-04	1.041E-01
1979	2.636E+04	4.127E-04	1.270E-01
1980	3.163E+04	4.836E-04	1.488E-01
1981	3.690E+04	5.510E-04	1.696E-01
1982	4.217E+04	6.151E-04	1.893E-01
1983	4.745E+04	6.761E-04	2.081E-01
1984	5.272E+04	7.342E-04	2.259E-01
1985	5.272E+04	6.984E-04	2.149E-01
1986	5.272E+04	6.643E-04	2.044E-01
1987	5.272E+04	6.319E-04	1.945E-01
1988	5.272E+04	6.011E-04	1.850E-01
1989	5.272E+04	5.718E-04	1.760E-01
1990	5.272E+04	5.439E-04	1.674E-01
1991	5.272E+04	5.174E-04	1.592E-01
1992	5.272E+04	4.921E-04	1.515E-01
1993	5.272E+04	4.681E-04	1.441E-01
1994	5.272E+04	4.453E-04	1.370E-01
1995	5.272E+04	4.236E-04	1.304E-01
1996	5.272E+04	4.029E-04	1.240E-01
1997	5.272E+04	3.833E-04	1.180E-01
1998	5.272E+04	3.646E-04	1.122E-01
1999	5.272E+04	3.468E-04	1.067E-01
2000	5.272E+04	3.299E-04	1.015E-01
2001	5.272E+04	3.138E-04	9.657E-02
2002	5.272E+04	2.985E-04	9.186E-02
2003	5.272E+04	2.839E-04	8.738E-02
2004	5.272E+04	2.701E-04	8.312E-02
2005	5.272E+04	2.569E-04	7.907E-02
2006	5.272E+04	2.444E-04	7.521E-02
2007	5.272E+04	2.325E-04	7.154E-02
2008	5.272E+04	2.211E-04	6.805E-02
2009	5.272E+04	2.103E-04	6.474E-02
2010	5.272E+04	2.001E-04	6.158E-02
2011	5.272E+04	1.903E-04	5.858E-02
2012	5.272E+04	1.810E-04	5.572E-02
2013	5.272E+04	1.722E-04	5.300E-02
2014	5.272E+04	1.638E-04	5.042E-02
2015	5.272E+04	1.558E-04	4.796E-02
2016	5.272E+04	1.482E-04	4.562E-02
2017	5.272E+04	1.410E-04	4.339E-02
2018	5.272E+04	1.341E-04	4.128E-02

continued

Table D-37. Emisson Rate of Benzene from Parcel 3 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2019	5.272E+04	1.276E-04	3.926E-02
2020	5.272E+04	1.214E-04	3.735E-02
2021	5.272E+04	1.154E-04	3.553E-02
2022	5.272E+04	1.098E-04	3.379E-02
2023	5.272E+04	1.045E-04	3.215E-02
2024	5.272E+04	9.936E-05	3.058E-02
2025	5.272E+04	9.451E-05	2.909E-02
2026	5.272E+04	8.990E-05	2.767E-02
2027	5.272E+04	8.552E-05	2.632E-02
2028	5.272E+04	8.135E-05	2.504E-02
2029	5.272E+04	7.738E-05	2.381E-02
2030	5.272E+04	7.361E-05	2.265E-02
2031	5.272E+04	7.002E-05	2.155E-02
2032	5.272E+04	6.660E-05	2.050E-02
2033	5.272E+04	6.335E-05	1.950E-02
2034	5.272E+04	6.026E-05	1.855E-02
2035	5.272E+04	5.732E-05	1.764E-02
2036	5.272E+04	5.453E-05	1.678E-02
2037	5.272E+04	5.187E-05	1.596E-02
2038	5.272E+04	4.934E-05	1.519E-02
2039	5.272E+04	4.693E-05	1.444E-02
2040	5.272E+04	4.464E-05	1.374E-02
2041	5.272E+04	4.247E-05	1.307E-02
2042	5.272E+04	4.040E-05	1.243E-02
2043	5.272E+04	3.843E-05	1.183E-02
2044	5.272E+04	3.655E-05	1.125E-02
2045	5.272E+04	3.477E-05	1.070E-02
2046	5.272E+04	3.307E-05	1.018E-02
2047	5.272E+04	3.146E-05	9.682E-03
2048	5.272E+04	2.993E-05	9.210E-03
2049	5.272E+04	2.847E-05	8.761E-03
2050	5.272E+04	2.708E-05	8.334E-03
2051	5.272E+04	2.576E-05	7.927E-03
2052	5.272E+04	2.450E-05	7.541E-03
2053	5.272E+04	2.331E-05	7.173E-03
2054	5.272E+04	2.217E-05	6.823E-03
2055	5.272E+04	2.109E-05	6.490E-03
2056	5.272E+04	2.006E-05	6.174E-03
2057	5.272E+04	1.908E-05	5.873E-03
2058	5.272E+04	1.815E-05	5.586E-03
2059	5.272E+04	1.727E-05	5.314E-03
2060	5.272E+04	1.642E-05	5.055E-03
2061	5.272E+04	1.562E-05	4.808E-03
2062	5.272E+04	1.486E-05	4.574E-03
2063	5.272E+04	1.414E-05	4.351E-03
2064	5.272E+04	1.345E-05	4.138E-03
2065	5.272E+04	1.279E-05	3.937E-03
2066	5.272E+04	1.217E-05	3.745E-03
2067	5.272E+04	1.157E-05	3.562E-03
2068	5.272E+04	1.101E-05	3.388E-03
2069	5.272E+04	1.047E-05	3.223E-03
2070	5.272E+04	9.961E-06	3.066E-03
2071	5.272E+04	9.476E-06	2.916E-03
2072	5.272E+04	9.014E-06	2.774E-03
2073	5.272E+04	8.574E-06	2.639E-03
2074	5.272E+04	8.156E-06	2.510E-03
2075	5.272E+04	7.758E-06	2.388E-03
2076	5.272E+04	7.380E-06	2.271E-03
2077	5.272E+04	7.020E-06	2.160E-03
2078	5.272E+04	6.677E-06	2.055E-03
2079	5.272E+04	6.352E-06	1.955E-03
2080	5.272E+04	6.042E-06	1.860E-03
2081	5.272E+04	5.747E-06	1.769E-03
2082	5.272E+04	5.467E-06	1.683E-03
2083	5.272E+04	5.200E-06	1.600E-03
2084	5.272E+04	4.947E-06	1.522E-03
2085	5.272E+04	4.705E-06	1.448E-03
2086	5.272E+04	4.476E-06	1.378E-03
2087	5.272E+04	4.258E-06	1.310E-03
2088	5.272E+04	4.050E-06	1.246E-03

continued

Table D-37. Emisson Rate of Benzene from Parcel 3 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2089	5.272E+04	3.853E-06	1.186E-03
2090	5.272E+04	3.665E-06	1.128E-03
2091	5.272E+04	3.486E-06	1.073E-03
2092	5.272E+04	3.316E-06	1.021E-03
2093	5.272E+04	3.154E-06	9.707E-04
2094	5.272E+04	3.000E-06	9.234E-04
2095	5.272E+04	2.854E-06	8.784E-04
2096	5.272E+04	2.715E-06	8.355E-04
2097	5.272E+04	2.582E-06	7.948E-04
2098	5.272E+04	2.456E-06	7.560E-04
2099	5.272E+04	2.337E-06	7.191E-04
2100	5.272E+04	2.223E-06	6.841E-04
2101	5.272E+04	2.114E-06	6.507E-04
2102	5.272E+04	2.011E-06	6.190E-04
2103	5.272E+04	1.913E-06	5.888E-04
2104	5.272E+04	1.820E-06	5.601E-04
2105	5.272E+04	1.731E-06	5.328E-04
2106	5.272E+04	1.647E-06	5.068E-04
2107	5.272E+04	1.566E-06	4.821E-04
2108	5.272E+04	1.490E-06	4.585E-04
2109	5.272E+04	1.417E-06	4.362E-04
2110	5.272E+04	1.348E-06	4.149E-04
2111	5.272E+04	1.282E-06	3.947E-04
2112	5.272E+04	1.220E-06	3.754E-04
2113	5.272E+04	1.160E-06	3.571E-04
2114	5.272E+04	1.104E-06	3.397E-04
2115	5.272E+04	1.050E-06	3.231E-04
2116	5.272E+04	9.987E-07	3.074E-04
2117	5.272E+04	9.500E-07	2.924E-04
2118	5.272E+04	9.037E-07	2.781E-04
2119	5.272E+04	8.596E-07	2.646E-04
2120	5.272E+04	8.177E-07	2.517E-04
2121	5.272E+04	7.778E-07	2.394E-04
2122	5.272E+04	7.399E-07	2.277E-04
2123	5.272E+04	7.038E-07	2.166E-04
2124	5.272E+04	6.695E-07	2.060E-04
2125	5.272E+04	6.368E-07	1.960E-04
2126	5.272E+04	6.058E-07	1.864E-04
2127	5.272E+04	5.762E-07	1.773E-04
2128	5.272E+04	5.481E-07	1.687E-04
2129	5.272E+04	5.214E-07	1.605E-04
2130	5.272E+04	4.960E-07	1.526E-04
2131	5.272E+04	4.718E-07	1.452E-04
2132	5.272E+04	4.488E-07	1.381E-04
2133	5.272E+04	4.269E-07	1.314E-04
2134	5.272E+04	4.061E-07	1.250E-04
2135	5.272E+04	3.862E-07	1.189E-04
2136	5.272E+04	3.674E-07	1.131E-04
2137	5.272E+04	3.495E-07	1.076E-04
2138	5.272E+04	3.324E-07	1.023E-04
2139	5.272E+04	3.162E-07	9.733E-05
2140	5.272E+04	3.008E-07	9.258E-05
2141	5.272E+04	2.861E-07	8.806E-05
2142	5.272E+04	2.722E-07	8.377E-05
2143	5.272E+04	2.589E-07	7.968E-05
2144	5.272E+04	2.463E-07	7.580E-05
2145	5.272E+04	2.343E-07	7.210E-05
2146	5.272E+04	2.228E-07	6.858E-05
2147	5.272E+04	2.120E-07	6.524E-05
2148	5.272E+04	2.016E-07	6.206E-05
2149	5.272E+04	1.918E-07	5.903E-05
2150	5.272E+04	1.825E-07	5.615E-05
2151	5.272E+04	1.736E-07	5.341E-05
2152	5.272E+04	1.651E-07	5.081E-05
2153	5.272E+04	1.570E-07	4.833E-05
2154	5.272E+04	1.494E-07	4.597E-05
2155	5.272E+04	1.421E-07	4.373E-05
2156	5.272E+04	1.352E-07	4.160E-05
2157	5.272E+04	1.286E-07	3.957E-05
2158	5.272E+04	1.223E-07	3.764E-05

continued

Table D-37. Emisson Rate of Benzene from Parcel 3 for Years 1975 to 2203 (concluded).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2159	5.272E+04	1.163E-07	3.580E-05
2160	5.272E+04	1.107E-07	3.406E-05
2161	5.272E+04	1.053E-07	3.240E-05
2162	5.272E+04	1.001E-07	3.082E-05
2163	5.272E+04	9.525E-08	2.931E-05
2164	5.272E+04	9.060E-08	2.788E-05
2165	5.272E+04	8.618E-08	2.652E-05
2166	5.272E+04	8.198E-08	2.523E-05
2167	5.272E+04	7.798E-08	2.400E-05
2168	5.272E+04	7.418E-08	2.283E-05
2169	5.272E+04	7.056E-08	2.172E-05
2170	5.272E+04	6.712E-08	2.066E-05
2171	5.272E+04	6.385E-08	1.965E-05
2172	5.272E+04	6.073E-08	1.869E-05
2173	5.272E+04	5.777E-08	1.778E-05
2174	5.272E+04	5.495E-08	1.691E-05
2175	5.272E+04	5.227E-08	1.609E-05
2176	5.272E+04	4.972E-08	1.530E-05
2177	5.272E+04	4.730E-08	1.456E-05
2178	5.272E+04	4.499E-08	1.385E-05
2179	5.272E+04	4.280E-08	1.317E-05
2180	5.272E+04	4.071E-08	1.253E-05
2181	5.272E+04	3.872E-08	1.192E-05
2182	5.272E+04	3.684E-08	1.134E-05
2183	5.272E+04	3.504E-08	1.078E-05
2184	5.272E+04	3.333E-08	1.026E-05
2185	5.272E+04	3.171E-08	9.758E-06
2186	5.272E+04	3.016E-08	9.282E-06
2187	5.272E+04	2.869E-08	8.829E-06
2188	5.272E+04	2.729E-08	8.399E-06
2189	5.272E+04	2.596E-08	7.989E-06
2190	5.272E+04	2.469E-08	7.599E-06
2191	5.272E+04	2.349E-08	7.229E-06
2192	5.272E+04	2.234E-08	6.876E-06
2193	5.272E+04	2.125E-08	6.541E-06
2194	5.272E+04	2.022E-08	6.222E-06
2195	5.272E+04	1.923E-08	5.918E-06
2196	5.272E+04	1.829E-08	5.630E-06
2197	5.272E+04	1.740E-08	5.355E-06
2198	5.272E+04	1.655E-08	5.094E-06
2199	5.272E+04	1.574E-08	4.846E-06
2200	5.272E+04	1.498E-08	4.609E-06
2201	5.272E+04	1.425E-08	4.384E-06
2202	5.272E+04	1.355E-08	4.171E-06
2203	5.272E+04	1.289E-08	3.967E-06

Table D-38. Emisson Rate of Chlorobenzene from Parcel 3 for Years 1975 to 2203.

Source: H:\3000\030177~2.000\030177~1.003\BUSHVA~1\STRATA3.PRM

Model Parameters

Lo : 170.00 m^3 / Mg
k : 0.0500 1/yr
NMOC : 1800.00 ppmv
Methane : 65.6000 % volume
Carbon Dioxide : 34.4000 % volume
Air Pollutant : Chlorobenzene (HAP/VOC)
Molecular Wt = 112.56 Concentration = 0.380000 ppmV

Landfill Parameters

Landfill type : Co-Disposal
Year Opened : 1974 Current Year : 2004 Closure Year: 2004
Capacity : 52718 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 0.00 Mg/year

Model Results

Year	Refuse In Place (Mg)	Chlorobenzene (HAP/VOC) Emission Rate (Mg/yr)	(Cubic m/yr)
1975	5.272E+03	1.215E-04	2.596E-02
1976	1.054E+04	2.371E-04	5.065E-02
1977	1.582E+04	3.471E-04	7.414E-02
1978	2.109E+04	4.517E-04	9.648E-02
1979	2.636E+04	5.512E-04	1.177E-01
1980	3.163E+04	6.458E-04	1.379E-01
1981	3.690E+04	7.358E-04	1.572E-01
1982	4.217E+04	8.215E-04	1.755E-01
1983	4.745E+04	9.029E-04	1.929E-01
1984	5.272E+04	9.804E-04	2.094E-01
1985	5.272E+04	9.326E-04	1.992E-01
1986	5.272E+04	8.871E-04	1.895E-01
1987	5.272E+04	8.439E-04	1.802E-01
1988	5.272E+04	8.027E-04	1.715E-01
1989	5.272E+04	7.636E-04	1.631E-01
1990	5.272E+04	7.263E-04	1.551E-01
1991	5.272E+04	6.909E-04	1.476E-01
1992	5.272E+04	6.572E-04	1.404E-01
1993	5.272E+04	6.251E-04	1.335E-01
1994	5.272E+04	5.947E-04	1.270E-01
1995	5.272E+04	5.657E-04	1.208E-01
1996	5.272E+04	5.381E-04	1.149E-01
1997	5.272E+04	5.118E-04	1.093E-01
1998	5.272E+04	4.869E-04	1.040E-01
1999	5.272E+04	4.631E-04	9.892E-02
2000	5.272E+04	4.405E-04	9.410E-02
2001	5.272E+04	4.190E-04	8.951E-02
2002	5.272E+04	3.986E-04	8.514E-02
2003	5.272E+04	3.792E-04	8.099E-02
2004	5.272E+04	3.607E-04	7.704E-02
2005	5.272E+04	3.431E-04	7.328E-02
2006	5.272E+04	3.264E-04	6.971E-02
2007	5.272E+04	3.104E-04	6.631E-02
2008	5.272E+04	2.953E-04	6.307E-02
2009	5.272E+04	2.809E-04	6.000E-02
2010	5.272E+04	2.672E-04	5.707E-02
2011	5.272E+04	2.542E-04	5.429E-02
2012	5.272E+04	2.418E-04	5.164E-02
2013	5.272E+04	2.300E-04	4.912E-02
2014	5.272E+04	2.188E-04	4.673E-02
2015	5.272E+04	2.081E-04	4.445E-02
2016	5.272E+04	1.979E-04	4.228E-02
2017	5.272E+04	1.883E-04	4.022E-02
2018	5.272E+04	1.791E-04	3.826E-02

continued

Table D-38. Emisson Rate of Chlorobenzene from Parcel 3 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2019	5.272E+04	1.704E-04	3.639E-02
2020	5.272E+04	1.621E-04	3.462E-02
2021	5.272E+04	1.542E-04	3.293E-02
2022	5.272E+04	1.466E-04	3.132E-02
2023	5.272E+04	1.395E-04	2.979E-02
2024	5.272E+04	1.327E-04	2.834E-02
2025	5.272E+04	1.262E-04	2.696E-02
2026	5.272E+04	1.201E-04	2.564E-02
2027	5.272E+04	1.142E-04	2.439E-02
2028	5.272E+04	1.086E-04	2.320E-02
2029	5.272E+04	1.033E-04	2.207E-02
2030	5.272E+04	9.830E-05	2.100E-02
2031	5.272E+04	9.350E-05	1.997E-02
2032	5.272E+04	8.894E-05	1.900E-02
2033	5.272E+04	8.460E-05	1.807E-02
2034	5.272E+04	8.048E-05	1.719E-02
2035	5.272E+04	7.655E-05	1.635E-02
2036	5.272E+04	7.282E-05	1.555E-02
2037	5.272E+04	6.927E-05	1.480E-02
2038	5.272E+04	6.589E-05	1.407E-02
2039	5.272E+04	6.268E-05	1.339E-02
2040	5.272E+04	5.962E-05	1.273E-02
2041	5.272E+04	5.671E-05	1.211E-02
2042	5.272E+04	5.395E-05	1.152E-02
2043	5.272E+04	5.131E-05	1.096E-02
2044	5.272E+04	4.881E-05	1.043E-02
2045	5.272E+04	4.643E-05	9.918E-03
2046	5.272E+04	4.417E-05	9.434E-03
2047	5.272E+04	4.201E-05	8.974E-03
2048	5.272E+04	3.996E-05	8.536E-03
2049	5.272E+04	3.802E-05	8.120E-03
2050	5.272E+04	3.616E-05	7.724E-03
2051	5.272E+04	3.440E-05	7.347E-03
2052	5.272E+04	3.272E-05	6.989E-03
2053	5.272E+04	3.112E-05	6.648E-03
2054	5.272E+04	2.961E-05	6.324E-03
2055	5.272E+04	2.816E-05	6.015E-03
2056	5.272E+04	2.679E-05	5.722E-03
2057	5.272E+04	2.548E-05	5.443E-03
2058	5.272E+04	2.424E-05	5.178E-03
2059	5.272E+04	2.306E-05	4.925E-03
2060	5.272E+04	2.193E-05	4.685E-03
2061	5.272E+04	2.086E-05	4.456E-03
2062	5.272E+04	1.985E-05	4.239E-03
2063	5.272E+04	1.888E-05	4.032E-03
2064	5.272E+04	1.796E-05	3.836E-03
2065	5.272E+04	1.708E-05	3.649E-03
2066	5.272E+04	1.625E-05	3.471E-03
2067	5.272E+04	1.546E-05	3.301E-03
2068	5.272E+04	1.470E-05	3.140E-03
2069	5.272E+04	1.398E-05	2.987E-03
2070	5.272E+04	1.330E-05	2.841E-03
2071	5.272E+04	1.265E-05	2.703E-03
2072	5.272E+04	1.204E-05	2.571E-03
2073	5.272E+04	1.145E-05	2.446E-03
2074	5.272E+04	1.089E-05	2.326E-03
2075	5.272E+04	1.036E-05	2.213E-03
2076	5.272E+04	9.855E-06	2.105E-03
2077	5.272E+04	9.374E-06	2.002E-03
2078	5.272E+04	8.917E-06	1.905E-03
2079	5.272E+04	8.482E-06	1.812E-03
2080	5.272E+04	8.069E-06	1.723E-03
2081	5.272E+04	7.675E-06	1.639E-03
2082	5.272E+04	7.301E-06	1.559E-03
2083	5.272E+04	6.945E-06	1.483E-03
2084	5.272E+04	6.606E-06	1.411E-03
2085	5.272E+04	6.284E-06	1.342E-03
2086	5.272E+04	5.977E-06	1.277E-03
2087	5.272E+04	5.686E-06	1.214E-03
2088	5.272E+04	5.409E-06	1.155E-03

continued

Table D-38. Emisson Rate of Chlorobenzene from Parcel 3 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2089	5.272E+04	5.145E-06	1.099E-03
2090	5.272E+04	4.894E-06	1.045E-03
2091	5.272E+04	4.655E-06	9.943E-04
2092	5.272E+04	4.428E-06	9.458E-04
2093	5.272E+04	4.212E-06	8.997E-04
2094	5.272E+04	4.007E-06	8.558E-04
2095	5.272E+04	3.811E-06	8.141E-04
2096	5.272E+04	3.625E-06	7.744E-04
2097	5.272E+04	3.449E-06	7.366E-04
2098	5.272E+04	3.280E-06	7.007E-04
2099	5.272E+04	3.120E-06	6.665E-04
2100	5.272E+04	2.968E-06	6.340E-04
2101	5.272E+04	2.824E-06	6.031E-04
2102	5.272E+04	2.686E-06	5.737E-04
2103	5.272E+04	2.555E-06	5.457E-04
2104	5.272E+04	2.430E-06	5.191E-04
2105	5.272E+04	2.312E-06	4.938E-04
2106	5.272E+04	2.199E-06	4.697E-04
2107	5.272E+04	2.092E-06	4.468E-04
2108	5.272E+04	1.990E-06	4.250E-04
2109	5.272E+04	1.893E-06	4.043E-04
2110	5.272E+04	1.800E-06	3.846E-04
2111	5.272E+04	1.713E-06	3.658E-04
2112	5.272E+04	1.629E-06	3.480E-04
2113	5.272E+04	1.550E-06	3.310E-04
2114	5.272E+04	1.474E-06	3.148E-04
2115	5.272E+04	1.402E-06	2.995E-04
2116	5.272E+04	1.334E-06	2.849E-04
2117	5.272E+04	1.269E-06	2.710E-04
2118	5.272E+04	1.207E-06	2.578E-04
2119	5.272E+04	1.148E-06	2.452E-04
2120	5.272E+04	1.092E-06	2.332E-04
2121	5.272E+04	1.039E-06	2.219E-04
2122	5.272E+04	9.881E-07	2.110E-04
2123	5.272E+04	9.399E-07	2.008E-04
2124	5.272E+04	8.940E-07	1.910E-04
2125	5.272E+04	8.504E-07	1.816E-04
2126	5.272E+04	8.089E-07	1.728E-04
2127	5.272E+04	7.695E-07	1.644E-04
2128	5.272E+04	7.320E-07	1.563E-04
2129	5.272E+04	6.963E-07	1.487E-04
2130	5.272E+04	6.623E-07	1.415E-04
2131	5.272E+04	6.300E-07	1.346E-04
2132	5.272E+04	5.993E-07	1.280E-04
2133	5.272E+04	5.701E-07	1.218E-04
2134	5.272E+04	5.423E-07	1.158E-04
2135	5.272E+04	5.158E-07	1.102E-04
2136	5.272E+04	4.907E-07	1.048E-04
2137	5.272E+04	4.667E-07	9.969E-05
2138	5.272E+04	4.440E-07	9.483E-05
2139	5.272E+04	4.223E-07	9.020E-05
2140	5.272E+04	4.017E-07	8.581E-05
2141	5.272E+04	3.821E-07	8.162E-05
2142	5.272E+04	3.635E-07	7.764E-05
2143	5.272E+04	3.458E-07	7.385E-05
2144	5.272E+04	3.289E-07	7.025E-05
2145	5.272E+04	3.129E-07	6.683E-05
2146	5.272E+04	2.976E-07	6.357E-05
2147	5.272E+04	2.831E-07	6.047E-05
2148	5.272E+04	2.693E-07	5.752E-05
2149	5.272E+04	2.561E-07	5.471E-05
2150	5.272E+04	2.437E-07	5.204E-05
2151	5.272E+04	2.318E-07	4.951E-05
2152	5.272E+04	2.205E-07	4.709E-05
2153	5.272E+04	2.097E-07	4.479E-05
2154	5.272E+04	1.995E-07	4.261E-05
2155	5.272E+04	1.898E-07	4.053E-05
2156	5.272E+04	1.805E-07	3.855E-05
2157	5.272E+04	1.717E-07	3.667E-05
2158	5.272E+04	1.633E-07	3.489E-05

continued

Table D-38. Emisson Rate of Chlorobenzene from Parcel 3 for Years 1975 to 2203 (concluded).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2159	5.272E+04	1.554E-07	3.318E-05
2160	5.272E+04	1.478E-07	3.157E-05
2161	5.272E+04	1.406E-07	3.003E-05
2162	5.272E+04	1.337E-07	2.856E-05
2163	5.272E+04	1.272E-07	2.717E-05
2164	5.272E+04	1.210E-07	2.584E-05
2165	5.272E+04	1.151E-07	2.458E-05
2166	5.272E+04	1.095E-07	2.338E-05
2167	5.272E+04	1.041E-07	2.224E-05
2168	5.272E+04	9.906E-08	2.116E-05
2169	5.272E+04	9.423E-08	2.013E-05
2170	5.272E+04	8.963E-08	1.915E-05
2171	5.272E+04	8.526E-08	1.821E-05
2172	5.272E+04	8.110E-08	1.732E-05
2173	5.272E+04	7.715E-08	1.648E-05
2174	5.272E+04	7.339E-08	1.568E-05
2175	5.272E+04	6.981E-08	1.491E-05
2176	5.272E+04	6.640E-08	1.418E-05
2177	5.272E+04	6.316E-08	1.349E-05
2178	5.272E+04	6.008E-08	1.283E-05
2179	5.272E+04	5.715E-08	1.221E-05
2180	5.272E+04	5.437E-08	1.161E-05
2181	5.272E+04	5.171E-08	1.105E-05
2182	5.272E+04	4.919E-08	1.051E-05
2183	5.272E+04	4.679E-08	9.995E-06
2184	5.272E+04	4.451E-08	9.507E-06
2185	5.272E+04	4.234E-08	9.044E-06
2186	5.272E+04	4.028E-08	8.603E-06
2187	5.272E+04	3.831E-08	8.183E-06
2188	5.272E+04	3.644E-08	7.784E-06
2189	5.272E+04	3.467E-08	7.404E-06
2190	5.272E+04	3.297E-08	7.043E-06
2191	5.272E+04	3.137E-08	6.700E-06
2192	5.272E+04	2.984E-08	6.373E-06
2193	5.272E+04	2.838E-08	6.062E-06
2194	5.272E+04	2.700E-08	5.767E-06
2195	5.272E+04	2.568E-08	5.485E-06
2196	5.272E+04	2.443E-08	5.218E-06
2197	5.272E+04	2.324E-08	4.963E-06
2198	5.272E+04	2.210E-08	4.721E-06
2199	5.272E+04	2.103E-08	4.491E-06
2200	5.272E+04	2.000E-08	4.272E-06
2201	5.272E+04	1.902E-08	4.064E-06
2202	5.272E+04	1.810E-08	3.865E-06
2203	5.272E+04	1.721E-08	3.677E-06

Table D-39. Emisson Rate of Chloroethane from Parcel 3 for Years 1975 to 2203.

Source: H:\3000\030177~2.000\030177~1.003\BUSHVA~1\STRATA3.PRM

Model Parameters

Lo : 170.00 m^3 / Mg
k : 0.0500 1/yr
NMOC : 1800.00 ppmv
Methane : 65.6000 % volume
Carbon Dioxide : 34.4000 % volume
Air Pollutant : Chloroethane (HAP/VOC)
Molecular Wt = 64.52 Concentration = 0.220000 ppmV

Landfill Parameters

Landfill type : Co-Disposal
Year Opened : 1974 Current Year : 2004 Closure Year: 2004
Capacity : 52718 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 0.00 Mg/year

Model Results

Year	Refuse In Place (Mg)	Chloroethane (HAP/VOC) Emission Rate (Mg/yr)	(Cubic m/yr)
1975	5.272E+03	4.033E-05	1.503E-02
1976	1.054E+04	7.869E-05	2.932E-02
1977	1.582E+04	1.152E-04	4.292E-02
1978	2.109E+04	1.499E-04	5.586E-02
1979	2.636E+04	1.829E-04	6.816E-02
1980	3.163E+04	2.143E-04	7.986E-02
1981	3.690E+04	2.442E-04	9.100E-02
1982	4.217E+04	2.726E-04	1.016E-01
1983	4.745E+04	2.996E-04	1.117E-01
1984	5.272E+04	3.254E-04	1.212E-01
1985	5.272E+04	3.095E-04	1.153E-01
1986	5.272E+04	2.944E-04	1.097E-01
1987	5.272E+04	2.800E-04	1.044E-01
1988	5.272E+04	2.664E-04	9.926E-02
1989	5.272E+04	2.534E-04	9.442E-02
1990	5.272E+04	2.410E-04	8.982E-02
1991	5.272E+04	2.293E-04	8.544E-02
1992	5.272E+04	2.181E-04	8.127E-02
1993	5.272E+04	2.075E-04	7.731E-02
1994	5.272E+04	1.973E-04	7.354E-02
1995	5.272E+04	1.877E-04	6.995E-02
1996	5.272E+04	1.786E-04	6.654E-02
1997	5.272E+04	1.699E-04	6.329E-02
1998	5.272E+04	1.616E-04	6.021E-02
1999	5.272E+04	1.537E-04	5.727E-02
2000	5.272E+04	1.462E-04	5.448E-02
2001	5.272E+04	1.391E-04	5.182E-02
2002	5.272E+04	1.323E-04	4.929E-02
2003	5.272E+04	1.258E-04	4.689E-02
2004	5.272E+04	1.197E-04	4.460E-02
2005	5.272E+04	1.139E-04	4.243E-02
2006	5.272E+04	1.083E-04	4.036E-02
2007	5.272E+04	1.030E-04	3.839E-02
2008	5.272E+04	9.800E-05	3.652E-02
2009	5.272E+04	9.322E-05	3.474E-02
2010	5.272E+04	8.867E-05	3.304E-02
2011	5.272E+04	8.435E-05	3.143E-02
2012	5.272E+04	8.023E-05	2.990E-02
2013	5.272E+04	7.632E-05	2.844E-02
2014	5.272E+04	7.260E-05	2.705E-02
2015	5.272E+04	6.906E-05	2.573E-02
2016	5.272E+04	6.569E-05	2.448E-02
2017	5.272E+04	6.248E-05	2.328E-02
2018	5.272E+04	5.944E-05	2.215E-02

continued

Table D-39. Emisson Rate of Chloroethane from Parcel 3 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2019	5.272E+04	5.654E-05	2.107E-02
2020	5.272E+04	5.378E-05	2.004E-02
2021	5.272E+04	5.116E-05	1.906E-02
2022	5.272E+04	4.866E-05	1.813E-02
2023	5.272E+04	4.629E-05	1.725E-02
2024	5.272E+04	4.403E-05	1.641E-02
2025	5.272E+04	4.188E-05	1.561E-02
2026	5.272E+04	3.984E-05	1.485E-02
2027	5.272E+04	3.790E-05	1.412E-02
2028	5.272E+04	3.605E-05	1.343E-02
2029	5.272E+04	3.429E-05	1.278E-02
2030	5.272E+04	3.262E-05	1.216E-02
2031	5.272E+04	3.103E-05	1.156E-02
2032	5.272E+04	2.952E-05	1.100E-02
2033	5.272E+04	2.808E-05	1.046E-02
2034	5.272E+04	2.671E-05	9.952E-03
2035	5.272E+04	2.540E-05	9.467E-03
2036	5.272E+04	2.417E-05	9.005E-03
2037	5.272E+04	2.299E-05	8.566E-03
2038	5.272E+04	2.187E-05	8.148E-03
2039	5.272E+04	2.080E-05	7.751E-03
2040	5.272E+04	1.979E-05	7.373E-03
2041	5.272E+04	1.882E-05	7.013E-03
2042	5.272E+04	1.790E-05	6.671E-03
2043	5.272E+04	1.703E-05	6.346E-03
2044	5.272E+04	1.620E-05	6.036E-03
2045	5.272E+04	1.541E-05	5.742E-03
2046	5.272E+04	1.466E-05	5.462E-03
2047	5.272E+04	1.394E-05	5.195E-03
2048	5.272E+04	1.326E-05	4.942E-03
2049	5.272E+04	1.262E-05	4.701E-03
2050	5.272E+04	1.200E-05	4.472E-03
2051	5.272E+04	1.141E-05	4.254E-03
2052	5.272E+04	1.086E-05	4.046E-03
2053	5.272E+04	1.033E-05	3.849E-03
2054	5.272E+04	9.825E-06	3.661E-03
2055	5.272E+04	9.346E-06	3.483E-03
2056	5.272E+04	8.890E-06	3.313E-03
2057	5.272E+04	8.456E-06	3.151E-03
2058	5.272E+04	8.044E-06	2.998E-03
2059	5.272E+04	7.652E-06	2.851E-03
2060	5.272E+04	7.279E-06	2.712E-03
2061	5.272E+04	6.924E-06	2.580E-03
2062	5.272E+04	6.586E-06	2.454E-03
2063	5.272E+04	6.265E-06	2.334E-03
2064	5.272E+04	5.959E-06	2.221E-03
2065	5.272E+04	5.669E-06	2.112E-03
2066	5.272E+04	5.392E-06	2.009E-03
2067	5.272E+04	5.129E-06	1.911E-03
2068	5.272E+04	4.879E-06	1.818E-03
2069	5.272E+04	4.641E-06	1.729E-03
2070	5.272E+04	4.415E-06	1.645E-03
2071	5.272E+04	4.199E-06	1.565E-03
2072	5.272E+04	3.995E-06	1.489E-03
2073	5.272E+04	3.800E-06	1.416E-03
2074	5.272E+04	3.614E-06	1.347E-03
2075	5.272E+04	3.438E-06	1.281E-03
2076	5.272E+04	3.270E-06	1.219E-03
2077	5.272E+04	3.111E-06	1.159E-03
2078	5.272E+04	2.959E-06	1.103E-03
2079	5.272E+04	2.815E-06	1.049E-03
2080	5.272E+04	2.678E-06	9.978E-04
2081	5.272E+04	2.547E-06	9.491E-04
2082	5.272E+04	2.423E-06	9.028E-04
2083	5.272E+04	2.305E-06	8.588E-04
2084	5.272E+04	2.192E-06	8.169E-04
2085	5.272E+04	2.085E-06	7.771E-04
2086	5.272E+04	1.984E-06	7.392E-04
2087	5.272E+04	1.887E-06	7.031E-04
2088	5.272E+04	1.795E-06	6.688E-04

continued

Table D-39. Emisson Rate of Chloroethane from Parcel 3 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2089	5.272E+04	1.707E-06	6.362E-04
2090	5.272E+04	1.624E-06	6.052E-04
2091	5.272E+04	1.545E-06	5.757E-04
2092	5.272E+04	1.470E-06	5.476E-04
2093	5.272E+04	1.398E-06	5.209E-04
2094	5.272E+04	1.330E-06	4.955E-04
2095	5.272E+04	1.265E-06	4.713E-04
2096	5.272E+04	1.203E-06	4.483E-04
2097	5.272E+04	1.144E-06	4.265E-04
2098	5.272E+04	1.089E-06	4.057E-04
2099	5.272E+04	1.036E-06	3.859E-04
2100	5.272E+04	9.850E-07	3.671E-04
2101	5.272E+04	9.370E-07	3.492E-04
2102	5.272E+04	8.913E-07	3.321E-04
2103	5.272E+04	8.478E-07	3.159E-04
2104	5.272E+04	8.065E-07	3.005E-04
2105	5.272E+04	7.671E-07	2.859E-04
2106	5.272E+04	7.297E-07	2.719E-04
2107	5.272E+04	6.941E-07	2.587E-04
2108	5.272E+04	6.603E-07	2.461E-04
2109	5.272E+04	6.281E-07	2.341E-04
2110	5.272E+04	5.975E-07	2.226E-04
2111	5.272E+04	5.683E-07	2.118E-04
2112	5.272E+04	5.406E-07	2.014E-04
2113	5.272E+04	5.142E-07	1.916E-04
2114	5.272E+04	4.892E-07	1.823E-04
2115	5.272E+04	4.653E-07	1.734E-04
2116	5.272E+04	4.426E-07	1.649E-04
2117	5.272E+04	4.210E-07	1.569E-04
2118	5.272E+04	4.005E-07	1.492E-04
2119	5.272E+04	3.810E-07	1.420E-04
2120	5.272E+04	3.624E-07	1.350E-04
2121	5.272E+04	3.447E-07	1.284E-04
2122	5.272E+04	3.279E-07	1.222E-04
2123	5.272E+04	3.119E-07	1.162E-04
2124	5.272E+04	2.967E-07	1.106E-04
2125	5.272E+04	2.822E-07	1.052E-04
2126	5.272E+04	2.685E-07	1.000E-04
2127	5.272E+04	2.554E-07	9.516E-05
2128	5.272E+04	2.429E-07	9.052E-05
2129	5.272E+04	2.311E-07	8.610E-05
2130	5.272E+04	2.198E-07	8.190E-05
2131	5.272E+04	2.091E-07	7.791E-05
2132	5.272E+04	1.989E-07	7.411E-05
2133	5.272E+04	1.892E-07	7.049E-05
2134	5.272E+04	1.800E-07	6.706E-05
2135	5.272E+04	1.712E-07	6.379E-05
2136	5.272E+04	1.628E-07	6.068E-05
2137	5.272E+04	1.549E-07	5.772E-05
2138	5.272E+04	1.473E-07	5.490E-05
2139	5.272E+04	1.401E-07	5.222E-05
2140	5.272E+04	1.333E-07	4.968E-05
2141	5.272E+04	1.268E-07	4.725E-05
2142	5.272E+04	1.206E-07	4.495E-05
2143	5.272E+04	1.147E-07	4.276E-05
2144	5.272E+04	1.091E-07	4.067E-05
2145	5.272E+04	1.038E-07	3.869E-05
2146	5.272E+04	9.876E-08	3.680E-05
2147	5.272E+04	9.394E-08	3.501E-05
2148	5.272E+04	8.936E-08	3.330E-05
2149	5.272E+04	8.500E-08	3.168E-05
2150	5.272E+04	8.086E-08	3.013E-05
2151	5.272E+04	7.691E-08	2.866E-05
2152	5.272E+04	7.316E-08	2.726E-05
2153	5.272E+04	6.959E-08	2.593E-05
2154	5.272E+04	6.620E-08	2.467E-05
2155	5.272E+04	6.297E-08	2.347E-05
2156	5.272E+04	5.990E-08	2.232E-05
2157	5.272E+04	5.698E-08	2.123E-05
2158	5.272E+04	5.420E-08	2.020E-05

continued

Table D-39. Emisson Rate of Chloroethane from Parcel 3 for Years 1975 to 2203 (concluded).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2159	5.272E+04	5.156E-08	1.921E-05
2160	5.272E+04	4.904E-08	1.828E-05
2161	5.272E+04	4.665E-08	1.738E-05
2162	5.272E+04	4.438E-08	1.654E-05
2163	5.272E+04	4.221E-08	1.573E-05
2164	5.272E+04	4.015E-08	1.496E-05
2165	5.272E+04	3.819E-08	1.423E-05
2166	5.272E+04	3.633E-08	1.354E-05
2167	5.272E+04	3.456E-08	1.288E-05
2168	5.272E+04	3.287E-08	1.225E-05
2169	5.272E+04	3.127E-08	1.165E-05
2170	5.272E+04	2.975E-08	1.108E-05
2171	5.272E+04	2.829E-08	1.054E-05
2172	5.272E+04	2.691E-08	1.003E-05
2173	5.272E+04	2.560E-08	9.540E-06
2174	5.272E+04	2.435E-08	9.075E-06
2175	5.272E+04	2.317E-08	8.633E-06
2176	5.272E+04	2.204E-08	8.211E-06
2177	5.272E+04	2.096E-08	7.811E-06
2178	5.272E+04	1.994E-08	7.430E-06
2179	5.272E+04	1.897E-08	7.068E-06
2180	5.272E+04	1.804E-08	6.723E-06
2181	5.272E+04	1.716E-08	6.395E-06
2182	5.272E+04	1.632E-08	6.083E-06
2183	5.272E+04	1.553E-08	5.787E-06
2184	5.272E+04	1.477E-08	5.504E-06
2185	5.272E+04	1.405E-08	5.236E-06
2186	5.272E+04	1.337E-08	4.981E-06
2187	5.272E+04	1.271E-08	4.738E-06
2188	5.272E+04	1.209E-08	4.507E-06
2189	5.272E+04	1.150E-08	4.287E-06
2190	5.272E+04	1.094E-08	4.078E-06
2191	5.272E+04	1.041E-08	3.879E-06
2192	5.272E+04	9.901E-09	3.690E-06
2193	5.272E+04	9.419E-09	3.510E-06
2194	5.272E+04	8.959E-09	3.339E-06
2195	5.272E+04	8.522E-09	3.176E-06
2196	5.272E+04	8.107E-09	3.021E-06
2197	5.272E+04	7.711E-09	2.874E-06
2198	5.272E+04	7.335E-09	2.733E-06
2199	5.272E+04	6.977E-09	2.600E-06
2200	5.272E+04	6.637E-09	2.473E-06
2201	5.272E+04	6.313E-09	2.353E-06
2202	5.272E+04	6.006E-09	2.238E-06
2203	5.272E+04	5.713E-09	2.129E-06

Table D-40. Emisson Rate of 1,4-Dichlorobenzene from Parcel 3 for Years 1975 to 2203.

Source: H:\3000\030177~2.000\030177~1.003\BUSHVA~1\STRATA3.PRM

Model Parameters

Lo : 170.00 m^3 / Mg
k : 0.0500 1/yr
NMOC : 1800.00 ppmv
Methane : 65.6000 % volume
Carbon Dioxide : 34.4000 % volume
Air Pollutant : Dichlorobenzene (VOC/HAP for 1,4 isomer)
Molecular Wt = 147.00 Concentration = 0.140000 ppmV

Landfill Parameters

Landfill type : Co-Disposal
Year Opened : 1974 Current Year : 2004 Closure Year: 2004
Capacity : 52718 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 0.00 Mg/year

Model Results

Year	Refuse In Place (Mg)	Dichlorobenzene (VOC/HAP for 1,4 isomer) Emission R (Mg/yr)	(Cubic m/yr)
1975	5.272E+03	5.847E-05	9.563E-03
1976	1.054E+04	1.141E-04	1.866E-02
1977	1.582E+04	1.670E-04	2.731E-02
1978	2.109E+04	2.173E-04	3.554E-02
1979	2.636E+04	2.652E-04	4.337E-02
1980	3.163E+04	3.107E-04	5.082E-02
1981	3.690E+04	3.540E-04	5.791E-02
1982	4.217E+04	3.952E-04	6.465E-02
1983	4.745E+04	4.344E-04	7.106E-02
1984	5.272E+04	4.717E-04	7.715E-02
1985	5.272E+04	4.487E-04	7.339E-02
1986	5.272E+04	4.268E-04	6.981E-02
1987	5.272E+04	4.060E-04	6.641E-02
1988	5.272E+04	3.862E-04	6.317E-02
1989	5.272E+04	3.674E-04	6.009E-02
1990	5.272E+04	3.495E-04	5.716E-02
1991	5.272E+04	3.324E-04	5.437E-02
1992	5.272E+04	3.162E-04	5.172E-02
1993	5.272E+04	3.008E-04	4.920E-02
1994	5.272E+04	2.861E-04	4.680E-02
1995	5.272E+04	2.722E-04	4.451E-02
1996	5.272E+04	2.589E-04	4.234E-02
1997	5.272E+04	2.463E-04	4.028E-02
1998	5.272E+04	2.343E-04	3.831E-02
1999	5.272E+04	2.228E-04	3.644E-02
2000	5.272E+04	2.120E-04	3.467E-02
2001	5.272E+04	2.016E-04	3.298E-02
2002	5.272E+04	1.918E-04	3.137E-02
2003	5.272E+04	1.824E-04	2.984E-02
2004	5.272E+04	1.735E-04	2.838E-02
2005	5.272E+04	1.651E-04	2.700E-02
2006	5.272E+04	1.570E-04	2.568E-02
2007	5.272E+04	1.494E-04	2.443E-02
2008	5.272E+04	1.421E-04	2.324E-02
2009	5.272E+04	1.352E-04	2.210E-02
2010	5.272E+04	1.286E-04	2.103E-02
2011	5.272E+04	1.223E-04	2.000E-02
2012	5.272E+04	1.163E-04	1.903E-02
2013	5.272E+04	1.107E-04	1.810E-02
2014	5.272E+04	1.053E-04	1.722E-02
2015	5.272E+04	1.001E-04	1.638E-02
2016	5.272E+04	9.524E-05	1.558E-02
2017	5.272E+04	9.059E-05	1.482E-02
2018	5.272E+04	8.618E-05	1.409E-02

continued

Table D-40. Emisson Rate of 1,4-Dichlorobenzene from Parcel 3 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2019	5.272E+04	8.197E-05	1.341E-02
2020	5.272E+04	7.798E-05	1.275E-02
2021	5.272E+04	7.417E-05	1.213E-02
2022	5.272E+04	7.056E-05	1.154E-02
2023	5.272E+04	6.711E-05	1.098E-02
2024	5.272E+04	6.384E-05	1.044E-02
2025	5.272E+04	6.073E-05	9.932E-03
2026	5.272E+04	5.777E-05	9.448E-03
2027	5.272E+04	5.495E-05	8.987E-03
2028	5.272E+04	5.227E-05	8.549E-03
2029	5.272E+04	4.972E-05	8.132E-03
2030	5.272E+04	4.729E-05	7.735E-03
2031	5.272E+04	4.499E-05	7.358E-03
2032	5.272E+04	4.279E-05	6.999E-03
2033	5.272E+04	4.071E-05	6.658E-03
2034	5.272E+04	3.872E-05	6.333E-03
2035	5.272E+04	3.683E-05	6.024E-03
2036	5.272E+04	3.504E-05	5.730E-03
2037	5.272E+04	3.333E-05	5.451E-03
2038	5.272E+04	3.170E-05	5.185E-03
2039	5.272E+04	3.016E-05	4.932E-03
2040	5.272E+04	2.869E-05	4.692E-03
2041	5.272E+04	2.729E-05	4.463E-03
2042	5.272E+04	2.596E-05	4.245E-03
2043	5.272E+04	2.469E-05	4.038E-03
2044	5.272E+04	2.349E-05	3.841E-03
2045	5.272E+04	2.234E-05	3.654E-03
2046	5.272E+04	2.125E-05	3.476E-03
2047	5.272E+04	2.021E-05	3.306E-03
2048	5.272E+04	1.923E-05	3.145E-03
2049	5.272E+04	1.829E-05	2.992E-03
2050	5.272E+04	1.740E-05	2.846E-03
2051	5.272E+04	1.655E-05	2.707E-03
2052	5.272E+04	1.574E-05	2.575E-03
2053	5.272E+04	1.498E-05	2.449E-03
2054	5.272E+04	1.424E-05	2.330E-03
2055	5.272E+04	1.355E-05	2.216E-03
2056	5.272E+04	1.289E-05	2.108E-03
2057	5.272E+04	1.226E-05	2.005E-03
2058	5.272E+04	1.166E-05	1.908E-03
2059	5.272E+04	1.109E-05	1.814E-03
2060	5.272E+04	1.055E-05	1.726E-03
2061	5.272E+04	1.004E-05	1.642E-03
2062	5.272E+04	9.549E-06	1.562E-03
2063	5.272E+04	9.083E-06	1.486E-03
2064	5.272E+04	8.640E-06	1.413E-03
2065	5.272E+04	8.219E-06	1.344E-03
2066	5.272E+04	7.818E-06	1.279E-03
2067	5.272E+04	7.436E-06	1.216E-03
2068	5.272E+04	7.074E-06	1.157E-03
2069	5.272E+04	6.729E-06	1.101E-03
2070	5.272E+04	6.401E-06	1.047E-03
2071	5.272E+04	6.088E-06	9.958E-04
2072	5.272E+04	5.792E-06	9.472E-04
2073	5.272E+04	5.509E-06	9.010E-04
2074	5.272E+04	5.240E-06	8.571E-04
2075	5.272E+04	4.985E-06	8.153E-04
2076	5.272E+04	4.742E-06	7.755E-04
2077	5.272E+04	4.510E-06	7.377E-04
2078	5.272E+04	4.290E-06	7.017E-04
2079	5.272E+04	4.081E-06	6.675E-04
2080	5.272E+04	3.882E-06	6.350E-04
2081	5.272E+04	3.693E-06	6.040E-04
2082	5.272E+04	3.513E-06	5.745E-04
2083	5.272E+04	3.341E-06	5.465E-04
2084	5.272E+04	3.178E-06	5.199E-04
2085	5.272E+04	3.023E-06	4.945E-04
2086	5.272E+04	2.876E-06	4.704E-04
2087	5.272E+04	2.736E-06	4.474E-04
2088	5.272E+04	2.602E-06	4.256E-04

continued

Table D-40. Emisson Rate of 1,4-Dichlorobenzene from Parcel 3 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2089	5.272E+04	2.475E-06	4.049E-04
2090	5.272E+04	2.355E-06	3.851E-04
2091	5.272E+04	2.240E-06	3.663E-04
2092	5.272E+04	2.131E-06	3.485E-04
2093	5.272E+04	2.027E-06	3.315E-04
2094	5.272E+04	1.928E-06	3.153E-04
2095	5.272E+04	1.834E-06	2.999E-04
2096	5.272E+04	1.744E-06	2.853E-04
2097	5.272E+04	1.659E-06	2.714E-04
2098	5.272E+04	1.578E-06	2.582E-04
2099	5.272E+04	1.501E-06	2.456E-04
2100	5.272E+04	1.428E-06	2.336E-04
2101	5.272E+04	1.359E-06	2.222E-04
2102	5.272E+04	1.292E-06	2.114E-04
2103	5.272E+04	1.229E-06	2.010E-04
2104	5.272E+04	1.169E-06	1.912E-04
2105	5.272E+04	1.112E-06	1.819E-04
2106	5.272E+04	1.058E-06	1.730E-04
2107	5.272E+04	1.006E-06	1.646E-04
2108	5.272E+04	9.573E-07	1.566E-04
2109	5.272E+04	9.106E-07	1.489E-04
2110	5.272E+04	8.662E-07	1.417E-04
2111	5.272E+04	8.240E-07	1.348E-04
2112	5.272E+04	7.838E-07	1.282E-04
2113	5.272E+04	7.456E-07	1.219E-04
2114	5.272E+04	7.092E-07	1.160E-04
2115	5.272E+04	6.746E-07	1.103E-04
2116	5.272E+04	6.417E-07	1.050E-04
2117	5.272E+04	6.104E-07	9.984E-05
2118	5.272E+04	5.807E-07	9.497E-05
2119	5.272E+04	5.523E-07	9.034E-05
2120	5.272E+04	5.254E-07	8.593E-05
2121	5.272E+04	4.998E-07	8.174E-05
2122	5.272E+04	4.754E-07	7.775E-05
2123	5.272E+04	4.522E-07	7.396E-05
2124	5.272E+04	4.302E-07	7.035E-05
2125	5.272E+04	4.092E-07	6.692E-05
2126	5.272E+04	3.892E-07	6.366E-05
2127	5.272E+04	3.702E-07	6.055E-05
2128	5.272E+04	3.522E-07	5.760E-05
2129	5.272E+04	3.350E-07	5.479E-05
2130	5.272E+04	3.187E-07	5.212E-05
2131	5.272E+04	3.031E-07	4.958E-05
2132	5.272E+04	2.883E-07	4.716E-05
2133	5.272E+04	2.743E-07	4.486E-05
2134	5.272E+04	2.609E-07	4.267E-05
2135	5.272E+04	2.482E-07	4.059E-05
2136	5.272E+04	2.361E-07	3.861E-05
2137	5.272E+04	2.246E-07	3.673E-05
2138	5.272E+04	2.136E-07	3.494E-05
2139	5.272E+04	2.032E-07	3.323E-05
2140	5.272E+04	1.933E-07	3.161E-05
2141	5.272E+04	1.839E-07	3.007E-05
2142	5.272E+04	1.749E-07	2.860E-05
2143	5.272E+04	1.664E-07	2.721E-05
2144	5.272E+04	1.582E-07	2.588E-05
2145	5.272E+04	1.505E-07	2.462E-05
2146	5.272E+04	1.432E-07	2.342E-05
2147	5.272E+04	1.362E-07	2.228E-05
2148	5.272E+04	1.296E-07	2.119E-05
2149	5.272E+04	1.232E-07	2.016E-05
2150	5.272E+04	1.172E-07	1.917E-05
2151	5.272E+04	1.115E-07	1.824E-05
2152	5.272E+04	1.061E-07	1.735E-05
2153	5.272E+04	1.009E-07	1.650E-05
2154	5.272E+04	9.598E-08	1.570E-05
2155	5.272E+04	9.130E-08	1.493E-05
2156	5.272E+04	8.685E-08	1.420E-05
2157	5.272E+04	8.261E-08	1.351E-05
2158	5.272E+04	7.858E-08	1.285E-05

continued

Table D-40. Emisson Rate of 1,4-Dichlorobenzene from Parcel 3 for Years 1975 to 2203 (concluded).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2159	5.272E+04	7.475E-08	1.223E-05
2160	5.272E+04	7.110E-08	1.163E-05
2161	5.272E+04	6.764E-08	1.106E-05
2162	5.272E+04	6.434E-08	1.052E-05
2163	5.272E+04	6.120E-08	1.001E-05
2164	5.272E+04	5.822E-08	9.521E-06
2165	5.272E+04	5.538E-08	9.057E-06
2166	5.272E+04	5.268E-08	8.615E-06
2167	5.272E+04	5.011E-08	8.195E-06
2168	5.272E+04	4.766E-08	7.796E-06
2169	5.272E+04	4.534E-08	7.415E-06
2170	5.272E+04	4.313E-08	7.054E-06
2171	5.272E+04	4.102E-08	6.710E-06
2172	5.272E+04	3.902E-08	6.382E-06
2173	5.272E+04	3.712E-08	6.071E-06
2174	5.272E+04	3.531E-08	5.775E-06
2175	5.272E+04	3.359E-08	5.493E-06
2176	5.272E+04	3.195E-08	5.225E-06
2177	5.272E+04	3.039E-08	4.971E-06
2178	5.272E+04	2.891E-08	4.728E-06
2179	5.272E+04	2.750E-08	4.498E-06
2180	5.272E+04	2.616E-08	4.278E-06
2181	5.272E+04	2.488E-08	4.070E-06
2182	5.272E+04	2.367E-08	3.871E-06
2183	5.272E+04	2.251E-08	3.682E-06
2184	5.272E+04	2.142E-08	3.503E-06
2185	5.272E+04	2.037E-08	3.332E-06
2186	5.272E+04	1.938E-08	3.169E-06
2187	5.272E+04	1.843E-08	3.015E-06
2188	5.272E+04	1.753E-08	2.868E-06
2189	5.272E+04	1.668E-08	2.728E-06
2190	5.272E+04	1.587E-08	2.595E-06
2191	5.272E+04	1.509E-08	2.468E-06
2192	5.272E+04	1.436E-08	2.348E-06
2193	5.272E+04	1.366E-08	2.233E-06
2194	5.272E+04	1.299E-08	2.125E-06
2195	5.272E+04	1.236E-08	2.021E-06
2196	5.272E+04	1.175E-08	1.922E-06
2197	5.272E+04	1.118E-08	1.829E-06
2198	5.272E+04	1.064E-08	1.739E-06
2199	5.272E+04	1.012E-08	1.655E-06
2200	5.272E+04	9.623E-09	1.574E-06
2201	5.272E+04	9.154E-09	1.497E-06
2202	5.272E+04	8.707E-09	1.424E-06
2203	5.272E+04	8.283E-09	1.355E-06

Table D-41. Emisson Rate of Methylene Chloride from Parcel 3 for Years 1975 to 2203.

Source: H:\3000\030177~2.000\030177~1.003\BUSHVA~1\STRATA3.PRM

Model Parameters

Lo : 170.00 m^3 / Mg
k : 0.0500 1/yr
NMOC : 1800.00 ppmv
Methane : 65.6000 % volume
Carbon Dioxide : 34.4000 % volume
Air Pollutant : Methylene Chloride
Molecular Wt = 84.90 Concentration = 1.840000 ppmV

Landfill Parameters

Landfill type : Co-Disposal
Year Opened : 1974 Current Year : 2004 Closure Year: 2004
Capacity : 52718 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 0.00 Mg/year

Model Results

Year	Refuse In Place (Mg)	Methylene Chloride Emission Rate (Mg/yr)	(Cubic m/yr)
1975	5.272E+03	4.438E-04	1.257E-01
1976	1.054E+04	8.660E-04	2.452E-01
1977	1.582E+04	1.268E-03	3.590E-01
1978	2.109E+04	1.650E-03	4.672E-01
1979	2.636E+04	2.013E-03	5.701E-01
1980	3.163E+04	2.359E-03	6.679E-01
1981	3.690E+04	2.687E-03	7.611E-01
1982	4.217E+04	3.000E-03	8.496E-01
1983	4.745E+04	3.298E-03	9.339E-01
1984	5.272E+04	3.581E-03	1.014E+00
1985	5.272E+04	3.406E-03	9.646E-01
1986	5.272E+04	3.240E-03	9.175E-01
1987	5.272E+04	3.082E-03	8.728E-01
1988	5.272E+04	2.932E-03	8.302E-01
1989	5.272E+04	2.789E-03	7.897E-01
1990	5.272E+04	2.653E-03	7.512E-01
1991	5.272E+04	2.523E-03	7.146E-01
1992	5.272E+04	2.400E-03	6.797E-01
1993	5.272E+04	2.283E-03	6.466E-01
1994	5.272E+04	2.172E-03	6.150E-01
1995	5.272E+04	2.066E-03	5.850E-01
1996	5.272E+04	1.965E-03	5.565E-01
1997	5.272E+04	1.869E-03	5.294E-01
1998	5.272E+04	1.778E-03	5.035E-01
1999	5.272E+04	1.691E-03	4.790E-01
2000	5.272E+04	1.609E-03	4.556E-01
2001	5.272E+04	1.530E-03	4.334E-01
2002	5.272E+04	1.456E-03	4.123E-01
2003	5.272E+04	1.385E-03	3.922E-01
2004	5.272E+04	1.317E-03	3.730E-01
2005	5.272E+04	1.253E-03	3.548E-01
2006	5.272E+04	1.192E-03	3.375E-01
2007	5.272E+04	1.134E-03	3.211E-01
2008	5.272E+04	1.078E-03	3.054E-01
2009	5.272E+04	1.026E-03	2.905E-01
2010	5.272E+04	9.759E-04	2.764E-01
2011	5.272E+04	9.283E-04	2.629E-01
2012	5.272E+04	8.830E-04	2.501E-01
2013	5.272E+04	8.399E-04	2.379E-01
2014	5.272E+04	7.990E-04	2.263E-01
2015	5.272E+04	7.600E-04	2.152E-01
2016	5.272E+04	7.229E-04	2.047E-01
2017	5.272E+04	6.877E-04	1.947E-01
2018	5.272E+04	6.541E-04	1.852E-01

continued

Table D-41. Emisson Rate of Methylene Chloride from Parcel 3 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2019	5.272E+04	6.222E-04	1.762E-01
2020	5.272E+04	5.919E-04	1.676E-01
2021	5.272E+04	5.630E-04	1.594E-01
2022	5.272E+04	5.356E-04	1.517E-01
2023	5.272E+04	5.094E-04	1.443E-01
2024	5.272E+04	4.846E-04	1.372E-01
2025	5.272E+04	4.610E-04	1.305E-01
2026	5.272E+04	4.385E-04	1.242E-01
2027	5.272E+04	4.171E-04	1.181E-01
2028	5.272E+04	3.968E-04	1.124E-01
2029	5.272E+04	3.774E-04	1.069E-01
2030	5.272E+04	3.590E-04	1.017E-01
2031	5.272E+04	3.415E-04	9.671E-02
2032	5.272E+04	3.248E-04	9.199E-02
2033	5.272E+04	3.090E-04	8.750E-02
2034	5.272E+04	2.939E-04	8.324E-02
2035	5.272E+04	2.796E-04	7.918E-02
2036	5.272E+04	2.660E-04	7.531E-02
2037	5.272E+04	2.530E-04	7.164E-02
2038	5.272E+04	2.406E-04	6.815E-02
2039	5.272E+04	2.289E-04	6.482E-02
2040	5.272E+04	2.177E-04	6.166E-02
2041	5.272E+04	2.071E-04	5.866E-02
2042	5.272E+04	1.970E-04	5.579E-02
2043	5.272E+04	1.874E-04	5.307E-02
2044	5.272E+04	1.783E-04	5.048E-02
2045	5.272E+04	1.696E-04	4.802E-02
2046	5.272E+04	1.613E-04	4.568E-02
2047	5.272E+04	1.534E-04	4.345E-02
2048	5.272E+04	1.460E-04	4.133E-02
2049	5.272E+04	1.388E-04	3.932E-02
2050	5.272E+04	1.321E-04	3.740E-02
2051	5.272E+04	1.256E-04	3.558E-02
2052	5.272E+04	1.195E-04	3.384E-02
2053	5.272E+04	1.137E-04	3.219E-02
2054	5.272E+04	1.081E-04	3.062E-02
2055	5.272E+04	1.029E-04	2.913E-02
2056	5.272E+04	9.784E-05	2.771E-02
2057	5.272E+04	9.307E-05	2.636E-02
2058	5.272E+04	8.853E-05	2.507E-02
2059	5.272E+04	8.421E-05	2.385E-02
2060	5.272E+04	8.010E-05	2.268E-02
2061	5.272E+04	7.620E-05	2.158E-02
2062	5.272E+04	7.248E-05	2.053E-02
2063	5.272E+04	6.895E-05	1.952E-02
2064	5.272E+04	6.558E-05	1.857E-02
2065	5.272E+04	6.238E-05	1.767E-02
2066	5.272E+04	5.934E-05	1.680E-02
2067	5.272E+04	5.645E-05	1.599E-02
2068	5.272E+04	5.369E-05	1.521E-02
2069	5.272E+04	5.108E-05	1.446E-02
2070	5.272E+04	4.859E-05	1.376E-02
2071	5.272E+04	4.622E-05	1.309E-02
2072	5.272E+04	4.396E-05	1.245E-02
2073	5.272E+04	4.182E-05	1.184E-02
2074	5.272E+04	3.978E-05	1.126E-02
2075	5.272E+04	3.784E-05	1.072E-02
2076	5.272E+04	3.599E-05	1.019E-02
2077	5.272E+04	3.424E-05	9.696E-03
2078	5.272E+04	3.257E-05	9.223E-03
2079	5.272E+04	3.098E-05	8.773E-03
2080	5.272E+04	2.947E-05	8.345E-03
2081	5.272E+04	2.803E-05	7.938E-03
2082	5.272E+04	2.666E-05	7.551E-03
2083	5.272E+04	2.536E-05	7.183E-03
2084	5.272E+04	2.413E-05	6.832E-03
2085	5.272E+04	2.295E-05	6.499E-03
2086	5.272E+04	2.183E-05	6.182E-03
2087	5.272E+04	2.077E-05	5.881E-03
2088	5.272E+04	1.975E-05	5.594E-03

continued

Table D-41. Emisson Rate of Methylene Chloride from Parcel 3 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2089	5.272E+04	1.879E-05	5.321E-03
2090	5.272E+04	1.787E-05	5.062E-03
2091	5.272E+04	1.700E-05	4.815E-03
2092	5.272E+04	1.617E-05	4.580E-03
2093	5.272E+04	1.538E-05	4.357E-03
2094	5.272E+04	1.463E-05	4.144E-03
2095	5.272E+04	1.392E-05	3.942E-03
2096	5.272E+04	1.324E-05	3.750E-03
2097	5.272E+04	1.260E-05	3.567E-03
2098	5.272E+04	1.198E-05	3.393E-03
2099	5.272E+04	1.140E-05	3.227E-03
2100	5.272E+04	1.084E-05	3.070E-03
2101	5.272E+04	1.031E-05	2.920E-03
2102	5.272E+04	9.809E-06	2.778E-03
2103	5.272E+04	9.331E-06	2.642E-03
2104	5.272E+04	8.876E-06	2.513E-03
2105	5.272E+04	8.443E-06	2.391E-03
2106	5.272E+04	8.031E-06	2.274E-03
2107	5.272E+04	7.639E-06	2.163E-03
2108	5.272E+04	7.267E-06	2.058E-03
2109	5.272E+04	6.912E-06	1.958E-03
2110	5.272E+04	6.575E-06	1.862E-03
2111	5.272E+04	6.255E-06	1.771E-03
2112	5.272E+04	5.950E-06	1.685E-03
2113	5.272E+04	5.659E-06	1.603E-03
2114	5.272E+04	5.383E-06	1.525E-03
2115	5.272E+04	5.121E-06	1.450E-03
2116	5.272E+04	4.871E-06	1.379E-03
2117	5.272E+04	4.634E-06	1.312E-03
2118	5.272E+04	4.408E-06	1.248E-03
2119	5.272E+04	4.193E-06	1.187E-03
2120	5.272E+04	3.988E-06	1.129E-03
2121	5.272E+04	3.794E-06	1.074E-03
2122	5.272E+04	3.609E-06	1.022E-03
2123	5.272E+04	3.433E-06	9.721E-04
2124	5.272E+04	3.265E-06	9.247E-04
2125	5.272E+04	3.106E-06	8.796E-04
2126	5.272E+04	2.954E-06	8.367E-04
2127	5.272E+04	2.810E-06	7.959E-04
2128	5.272E+04	2.673E-06	7.570E-04
2129	5.272E+04	2.543E-06	7.201E-04
2130	5.272E+04	2.419E-06	6.850E-04
2131	5.272E+04	2.301E-06	6.516E-04
2132	5.272E+04	2.189E-06	6.198E-04
2133	5.272E+04	2.082E-06	5.896E-04
2134	5.272E+04	1.980E-06	5.608E-04
2135	5.272E+04	1.884E-06	5.335E-04
2136	5.272E+04	1.792E-06	5.075E-04
2137	5.272E+04	1.705E-06	4.827E-04
2138	5.272E+04	1.621E-06	4.592E-04
2139	5.272E+04	1.542E-06	4.368E-04
2140	5.272E+04	1.467E-06	4.155E-04
2141	5.272E+04	1.396E-06	3.952E-04
2142	5.272E+04	1.328E-06	3.759E-04
2143	5.272E+04	1.263E-06	3.576E-04
2144	5.272E+04	1.201E-06	3.402E-04
2145	5.272E+04	1.143E-06	3.236E-04
2146	5.272E+04	1.087E-06	3.078E-04
2147	5.272E+04	1.034E-06	2.928E-04
2148	5.272E+04	9.835E-07	2.785E-04
2149	5.272E+04	9.355E-07	2.649E-04
2150	5.272E+04	8.899E-07	2.520E-04
2151	5.272E+04	8.465E-07	2.397E-04
2152	5.272E+04	8.052E-07	2.280E-04
2153	5.272E+04	7.659E-07	2.169E-04
2154	5.272E+04	7.286E-07	2.063E-04
2155	5.272E+04	6.930E-07	1.963E-04
2156	5.272E+04	6.592E-07	1.867E-04
2157	5.272E+04	6.271E-07	1.776E-04
2158	5.272E+04	5.965E-07	1.689E-04

continued

Table D-41. Emisson Rate of Methylene Chloride from Parcel 3 for Years 1975 to 2203 (concluded).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2159	5.272E+04	5.674E-07	1.607E-04
2160	5.272E+04	5.397E-07	1.528E-04
2161	5.272E+04	5.134E-07	1.454E-04
2162	5.272E+04	4.884E-07	1.383E-04
2163	5.272E+04	4.646E-07	1.316E-04
2164	5.272E+04	4.419E-07	1.251E-04
2165	5.272E+04	4.203E-07	1.190E-04
2166	5.272E+04	3.998E-07	1.132E-04
2167	5.272E+04	3.803E-07	1.077E-04
2168	5.272E+04	3.618E-07	1.025E-04
2169	5.272E+04	3.441E-07	9.746E-05
2170	5.272E+04	3.274E-07	9.271E-05
2171	5.272E+04	3.114E-07	8.818E-05
2172	5.272E+04	2.962E-07	8.388E-05
2173	5.272E+04	2.818E-07	7.979E-05
2174	5.272E+04	2.680E-07	7.590E-05
2175	5.272E+04	2.550E-07	7.220E-05
2176	5.272E+04	2.425E-07	6.868E-05
2177	5.272E+04	2.307E-07	6.533E-05
2178	5.272E+04	2.194E-07	6.214E-05
2179	5.272E+04	2.087E-07	5.911E-05
2180	5.272E+04	1.986E-07	5.623E-05
2181	5.272E+04	1.889E-07	5.349E-05
2182	5.272E+04	1.797E-07	5.088E-05
2183	5.272E+04	1.709E-07	4.840E-05
2184	5.272E+04	1.626E-07	4.604E-05
2185	5.272E+04	1.546E-07	4.379E-05
2186	5.272E+04	1.471E-07	4.166E-05
2187	5.272E+04	1.399E-07	3.962E-05
2188	5.272E+04	1.331E-07	3.769E-05
2189	5.272E+04	1.266E-07	3.585E-05
2190	5.272E+04	1.204E-07	3.410E-05
2191	5.272E+04	1.146E-07	3.244E-05
2192	5.272E+04	1.090E-07	3.086E-05
2193	5.272E+04	1.037E-07	2.935E-05
2194	5.272E+04	9.860E-08	2.792E-05
2195	5.272E+04	9.379E-08	2.656E-05
2196	5.272E+04	8.922E-08	2.527E-05
2197	5.272E+04	8.487E-08	2.403E-05
2198	5.272E+04	8.073E-08	2.286E-05
2199	5.272E+04	7.679E-08	2.175E-05
2200	5.272E+04	7.304E-08	2.069E-05
2201	5.272E+04	6.948E-08	1.968E-05
2202	5.272E+04	6.609E-08	1.872E-05
2203	5.272E+04	6.287E-08	1.780E-05

Table D-42. Emisson Rate of Tetrachloroethene from Parcel 3 for Years 1975 to 2203.

Source: H:\3000\030177~2.000\030177~1.003\BUSHVA~1\STRATA3.PRM

Model Parameters

Lo : 170.00 m^3 / Mg
k : 0.0500 1/yr
NMOC : 1800.00 ppmv
Methane : 65.6000 % volume
Carbon Dioxide : 34.4000 % volume
Air Pollutant : Tetrachloroethene
Molecular Wt = 165.83 Concentration = 1.260000 ppmV

Landfill Parameters

Landfill type : Co-Disposal
Year Opened : 1974 Current Year : 2004 Closure Year: 2004
Capacity : 52718 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 0.00 Mg/year

Model Results

Year	Refuse In Place (Mg)	Tetrachloroethene Emission Rate (Mg/yr)	(Cubic m/yr)
1975	5.272E+03	5.936E-04	8.607E-02
1976	1.054E+04	1.158E-03	1.679E-01
1977	1.582E+04	1.695E-03	2.458E-01
1978	2.109E+04	2.206E-03	3.199E-01
1979	2.636E+04	2.692E-03	3.904E-01
1980	3.163E+04	3.155E-03	4.574E-01
1981	3.690E+04	3.595E-03	5.212E-01
1982	4.217E+04	4.013E-03	5.818E-01
1983	4.745E+04	4.411E-03	6.395E-01
1984	5.272E+04	4.789E-03	6.944E-01
1985	5.272E+04	4.556E-03	6.605E-01
1986	5.272E+04	4.334E-03	6.283E-01
1987	5.272E+04	4.122E-03	5.977E-01
1988	5.272E+04	3.921E-03	5.685E-01
1989	5.272E+04	3.730E-03	5.408E-01
1990	5.272E+04	3.548E-03	5.144E-01
1991	5.272E+04	3.375E-03	4.893E-01
1992	5.272E+04	3.210E-03	4.655E-01
1993	5.272E+04	3.054E-03	4.428E-01
1994	5.272E+04	2.905E-03	4.212E-01
1995	5.272E+04	2.763E-03	4.006E-01
1996	5.272E+04	2.628E-03	3.811E-01
1997	5.272E+04	2.500E-03	3.625E-01
1998	5.272E+04	2.378E-03	3.448E-01
1999	5.272E+04	2.262E-03	3.280E-01
2000	5.272E+04	2.152E-03	3.120E-01
2001	5.272E+04	2.047E-03	2.968E-01
2002	5.272E+04	1.947E-03	2.823E-01
2003	5.272E+04	1.852E-03	2.685E-01
2004	5.272E+04	1.762E-03	2.554E-01
2005	5.272E+04	1.676E-03	2.430E-01
2006	5.272E+04	1.594E-03	2.311E-01
2007	5.272E+04	1.516E-03	2.199E-01
2008	5.272E+04	1.443E-03	2.091E-01
2009	5.272E+04	1.372E-03	1.989E-01
2010	5.272E+04	1.305E-03	1.892E-01
2011	5.272E+04	1.242E-03	1.800E-01
2012	5.272E+04	1.181E-03	1.712E-01
2013	5.272E+04	1.123E-03	1.629E-01
2014	5.272E+04	1.069E-03	1.549E-01
2015	5.272E+04	1.017E-03	1.474E-01
2016	5.272E+04	9.670E-04	1.402E-01
2017	5.272E+04	9.198E-04	1.334E-01
2018	5.272E+04	8.749E-04	1.269E-01

continued

Table D-42. Emisson Rate of Tetrachloroethene from Parcel 3 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2019	5.272E+04	8.323E-04	1.207E-01
2020	5.272E+04	7.917E-04	1.148E-01
2021	5.272E+04	7.531E-04	1.092E-01
2022	5.272E+04	7.163E-04	1.039E-01
2023	5.272E+04	6.814E-04	9.879E-02
2024	5.272E+04	6.482E-04	9.397E-02
2025	5.272E+04	6.166E-04	8.939E-02
2026	5.272E+04	5.865E-04	8.503E-02
2027	5.272E+04	5.579E-04	8.088E-02
2028	5.272E+04	5.307E-04	7.694E-02
2029	5.272E+04	5.048E-04	7.319E-02
2030	5.272E+04	4.802E-04	6.962E-02
2031	5.272E+04	4.568E-04	6.622E-02
2032	5.272E+04	4.345E-04	6.299E-02
2033	5.272E+04	4.133E-04	5.992E-02
2034	5.272E+04	3.931E-04	5.700E-02
2035	5.272E+04	3.740E-04	5.422E-02
2036	5.272E+04	3.557E-04	5.157E-02
2037	5.272E+04	3.384E-04	4.906E-02
2038	5.272E+04	3.219E-04	4.667E-02
2039	5.272E+04	3.062E-04	4.439E-02
2040	5.272E+04	2.912E-04	4.223E-02
2041	5.272E+04	2.770E-04	4.017E-02
2042	5.272E+04	2.635E-04	3.821E-02
2043	5.272E+04	2.507E-04	3.634E-02
2044	5.272E+04	2.384E-04	3.457E-02
2045	5.272E+04	2.268E-04	3.289E-02
2046	5.272E+04	2.158E-04	3.128E-02
2047	5.272E+04	2.052E-04	2.976E-02
2048	5.272E+04	1.952E-04	2.830E-02
2049	5.272E+04	1.857E-04	2.692E-02
2050	5.272E+04	1.766E-04	2.561E-02
2051	5.272E+04	1.680E-04	2.436E-02
2052	5.272E+04	1.598E-04	2.317E-02
2053	5.272E+04	1.520E-04	2.204E-02
2054	5.272E+04	1.446E-04	2.097E-02
2055	5.272E+04	1.376E-04	1.995E-02
2056	5.272E+04	1.309E-04	1.897E-02
2057	5.272E+04	1.245E-04	1.805E-02
2058	5.272E+04	1.184E-04	1.717E-02
2059	5.272E+04	1.126E-04	1.633E-02
2060	5.272E+04	1.071E-04	1.553E-02
2061	5.272E+04	1.019E-04	1.478E-02
2062	5.272E+04	9.695E-05	1.406E-02
2063	5.272E+04	9.222E-05	1.337E-02
2064	5.272E+04	8.772E-05	1.272E-02
2065	5.272E+04	8.344E-05	1.210E-02
2066	5.272E+04	7.937E-05	1.151E-02
2067	5.272E+04	7.550E-05	1.095E-02
2068	5.272E+04	7.182E-05	1.041E-02
2069	5.272E+04	6.832E-05	9.905E-03
2070	5.272E+04	6.498E-05	9.422E-03
2071	5.272E+04	6.182E-05	8.962E-03
2072	5.272E+04	5.880E-05	8.525E-03
2073	5.272E+04	5.593E-05	8.109E-03
2074	5.272E+04	5.321E-05	7.714E-03
2075	5.272E+04	5.061E-05	7.338E-03
2076	5.272E+04	4.814E-05	6.980E-03
2077	5.272E+04	4.579E-05	6.639E-03
2078	5.272E+04	4.356E-05	6.316E-03
2079	5.272E+04	4.144E-05	6.008E-03
2080	5.272E+04	3.942E-05	5.715E-03
2081	5.272E+04	3.749E-05	5.436E-03
2082	5.272E+04	3.566E-05	5.171E-03
2083	5.272E+04	3.393E-05	4.919E-03
2084	5.272E+04	3.227E-05	4.679E-03
2085	5.272E+04	3.070E-05	4.451E-03
2086	5.272E+04	2.920E-05	4.233E-03
2087	5.272E+04	2.778E-05	4.027E-03
2088	5.272E+04	2.642E-05	3.831E-03

continued

Table D-42. Emisson Rate of Tetrachloroethene from Parcel 3 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2089	5.272E+04	2.513E-05	3.644E-03
2090	5.272E+04	2.391E-05	3.466E-03
2091	5.272E+04	2.274E-05	3.297E-03
2092	5.272E+04	2.163E-05	3.136E-03
2093	5.272E+04	2.058E-05	2.983E-03
2094	5.272E+04	1.957E-05	2.838E-03
2095	5.272E+04	1.862E-05	2.699E-03
2096	5.272E+04	1.771E-05	2.568E-03
2097	5.272E+04	1.685E-05	2.442E-03
2098	5.272E+04	1.603E-05	2.323E-03
2099	5.272E+04	1.524E-05	2.210E-03
2100	5.272E+04	1.450E-05	2.102E-03
2101	5.272E+04	1.379E-05	2.000E-03
2102	5.272E+04	1.312E-05	1.902E-03
2103	5.272E+04	1.248E-05	1.809E-03
2104	5.272E+04	1.187E-05	1.721E-03
2105	5.272E+04	1.129E-05	1.637E-03
2106	5.272E+04	1.074E-05	1.557E-03
2107	5.272E+04	1.022E-05	1.481E-03
2108	5.272E+04	9.720E-06	1.409E-03
2109	5.272E+04	9.246E-06	1.340E-03
2110	5.272E+04	8.795E-06	1.275E-03
2111	5.272E+04	8.366E-06	1.213E-03
2112	5.272E+04	7.958E-06	1.154E-03
2113	5.272E+04	7.570E-06	1.097E-03
2114	5.272E+04	7.201E-06	1.044E-03
2115	5.272E+04	6.849E-06	9.930E-04
2116	5.272E+04	6.515E-06	9.446E-04
2117	5.272E+04	6.198E-06	8.985E-04
2118	5.272E+04	5.895E-06	8.547E-04
2119	5.272E+04	5.608E-06	8.130E-04
2120	5.272E+04	5.334E-06	7.734E-04
2121	5.272E+04	5.074E-06	7.357E-04
2122	5.272E+04	4.827E-06	6.998E-04
2123	5.272E+04	4.591E-06	6.657E-04
2124	5.272E+04	4.367E-06	6.332E-04
2125	5.272E+04	4.154E-06	6.023E-04
2126	5.272E+04	3.952E-06	5.729E-04
2127	5.272E+04	3.759E-06	5.450E-04
2128	5.272E+04	3.576E-06	5.184E-04
2129	5.272E+04	3.401E-06	4.931E-04
2130	5.272E+04	3.235E-06	4.691E-04
2131	5.272E+04	3.078E-06	4.462E-04
2132	5.272E+04	2.928E-06	4.244E-04
2133	5.272E+04	2.785E-06	4.037E-04
2134	5.272E+04	2.649E-06	3.841E-04
2135	5.272E+04	2.520E-06	3.653E-04
2136	5.272E+04	2.397E-06	3.475E-04
2137	5.272E+04	2.280E-06	3.306E-04
2138	5.272E+04	2.169E-06	3.144E-04
2139	5.272E+04	2.063E-06	2.991E-04
2140	5.272E+04	1.962E-06	2.845E-04
2141	5.272E+04	1.867E-06	2.706E-04
2142	5.272E+04	1.776E-06	2.574E-04
2143	5.272E+04	1.689E-06	2.449E-04
2144	5.272E+04	1.607E-06	2.329E-04
2145	5.272E+04	1.528E-06	2.216E-04
2146	5.272E+04	1.454E-06	2.108E-04
2147	5.272E+04	1.383E-06	2.005E-04
2148	5.272E+04	1.315E-06	1.907E-04
2149	5.272E+04	1.251E-06	1.814E-04
2150	5.272E+04	1.190E-06	1.726E-04
2151	5.272E+04	1.132E-06	1.641E-04
2152	5.272E+04	1.077E-06	1.561E-04
2153	5.272E+04	1.024E-06	1.485E-04
2154	5.272E+04	9.745E-07	1.413E-04
2155	5.272E+04	9.270E-07	1.344E-04
2156	5.272E+04	8.818E-07	1.278E-04
2157	5.272E+04	8.387E-07	1.216E-04
2158	5.272E+04	7.978E-07	1.157E-04

continued

Table D-42. Emisson Rate of Tetrachloroethene from Parcel 3 for Years 1975 to 2203 (concluded).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2159	5.272E+04	7.589E-07	1.100E-04
2160	5.272E+04	7.219E-07	1.047E-04
2161	5.272E+04	6.867E-07	9.956E-05
2162	5.272E+04	6.532E-07	9.471E-05
2163	5.272E+04	6.214E-07	9.009E-05
2164	5.272E+04	5.911E-07	8.569E-05
2165	5.272E+04	5.622E-07	8.151E-05
2166	5.272E+04	5.348E-07	7.754E-05
2167	5.272E+04	5.087E-07	7.376E-05
2168	5.272E+04	4.839E-07	7.016E-05
2169	5.272E+04	4.603E-07	6.674E-05
2170	5.272E+04	4.379E-07	6.348E-05
2171	5.272E+04	4.165E-07	6.039E-05
2172	5.272E+04	3.962E-07	5.744E-05
2173	5.272E+04	3.769E-07	5.464E-05
2174	5.272E+04	3.585E-07	5.198E-05
2175	5.272E+04	3.410E-07	4.944E-05
2176	5.272E+04	3.244E-07	4.703E-05
2177	5.272E+04	3.086E-07	4.474E-05
2178	5.272E+04	2.935E-07	4.255E-05
2179	5.272E+04	2.792E-07	4.048E-05
2180	5.272E+04	2.656E-07	3.850E-05
2181	5.272E+04	2.526E-07	3.663E-05
2182	5.272E+04	2.403E-07	3.484E-05
2183	5.272E+04	2.286E-07	3.314E-05
2184	5.272E+04	2.174E-07	3.152E-05
2185	5.272E+04	2.068E-07	2.999E-05
2186	5.272E+04	1.967E-07	2.852E-05
2187	5.272E+04	1.871E-07	2.713E-05
2188	5.272E+04	1.780E-07	2.581E-05
2189	5.272E+04	1.693E-07	2.455E-05
2190	5.272E+04	1.611E-07	2.335E-05
2191	5.272E+04	1.532E-07	2.222E-05
2192	5.272E+04	1.458E-07	2.113E-05
2193	5.272E+04	1.386E-07	2.010E-05
2194	5.272E+04	1.319E-07	1.912E-05
2195	5.272E+04	1.255E-07	1.819E-05
2196	5.272E+04	1.193E-07	1.730E-05
2197	5.272E+04	1.135E-07	1.646E-05
2198	5.272E+04	1.080E-07	1.565E-05
2199	5.272E+04	1.027E-07	1.489E-05
2200	5.272E+04	9.770E-08	1.417E-05
2201	5.272E+04	9.294E-08	1.347E-05
2202	5.272E+04	8.840E-08	1.282E-05
2203	5.272E+04	8.409E-08	1.219E-05

Table D-43. Emisson Rate of Toluene from Parcel 3 for Years 1975 to 2203.

Source: H:\3000\030177~2.000\030177~1.003\BUSHVA~1\STRATA3.PRM

Model Parameters

Lo : 170.00 m^3 / Mg
k : 0.0500 1/yr
NMOC : 1800.00 ppmv
Methane : 65.6000 % volume
Carbon Dioxide : 34.4000 % volume
Air Pollutant : Toluene (HAP/VOC)
Molecular Wt = 92.14 Concentration = 2.090000 ppmV

Landfill Parameters

Landfill type : Co-Disposal
Year Opened : 1974 Current Year : 2004 Closure Year: 2004
Capacity : 52718 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 0.00 Mg/year

Model Results

Year	Refuse In Place (Mg)	Toluene (HAP/VOC) Emission Rate (Mg/yr)	(Cubic m/yr)
1975	5.272E+03	5.471E-04	1.428E-01
1976	1.054E+04	1.068E-03	2.786E-01
1977	1.582E+04	1.563E-03	4.077E-01
1978	2.109E+04	2.034E-03	5.306E-01
1979	2.636E+04	2.481E-03	6.475E-01
1980	3.163E+04	2.908E-03	7.587E-01
1981	3.690E+04	3.313E-03	8.645E-01
1982	4.217E+04	3.698E-03	9.651E-01
1983	4.745E+04	4.065E-03	1.061E+00
1984	5.272E+04	4.414E-03	1.152E+00
1985	5.272E+04	4.199E-03	1.096E+00
1986	5.272E+04	3.994E-03	1.042E+00
1987	5.272E+04	3.799E-03	9.914E-01
1988	5.272E+04	3.614E-03	9.430E-01
1989	5.272E+04	3.438E-03	8.970E-01
1990	5.272E+04	3.270E-03	8.533E-01
1991	5.272E+04	3.111E-03	8.117E-01
1992	5.272E+04	2.959E-03	7.721E-01
1993	5.272E+04	2.815E-03	7.344E-01
1994	5.272E+04	2.677E-03	6.986E-01
1995	5.272E+04	2.547E-03	6.645E-01
1996	5.272E+04	2.422E-03	6.321E-01
1997	5.272E+04	2.304E-03	6.013E-01
1998	5.272E+04	2.192E-03	5.720E-01
1999	5.272E+04	2.085E-03	5.441E-01
2000	5.272E+04	1.983E-03	5.175E-01
2001	5.272E+04	1.887E-03	4.923E-01
2002	5.272E+04	1.795E-03	4.683E-01
2003	5.272E+04	1.707E-03	4.454E-01
2004	5.272E+04	1.624E-03	4.237E-01
2005	5.272E+04	1.545E-03	4.031E-01
2006	5.272E+04	1.469E-03	3.834E-01
2007	5.272E+04	1.398E-03	3.647E-01
2008	5.272E+04	1.329E-03	3.469E-01
2009	5.272E+04	1.265E-03	3.300E-01
2010	5.272E+04	1.203E-03	3.139E-01
2011	5.272E+04	1.144E-03	2.986E-01
2012	5.272E+04	1.088E-03	2.840E-01
2013	5.272E+04	1.035E-03	2.702E-01
2014	5.272E+04	9.849E-04	2.570E-01
2015	5.272E+04	9.369E-04	2.445E-01
2016	5.272E+04	8.912E-04	2.325E-01
2017	5.272E+04	8.477E-04	2.212E-01
2018	5.272E+04	8.064E-04	2.104E-01

continued

Table D-43. Emisson Rate of Toluene from Parcel 3 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2019	5.272E+04	7.671E-04	2.002E-01
2020	5.272E+04	7.296E-04	1.904E-01
2021	5.272E+04	6.941E-04	1.811E-01
2022	5.272E+04	6.602E-04	1.723E-01
2023	5.272E+04	6.280E-04	1.639E-01
2024	5.272E+04	5.974E-04	1.559E-01
2025	5.272E+04	5.682E-04	1.483E-01
2026	5.272E+04	5.405E-04	1.410E-01
2027	5.272E+04	5.142E-04	1.342E-01
2028	5.272E+04	4.891E-04	1.276E-01
2029	5.272E+04	4.652E-04	1.214E-01
2030	5.272E+04	4.425E-04	1.155E-01
2031	5.272E+04	4.210E-04	1.098E-01
2032	5.272E+04	4.004E-04	1.045E-01
2033	5.272E+04	3.809E-04	9.939E-02
2034	5.272E+04	3.623E-04	9.454E-02
2035	5.272E+04	3.447E-04	8.993E-02
2036	5.272E+04	3.278E-04	8.555E-02
2037	5.272E+04	3.119E-04	8.138E-02
2038	5.272E+04	2.966E-04	7.741E-02
2039	5.272E+04	2.822E-04	7.363E-02
2040	5.272E+04	2.684E-04	7.004E-02
2041	5.272E+04	2.553E-04	6.662E-02
2042	5.272E+04	2.429E-04	6.338E-02
2043	5.272E+04	2.310E-04	6.028E-02
2044	5.272E+04	2.198E-04	5.734E-02
2045	5.272E+04	2.090E-04	5.455E-02
2046	5.272E+04	1.989E-04	5.189E-02
2047	5.272E+04	1.892E-04	4.936E-02
2048	5.272E+04	1.799E-04	4.695E-02
2049	5.272E+04	1.712E-04	4.466E-02
2050	5.272E+04	1.628E-04	4.248E-02
2051	5.272E+04	1.549E-04	4.041E-02
2052	5.272E+04	1.473E-04	3.844E-02
2053	5.272E+04	1.401E-04	3.656E-02
2054	5.272E+04	1.333E-04	3.478E-02
2055	5.272E+04	1.268E-04	3.308E-02
2056	5.272E+04	1.206E-04	3.147E-02
2057	5.272E+04	1.147E-04	2.994E-02
2058	5.272E+04	1.091E-04	2.848E-02
2059	5.272E+04	1.038E-04	2.709E-02
2060	5.272E+04	9.875E-05	2.577E-02
2061	5.272E+04	9.393E-05	2.451E-02
2062	5.272E+04	8.935E-05	2.331E-02
2063	5.272E+04	8.499E-05	2.218E-02
2064	5.272E+04	8.085E-05	2.110E-02
2065	5.272E+04	7.690E-05	2.007E-02
2066	5.272E+04	7.315E-05	1.909E-02
2067	5.272E+04	6.959E-05	1.816E-02
2068	5.272E+04	6.619E-05	1.727E-02
2069	5.272E+04	6.296E-05	1.643E-02
2070	5.272E+04	5.989E-05	1.563E-02
2071	5.272E+04	5.697E-05	1.487E-02
2072	5.272E+04	5.419E-05	1.414E-02
2073	5.272E+04	5.155E-05	1.345E-02
2074	5.272E+04	4.904E-05	1.280E-02
2075	5.272E+04	4.664E-05	1.217E-02
2076	5.272E+04	4.437E-05	1.158E-02
2077	5.272E+04	4.221E-05	1.101E-02
2078	5.272E+04	4.015E-05	1.048E-02
2079	5.272E+04	3.819E-05	9.965E-03
2080	5.272E+04	3.633E-05	9.479E-03
2081	5.272E+04	3.455E-05	9.017E-03
2082	5.272E+04	3.287E-05	8.577E-03
2083	5.272E+04	3.127E-05	8.159E-03
2084	5.272E+04	2.974E-05	7.761E-03
2085	5.272E+04	2.829E-05	7.382E-03
2086	5.272E+04	2.691E-05	7.022E-03
2087	5.272E+04	2.560E-05	6.680E-03
2088	5.272E+04	2.435E-05	6.354E-03

continued

Table D-43. Emisson Rate of Toluene from Parcel 3 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2089	5.272E+04	2.316E-05	6.044E-03
2090	5.272E+04	2.203E-05	5.749E-03
2091	5.272E+04	2.096E-05	5.469E-03
2092	5.272E+04	1.994E-05	5.202E-03
2093	5.272E+04	1.896E-05	4.948E-03
2094	5.272E+04	1.804E-05	4.707E-03
2095	5.272E+04	1.716E-05	4.478E-03
2096	5.272E+04	1.632E-05	4.259E-03
2097	5.272E+04	1.553E-05	4.051E-03
2098	5.272E+04	1.477E-05	3.854E-03
2099	5.272E+04	1.405E-05	3.666E-03
2100	5.272E+04	1.336E-05	3.487E-03
2101	5.272E+04	1.271E-05	3.317E-03
2102	5.272E+04	1.209E-05	3.155E-03
2103	5.272E+04	1.150E-05	3.001E-03
2104	5.272E+04	1.094E-05	2.855E-03
2105	5.272E+04	1.041E-05	2.716E-03
2106	5.272E+04	9.900E-06	2.583E-03
2107	5.272E+04	9.417E-06	2.457E-03
2108	5.272E+04	8.958E-06	2.337E-03
2109	5.272E+04	8.521E-06	2.223E-03
2110	5.272E+04	8.106E-06	2.115E-03
2111	5.272E+04	7.710E-06	2.012E-03
2112	5.272E+04	7.334E-06	1.914E-03
2113	5.272E+04	6.977E-06	1.820E-03
2114	5.272E+04	6.636E-06	1.732E-03
2115	5.272E+04	6.313E-06	1.647E-03
2116	5.272E+04	6.005E-06	1.567E-03
2117	5.272E+04	5.712E-06	1.490E-03
2118	5.272E+04	5.433E-06	1.418E-03
2119	5.272E+04	5.168E-06	1.349E-03
2120	5.272E+04	4.916E-06	1.283E-03
2121	5.272E+04	4.677E-06	1.220E-03
2122	5.272E+04	4.448E-06	1.161E-03
2123	5.272E+04	4.231E-06	1.104E-03
2124	5.272E+04	4.025E-06	1.050E-03
2125	5.272E+04	3.829E-06	9.991E-04
2126	5.272E+04	3.642E-06	9.503E-04
2127	5.272E+04	3.464E-06	9.040E-04
2128	5.272E+04	3.295E-06	8.599E-04
2129	5.272E+04	3.135E-06	8.180E-04
2130	5.272E+04	2.982E-06	7.781E-04
2131	5.272E+04	2.836E-06	7.401E-04
2132	5.272E+04	2.698E-06	7.040E-04
2133	5.272E+04	2.567E-06	6.697E-04
2134	5.272E+04	2.441E-06	6.370E-04
2135	5.272E+04	2.322E-06	6.060E-04
2136	5.272E+04	2.209E-06	5.764E-04
2137	5.272E+04	2.101E-06	5.483E-04
2138	5.272E+04	1.999E-06	5.216E-04
2139	5.272E+04	1.901E-06	4.961E-04
2140	5.272E+04	1.809E-06	4.719E-04
2141	5.272E+04	1.720E-06	4.489E-04
2142	5.272E+04	1.636E-06	4.270E-04
2143	5.272E+04	1.557E-06	4.062E-04
2144	5.272E+04	1.481E-06	3.864E-04
2145	5.272E+04	1.409E-06	3.675E-04
2146	5.272E+04	1.340E-06	3.496E-04
2147	5.272E+04	1.274E-06	3.326E-04
2148	5.272E+04	1.212E-06	3.163E-04
2149	5.272E+04	1.153E-06	3.009E-04
2150	5.272E+04	1.097E-06	2.862E-04
2151	5.272E+04	1.043E-06	2.723E-04
2152	5.272E+04	9.926E-07	2.590E-04
2153	5.272E+04	9.442E-07	2.464E-04
2154	5.272E+04	8.981E-07	2.344E-04
2155	5.272E+04	8.543E-07	2.229E-04
2156	5.272E+04	8.127E-07	2.121E-04
2157	5.272E+04	7.730E-07	2.017E-04
2158	5.272E+04	7.353E-07	1.919E-04

continued

Table D-43. Emisson Rate of Toluene from Parcel 3 for Years 1975 to 2203 (concluded).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2159	5.272E+04	6.995E-07	1.825E-04
2160	5.272E+04	6.653E-07	1.736E-04
2161	5.272E+04	6.329E-07	1.651E-04
2162	5.272E+04	6.020E-07	1.571E-04
2163	5.272E+04	5.727E-07	1.494E-04
2164	5.272E+04	5.447E-07	1.421E-04
2165	5.272E+04	5.182E-07	1.352E-04
2166	5.272E+04	4.929E-07	1.286E-04
2167	5.272E+04	4.689E-07	1.223E-04
2168	5.272E+04	4.460E-07	1.164E-04
2169	5.272E+04	4.242E-07	1.107E-04
2170	5.272E+04	4.036E-07	1.053E-04
2171	5.272E+04	3.839E-07	1.002E-04
2172	5.272E+04	3.651E-07	9.528E-05
2173	5.272E+04	3.473E-07	9.063E-05
2174	5.272E+04	3.304E-07	8.621E-05
2175	5.272E+04	3.143E-07	8.201E-05
2176	5.272E+04	2.990E-07	7.801E-05
2177	5.272E+04	2.844E-07	7.420E-05
2178	5.272E+04	2.705E-07	7.059E-05
2179	5.272E+04	2.573E-07	6.714E-05
2180	5.272E+04	2.448E-07	6.387E-05
2181	5.272E+04	2.328E-07	6.075E-05
2182	5.272E+04	2.215E-07	5.779E-05
2183	5.272E+04	2.107E-07	5.497E-05
2184	5.272E+04	2.004E-07	5.229E-05
2185	5.272E+04	1.906E-07	4.974E-05
2186	5.272E+04	1.813E-07	4.731E-05
2187	5.272E+04	1.725E-07	4.501E-05
2188	5.272E+04	1.641E-07	4.281E-05
2189	5.272E+04	1.561E-07	4.072E-05
2190	5.272E+04	1.485E-07	3.874E-05
2191	5.272E+04	1.412E-07	3.685E-05
2192	5.272E+04	1.343E-07	3.505E-05
2193	5.272E+04	1.278E-07	3.334E-05
2194	5.272E+04	1.215E-07	3.172E-05
2195	5.272E+04	1.156E-07	3.017E-05
2196	5.272E+04	1.100E-07	2.870E-05
2197	5.272E+04	1.046E-07	2.730E-05
2198	5.272E+04	9.951E-08	2.597E-05
2199	5.272E+04	9.466E-08	2.470E-05
2200	5.272E+04	9.004E-08	2.350E-05
2201	5.272E+04	8.565E-08	2.235E-05
2202	5.272E+04	8.148E-08	2.126E-05
2203	5.272E+04	7.750E-08	2.022E-05

Table D-44. Emisson Rate of Trichloroethene from Parcel 3 for Years 1975 to 2203.

Source: H:\3000\030177~2.000\030177~1.003\BUSHVA~1\STRATA3.PRM

Model Parameters

Lo : 170.00 m^3 / Mg
k : 0.0500 1/yr
NMOC : 1800.00 ppmv
Methane : 65.6000 % volume
Carbon Dioxide : 34.4000 % volume
Air Pollutant : Trichloroethene (HAP/VOC)
Molecular Wt = 131.38 Concentration = 1.160000 ppmV

Landfill Parameters

Landfill type : Co-Disposal
Year Opened : 1974 Current Year : 2004 Closure Year: 2004
Capacity : 52718 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 0.00 Mg/year

Model Results

Year	Refuse In Place (Mg)	Trichloroethene (HAP/VOC) Emission Rate (Mg/yr)	(Cubic m/yr)
1975	5.272E+03	4.330E-04	7.924E-02
1976	1.054E+04	8.449E-04	1.546E-01
1977	1.582E+04	1.237E-03	2.263E-01
1978	2.109E+04	1.609E-03	2.945E-01
1979	2.636E+04	1.964E-03	3.594E-01
1980	3.163E+04	2.301E-03	4.211E-01
1981	3.690E+04	2.622E-03	4.798E-01
1982	4.217E+04	2.927E-03	5.356E-01
1983	4.745E+04	3.217E-03	5.887E-01
1984	5.272E+04	3.493E-03	6.393E-01
1985	5.272E+04	3.323E-03	6.081E-01
1986	5.272E+04	3.161E-03	5.784E-01
1987	5.272E+04	3.007E-03	5.502E-01
1988	5.272E+04	2.860E-03	5.234E-01
1989	5.272E+04	2.721E-03	4.979E-01
1990	5.272E+04	2.588E-03	4.736E-01
1991	5.272E+04	2.462E-03	4.505E-01
1992	5.272E+04	2.342E-03	4.285E-01
1993	5.272E+04	2.227E-03	4.076E-01
1994	5.272E+04	2.119E-03	3.877E-01
1995	5.272E+04	2.015E-03	3.688E-01
1996	5.272E+04	1.917E-03	3.508E-01
1997	5.272E+04	1.824E-03	3.337E-01
1998	5.272E+04	1.735E-03	3.175E-01
1999	5.272E+04	1.650E-03	3.020E-01
2000	5.272E+04	1.570E-03	2.872E-01
2001	5.272E+04	1.493E-03	2.732E-01
2002	5.272E+04	1.420E-03	2.599E-01
2003	5.272E+04	1.351E-03	2.472E-01
2004	5.272E+04	1.285E-03	2.352E-01
2005	5.272E+04	1.222E-03	2.237E-01
2006	5.272E+04	1.163E-03	2.128E-01
2007	5.272E+04	1.106E-03	2.024E-01
2008	5.272E+04	1.052E-03	1.925E-01
2009	5.272E+04	1.001E-03	1.832E-01
2010	5.272E+04	9.520E-04	1.742E-01
2011	5.272E+04	9.056E-04	1.657E-01
2012	5.272E+04	8.614E-04	1.576E-01
2013	5.272E+04	8.194E-04	1.500E-01
2014	5.272E+04	7.795E-04	1.426E-01
2015	5.272E+04	7.414E-04	1.357E-01
2016	5.272E+04	7.053E-04	1.291E-01
2017	5.272E+04	6.709E-04	1.228E-01
2018	5.272E+04	6.382E-04	1.168E-01

continued

Table D-44. Emisson Rate of Trichloroethene from Parcel 3 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2019	5.272E+04	6.070E-04	1.111E-01
2020	5.272E+04	5.774E-04	1.057E-01
2021	5.272E+04	5.493E-04	1.005E-01
2022	5.272E+04	5.225E-04	9.561E-02
2023	5.272E+04	4.970E-04	9.095E-02
2024	5.272E+04	4.728E-04	8.652E-02
2025	5.272E+04	4.497E-04	8.230E-02
2026	5.272E+04	4.278E-04	7.828E-02
2027	5.272E+04	4.069E-04	7.446E-02
2028	5.272E+04	3.871E-04	7.083E-02
2029	5.272E+04	3.682E-04	6.738E-02
2030	5.272E+04	3.502E-04	6.409E-02
2031	5.272E+04	3.332E-04	6.097E-02
2032	5.272E+04	3.169E-04	5.799E-02
2033	5.272E+04	3.014E-04	5.516E-02
2034	5.272E+04	2.867E-04	5.247E-02
2035	5.272E+04	2.728E-04	4.992E-02
2036	5.272E+04	2.595E-04	4.748E-02
2037	5.272E+04	2.468E-04	4.517E-02
2038	5.272E+04	2.348E-04	4.296E-02
2039	5.272E+04	2.233E-04	4.087E-02
2040	5.272E+04	2.124E-04	3.887E-02
2041	5.272E+04	2.021E-04	3.698E-02
2042	5.272E+04	1.922E-04	3.517E-02
2043	5.272E+04	1.828E-04	3.346E-02
2044	5.272E+04	1.739E-04	3.183E-02
2045	5.272E+04	1.654E-04	3.028E-02
2046	5.272E+04	1.574E-04	2.880E-02
2047	5.272E+04	1.497E-04	2.739E-02
2048	5.272E+04	1.424E-04	2.606E-02
2049	5.272E+04	1.354E-04	2.479E-02
2050	5.272E+04	1.288E-04	2.358E-02
2051	5.272E+04	1.226E-04	2.243E-02
2052	5.272E+04	1.166E-04	2.133E-02
2053	5.272E+04	1.109E-04	2.029E-02
2054	5.272E+04	1.055E-04	1.930E-02
2055	5.272E+04	1.003E-04	1.836E-02
2056	5.272E+04	9.545E-05	1.747E-02
2057	5.272E+04	9.079E-05	1.662E-02
2058	5.272E+04	8.637E-05	1.581E-02
2059	5.272E+04	8.215E-05	1.503E-02
2060	5.272E+04	7.815E-05	1.430E-02
2061	5.272E+04	7.434E-05	1.360E-02
2062	5.272E+04	7.071E-05	1.294E-02
2063	5.272E+04	6.726E-05	1.231E-02
2064	5.272E+04	6.398E-05	1.171E-02
2065	5.272E+04	6.086E-05	1.114E-02
2066	5.272E+04	5.789E-05	1.059E-02
2067	5.272E+04	5.507E-05	1.008E-02
2068	5.272E+04	5.238E-05	9.586E-03
2069	5.272E+04	4.983E-05	9.119E-03
2070	5.272E+04	4.740E-05	8.674E-03
2071	5.272E+04	4.509E-05	8.251E-03
2072	5.272E+04	4.289E-05	7.849E-03
2073	5.272E+04	4.080E-05	7.466E-03
2074	5.272E+04	3.881E-05	7.102E-03
2075	5.272E+04	3.691E-05	6.755E-03
2076	5.272E+04	3.511E-05	6.426E-03
2077	5.272E+04	3.340E-05	6.112E-03
2078	5.272E+04	3.177E-05	5.814E-03
2079	5.272E+04	3.022E-05	5.531E-03
2080	5.272E+04	2.875E-05	5.261E-03
2081	5.272E+04	2.735E-05	5.004E-03
2082	5.272E+04	2.601E-05	4.760E-03
2083	5.272E+04	2.474E-05	4.528E-03
2084	5.272E+04	2.354E-05	4.307E-03
2085	5.272E+04	2.239E-05	4.097E-03
2086	5.272E+04	2.130E-05	3.897E-03
2087	5.272E+04	2.026E-05	3.707E-03
2088	5.272E+04	1.927E-05	3.527E-03

continued

Table D-44. Emisson Rate of Trichloroethene from Parcel 3 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2089	5.272E+04	1.833E-05	3.355E-03
2090	5.272E+04	1.744E-05	3.191E-03
2091	5.272E+04	1.659E-05	3.035E-03
2092	5.272E+04	1.578E-05	2.887E-03
2093	5.272E+04	1.501E-05	2.746E-03
2094	5.272E+04	1.428E-05	2.613E-03
2095	5.272E+04	1.358E-05	2.485E-03
2096	5.272E+04	1.292E-05	2.364E-03
2097	5.272E+04	1.229E-05	2.249E-03
2098	5.272E+04	1.169E-05	2.139E-03
2099	5.272E+04	1.112E-05	2.035E-03
2100	5.272E+04	1.058E-05	1.935E-03
2101	5.272E+04	1.006E-05	1.841E-03
2102	5.272E+04	9.570E-06	1.751E-03
2103	5.272E+04	9.103E-06	1.666E-03
2104	5.272E+04	8.659E-06	1.585E-03
2105	5.272E+04	8.237E-06	1.507E-03
2106	5.272E+04	7.835E-06	1.434E-03
2107	5.272E+04	7.453E-06	1.364E-03
2108	5.272E+04	7.089E-06	1.297E-03
2109	5.272E+04	6.744E-06	1.234E-03
2110	5.272E+04	6.415E-06	1.174E-03
2111	5.272E+04	6.102E-06	1.117E-03
2112	5.272E+04	5.804E-06	1.062E-03
2113	5.272E+04	5.521E-06	1.010E-03
2114	5.272E+04	5.252E-06	9.611E-04
2115	5.272E+04	4.996E-06	9.142E-04
2116	5.272E+04	4.752E-06	8.696E-04
2117	5.272E+04	4.520E-06	8.272E-04
2118	5.272E+04	4.300E-06	7.869E-04
2119	5.272E+04	4.090E-06	7.485E-04
2120	5.272E+04	3.891E-06	7.120E-04
2121	5.272E+04	3.701E-06	6.773E-04
2122	5.272E+04	3.520E-06	6.442E-04
2123	5.272E+04	3.349E-06	6.128E-04
2124	5.272E+04	3.185E-06	5.829E-04
2125	5.272E+04	3.030E-06	5.545E-04
2126	5.272E+04	2.882E-06	5.275E-04
2127	5.272E+04	2.742E-06	5.017E-04
2128	5.272E+04	2.608E-06	4.773E-04
2129	5.272E+04	2.481E-06	4.540E-04
2130	5.272E+04	2.360E-06	4.319E-04
2131	5.272E+04	2.245E-06	4.108E-04
2132	5.272E+04	2.135E-06	3.908E-04
2133	5.272E+04	2.031E-06	3.717E-04
2134	5.272E+04	1.932E-06	3.536E-04
2135	5.272E+04	1.838E-06	3.363E-04
2136	5.272E+04	1.748E-06	3.199E-04
2137	5.272E+04	1.663E-06	3.043E-04
2138	5.272E+04	1.582E-06	2.895E-04
2139	5.272E+04	1.505E-06	2.754E-04
2140	5.272E+04	1.431E-06	2.619E-04
2141	5.272E+04	1.362E-06	2.492E-04
2142	5.272E+04	1.295E-06	2.370E-04
2143	5.272E+04	1.232E-06	2.254E-04
2144	5.272E+04	1.172E-06	2.145E-04
2145	5.272E+04	1.115E-06	2.040E-04
2146	5.272E+04	1.060E-06	1.940E-04
2147	5.272E+04	1.009E-06	1.846E-04
2148	5.272E+04	9.594E-07	1.756E-04
2149	5.272E+04	9.126E-07	1.670E-04
2150	5.272E+04	8.681E-07	1.589E-04
2151	5.272E+04	8.258E-07	1.511E-04
2152	5.272E+04	7.855E-07	1.438E-04
2153	5.272E+04	7.472E-07	1.367E-04
2154	5.272E+04	7.108E-07	1.301E-04
2155	5.272E+04	6.761E-07	1.237E-04
2156	5.272E+04	6.431E-07	1.177E-04
2157	5.272E+04	6.118E-07	1.120E-04
2158	5.272E+04	5.819E-07	1.065E-04

continued

Table D-44. Emisson Rate of Trichloroethene from Parcel 3 for Years 1975 to 2203 (concluded).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2159	5.272E+04	5.535E-07	1.013E-04
2160	5.272E+04	5.266E-07	9.636E-05
2161	5.272E+04	5.009E-07	9.166E-05
2162	5.272E+04	4.764E-07	8.719E-05
2163	5.272E+04	4.532E-07	8.294E-05
2164	5.272E+04	4.311E-07	7.889E-05
2165	5.272E+04	4.101E-07	7.504E-05
2166	5.272E+04	3.901E-07	7.138E-05
2167	5.272E+04	3.711E-07	6.790E-05
2168	5.272E+04	3.530E-07	6.459E-05
2169	5.272E+04	3.357E-07	6.144E-05
2170	5.272E+04	3.194E-07	5.844E-05
2171	5.272E+04	3.038E-07	5.559E-05
2172	5.272E+04	2.890E-07	5.288E-05
2173	5.272E+04	2.749E-07	5.030E-05
2174	5.272E+04	2.615E-07	4.785E-05
2175	5.272E+04	2.487E-07	4.552E-05
2176	5.272E+04	2.366E-07	4.330E-05
2177	5.272E+04	2.251E-07	4.119E-05
2178	5.272E+04	2.141E-07	3.918E-05
2179	5.272E+04	2.036E-07	3.727E-05
2180	5.272E+04	1.937E-07	3.545E-05
2181	5.272E+04	1.843E-07	3.372E-05
2182	5.272E+04	1.753E-07	3.208E-05
2183	5.272E+04	1.667E-07	3.051E-05
2184	5.272E+04	1.586E-07	2.902E-05
2185	5.272E+04	1.509E-07	2.761E-05
2186	5.272E+04	1.435E-07	2.626E-05
2187	5.272E+04	1.365E-07	2.498E-05
2188	5.272E+04	1.298E-07	2.376E-05
2189	5.272E+04	1.235E-07	2.260E-05
2190	5.272E+04	1.175E-07	2.150E-05
2191	5.272E+04	1.118E-07	2.045E-05
2192	5.272E+04	1.063E-07	1.945E-05
2193	5.272E+04	1.011E-07	1.851E-05
2194	5.272E+04	9.619E-08	1.760E-05
2195	5.272E+04	9.150E-08	1.674E-05
2196	5.272E+04	8.704E-08	1.593E-05
2197	5.272E+04	8.279E-08	1.515E-05
2198	5.272E+04	7.876E-08	1.441E-05
2199	5.272E+04	7.491E-08	1.371E-05
2200	5.272E+04	7.126E-08	1.304E-05
2201	5.272E+04	6.779E-08	1.240E-05
2202	5.272E+04	6.448E-08	1.180E-05
2203	5.272E+04	6.133E-08	1.122E-05

Table D-45. Emisson Rate of Vinyl Chloride from Parcel 3 for Years 1975 to 2203.

Source: H:\3000\030177~2.000\030177~1.003\BUSHVA~1\STRATA3.PRM

Model Parameters

Lo : 170.00 m^3 / Mg
k : 0.0500 1/yr
NMOC : 1800.00 ppmv
Methane : 65.6000 % volume
Carbon Dioxide : 34.4000 % volume
Air Pollutant : Vinyl Chloride (HAP/VOC)
Molecular Wt = 62.50 Concentration = 0.810000 ppmV

Landfill Parameters

Landfill type : Co-Disposal
Year Opened : 1974 Current Year : 2004 Closure Year: 2004
Capacity : 52718 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 0.00 Mg/year

Model Results

Year	Refuse In Place (Mg)	Vinyl Chloride (HAP/VOC) Emission Rate (Mg/yr)	(Cubic m/yr)
1975	5.272E+03	1.438E-04	5.533E-02
1976	1.054E+04	2.806E-04	1.080E-01
1977	1.582E+04	4.108E-04	1.580E-01
1978	2.109E+04	5.346E-04	2.056E-01
1979	2.636E+04	6.524E-04	2.509E-01
1980	3.163E+04	7.644E-04	2.940E-01
1981	3.690E+04	8.709E-04	3.350E-01
1982	4.217E+04	9.723E-04	3.740E-01
1983	4.745E+04	1.069E-03	4.111E-01
1984	5.272E+04	1.160E-03	4.464E-01
1985	5.272E+04	1.104E-03	4.246E-01
1986	5.272E+04	1.050E-03	4.039E-01
1987	5.272E+04	9.988E-04	3.842E-01
1988	5.272E+04	9.501E-04	3.655E-01
1989	5.272E+04	9.037E-04	3.476E-01
1990	5.272E+04	8.596E-04	3.307E-01
1991	5.272E+04	8.177E-04	3.146E-01
1992	5.272E+04	7.778E-04	2.992E-01
1993	5.272E+04	7.399E-04	2.846E-01
1994	5.272E+04	7.038E-04	2.707E-01
1995	5.272E+04	6.695E-04	2.575E-01
1996	5.272E+04	6.368E-04	2.450E-01
1997	5.272E+04	6.058E-04	2.330E-01
1998	5.272E+04	5.762E-04	2.217E-01
1999	5.272E+04	5.481E-04	2.109E-01
2000	5.272E+04	5.214E-04	2.006E-01
2001	5.272E+04	4.960E-04	1.908E-01
2002	5.272E+04	4.718E-04	1.815E-01
2003	5.272E+04	4.488E-04	1.726E-01
2004	5.272E+04	4.269E-04	1.642E-01
2005	5.272E+04	4.061E-04	1.562E-01
2006	5.272E+04	3.863E-04	1.486E-01
2007	5.272E+04	3.674E-04	1.413E-01
2008	5.272E+04	3.495E-04	1.344E-01
2009	5.272E+04	3.325E-04	1.279E-01
2010	5.272E+04	3.162E-04	1.217E-01
2011	5.272E+04	3.008E-04	1.157E-01
2012	5.272E+04	2.862E-04	1.101E-01
2013	5.272E+04	2.722E-04	1.047E-01
2014	5.272E+04	2.589E-04	9.960E-02
2015	5.272E+04	2.463E-04	9.474E-02
2016	5.272E+04	2.343E-04	9.012E-02
2017	5.272E+04	2.229E-04	8.573E-02
2018	5.272E+04	2.120E-04	8.155E-02

continued

Table D-45. Emisson Rate of Vinyl Chloride from Parcel 3 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2019	5.272E+04	2.016E-04	7.757E-02
2020	5.272E+04	1.918E-04	7.379E-02
2021	5.272E+04	1.825E-04	7.019E-02
2022	5.272E+04	1.736E-04	6.677E-02
2023	5.272E+04	1.651E-04	6.351E-02
2024	5.272E+04	1.570E-04	6.041E-02
2025	5.272E+04	1.494E-04	5.747E-02
2026	5.272E+04	1.421E-04	5.466E-02
2027	5.272E+04	1.352E-04	5.200E-02
2028	5.272E+04	1.286E-04	4.946E-02
2029	5.272E+04	1.223E-04	4.705E-02
2030	5.272E+04	1.163E-04	4.475E-02
2031	5.272E+04	1.107E-04	4.257E-02
2032	5.272E+04	1.053E-04	4.050E-02
2033	5.272E+04	1.001E-04	3.852E-02
2034	5.272E+04	9.525E-05	3.664E-02
2035	5.272E+04	9.061E-05	3.485E-02
2036	5.272E+04	8.619E-05	3.315E-02
2037	5.272E+04	8.198E-05	3.154E-02
2038	5.272E+04	7.799E-05	3.000E-02
2039	5.272E+04	7.418E-05	2.854E-02
2040	5.272E+04	7.056E-05	2.714E-02
2041	5.272E+04	6.712E-05	2.582E-02
2042	5.272E+04	6.385E-05	2.456E-02
2043	5.272E+04	6.074E-05	2.336E-02
2044	5.272E+04	5.777E-05	2.222E-02
2045	5.272E+04	5.496E-05	2.114E-02
2046	5.272E+04	5.228E-05	2.011E-02
2047	5.272E+04	4.973E-05	1.913E-02
2048	5.272E+04	4.730E-05	1.820E-02
2049	5.272E+04	4.499E-05	1.731E-02
2050	5.272E+04	4.280E-05	1.646E-02
2051	5.272E+04	4.071E-05	1.566E-02
2052	5.272E+04	3.873E-05	1.490E-02
2053	5.272E+04	3.684E-05	1.417E-02
2054	5.272E+04	3.504E-05	1.348E-02
2055	5.272E+04	3.333E-05	1.282E-02
2056	5.272E+04	3.171E-05	1.220E-02
2057	5.272E+04	3.016E-05	1.160E-02
2058	5.272E+04	2.869E-05	1.104E-02
2059	5.272E+04	2.729E-05	1.050E-02
2060	5.272E+04	2.596E-05	9.986E-03
2061	5.272E+04	2.469E-05	9.499E-03
2062	5.272E+04	2.349E-05	9.036E-03
2063	5.272E+04	2.234E-05	8.595E-03
2064	5.272E+04	2.125E-05	8.176E-03
2065	5.272E+04	2.022E-05	7.777E-03
2066	5.272E+04	1.923E-05	7.398E-03
2067	5.272E+04	1.829E-05	7.037E-03
2068	5.272E+04	1.740E-05	6.694E-03
2069	5.272E+04	1.655E-05	6.367E-03
2070	5.272E+04	1.575E-05	6.057E-03
2071	5.272E+04	1.498E-05	5.761E-03
2072	5.272E+04	1.425E-05	5.480E-03
2073	5.272E+04	1.355E-05	5.213E-03
2074	5.272E+04	1.289E-05	4.959E-03
2075	5.272E+04	1.226E-05	4.717E-03
2076	5.272E+04	1.166E-05	4.487E-03
2077	5.272E+04	1.110E-05	4.268E-03
2078	5.272E+04	1.055E-05	4.060E-03
2079	5.272E+04	1.004E-05	3.862E-03
2080	5.272E+04	9.550E-06	3.674E-03
2081	5.272E+04	9.084E-06	3.494E-03
2082	5.272E+04	8.641E-06	3.324E-03
2083	5.272E+04	8.220E-06	3.162E-03
2084	5.272E+04	7.819E-06	3.008E-03
2085	5.272E+04	7.437E-06	2.861E-03
2086	5.272E+04	7.075E-06	2.722E-03
2087	5.272E+04	6.730E-06	2.589E-03
2088	5.272E+04	6.401E-06	2.463E-03

continued

Table D-45. Emisson Rate of Vinyl Chloride from Parcel 3 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2089	5.272E+04	6.089E-06	2.342E-03
2090	5.272E+04	5.792E-06	2.228E-03
2091	5.272E+04	5.510E-06	2.120E-03
2092	5.272E+04	5.241E-06	2.016E-03
2093	5.272E+04	4.985E-06	1.918E-03
2094	5.272E+04	4.742E-06	1.824E-03
2095	5.272E+04	4.511E-06	1.735E-03
2096	5.272E+04	4.291E-06	1.651E-03
2097	5.272E+04	4.082E-06	1.570E-03
2098	5.272E+04	3.883E-06	1.494E-03
2099	5.272E+04	3.693E-06	1.421E-03
2100	5.272E+04	3.513E-06	1.351E-03
2101	5.272E+04	3.342E-06	1.286E-03
2102	5.272E+04	3.179E-06	1.223E-03
2103	5.272E+04	3.024E-06	1.163E-03
2104	5.272E+04	2.876E-06	1.106E-03
2105	5.272E+04	2.736E-06	1.053E-03
2106	5.272E+04	2.603E-06	1.001E-03
2107	5.272E+04	2.476E-06	9.524E-04
2108	5.272E+04	2.355E-06	9.059E-04
2109	5.272E+04	2.240E-06	8.617E-04
2110	5.272E+04	2.131E-06	8.197E-04
2111	5.272E+04	2.027E-06	7.797E-04
2112	5.272E+04	1.928E-06	7.417E-04
2113	5.272E+04	1.834E-06	7.055E-04
2114	5.272E+04	1.745E-06	6.711E-04
2115	5.272E+04	1.660E-06	6.384E-04
2116	5.272E+04	1.579E-06	6.073E-04
2117	5.272E+04	1.502E-06	5.776E-04
2118	5.272E+04	1.428E-06	5.495E-04
2119	5.272E+04	1.359E-06	5.227E-04
2120	5.272E+04	1.292E-06	4.972E-04
2121	5.272E+04	1.229E-06	4.729E-04
2122	5.272E+04	1.169E-06	4.499E-04
2123	5.272E+04	1.112E-06	4.279E-04
2124	5.272E+04	1.058E-06	4.071E-04
2125	5.272E+04	1.007E-06	3.872E-04
2126	5.272E+04	9.575E-07	3.683E-04
2127	5.272E+04	9.108E-07	3.504E-04
2128	5.272E+04	8.663E-07	3.333E-04
2129	5.272E+04	8.241E-07	3.170E-04
2130	5.272E+04	7.839E-07	3.016E-04
2131	5.272E+04	7.457E-07	2.868E-04
2132	5.272E+04	7.093E-07	2.729E-04
2133	5.272E+04	6.747E-07	2.595E-04
2134	5.272E+04	6.418E-07	2.469E-04
2135	5.272E+04	6.105E-07	2.348E-04
2136	5.272E+04	5.807E-07	2.234E-04
2137	5.272E+04	5.524E-07	2.125E-04
2138	5.272E+04	5.255E-07	2.021E-04
2139	5.272E+04	4.998E-07	1.923E-04
2140	5.272E+04	4.755E-07	1.829E-04
2141	5.272E+04	4.523E-07	1.740E-04
2142	5.272E+04	4.302E-07	1.655E-04
2143	5.272E+04	4.092E-07	1.574E-04
2144	5.272E+04	3.893E-07	1.497E-04
2145	5.272E+04	3.703E-07	1.424E-04
2146	5.272E+04	3.522E-07	1.355E-04
2147	5.272E+04	3.350E-07	1.289E-04
2148	5.272E+04	3.187E-07	1.226E-04
2149	5.272E+04	3.032E-07	1.166E-04
2150	5.272E+04	2.884E-07	1.109E-04
2151	5.272E+04	2.743E-07	1.055E-04
2152	5.272E+04	2.609E-07	1.004E-04
2153	5.272E+04	2.482E-07	9.548E-05
2154	5.272E+04	2.361E-07	9.083E-05
2155	5.272E+04	2.246E-07	8.640E-05
2156	5.272E+04	2.136E-07	8.218E-05
2157	5.272E+04	2.032E-07	7.817E-05
2158	5.272E+04	1.933E-07	7.436E-05

continued

Table D-45. Emisson Rate of Vinyl Chloride from Parcel 3 for Years 1975 to 2203 (concluded).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2159	5.272E+04	1.839E-07	7.074E-05
2160	5.272E+04	1.749E-07	6.729E-05
2161	5.272E+04	1.664E-07	6.400E-05
2162	5.272E+04	1.583E-07	6.088E-05
2163	5.272E+04	1.505E-07	5.791E-05
2164	5.272E+04	1.432E-07	5.509E-05
2165	5.272E+04	1.362E-07	5.240E-05
2166	5.272E+04	1.296E-07	4.985E-05
2167	5.272E+04	1.233E-07	4.742E-05
2168	5.272E+04	1.172E-07	4.510E-05
2169	5.272E+04	1.115E-07	4.290E-05
2170	5.272E+04	1.061E-07	4.081E-05
2171	5.272E+04	1.009E-07	3.882E-05
2172	5.272E+04	9.599E-08	3.693E-05
2173	5.272E+04	9.131E-08	3.513E-05
2174	5.272E+04	8.686E-08	3.341E-05
2175	5.272E+04	8.262E-08	3.178E-05
2176	5.272E+04	7.859E-08	3.023E-05
2177	5.272E+04	7.476E-08	2.876E-05
2178	5.272E+04	7.111E-08	2.736E-05
2179	5.272E+04	6.765E-08	2.602E-05
2180	5.272E+04	6.435E-08	2.475E-05
2181	5.272E+04	6.121E-08	2.355E-05
2182	5.272E+04	5.822E-08	2.240E-05
2183	5.272E+04	5.538E-08	2.130E-05
2184	5.272E+04	5.268E-08	2.027E-05
2185	5.272E+04	5.011E-08	1.928E-05
2186	5.272E+04	4.767E-08	1.834E-05
2187	5.272E+04	4.534E-08	1.744E-05
2188	5.272E+04	4.313E-08	1.659E-05
2189	5.272E+04	4.103E-08	1.578E-05
2190	5.272E+04	3.903E-08	1.501E-05
2191	5.272E+04	3.712E-08	1.428E-05
2192	5.272E+04	3.531E-08	1.358E-05
2193	5.272E+04	3.359E-08	1.292E-05
2194	5.272E+04	3.195E-08	1.229E-05
2195	5.272E+04	3.040E-08	1.169E-05
2196	5.272E+04	2.891E-08	1.112E-05
2197	5.272E+04	2.750E-08	1.058E-05
2198	5.272E+04	2.616E-08	1.006E-05
2199	5.272E+04	2.489E-08	9.573E-06
2200	5.272E+04	2.367E-08	9.106E-06
2201	5.272E+04	2.252E-08	8.662E-06
2202	5.272E+04	2.142E-08	8.240E-06
2203	5.272E+04	2.037E-08	7.838E-06

Table D-46. Emisson Rate of m,p-Xylene from Parcel 3 for Years 1975 to 2203.

Source: H:\3000\030177~2.000\030177~1.003\BUSHVA~1\STRATA3.PRM

Model Parameters

Lo : 170.00 m^3 / Mg
k : 0.0500 1/yr
NMOC : 1800.00 ppmv
Methane : 65.6000 % volume
Carbon Dioxide : 34.4000 % volume
Air Pollutant : mpXylene (HAP/VOC)
Molecular Wt = 106.17 Concentration = 7.090000 ppmV

Landfill Parameters

Landfill type : Co-Disposal
Year Opened : 1974 Current Year : 2004 Closure Year: 2004
Capacity : 52718 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 0.00 Mg/year

Model Results

Year	Refuse In Place (Mg)	mpXylene (HAP/VOC) Emission Rate (Mg/yr)	(Cubic m/yr)
1975	5.272E+03	2.139E-03	4.843E-01
1976	1.054E+04	4.173E-03	9.450E-01
1977	1.582E+04	6.108E-03	1.383E+00
1978	2.109E+04	7.949E-03	1.800E+00
1979	2.636E+04	9.700E-03	2.197E+00
1980	3.163E+04	1.137E-02	2.574E+00
1981	3.690E+04	1.295E-02	2.933E+00
1982	4.217E+04	1.446E-02	3.274E+00
1983	4.745E+04	1.589E-02	3.598E+00
1984	5.272E+04	1.725E-02	3.907E+00
1985	5.272E+04	1.641E-02	3.717E+00
1986	5.272E+04	1.561E-02	3.535E+00
1987	5.272E+04	1.485E-02	3.363E+00
1988	5.272E+04	1.413E-02	3.199E+00
1989	5.272E+04	1.344E-02	3.043E+00
1990	5.272E+04	1.278E-02	2.895E+00
1991	5.272E+04	1.216E-02	2.753E+00
1992	5.272E+04	1.157E-02	2.619E+00
1993	5.272E+04	1.100E-02	2.491E+00
1994	5.272E+04	1.047E-02	2.370E+00
1995	5.272E+04	9.955E-03	2.254E+00
1996	5.272E+04	9.469E-03	2.144E+00
1997	5.272E+04	9.007E-03	2.040E+00
1998	5.272E+04	8.568E-03	1.940E+00
1999	5.272E+04	8.150E-03	1.846E+00
2000	5.272E+04	7.753E-03	1.756E+00
2001	5.272E+04	7.375E-03	1.670E+00
2002	5.272E+04	7.015E-03	1.589E+00
2003	5.272E+04	6.673E-03	1.511E+00
2004	5.272E+04	6.347E-03	1.437E+00
2005	5.272E+04	6.038E-03	1.367E+00
2006	5.272E+04	5.743E-03	1.301E+00
2007	5.272E+04	5.463E-03	1.237E+00
2008	5.272E+04	5.197E-03	1.177E+00
2009	5.272E+04	4.943E-03	1.119E+00
2010	5.272E+04	4.702E-03	1.065E+00
2011	5.272E+04	4.473E-03	1.013E+00
2012	5.272E+04	4.255E-03	9.635E-01
2013	5.272E+04	4.047E-03	9.165E-01
2014	5.272E+04	3.850E-03	8.718E-01
2015	5.272E+04	3.662E-03	8.293E-01
2016	5.272E+04	3.484E-03	7.889E-01
2017	5.272E+04	3.314E-03	7.504E-01
2018	5.272E+04	3.152E-03	7.138E-01

continued

Table D-46. Emisson Rate of m,p-Xylene from Parcel 3 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2019	5.272E+04	2.998E-03	6.790E-01
2020	5.272E+04	2.852E-03	6.459E-01
2021	5.272E+04	2.713E-03	6.144E-01
2022	5.272E+04	2.581E-03	5.844E-01
2023	5.272E+04	2.455E-03	5.559E-01
2024	5.272E+04	2.335E-03	5.288E-01
2025	5.272E+04	2.221E-03	5.030E-01
2026	5.272E+04	2.113E-03	4.785E-01
2027	5.272E+04	2.010E-03	4.551E-01
2028	5.272E+04	1.912E-03	4.329E-01
2029	5.272E+04	1.819E-03	4.118E-01
2030	5.272E+04	1.730E-03	3.917E-01
2031	5.272E+04	1.646E-03	3.726E-01
2032	5.272E+04	1.565E-03	3.545E-01
2033	5.272E+04	1.489E-03	3.372E-01
2034	5.272E+04	1.416E-03	3.207E-01
2035	5.272E+04	1.347E-03	3.051E-01
2036	5.272E+04	1.282E-03	2.902E-01
2037	5.272E+04	1.219E-03	2.761E-01
2038	5.272E+04	1.160E-03	2.626E-01
2039	5.272E+04	1.103E-03	2.498E-01
2040	5.272E+04	1.049E-03	2.376E-01
2041	5.272E+04	9.981E-04	2.260E-01
2042	5.272E+04	9.494E-04	2.150E-01
2043	5.272E+04	9.031E-04	2.045E-01
2044	5.272E+04	8.590E-04	1.945E-01
2045	5.272E+04	8.171E-04	1.850E-01
2046	5.272E+04	7.773E-04	1.760E-01
2047	5.272E+04	7.394E-04	1.674E-01
2048	5.272E+04	7.033E-04	1.593E-01
2049	5.272E+04	6.690E-04	1.515E-01
2050	5.272E+04	6.364E-04	1.441E-01
2051	5.272E+04	6.053E-04	1.371E-01
2052	5.272E+04	5.758E-04	1.304E-01
2053	5.272E+04	5.477E-04	1.240E-01
2054	5.272E+04	5.210E-04	1.180E-01
2055	5.272E+04	4.956E-04	1.122E-01
2056	5.272E+04	4.714E-04	1.068E-01
2057	5.272E+04	4.485E-04	1.016E-01
2058	5.272E+04	4.266E-04	9.660E-02
2059	5.272E+04	4.058E-04	9.189E-02
2060	5.272E+04	3.860E-04	8.741E-02
2061	5.272E+04	3.672E-04	8.315E-02
2062	5.272E+04	3.493E-04	7.909E-02
2063	5.272E+04	3.322E-04	7.523E-02
2064	5.272E+04	3.160E-04	7.156E-02
2065	5.272E+04	3.006E-04	6.807E-02
2066	5.272E+04	2.859E-04	6.475E-02
2067	5.272E+04	2.720E-04	6.160E-02
2068	5.272E+04	2.587E-04	5.859E-02
2069	5.272E+04	2.461E-04	5.573E-02
2070	5.272E+04	2.341E-04	5.302E-02
2071	5.272E+04	2.227E-04	5.043E-02
2072	5.272E+04	2.118E-04	4.797E-02
2073	5.272E+04	2.015E-04	4.563E-02
2074	5.272E+04	1.917E-04	4.341E-02
2075	5.272E+04	1.823E-04	4.129E-02
2076	5.272E+04	1.734E-04	3.928E-02
2077	5.272E+04	1.650E-04	3.736E-02
2078	5.272E+04	1.569E-04	3.554E-02
2079	5.272E+04	1.493E-04	3.380E-02
2080	5.272E+04	1.420E-04	3.216E-02
2081	5.272E+04	1.351E-04	3.059E-02
2082	5.272E+04	1.285E-04	2.910E-02
2083	5.272E+04	1.222E-04	2.768E-02
2084	5.272E+04	1.163E-04	2.633E-02
2085	5.272E+04	1.106E-04	2.504E-02
2086	5.272E+04	1.052E-04	2.382E-02
2087	5.272E+04	1.001E-04	2.266E-02
2088	5.272E+04	9.518E-05	2.155E-02

continued

Table D-46. Emisson Rate of m,p-Xylene from Parcel 3 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2089	5.272E+04	9.054E-05	2.050E-02
2090	5.272E+04	8.613E-05	1.950E-02
2091	5.272E+04	8.193E-05	1.855E-02
2092	5.272E+04	7.793E-05	1.765E-02
2093	5.272E+04	7.413E-05	1.679E-02
2094	5.272E+04	7.051E-05	1.597E-02
2095	5.272E+04	6.707E-05	1.519E-02
2096	5.272E+04	6.380E-05	1.445E-02
2097	5.272E+04	6.069E-05	1.374E-02
2098	5.272E+04	5.773E-05	1.307E-02
2099	5.272E+04	5.492E-05	1.244E-02
2100	5.272E+04	5.224E-05	1.183E-02
2101	5.272E+04	4.969E-05	1.125E-02
2102	5.272E+04	4.727E-05	1.070E-02
2103	5.272E+04	4.496E-05	1.018E-02
2104	5.272E+04	4.277E-05	9.685E-03
2105	5.272E+04	4.068E-05	9.213E-03
2106	5.272E+04	3.870E-05	8.763E-03
2107	5.272E+04	3.681E-05	8.336E-03
2108	5.272E+04	3.502E-05	7.930E-03
2109	5.272E+04	3.331E-05	7.543E-03
2110	5.272E+04	3.168E-05	7.175E-03
2111	5.272E+04	3.014E-05	6.825E-03
2112	5.272E+04	2.867E-05	6.492E-03
2113	5.272E+04	2.727E-05	6.176E-03
2114	5.272E+04	2.594E-05	5.874E-03
2115	5.272E+04	2.468E-05	5.588E-03
2116	5.272E+04	2.347E-05	5.315E-03
2117	5.272E+04	2.233E-05	5.056E-03
2118	5.272E+04	2.124E-05	4.809E-03
2119	5.272E+04	2.020E-05	4.575E-03
2120	5.272E+04	1.922E-05	4.352E-03
2121	5.272E+04	1.828E-05	4.140E-03
2122	5.272E+04	1.739E-05	3.938E-03
2123	5.272E+04	1.654E-05	3.746E-03
2124	5.272E+04	1.573E-05	3.563E-03
2125	5.272E+04	1.497E-05	3.389E-03
2126	5.272E+04	1.424E-05	3.224E-03
2127	5.272E+04	1.354E-05	3.067E-03
2128	5.272E+04	1.288E-05	2.917E-03
2129	5.272E+04	1.225E-05	2.775E-03
2130	5.272E+04	1.166E-05	2.640E-03
2131	5.272E+04	1.109E-05	2.511E-03
2132	5.272E+04	1.055E-05	2.388E-03
2133	5.272E+04	1.003E-05	2.272E-03
2134	5.272E+04	9.543E-06	2.161E-03
2135	5.272E+04	9.078E-06	2.056E-03
2136	5.272E+04	8.635E-06	1.955E-03
2137	5.272E+04	8.214E-06	1.860E-03
2138	5.272E+04	7.813E-06	1.769E-03
2139	5.272E+04	7.432E-06	1.683E-03
2140	5.272E+04	7.070E-06	1.601E-03
2141	5.272E+04	6.725E-06	1.523E-03
2142	5.272E+04	6.397E-06	1.449E-03
2143	5.272E+04	6.085E-06	1.378E-03
2144	5.272E+04	5.788E-06	1.311E-03
2145	5.272E+04	5.506E-06	1.247E-03
2146	5.272E+04	5.237E-06	1.186E-03
2147	5.272E+04	4.982E-06	1.128E-03
2148	5.272E+04	4.739E-06	1.073E-03
2149	5.272E+04	4.508E-06	1.021E-03
2150	5.272E+04	4.288E-06	9.710E-04
2151	5.272E+04	4.079E-06	9.237E-04
2152	5.272E+04	3.880E-06	8.786E-04
2153	5.272E+04	3.691E-06	8.358E-04
2154	5.272E+04	3.511E-06	7.950E-04
2155	5.272E+04	3.339E-06	7.562E-04
2156	5.272E+04	3.177E-06	7.193E-04
2157	5.272E+04	3.022E-06	6.843E-04
2158	5.272E+04	2.874E-06	6.509E-04

continued

Table D-46. Emisson Rate of m,p-Xylene from Parcel 3 for Years 1975 to 2203 (concluded).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2159	5.272E+04	2.734E-06	6.192E-04
2160	5.272E+04	2.601E-06	5.890E-04
2161	5.272E+04	2.474E-06	5.602E-04
2162	5.272E+04	2.353E-06	5.329E-04
2163	5.272E+04	2.238E-06	5.069E-04
2164	5.272E+04	2.129E-06	4.822E-04
2165	5.272E+04	2.025E-06	4.587E-04
2166	5.272E+04	1.927E-06	4.363E-04
2167	5.272E+04	1.833E-06	4.150E-04
2168	5.272E+04	1.743E-06	3.948E-04
2169	5.272E+04	1.658E-06	3.755E-04
2170	5.272E+04	1.577E-06	3.572E-04
2171	5.272E+04	1.501E-06	3.398E-04
2172	5.272E+04	1.427E-06	3.232E-04
2173	5.272E+04	1.358E-06	3.075E-04
2174	5.272E+04	1.292E-06	2.925E-04
2175	5.272E+04	1.229E-06	2.782E-04
2176	5.272E+04	1.169E-06	2.646E-04
2177	5.272E+04	1.112E-06	2.517E-04
2178	5.272E+04	1.057E-06	2.395E-04
2179	5.272E+04	1.006E-06	2.278E-04
2180	5.272E+04	9.568E-07	2.167E-04
2181	5.272E+04	9.101E-07	2.061E-04
2182	5.272E+04	8.657E-07	1.960E-04
2183	5.272E+04	8.235E-07	1.865E-04
2184	5.272E+04	7.833E-07	1.774E-04
2185	5.272E+04	7.451E-07	1.687E-04
2186	5.272E+04	7.088E-07	1.605E-04
2187	5.272E+04	6.742E-07	1.527E-04
2188	5.272E+04	6.413E-07	1.452E-04
2189	5.272E+04	6.101E-07	1.382E-04
2190	5.272E+04	5.803E-07	1.314E-04
2191	5.272E+04	5.520E-07	1.250E-04
2192	5.272E+04	5.251E-07	1.189E-04
2193	5.272E+04	4.995E-07	1.131E-04
2194	5.272E+04	4.751E-07	1.076E-04
2195	5.272E+04	4.519E-07	1.023E-04
2196	5.272E+04	4.299E-07	9.735E-05
2197	5.272E+04	4.089E-07	9.261E-05
2198	5.272E+04	3.890E-07	8.809E-05
2199	5.272E+04	3.700E-07	8.379E-05
2200	5.272E+04	3.520E-07	7.971E-05
2201	5.272E+04	3.348E-07	7.582E-05
2202	5.272E+04	3.185E-07	7.212E-05
2203	5.272E+04	3.029E-07	6.860E-05

Table D-47. Emisson Rate of o-Xylene from Parcel 3 for Years 1975 to 2203.

Source: H:\3000\030177~2.000\030177~1.003\BUSHVA~1\STRATA3.PRM

Model Parameters

Lo : 170.00 m^3 / Mg
k : 0.0500 1/yr
NMOC : 1800.00 ppmv
Methane : 65.6000 % volume
Carbon Dioxide : 34.4000 % volume
Air Pollutant : oXylene (HAP/VOC)
Molecular Wt = 106.17 Concentration = 0.950000 ppmV

Landfill Parameters

Landfill type : Co-Disposal
Year Opened : 1974 Current Year : 2004 Closure Year: 2004
Capacity : 52718 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 0.00 Mg/year

Model Results

Year	Refuse In Place (Mg)	oXylene (HAP/VOC) Emission Rate (Mg/yr)	(Cubic m/yr)
1975	5.272E+03	2.866E-04	6.489E-02
1976	1.054E+04	5.591E-04	1.266E-01
1977	1.582E+04	8.184E-04	1.853E-01
1978	2.109E+04	1.065E-03	2.412E-01
1979	2.636E+04	1.300E-03	2.943E-01
1980	3.163E+04	1.523E-03	3.449E-01
1981	3.690E+04	1.735E-03	3.929E-01
1982	4.217E+04	1.937E-03	4.387E-01
1983	4.745E+04	2.129E-03	4.822E-01
1984	5.272E+04	2.312E-03	5.235E-01
1985	5.272E+04	2.199E-03	4.980E-01
1986	5.272E+04	2.092E-03	4.737E-01
1987	5.272E+04	1.990E-03	4.506E-01
1988	5.272E+04	1.893E-03	4.286E-01
1989	5.272E+04	1.801E-03	4.077E-01
1990	5.272E+04	1.713E-03	3.878E-01
1991	5.272E+04	1.629E-03	3.689E-01
1992	5.272E+04	1.550E-03	3.509E-01
1993	5.272E+04	1.474E-03	3.338E-01
1994	5.272E+04	1.402E-03	3.175E-01
1995	5.272E+04	1.334E-03	3.021E-01
1996	5.272E+04	1.269E-03	2.873E-01
1997	5.272E+04	1.207E-03	2.733E-01
1998	5.272E+04	1.148E-03	2.600E-01
1999	5.272E+04	1.092E-03	2.473E-01
2000	5.272E+04	1.039E-03	2.352E-01
2001	5.272E+04	9.881E-04	2.238E-01
2002	5.272E+04	9.400E-04	2.129E-01
2003	5.272E+04	8.941E-04	2.025E-01
2004	5.272E+04	8.505E-04	1.926E-01
2005	5.272E+04	8.090E-04	1.832E-01
2006	5.272E+04	7.696E-04	1.743E-01
2007	5.272E+04	7.320E-04	1.658E-01
2008	5.272E+04	6.963E-04	1.577E-01
2009	5.272E+04	6.624E-04	1.500E-01
2010	5.272E+04	6.301E-04	1.427E-01
2011	5.272E+04	5.993E-04	1.357E-01
2012	5.272E+04	5.701E-04	1.291E-01
2013	5.272E+04	5.423E-04	1.228E-01
2014	5.272E+04	5.159E-04	1.168E-01
2015	5.272E+04	4.907E-04	1.111E-01
2016	5.272E+04	4.668E-04	1.057E-01
2017	5.272E+04	4.440E-04	1.005E-01
2018	5.272E+04	4.223E-04	9.564E-02

continued

Table D-47. Emisson Rate of o-Xylene from Parcel 3 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2019	5.272E+04	4.017E-04	9.098E-02
2020	5.272E+04	3.822E-04	8.654E-02
2021	5.272E+04	3.635E-04	8.232E-02
2022	5.272E+04	3.458E-04	7.831E-02
2023	5.272E+04	3.289E-04	7.449E-02
2024	5.272E+04	3.129E-04	7.085E-02
2025	5.272E+04	2.976E-04	6.740E-02
2026	5.272E+04	2.831E-04	6.411E-02
2027	5.272E+04	2.693E-04	6.098E-02
2028	5.272E+04	2.562E-04	5.801E-02
2029	5.272E+04	2.437E-04	5.518E-02
2030	5.272E+04	2.318E-04	5.249E-02
2031	5.272E+04	2.205E-04	4.993E-02
2032	5.272E+04	2.097E-04	4.749E-02
2033	5.272E+04	1.995E-04	4.518E-02
2034	5.272E+04	1.898E-04	4.297E-02
2035	5.272E+04	1.805E-04	4.088E-02
2036	5.272E+04	1.717E-04	3.889E-02
2037	5.272E+04	1.633E-04	3.699E-02
2038	5.272E+04	1.554E-04	3.518E-02
2039	5.272E+04	1.478E-04	3.347E-02
2040	5.272E+04	1.406E-04	3.184E-02
2041	5.272E+04	1.337E-04	3.028E-02
2042	5.272E+04	1.272E-04	2.881E-02
2043	5.272E+04	1.210E-04	2.740E-02
2044	5.272E+04	1.151E-04	2.607E-02
2045	5.272E+04	1.095E-04	2.479E-02
2046	5.272E+04	1.041E-04	2.359E-02
2047	5.272E+04	9.907E-05	2.243E-02
2048	5.272E+04	9.424E-05	2.134E-02
2049	5.272E+04	8.964E-05	2.030E-02
2050	5.272E+04	8.527E-05	1.931E-02
2051	5.272E+04	8.111E-05	1.837E-02
2052	5.272E+04	7.716E-05	1.747E-02
2053	5.272E+04	7.339E-05	1.662E-02
2054	5.272E+04	6.981E-05	1.581E-02
2055	5.272E+04	6.641E-05	1.504E-02
2056	5.272E+04	6.317E-05	1.431E-02
2057	5.272E+04	6.009E-05	1.361E-02
2058	5.272E+04	5.716E-05	1.294E-02
2059	5.272E+04	5.437E-05	1.231E-02
2060	5.272E+04	5.172E-05	1.171E-02
2061	5.272E+04	4.920E-05	1.114E-02
2062	5.272E+04	4.680E-05	1.060E-02
2063	5.272E+04	4.452E-05	1.008E-02
2064	5.272E+04	4.234E-05	9.589E-03
2065	5.272E+04	4.028E-05	9.121E-03
2066	5.272E+04	3.831E-05	8.676E-03
2067	5.272E+04	3.645E-05	8.253E-03
2068	5.272E+04	3.467E-05	7.851E-03
2069	5.272E+04	3.298E-05	7.468E-03
2070	5.272E+04	3.137E-05	7.104E-03
2071	5.272E+04	2.984E-05	6.757E-03
2072	5.272E+04	2.838E-05	6.428E-03
2073	5.272E+04	2.700E-05	6.114E-03
2074	5.272E+04	2.568E-05	5.816E-03
2075	5.272E+04	2.443E-05	5.532E-03
2076	5.272E+04	2.324E-05	5.263E-03
2077	5.272E+04	2.211E-05	5.006E-03
2078	5.272E+04	2.103E-05	4.762E-03
2079	5.272E+04	2.000E-05	4.530E-03
2080	5.272E+04	1.903E-05	4.309E-03
2081	5.272E+04	1.810E-05	4.098E-03
2082	5.272E+04	1.722E-05	3.899E-03
2083	5.272E+04	1.638E-05	3.708E-03
2084	5.272E+04	1.558E-05	3.528E-03
2085	5.272E+04	1.482E-05	3.356E-03
2086	5.272E+04	1.410E-05	3.192E-03
2087	5.272E+04	1.341E-05	3.036E-03
2088	5.272E+04	1.275E-05	2.888E-03

continued

Table D-47. Emisson Rate of o-Xylene from Parcel 3 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2089	5.272E+04	1.213E-05	2.747E-03
2090	5.272E+04	1.154E-05	2.613E-03
2091	5.272E+04	1.098E-05	2.486E-03
2092	5.272E+04	1.044E-05	2.365E-03
2093	5.272E+04	9.933E-06	2.249E-03
2094	5.272E+04	9.448E-06	2.140E-03
2095	5.272E+04	8.987E-06	2.035E-03
2096	5.272E+04	8.549E-06	1.936E-03
2097	5.272E+04	8.132E-06	1.842E-03
2098	5.272E+04	7.736E-06	1.752E-03
2099	5.272E+04	7.358E-06	1.666E-03
2100	5.272E+04	6.999E-06	1.585E-03
2101	5.272E+04	6.658E-06	1.508E-03
2102	5.272E+04	6.333E-06	1.434E-03
2103	5.272E+04	6.024E-06	1.364E-03
2104	5.272E+04	5.731E-06	1.298E-03
2105	5.272E+04	5.451E-06	1.234E-03
2106	5.272E+04	5.185E-06	1.174E-03
2107	5.272E+04	4.932E-06	1.117E-03
2108	5.272E+04	4.692E-06	1.062E-03
2109	5.272E+04	4.463E-06	1.011E-03
2110	5.272E+04	4.245E-06	9.614E-04
2111	5.272E+04	4.038E-06	9.145E-04
2112	5.272E+04	3.841E-06	8.699E-04
2113	5.272E+04	3.654E-06	8.275E-04
2114	5.272E+04	3.476E-06	7.871E-04
2115	5.272E+04	3.306E-06	7.487E-04
2116	5.272E+04	3.145E-06	7.122E-04
2117	5.272E+04	2.992E-06	6.775E-04
2118	5.272E+04	2.846E-06	6.444E-04
2119	5.272E+04	2.707E-06	6.130E-04
2120	5.272E+04	2.575E-06	5.831E-04
2121	5.272E+04	2.449E-06	5.547E-04
2122	5.272E+04	2.330E-06	5.276E-04
2123	5.272E+04	2.216E-06	5.019E-04
2124	5.272E+04	2.108E-06	4.774E-04
2125	5.272E+04	2.005E-06	4.541E-04
2126	5.272E+04	1.908E-06	4.320E-04
2127	5.272E+04	1.815E-06	4.109E-04
2128	5.272E+04	1.726E-06	3.909E-04
2129	5.272E+04	1.642E-06	3.718E-04
2130	5.272E+04	1.562E-06	3.537E-04
2131	5.272E+04	1.486E-06	3.364E-04
2132	5.272E+04	1.413E-06	3.200E-04
2133	5.272E+04	1.344E-06	3.044E-04
2134	5.272E+04	1.279E-06	2.896E-04
2135	5.272E+04	1.216E-06	2.754E-04
2136	5.272E+04	1.157E-06	2.620E-04
2137	5.272E+04	1.101E-06	2.492E-04
2138	5.272E+04	1.047E-06	2.371E-04
2139	5.272E+04	9.958E-07	2.255E-04
2140	5.272E+04	9.473E-07	2.145E-04
2141	5.272E+04	9.011E-07	2.041E-04
2142	5.272E+04	8.571E-07	1.941E-04
2143	5.272E+04	8.153E-07	1.846E-04
2144	5.272E+04	7.756E-07	1.756E-04
2145	5.272E+04	7.377E-07	1.671E-04
2146	5.272E+04	7.018E-07	1.589E-04
2147	5.272E+04	6.675E-07	1.512E-04
2148	5.272E+04	6.350E-07	1.438E-04
2149	5.272E+04	6.040E-07	1.368E-04
2150	5.272E+04	5.745E-07	1.301E-04
2151	5.272E+04	5.465E-07	1.238E-04
2152	5.272E+04	5.199E-07	1.177E-04
2153	5.272E+04	4.945E-07	1.120E-04
2154	5.272E+04	4.704E-07	1.065E-04
2155	5.272E+04	4.475E-07	1.013E-04
2156	5.272E+04	4.256E-07	9.639E-05
2157	5.272E+04	4.049E-07	9.169E-05
2158	5.272E+04	3.851E-07	8.721E-05

continued

Table D-47. Emisson Rate of o-Xylene from Parcel 3 for Years 1975 to 2203 (concluded).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2159	5.272E+04	3.663E-07	8.296E-05
2160	5.272E+04	3.485E-07	7.891E-05
2161	5.272E+04	3.315E-07	7.507E-05
2162	5.272E+04	3.153E-07	7.141E-05
2163	5.272E+04	2.999E-07	6.792E-05
2164	5.272E+04	2.853E-07	6.461E-05
2165	5.272E+04	2.714E-07	6.146E-05
2166	5.272E+04	2.582E-07	5.846E-05
2167	5.272E+04	2.456E-07	5.561E-05
2168	5.272E+04	2.336E-07	5.290E-05
2169	5.272E+04	2.222E-07	5.032E-05
2170	5.272E+04	2.114E-07	4.786E-05
2171	5.272E+04	2.011E-07	4.553E-05
2172	5.272E+04	1.913E-07	4.331E-05
2173	5.272E+04	1.819E-07	4.120E-05
2174	5.272E+04	1.731E-07	3.919E-05
2175	5.272E+04	1.646E-07	3.728E-05
2176	5.272E+04	1.566E-07	3.546E-05
2177	5.272E+04	1.489E-07	3.373E-05
2178	5.272E+04	1.417E-07	3.208E-05
2179	5.272E+04	1.348E-07	3.052E-05
2180	5.272E+04	1.282E-07	2.903E-05
2181	5.272E+04	1.219E-07	2.762E-05
2182	5.272E+04	1.160E-07	2.627E-05
2183	5.272E+04	1.103E-07	2.499E-05
2184	5.272E+04	1.050E-07	2.377E-05
2185	5.272E+04	9.984E-08	2.261E-05
2186	5.272E+04	9.497E-08	2.151E-05
2187	5.272E+04	9.034E-08	2.046E-05
2188	5.272E+04	8.593E-08	1.946E-05
2189	5.272E+04	8.174E-08	1.851E-05
2190	5.272E+04	7.776E-08	1.761E-05
2191	5.272E+04	7.396E-08	1.675E-05
2192	5.272E+04	7.036E-08	1.593E-05
2193	5.272E+04	6.693E-08	1.516E-05
2194	5.272E+04	6.366E-08	1.442E-05
2195	5.272E+04	6.056E-08	1.371E-05
2196	5.272E+04	5.760E-08	1.304E-05
2197	5.272E+04	5.479E-08	1.241E-05
2198	5.272E+04	5.212E-08	1.180E-05
2199	5.272E+04	4.958E-08	1.123E-05
2200	5.272E+04	4.716E-08	1.068E-05
2201	5.272E+04	4.486E-08	1.016E-05
2202	5.272E+04	4.267E-08	9.664E-06
2203	5.272E+04	4.059E-08	9.192E-06

Table D-48. Emisson Rate of Methane from Parcel 4 for Years 1975 to 2203.

Source: H:\3000\030177~2.000\030177~1.003\BUSHVA~1\STRATA4.PRM

Model Parameters

Lo : 170.00 m^3 / Mg
k : 0.0500 1/yr
NMOC : 1870.00 ppmv
Methane : 64.0000 % volume
Carbon Dioxide : 36.0000 % volume

Landfill Parameters

Landfill type : Co-Disposal
Year Opened : 1974 Current Year : 2004 Closure Year: 2003
Capacity : 30752 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 5271.79 Mg/year

Model Results

Year	Refuse In Place (Mg)	Methane Emission Rate (Mg/yr)	Methane Emission Rate (Cubic m/yr)
1975	3.075E+03	1.744E+01	2.614E+04
1976	6.150E+03	3.403E+01	5.100E+04
1977	9.226E+03	4.981E+01	7.466E+04
1978	1.230E+04	6.482E+01	9.715E+04
1979	1.538E+04	7.909E+01	1.186E+05
1980	1.845E+04	9.268E+01	1.389E+05
1981	2.153E+04	1.056E+02	1.583E+05
1982	2.460E+04	1.179E+02	1.767E+05
1983	2.768E+04	1.296E+02	1.942E+05
1984	3.075E+04	1.407E+02	2.109E+05
1985	3.075E+04	1.338E+02	2.006E+05
1986	3.075E+04	1.273E+02	1.908E+05
1987	3.075E+04	1.211E+02	1.815E+05
1988	3.075E+04	1.152E+02	1.727E+05
1989	3.075E+04	1.096E+02	1.642E+05
1990	3.075E+04	1.042E+02	1.562E+05
1991	3.075E+04	9.914E+01	1.486E+05
1992	3.075E+04	9.431E+01	1.414E+05
1993	3.075E+04	8.971E+01	1.345E+05
1994	3.075E+04	8.533E+01	1.279E+05
1995	3.075E+04	8.117E+01	1.217E+05
1996	3.075E+04	7.721E+01	1.157E+05
1997	3.075E+04	7.345E+01	1.101E+05
1998	3.075E+04	6.987E+01	1.047E+05
1999	3.075E+04	6.646E+01	9.961E+04
2000	3.075E+04	6.322E+01	9.476E+04
2001	3.075E+04	6.013E+01	9.014E+04
2002	3.075E+04	5.720E+01	8.574E+04
2003	3.075E+04	5.441E+01	8.156E+04
2004	3.075E+04	5.176E+01	7.758E+04
2005	3.075E+04	4.923E+01	7.380E+04
2006	3.075E+04	4.683E+01	7.020E+04
2007	3.075E+04	4.455E+01	6.677E+04
2008	3.075E+04	4.238E+01	6.352E+04
2009	3.075E+04	4.031E+01	6.042E+04
2010	3.075E+04	3.834E+01	5.747E+04
2011	3.075E+04	3.647E+01	5.467E+04
2012	3.075E+04	3.469E+01	5.200E+04
2013	3.075E+04	3.300E+01	4.947E+04
2014	3.075E+04	3.139E+01	4.705E+04
2015	3.075E+04	2.986E+01	4.476E+04
2016	3.075E+04	2.841E+01	4.258E+04
2017	3.075E+04	2.702E+01	4.050E+04
2018	3.075E+04	2.570E+01	3.853E+04
2019	3.075E+04	2.445E+01	3.665E+04
2020	3.075E+04	2.326E+01	3.486E+04

continued

Table D-48. Emisson Rate of Methane from Parcel 4 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2021	3.075E+04	2.212E+01	3.316E+04
2022	3.075E+04	2.104E+01	3.154E+04
2023	3.075E+04	2.002E+01	3.000E+04
2024	3.075E+04	1.904E+01	2.854E+04
2025	3.075E+04	1.811E+01	2.715E+04
2026	3.075E+04	1.723E+01	2.582E+04
2027	3.075E+04	1.639E+01	2.456E+04
2028	3.075E+04	1.559E+01	2.337E+04
2029	3.075E+04	1.483E+01	2.223E+04
2030	3.075E+04	1.411E+01	2.114E+04
2031	3.075E+04	1.342E+01	2.011E+04
2032	3.075E+04	1.276E+01	1.913E+04
2033	3.075E+04	1.214E+01	1.820E+04
2034	3.075E+04	1.155E+01	1.731E+04
2035	3.075E+04	1.099E+01	1.647E+04
2036	3.075E+04	1.045E+01	1.566E+04
2037	3.075E+04	9.940E+00	1.490E+04
2038	3.075E+04	9.455E+00	1.417E+04
2039	3.075E+04	8.994E+00	1.348E+04
2040	3.075E+04	8.555E+00	1.282E+04
2041	3.075E+04	8.138E+00	1.220E+04
2042	3.075E+04	7.741E+00	1.160E+04
2043	3.075E+04	7.364E+00	1.104E+04
2044	3.075E+04	7.005E+00	1.050E+04
2045	3.075E+04	6.663E+00	9.987E+03
2046	3.075E+04	6.338E+00	9.500E+03
2047	3.075E+04	6.029E+00	9.037E+03
2048	3.075E+04	5.735E+00	8.596E+03
2049	3.075E+04	5.455E+00	8.177E+03
2050	3.075E+04	5.189E+00	7.778E+03
2051	3.075E+04	4.936E+00	7.399E+03
2052	3.075E+04	4.695E+00	7.038E+03
2053	3.075E+04	4.466E+00	6.695E+03
2054	3.075E+04	4.249E+00	6.368E+03
2055	3.075E+04	4.041E+00	6.058E+03
2056	3.075E+04	3.844E+00	5.762E+03
2057	3.075E+04	3.657E+00	5.481E+03
2058	3.075E+04	3.478E+00	5.214E+03
2059	3.075E+04	3.309E+00	4.960E+03
2060	3.075E+04	3.147E+00	4.718E+03
2061	3.075E+04	2.994E+00	4.488E+03
2062	3.075E+04	2.848E+00	4.269E+03
2063	3.075E+04	2.709E+00	4.061E+03
2064	3.075E+04	2.577E+00	3.862E+03
2065	3.075E+04	2.451E+00	3.674E+03
2066	3.075E+04	2.332E+00	3.495E+03
2067	3.075E+04	2.218E+00	3.324E+03
2068	3.075E+04	2.110E+00	3.162E+03
2069	3.075E+04	2.007E+00	3.008E+03
2070	3.075E+04	1.909E+00	2.861E+03
2071	3.075E+04	1.816E+00	2.722E+03
2072	3.075E+04	1.727E+00	2.589E+03
2073	3.075E+04	1.643E+00	2.463E+03
2074	3.075E+04	1.563E+00	2.343E+03
2075	3.075E+04	1.487E+00	2.228E+03
2076	3.075E+04	1.414E+00	2.120E+03
2077	3.075E+04	1.345E+00	2.016E+03
2078	3.075E+04	1.280E+00	1.918E+03
2079	3.075E+04	1.217E+00	1.825E+03
2080	3.075E+04	1.158E+00	1.736E+03
2081	3.075E+04	1.101E+00	1.651E+03
2082	3.075E+04	1.048E+00	1.570E+03
2083	3.075E+04	9.966E-01	1.494E+03
2084	3.075E+04	9.480E-01	1.421E+03
2085	3.075E+04	9.017E-01	1.352E+03
2086	3.075E+04	8.578E-01	1.286E+03
2087	3.075E+04	8.159E-01	1.223E+03
2088	3.075E+04	7.761E-01	1.163E+03
2089	3.075E+04	7.383E-01	1.107E+03
2090	3.075E+04	7.023E-01	1.053E+03

continued

Table D-48. Emisson Rate of Methane from Parcel 4 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2091	3.075E+04	6.680E-01	1.001E+03
2092	3.075E+04	6.354E-01	9.525E+02
2093	3.075E+04	6.045E-01	9.060E+02
2094	3.075E+04	5.750E-01	8.618E+02
2095	3.075E+04	5.469E-01	8.198E+02
2096	3.075E+04	5.203E-01	7.798E+02
2097	3.075E+04	4.949E-01	7.418E+02
2098	3.075E+04	4.707E-01	7.056E+02
2099	3.075E+04	4.478E-01	6.712E+02
2100	3.075E+04	4.260E-01	6.385E+02
2101	3.075E+04	4.052E-01	6.073E+02
2102	3.075E+04	3.854E-01	5.777E+02
2103	3.075E+04	3.666E-01	5.495E+02
2104	3.075E+04	3.487E-01	5.227E+02
2105	3.075E+04	3.317E-01	4.972E+02
2106	3.075E+04	3.156E-01	4.730E+02
2107	3.075E+04	3.002E-01	4.499E+02
2108	3.075E+04	2.855E-01	4.280E+02
2109	3.075E+04	2.716E-01	4.071E+02
2110	3.075E+04	2.584E-01	3.872E+02
2111	3.075E+04	2.458E-01	3.684E+02
2112	3.075E+04	2.338E-01	3.504E+02
2113	3.075E+04	2.224E-01	3.333E+02
2114	3.075E+04	2.115E-01	3.171E+02
2115	3.075E+04	2.012E-01	3.016E+02
2116	3.075E+04	1.914E-01	2.869E+02
2117	3.075E+04	1.821E-01	2.729E+02
2118	3.075E+04	1.732E-01	2.596E+02
2119	3.075E+04	1.647E-01	2.469E+02
2120	3.075E+04	1.567E-01	2.349E+02
2121	3.075E+04	1.491E-01	2.234E+02
2122	3.075E+04	1.418E-01	2.125E+02
2123	3.075E+04	1.349E-01	2.022E+02
2124	3.075E+04	1.283E-01	1.923E+02
2125	3.075E+04	1.220E-01	1.829E+02
2126	3.075E+04	1.161E-01	1.740E+02
2127	3.075E+04	1.104E-01	1.655E+02
2128	3.075E+04	1.050E-01	1.574E+02
2129	3.075E+04	9.992E-02	1.498E+02
2130	3.075E+04	9.504E-02	1.425E+02
2131	3.075E+04	9.041E-02	1.355E+02
2132	3.075E+04	8.600E-02	1.289E+02
2133	3.075E+04	8.180E-02	1.226E+02
2134	3.075E+04	7.781E-02	1.166E+02
2135	3.075E+04	7.402E-02	1.109E+02
2136	3.075E+04	7.041E-02	1.055E+02
2137	3.075E+04	6.698E-02	1.004E+02
2138	3.075E+04	6.371E-02	9.549E+01
2139	3.075E+04	6.060E-02	9.084E+01
2140	3.075E+04	5.765E-02	8.641E+01
2141	3.075E+04	5.483E-02	8.219E+01
2142	3.075E+04	5.216E-02	7.818E+01
2143	3.075E+04	4.962E-02	7.437E+01
2144	3.075E+04	4.720E-02	7.074E+01
2145	3.075E+04	4.489E-02	6.729E+01
2146	3.075E+04	4.271E-02	6.401E+01
2147	3.075E+04	4.062E-02	6.089E+01
2148	3.075E+04	3.864E-02	5.792E+01
2149	3.075E+04	3.676E-02	5.510E+01
2150	3.075E+04	3.496E-02	5.241E+01
2151	3.075E+04	3.326E-02	4.985E+01
2152	3.075E+04	3.164E-02	4.742E+01
2153	3.075E+04	3.009E-02	4.511E+01
2154	3.075E+04	2.863E-02	4.291E+01
2155	3.075E+04	2.723E-02	4.082E+01
2156	3.075E+04	2.590E-02	3.883E+01
2157	3.075E+04	2.464E-02	3.693E+01
2158	3.075E+04	2.344E-02	3.513E+01
2159	3.075E+04	2.229E-02	3.342E+01
2160	3.075E+04	2.121E-02	3.179E+01

continued

Table D-48. Emisson Rate of Methane from Parcel 4 for Years 1975 to 2203 (concluded).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2161	3.075E+04	2.017E-02	3.024E+01
2162	3.075E+04	1.919E-02	2.876E+01
2163	3.075E+04	1.825E-02	2.736E+01
2164	3.075E+04	1.736E-02	2.603E+01
2165	3.075E+04	1.652E-02	2.476E+01
2166	3.075E+04	1.571E-02	2.355E+01
2167	3.075E+04	1.494E-02	2.240E+01
2168	3.075E+04	1.422E-02	2.131E+01
2169	3.075E+04	1.352E-02	2.027E+01
2170	3.075E+04	1.286E-02	1.928E+01
2171	3.075E+04	1.224E-02	1.834E+01
2172	3.075E+04	1.164E-02	1.745E+01
2173	3.075E+04	1.107E-02	1.659E+01
2174	3.075E+04	1.053E-02	1.579E+01
2175	3.075E+04	1.002E-02	1.502E+01
2176	3.075E+04	9.529E-03	1.428E+01
2177	3.075E+04	9.064E-03	1.359E+01
2178	3.075E+04	8.622E-03	1.292E+01
2179	3.075E+04	8.202E-03	1.229E+01
2180	3.075E+04	7.802E-03	1.169E+01
2181	3.075E+04	7.421E-03	1.112E+01
2182	3.075E+04	7.059E-03	1.058E+01
2183	3.075E+04	6.715E-03	1.007E+01
2184	3.075E+04	6.387E-03	9.574E+00
2185	3.075E+04	6.076E-03	9.107E+00
2186	3.075E+04	5.780E-03	8.663E+00
2187	3.075E+04	5.498E-03	8.241E+00
2188	3.075E+04	5.230E-03	7.839E+00
2189	3.075E+04	4.974E-03	7.456E+00
2190	3.075E+04	4.732E-03	7.093E+00
2191	3.075E+04	4.501E-03	6.747E+00
2192	3.075E+04	4.282E-03	6.418E+00
2193	3.075E+04	4.073E-03	6.105E+00
2194	3.075E+04	3.874E-03	5.807E+00
2195	3.075E+04	3.685E-03	5.524E+00
2196	3.075E+04	3.505E-03	5.254E+00
2197	3.075E+04	3.335E-03	4.998E+00
2198	3.075E+04	3.172E-03	4.754E+00
2199	3.075E+04	3.017E-03	4.523E+00
2200	3.075E+04	2.870E-03	4.302E+00
2201	3.075E+04	2.730E-03	4.092E+00
2202	3.075E+04	2.597E-03	3.893E+00

Table D-49. Emisson Rate of Carbon Dioxide from Parcel 4 for Years 1975 to 2203.

Source: H:\3000\030177~2.000\030177~1.003\BUSHVA~1\STRATA4.PRM

Model Parameters

Lo : 170.00 m^3 / Mg
k : 0.0500 1/yr
NMOC : 1870.00 ppmv
Methane : 64.0000 % volume
Carbon Dioxide : 36.0000 % volume

Landfill Parameters

Landfill type : Co-Disposal
Year Opened : 1974 Current Year : 2004 Closure Year: 2003
Capacity : 30752 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 5271.79 Mg/year

Model Results

Year	Refuse In Place (Mg)	Carbon Dioxide Emission Rate (Mg/yr)	(Cubic m/yr)
1975	3.075E+03	2.691E+01	1.470E+04
1976	6.150E+03	5.252E+01	2.869E+04
1977	9.226E+03	7.687E+01	4.199E+04
1978	1.230E+04	1.000E+02	5.465E+04
1979	1.538E+04	1.221E+02	6.669E+04
1980	1.845E+04	1.430E+02	7.814E+04
1981	2.153E+04	1.630E+02	8.903E+04
1982	2.460E+04	1.819E+02	9.939E+04
1983	2.768E+04	2.000E+02	1.092E+05
1984	3.075E+04	2.171E+02	1.186E+05
1985	3.075E+04	2.065E+02	1.128E+05
1986	3.075E+04	1.965E+02	1.073E+05
1987	3.075E+04	1.869E+02	1.021E+05
1988	3.075E+04	1.778E+02	9.712E+04
1989	3.075E+04	1.691E+02	9.238E+04
1990	3.075E+04	1.609E+02	8.788E+04
1991	3.075E+04	1.530E+02	8.359E+04
1992	3.075E+04	1.456E+02	7.952E+04
1993	3.075E+04	1.385E+02	7.564E+04
1994	3.075E+04	1.317E+02	7.195E+04
1995	3.075E+04	1.253E+02	6.844E+04
1996	3.075E+04	1.192E+02	6.510E+04
1997	3.075E+04	1.134E+02	6.193E+04
1998	3.075E+04	1.078E+02	5.891E+04
1999	3.075E+04	1.026E+02	5.603E+04
2000	3.075E+04	9.757E+01	5.330E+04
2001	3.075E+04	9.281E+01	5.070E+04
2002	3.075E+04	8.828E+01	4.823E+04
2003	3.075E+04	8.398E+01	4.588E+04
2004	3.075E+04	7.988E+01	4.364E+04
2005	3.075E+04	7.598E+01	4.151E+04
2006	3.075E+04	7.228E+01	3.949E+04
2007	3.075E+04	6.875E+01	3.756E+04
2008	3.075E+04	6.540E+01	3.573E+04
2009	3.075E+04	6.221E+01	3.399E+04
2010	3.075E+04	5.918E+01	3.233E+04
2011	3.075E+04	5.629E+01	3.075E+04
2012	3.075E+04	5.355E+01	2.925E+04
2013	3.075E+04	5.093E+01	2.783E+04
2014	3.075E+04	4.845E+01	2.647E+04
2015	3.075E+04	4.609E+01	2.518E+04
2016	3.075E+04	4.384E+01	2.395E+04
2017	3.075E+04	4.170E+01	2.278E+04
2018	3.075E+04	3.967E+01	2.167E+04
2019	3.075E+04	3.773E+01	2.061E+04
2020	3.075E+04	3.589E+01	1.961E+04

continued

Table D-49. Emisson Rate of Carbon Dioxide from Parcel 4 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2021	3.075E+04	3.414E+01	1.865E+04
2022	3.075E+04	3.248E+01	1.774E+04
2023	3.075E+04	3.089E+01	1.688E+04
2024	3.075E+04	2.939E+01	1.605E+04
2025	3.075E+04	2.795E+01	1.527E+04
2026	3.075E+04	2.659E+01	1.453E+04
2027	3.075E+04	2.529E+01	1.382E+04
2028	3.075E+04	2.406E+01	1.314E+04
2029	3.075E+04	2.289E+01	1.250E+04
2030	3.075E+04	2.177E+01	1.189E+04
2031	3.075E+04	2.071E+01	1.131E+04
2032	3.075E+04	1.970E+01	1.076E+04
2033	3.075E+04	1.874E+01	1.024E+04
2034	3.075E+04	1.782E+01	9.737E+03
2035	3.075E+04	1.695E+01	9.262E+03
2036	3.075E+04	1.613E+01	8.811E+03
2037	3.075E+04	1.534E+01	8.381E+03
2038	3.075E+04	1.459E+01	7.972E+03
2039	3.075E+04	1.388E+01	7.583E+03
2040	3.075E+04	1.320E+01	7.213E+03
2041	3.075E+04	1.256E+01	6.862E+03
2042	3.075E+04	1.195E+01	6.527E+03
2043	3.075E+04	1.136E+01	6.209E+03
2044	3.075E+04	1.081E+01	5.906E+03
2045	3.075E+04	1.028E+01	5.618E+03
2046	3.075E+04	9.782E+00	5.344E+03
2047	3.075E+04	9.305E+00	5.083E+03
2048	3.075E+04	8.851E+00	4.835E+03
2049	3.075E+04	8.419E+00	4.599E+03
2050	3.075E+04	8.009E+00	4.375E+03
2051	3.075E+04	7.618E+00	4.162E+03
2052	3.075E+04	7.247E+00	3.959E+03
2053	3.075E+04	6.893E+00	3.766E+03
2054	3.075E+04	6.557E+00	3.582E+03
2055	3.075E+04	6.237E+00	3.407E+03
2056	3.075E+04	5.933E+00	3.241E+03
2057	3.075E+04	5.644E+00	3.083E+03
2058	3.075E+04	5.368E+00	2.933E+03
2059	3.075E+04	5.107E+00	2.790E+03
2060	3.075E+04	4.858E+00	2.654E+03
2061	3.075E+04	4.621E+00	2.524E+03
2062	3.075E+04	4.395E+00	2.401E+03
2063	3.075E+04	4.181E+00	2.284E+03
2064	3.075E+04	3.977E+00	2.173E+03
2065	3.075E+04	3.783E+00	2.067E+03
2066	3.075E+04	3.599E+00	1.966E+03
2067	3.075E+04	3.423E+00	1.870E+03
2068	3.075E+04	3.256E+00	1.779E+03
2069	3.075E+04	3.097E+00	1.692E+03
2070	3.075E+04	2.946E+00	1.610E+03
2071	3.075E+04	2.803E+00	1.531E+03
2072	3.075E+04	2.666E+00	1.456E+03
2073	3.075E+04	2.536E+00	1.385E+03
2074	3.075E+04	2.412E+00	1.318E+03
2075	3.075E+04	2.295E+00	1.254E+03
2076	3.075E+04	2.183E+00	1.192E+03
2077	3.075E+04	2.076E+00	1.134E+03
2078	3.075E+04	1.975E+00	1.079E+03
2079	3.075E+04	1.879E+00	1.026E+03
2080	3.075E+04	1.787E+00	9.762E+02
2081	3.075E+04	1.700E+00	9.286E+02
2082	3.075E+04	1.617E+00	8.833E+02
2083	3.075E+04	1.538E+00	8.403E+02
2084	3.075E+04	1.463E+00	7.993E+02
2085	3.075E+04	1.392E+00	7.603E+02
2086	3.075E+04	1.324E+00	7.232E+02
2087	3.075E+04	1.259E+00	6.879E+02
2088	3.075E+04	1.198E+00	6.544E+02
2089	3.075E+04	1.139E+00	6.225E+02
2090	3.075E+04	1.084E+00	5.921E+02

continued

Table D-49. Emisson Rate of Carbon Dioxide from Parcel 4 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2091	3.075E+04	1.031E+00	5.632E+02
2092	3.075E+04	9.807E-01	5.358E+02
2093	3.075E+04	9.329E-01	5.096E+02
2094	3.075E+04	8.874E-01	4.848E+02
2095	3.075E+04	8.441E-01	4.611E+02
2096	3.075E+04	8.029E-01	4.387E+02
2097	3.075E+04	7.638E-01	4.173E+02
2098	3.075E+04	7.265E-01	3.969E+02
2099	3.075E+04	6.911E-01	3.775E+02
2100	3.075E+04	6.574E-01	3.591E+02
2101	3.075E+04	6.253E-01	3.416E+02
2102	3.075E+04	5.948E-01	3.250E+02
2103	3.075E+04	5.658E-01	3.091E+02
2104	3.075E+04	5.382E-01	2.940E+02
2105	3.075E+04	5.120E-01	2.797E+02
2106	3.075E+04	4.870E-01	2.661E+02
2107	3.075E+04	4.633E-01	2.531E+02
2108	3.075E+04	4.407E-01	2.407E+02
2109	3.075E+04	4.192E-01	2.290E+02
2110	3.075E+04	3.987E-01	2.178E+02
2111	3.075E+04	3.793E-01	2.072E+02
2112	3.075E+04	3.608E-01	1.971E+02
2113	3.075E+04	3.432E-01	1.875E+02
2114	3.075E+04	3.265E-01	1.783E+02
2115	3.075E+04	3.105E-01	1.696E+02
2116	3.075E+04	2.954E-01	1.614E+02
2117	3.075E+04	2.810E-01	1.535E+02
2118	3.075E+04	2.673E-01	1.460E+02
2119	3.075E+04	2.542E-01	1.389E+02
2120	3.075E+04	2.418E-01	1.321E+02
2121	3.075E+04	2.300E-01	1.257E+02
2122	3.075E+04	2.188E-01	1.195E+02
2123	3.075E+04	2.082E-01	1.137E+02
2124	3.075E+04	1.980E-01	1.082E+02
2125	3.075E+04	1.883E-01	1.029E+02
2126	3.075E+04	1.792E-01	9.788E+01
2127	3.075E+04	1.704E-01	9.310E+01
2128	3.075E+04	1.621E-01	8.856E+01
2129	3.075E+04	1.542E-01	8.424E+01
2130	3.075E+04	1.467E-01	8.013E+01
2131	3.075E+04	1.395E-01	7.623E+01
2132	3.075E+04	1.327E-01	7.251E+01
2133	3.075E+04	1.263E-01	6.897E+01
2134	3.075E+04	1.201E-01	6.561E+01
2135	3.075E+04	1.142E-01	6.241E+01
2136	3.075E+04	1.087E-01	5.936E+01
2137	3.075E+04	1.034E-01	5.647E+01
2138	3.075E+04	9.833E-02	5.372E+01
2139	3.075E+04	9.353E-02	5.110E+01
2140	3.075E+04	8.897E-02	4.860E+01
2141	3.075E+04	8.463E-02	4.623E+01
2142	3.075E+04	8.050E-02	4.398E+01
2143	3.075E+04	7.658E-02	4.183E+01
2144	3.075E+04	7.284E-02	3.979E+01
2145	3.075E+04	6.929E-02	3.785E+01
2146	3.075E+04	6.591E-02	3.601E+01
2147	3.075E+04	6.270E-02	3.425E+01
2148	3.075E+04	5.964E-02	3.258E+01
2149	3.075E+04	5.673E-02	3.099E+01
2150	3.075E+04	5.396E-02	2.948E+01
2151	3.075E+04	5.133E-02	2.804E+01
2152	3.075E+04	4.883E-02	2.667E+01
2153	3.075E+04	4.645E-02	2.537E+01
2154	3.075E+04	4.418E-02	2.414E+01
2155	3.075E+04	4.203E-02	2.296E+01
2156	3.075E+04	3.998E-02	2.184E+01
2157	3.075E+04	3.803E-02	2.077E+01
2158	3.075E+04	3.617E-02	1.976E+01
2159	3.075E+04	3.441E-02	1.880E+01
2160	3.075E+04	3.273E-02	1.788E+01

continued

Table D-49. Emisson Rate of Carbon Dioxide from Parcel 4 for Years 1975 to 2203 (concluded).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2161	3.075E+04	3.113E-02	1.701E+01
2162	3.075E+04	2.962E-02	1.618E+01
2163	3.075E+04	2.817E-02	1.539E+01
2164	3.075E+04	2.680E-02	1.464E+01
2165	3.075E+04	2.549E-02	1.393E+01
2166	3.075E+04	2.425E-02	1.325E+01
2167	3.075E+04	2.306E-02	1.260E+01
2168	3.075E+04	2.194E-02	1.199E+01
2169	3.075E+04	2.087E-02	1.140E+01
2170	3.075E+04	1.985E-02	1.084E+01
2171	3.075E+04	1.888E-02	1.032E+01
2172	3.075E+04	1.796E-02	9.813E+00
2173	3.075E+04	1.709E-02	9.334E+00
2174	3.075E+04	1.625E-02	8.879E+00
2175	3.075E+04	1.546E-02	8.446E+00
2176	3.075E+04	1.471E-02	8.034E+00
2177	3.075E+04	1.399E-02	7.642E+00
2178	3.075E+04	1.331E-02	7.270E+00
2179	3.075E+04	1.266E-02	6.915E+00
2180	3.075E+04	1.204E-02	6.578E+00
2181	3.075E+04	1.145E-02	6.257E+00
2182	3.075E+04	1.089E-02	5.952E+00
2183	3.075E+04	1.036E-02	5.662E+00
2184	3.075E+04	9.858E-03	5.385E+00
2185	3.075E+04	9.377E-03	5.123E+00
2186	3.075E+04	8.920E-03	4.873E+00
2187	3.075E+04	8.485E-03	4.635E+00
2188	3.075E+04	8.071E-03	4.409E+00
2189	3.075E+04	7.677E-03	4.194E+00
2190	3.075E+04	7.303E-03	3.990E+00
2191	3.075E+04	6.947E-03	3.795E+00
2192	3.075E+04	6.608E-03	3.610E+00
2193	3.075E+04	6.286E-03	3.434E+00
2194	3.075E+04	5.979E-03	3.266E+00
2195	3.075E+04	5.688E-03	3.107E+00
2196	3.075E+04	5.410E-03	2.956E+00
2197	3.075E+04	5.146E-03	2.811E+00
2198	3.075E+04	4.895E-03	2.674E+00
2199	3.075E+04	4.657E-03	2.544E+00
2200	3.075E+04	4.430E-03	2.420E+00
2201	3.075E+04	4.213E-03	2.302E+00
2202	3.075E+04	4.008E-03	2.190E+00

Table D-50. Emisson Rate of NMOCs from Parcel 4 for Years 1975 to 2203.

Source: H:\3000\030177~2.000\030177~1.003\BUSHVA~1\STRATA4.PRM

Model Parameters

Lo : 170.00 m^3 / Mg
k : 0.0500 1/yr
NMOC : 1870.00 ppmv
Methane : 64.0000 % volume
Carbon Dioxide : 36.0000 % volume

Landfill Parameters

Landfill type : Co-Disposal
Year Opened : 1974 Current Year : 2004 Closure Year: 2003
Capacity : 30752 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 5271.79 Mg/year

Model Results

Year	Refuse In Place (Mg)	NMOC Emission Rate (Mg/yr)	NMOC Emission Rate (Cubic m/yr)
1975	3.075E+03	2.738E-01	7.638E+01
1976	6.150E+03	5.342E-01	1.490E+02
1977	9.226E+03	7.819E-01	2.181E+02
1978	1.230E+04	1.018E+00	2.839E+02
1979	1.538E+04	1.242E+00	3.464E+02
1980	1.845E+04	1.455E+00	4.059E+02
1981	2.153E+04	1.658E+00	4.625E+02
1982	2.460E+04	1.851E+00	5.163E+02
1983	2.768E+04	2.034E+00	5.675E+02
1984	3.075E+04	2.209E+00	6.162E+02
1985	3.075E+04	2.101E+00	5.861E+02
1986	3.075E+04	1.998E+00	5.575E+02
1987	3.075E+04	1.901E+00	5.303E+02
1988	3.075E+04	1.808E+00	5.045E+02
1989	3.075E+04	1.720E+00	4.799E+02
1990	3.075E+04	1.636E+00	4.565E+02
1991	3.075E+04	1.556E+00	4.342E+02
1992	3.075E+04	1.481E+00	4.130E+02
1993	3.075E+04	1.408E+00	3.929E+02
1994	3.075E+04	1.340E+00	3.737E+02
1995	3.075E+04	1.274E+00	3.555E+02
1996	3.075E+04	1.212E+00	3.382E+02
1997	3.075E+04	1.153E+00	3.217E+02
1998	3.075E+04	1.097E+00	3.060E+02
1999	3.075E+04	1.043E+00	2.911E+02
2000	3.075E+04	9.924E-01	2.769E+02
2001	3.075E+04	9.440E-01	2.634E+02
2002	3.075E+04	8.980E-01	2.505E+02
2003	3.075E+04	8.542E-01	2.383E+02
2004	3.075E+04	8.125E-01	2.267E+02
2005	3.075E+04	7.729E-01	2.156E+02
2006	3.075E+04	7.352E-01	2.051E+02
2007	3.075E+04	6.993E-01	1.951E+02
2008	3.075E+04	6.652E-01	1.856E+02
2009	3.075E+04	6.328E-01	1.765E+02
2010	3.075E+04	6.019E-01	1.679E+02
2011	3.075E+04	5.726E-01	1.597E+02
2012	3.075E+04	5.447E-01	1.519E+02
2013	3.075E+04	5.181E-01	1.445E+02
2014	3.075E+04	4.928E-01	1.375E+02
2015	3.075E+04	4.688E-01	1.308E+02
2016	3.075E+04	4.459E-01	1.244E+02
2017	3.075E+04	4.242E-01	1.183E+02
2018	3.075E+04	4.035E-01	1.126E+02
2019	3.075E+04	3.838E-01	1.071E+02
2020	3.075E+04	3.651E-01	1.019E+02

continued

Table D-50. Emisson Rate of NMOCs from Parcel 4 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2021	3.075E+04	3.473E-01	9.689E+01
2022	3.075E+04	3.303E-01	9.216E+01
2023	3.075E+04	3.142E-01	8.767E+01
2024	3.075E+04	2.989E-01	8.339E+01
2025	3.075E+04	2.843E-01	7.932E+01
2026	3.075E+04	2.705E-01	7.546E+01
2027	3.075E+04	2.573E-01	7.178E+01
2028	3.075E+04	2.447E-01	6.827E+01
2029	3.075E+04	2.328E-01	6.494E+01
2030	3.075E+04	2.214E-01	6.178E+01
2031	3.075E+04	2.106E-01	5.876E+01
2032	3.075E+04	2.004E-01	5.590E+01
2033	3.075E+04	1.906E-01	5.317E+01
2034	3.075E+04	1.813E-01	5.058E+01
2035	3.075E+04	1.725E-01	4.811E+01
2036	3.075E+04	1.640E-01	4.577E+01
2037	3.075E+04	1.560E-01	4.353E+01
2038	3.075E+04	1.484E-01	4.141E+01
2039	3.075E+04	1.412E-01	3.939E+01
2040	3.075E+04	1.343E-01	3.747E+01
2041	3.075E+04	1.278E-01	3.564E+01
2042	3.075E+04	1.215E-01	3.390E+01
2043	3.075E+04	1.156E-01	3.225E+01
2044	3.075E+04	1.100E-01	3.068E+01
2045	3.075E+04	1.046E-01	2.918E+01
2046	3.075E+04	9.950E-02	2.776E+01
2047	3.075E+04	9.465E-02	2.640E+01
2048	3.075E+04	9.003E-02	2.512E+01
2049	3.075E+04	8.564E-02	2.389E+01
2050	3.075E+04	8.146E-02	2.273E+01
2051	3.075E+04	7.749E-02	2.162E+01
2052	3.075E+04	7.371E-02	2.056E+01
2053	3.075E+04	7.012E-02	1.956E+01
2054	3.075E+04	6.670E-02	1.861E+01
2055	3.075E+04	6.344E-02	1.770E+01
2056	3.075E+04	6.035E-02	1.684E+01
2057	3.075E+04	5.741E-02	1.602E+01
2058	3.075E+04	5.461E-02	1.523E+01
2059	3.075E+04	5.194E-02	1.449E+01
2060	3.075E+04	4.941E-02	1.378E+01
2061	3.075E+04	4.700E-02	1.311E+01
2062	3.075E+04	4.471E-02	1.247E+01
2063	3.075E+04	4.253E-02	1.186E+01
2064	3.075E+04	4.045E-02	1.129E+01
2065	3.075E+04	3.848E-02	1.074E+01
2066	3.075E+04	3.660E-02	1.021E+01
2067	3.075E+04	3.482E-02	9.714E+00
2068	3.075E+04	3.312E-02	9.240E+00
2069	3.075E+04	3.151E-02	8.789E+00
2070	3.075E+04	2.997E-02	8.361E+00
2071	3.075E+04	2.851E-02	7.953E+00
2072	3.075E+04	2.712E-02	7.565E+00
2073	3.075E+04	2.579E-02	7.196E+00
2074	3.075E+04	2.454E-02	6.845E+00
2075	3.075E+04	2.334E-02	6.511E+00
2076	3.075E+04	2.220E-02	6.194E+00
2077	3.075E+04	2.112E-02	5.892E+00
2078	3.075E+04	2.009E-02	5.604E+00
2079	3.075E+04	1.911E-02	5.331E+00
2080	3.075E+04	1.818E-02	5.071E+00
2081	3.075E+04	1.729E-02	4.824E+00
2082	3.075E+04	1.645E-02	4.588E+00
2083	3.075E+04	1.564E-02	4.365E+00
2084	3.075E+04	1.488E-02	4.152E+00
2085	3.075E+04	1.416E-02	3.949E+00
2086	3.075E+04	1.347E-02	3.757E+00
2087	3.075E+04	1.281E-02	3.573E+00
2088	3.075E+04	1.218E-02	3.399E+00
2089	3.075E+04	1.159E-02	3.233E+00
2090	3.075E+04	1.102E-02	3.076E+00

continued

Table D-50. Emisson Rate of NMOCs from Parcel 4 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2091	3.075E+04	1.049E-02	2.926E+00
2092	3.075E+04	9.976E-03	2.783E+00
2093	3.075E+04	9.489E-03	2.647E+00
2094	3.075E+04	9.026E-03	2.518E+00
2095	3.075E+04	8.586E-03	2.395E+00
2096	3.075E+04	8.167E-03	2.279E+00
2097	3.075E+04	7.769E-03	2.167E+00
2098	3.075E+04	7.390E-03	2.062E+00
2099	3.075E+04	7.030E-03	1.961E+00
2100	3.075E+04	6.687E-03	1.866E+00
2101	3.075E+04	6.361E-03	1.775E+00
2102	3.075E+04	6.051E-03	1.688E+00
2103	3.075E+04	5.755E-03	1.606E+00
2104	3.075E+04	5.475E-03	1.527E+00
2105	3.075E+04	5.208E-03	1.453E+00
2106	3.075E+04	4.954E-03	1.382E+00
2107	3.075E+04	4.712E-03	1.315E+00
2108	3.075E+04	4.482E-03	1.250E+00
2109	3.075E+04	4.264E-03	1.190E+00
2110	3.075E+04	4.056E-03	1.131E+00
2111	3.075E+04	3.858E-03	1.076E+00
2112	3.075E+04	3.670E-03	1.024E+00
2113	3.075E+04	3.491E-03	9.739E-01
2114	3.075E+04	3.321E-03	9.264E-01
2115	3.075E+04	3.159E-03	8.812E-01
2116	3.075E+04	3.005E-03	8.382E-01
2117	3.075E+04	2.858E-03	7.973E-01
2118	3.075E+04	2.719E-03	7.585E-01
2119	3.075E+04	2.586E-03	7.215E-01
2120	3.075E+04	2.460E-03	6.863E-01
2121	3.075E+04	2.340E-03	6.528E-01
2122	3.075E+04	2.226E-03	6.210E-01
2123	3.075E+04	2.117E-03	5.907E-01
2124	3.075E+04	2.014E-03	5.619E-01
2125	3.075E+04	1.916E-03	5.345E-01
2126	3.075E+04	1.822E-03	5.084E-01
2127	3.075E+04	1.734E-03	4.836E-01
2128	3.075E+04	1.649E-03	4.600E-01
2129	3.075E+04	1.569E-03	4.376E-01
2130	3.075E+04	1.492E-03	4.163E-01
2131	3.075E+04	1.419E-03	3.960E-01
2132	3.075E+04	1.350E-03	3.766E-01
2133	3.075E+04	1.284E-03	3.583E-01
2134	3.075E+04	1.222E-03	3.408E-01
2135	3.075E+04	1.162E-03	3.242E-01
2136	3.075E+04	1.105E-03	3.084E-01
2137	3.075E+04	1.051E-03	2.933E-01
2138	3.075E+04	1.000E-03	2.790E-01
2139	3.075E+04	9.514E-04	2.654E-01
2140	3.075E+04	9.050E-04	2.525E-01
2141	3.075E+04	8.608E-04	2.402E-01
2142	3.075E+04	8.189E-04	2.284E-01
2143	3.075E+04	7.789E-04	2.173E-01
2144	3.075E+04	7.409E-04	2.067E-01
2145	3.075E+04	7.048E-04	1.966E-01
2146	3.075E+04	6.704E-04	1.870E-01
2147	3.075E+04	6.377E-04	1.779E-01
2148	3.075E+04	6.066E-04	1.692E-01
2149	3.075E+04	5.770E-04	1.610E-01
2150	3.075E+04	5.489E-04	1.531E-01
2151	3.075E+04	5.221E-04	1.457E-01
2152	3.075E+04	4.967E-04	1.386E-01
2153	3.075E+04	4.724E-04	1.318E-01
2154	3.075E+04	4.494E-04	1.254E-01
2155	3.075E+04	4.275E-04	1.193E-01
2156	3.075E+04	4.066E-04	1.134E-01
2157	3.075E+04	3.868E-04	1.079E-01
2158	3.075E+04	3.679E-04	1.026E-01
2159	3.075E+04	3.500E-04	9.764E-02
2160	3.075E+04	3.329E-04	9.288E-02

continued

Table D-50. Emisson Rate of NMOCs from Parcel 4 for Years 1975 to 2203 (concluded).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2161	3.075E+04	3.167E-04	8.835E-02
2162	3.075E+04	3.012E-04	8.404E-02
2163	3.075E+04	2.865E-04	7.994E-02
2164	3.075E+04	2.726E-04	7.604E-02
2165	3.075E+04	2.593E-04	7.233E-02
2166	3.075E+04	2.466E-04	6.881E-02
2167	3.075E+04	2.346E-04	6.545E-02
2168	3.075E+04	2.232E-04	6.226E-02
2169	3.075E+04	2.123E-04	5.922E-02
2170	3.075E+04	2.019E-04	5.633E-02
2171	3.075E+04	1.921E-04	5.359E-02
2172	3.075E+04	1.827E-04	5.097E-02
2173	3.075E+04	1.738E-04	4.849E-02
2174	3.075E+04	1.653E-04	4.612E-02
2175	3.075E+04	1.573E-04	4.387E-02
2176	3.075E+04	1.496E-04	4.173E-02
2177	3.075E+04	1.423E-04	3.970E-02
2178	3.075E+04	1.354E-04	3.776E-02
2179	3.075E+04	1.288E-04	3.592E-02
2180	3.075E+04	1.225E-04	3.417E-02
2181	3.075E+04	1.165E-04	3.250E-02
2182	3.075E+04	1.108E-04	3.092E-02
2183	3.075E+04	1.054E-04	2.941E-02
2184	3.075E+04	1.003E-04	2.797E-02
2185	3.075E+04	9.538E-05	2.661E-02
2186	3.075E+04	9.073E-05	2.531E-02
2187	3.075E+04	8.631E-05	2.408E-02
2188	3.075E+04	8.210E-05	2.290E-02
2189	3.075E+04	7.809E-05	2.179E-02
2190	3.075E+04	7.428E-05	2.072E-02
2191	3.075E+04	7.066E-05	1.971E-02
2192	3.075E+04	6.722E-05	1.875E-02
2193	3.075E+04	6.394E-05	1.784E-02
2194	3.075E+04	6.082E-05	1.697E-02
2195	3.075E+04	5.785E-05	1.614E-02
2196	3.075E+04	5.503E-05	1.535E-02
2197	3.075E+04	5.235E-05	1.460E-02
2198	3.075E+04	4.979E-05	1.389E-02
2199	3.075E+04	4.737E-05	1.321E-02
2200	3.075E+04	4.506E-05	1.257E-02
2201	3.075E+04	4.286E-05	1.196E-02
2202	3.075E+04	4.077E-05	1.137E-02

Table D-51. Emisson Rate of 1,1,1-Trichloroethane from Parcel 4 for Years 1975 to 2203.

Source: H:\3000\030177~2.000\030177~1.003\BUSHVA~1\STRATA4.PRM

Model Parameters

Lo : 170.00 m^3 / Mg
k : 0.0500 1/yr
NMOC : 1870.00 ppmv
Methane : 64.0000 % volume
Carbon Dioxide : 36.0000 % volume
Air Pollutant : 1,1,1-Trichloroethane (HAP)
Molecular Wt = 133.41 Concentration = 0.050000 ppmV

Landfill Parameters

Landfill type : Co-Disposal
Year Opened : 1974 Current Year : 2004 Closure Year: 2003
Capacity : 30752 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 5271.79 Mg/year

Model Results

Year	Refuse In Place (Mg)	1,1,1-Trichloroethane (HAP) Emission Rate (Mg/yr)	(Cubic m/yr)
1975	3.075E+03	1.133E-05	2.042E-03
1976	6.150E+03	2.211E-05	3.985E-03
1977	9.226E+03	3.236E-05	5.832E-03
1978	1.230E+04	4.212E-05	7.590E-03
1979	1.538E+04	5.139E-05	9.262E-03
1980	1.845E+04	6.022E-05	1.085E-02
1981	2.153E+04	6.861E-05	1.237E-02
1982	2.460E+04	7.660E-05	1.380E-02
1983	2.768E+04	8.420E-05	1.517E-02
1984	3.075E+04	9.142E-05	1.648E-02
1985	3.075E+04	8.696E-05	1.567E-02
1986	3.075E+04	8.272E-05	1.491E-02
1987	3.075E+04	7.869E-05	1.418E-02
1988	3.075E+04	7.485E-05	1.349E-02
1989	3.075E+04	7.120E-05	1.283E-02
1990	3.075E+04	6.773E-05	1.221E-02
1991	3.075E+04	6.442E-05	1.161E-02
1992	3.075E+04	6.128E-05	1.104E-02
1993	3.075E+04	5.829E-05	1.051E-02
1994	3.075E+04	5.545E-05	9.993E-03
1995	3.075E+04	5.274E-05	9.505E-03
1996	3.075E+04	5.017E-05	9.042E-03
1997	3.075E+04	4.773E-05	8.601E-03
1998	3.075E+04	4.540E-05	8.181E-03
1999	3.075E+04	4.318E-05	7.782E-03
2000	3.075E+04	4.108E-05	7.403E-03
2001	3.075E+04	3.907E-05	7.042E-03
2002	3.075E+04	3.717E-05	6.698E-03
2003	3.075E+04	3.536E-05	6.372E-03
2004	3.075E+04	3.363E-05	6.061E-03
2005	3.075E+04	3.199E-05	5.765E-03
2006	3.075E+04	3.043E-05	5.484E-03
2007	3.075E+04	2.895E-05	5.217E-03
2008	3.075E+04	2.754E-05	4.962E-03
2009	3.075E+04	2.619E-05	4.720E-03
2010	3.075E+04	2.491E-05	4.490E-03
2011	3.075E+04	2.370E-05	4.271E-03
2012	3.075E+04	2.254E-05	4.063E-03
2013	3.075E+04	2.144E-05	3.865E-03
2014	3.075E+04	2.040E-05	3.676E-03
2015	3.075E+04	1.940E-05	3.497E-03
2016	3.075E+04	1.846E-05	3.326E-03
2017	3.075E+04	1.756E-05	3.164E-03
2018	3.075E+04	1.670E-05	3.010E-03

continued

Table D-51. Emisson Rate of 1,1,1-Trichloroethane from Parcel 4 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2019	3.075E+04	1.589E-05	2.863E-03
2020	3.075E+04	1.511E-05	2.723E-03
2021	3.075E+04	1.437E-05	2.591E-03
2022	3.075E+04	1.367E-05	2.464E-03
2023	3.075E+04	1.301E-05	2.344E-03
2024	3.075E+04	1.237E-05	2.230E-03
2025	3.075E+04	1.177E-05	2.121E-03
2026	3.075E+04	1.119E-05	2.018E-03
2027	3.075E+04	1.065E-05	1.919E-03
2028	3.075E+04	1.013E-05	1.826E-03
2029	3.075E+04	9.636E-06	1.736E-03
2030	3.075E+04	9.166E-06	1.652E-03
2031	3.075E+04	8.719E-06	1.571E-03
2032	3.075E+04	8.293E-06	1.495E-03
2033	3.075E+04	7.889E-06	1.422E-03
2034	3.075E+04	7.504E-06	1.352E-03
2035	3.075E+04	7.138E-06	1.286E-03
2036	3.075E+04	6.790E-06	1.224E-03
2037	3.075E+04	6.459E-06	1.164E-03
2038	3.075E+04	6.144E-06	1.107E-03
2039	3.075E+04	5.844E-06	1.053E-03
2040	3.075E+04	5.559E-06	1.002E-03
2041	3.075E+04	5.288E-06	9.530E-04
2042	3.075E+04	5.030E-06	9.065E-04
2043	3.075E+04	4.785E-06	8.623E-04
2044	3.075E+04	4.552E-06	8.203E-04
2045	3.075E+04	4.330E-06	7.803E-04
2046	3.075E+04	4.118E-06	7.422E-04
2047	3.075E+04	3.918E-06	7.060E-04
2048	3.075E+04	3.726E-06	6.716E-04
2049	3.075E+04	3.545E-06	6.388E-04
2050	3.075E+04	3.372E-06	6.077E-04
2051	3.075E+04	3.207E-06	5.780E-04
2052	3.075E+04	3.051E-06	5.498E-04
2053	3.075E+04	2.902E-06	5.230E-04
2054	3.075E+04	2.761E-06	4.975E-04
2055	3.075E+04	2.626E-06	4.732E-04
2056	3.075E+04	2.498E-06	4.502E-04
2057	3.075E+04	2.376E-06	4.282E-04
2058	3.075E+04	2.260E-06	4.073E-04
2059	3.075E+04	2.150E-06	3.875E-04
2060	3.075E+04	2.045E-06	3.686E-04
2061	3.075E+04	1.945E-06	3.506E-04
2062	3.075E+04	1.851E-06	3.335E-04
2063	3.075E+04	1.760E-06	3.172E-04
2064	3.075E+04	1.674E-06	3.018E-04
2065	3.075E+04	1.593E-06	2.870E-04
2066	3.075E+04	1.515E-06	2.730E-04
2067	3.075E+04	1.441E-06	2.597E-04
2068	3.075E+04	1.371E-06	2.471E-04
2069	3.075E+04	1.304E-06	2.350E-04
2070	3.075E+04	1.240E-06	2.235E-04
2071	3.075E+04	1.180E-06	2.126E-04
2072	3.075E+04	1.122E-06	2.023E-04
2073	3.075E+04	1.068E-06	1.924E-04
2074	3.075E+04	1.016E-06	1.830E-04
2075	3.075E+04	9.661E-07	1.741E-04
2076	3.075E+04	9.189E-07	1.656E-04
2077	3.075E+04	8.741E-07	1.575E-04
2078	3.075E+04	8.315E-07	1.498E-04
2079	3.075E+04	7.909E-07	1.425E-04
2080	3.075E+04	7.524E-07	1.356E-04
2081	3.075E+04	7.157E-07	1.290E-04
2082	3.075E+04	6.808E-07	1.227E-04
2083	3.075E+04	6.476E-07	1.167E-04
2084	3.075E+04	6.160E-07	1.110E-04
2085	3.075E+04	5.859E-07	1.056E-04
2086	3.075E+04	5.574E-07	1.004E-04
2087	3.075E+04	5.302E-07	9.555E-05
2088	3.075E+04	5.043E-07	9.089E-05

continued

Table D-51. Emisson Rate of 1,1,1-Trichloroethane from Parcel 4 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2089	3.075E+04	4.797E-07	8.645E-05
2090	3.075E+04	4.563E-07	8.224E-05
2091	3.075E+04	4.341E-07	7.823E-05
2092	3.075E+04	4.129E-07	7.441E-05
2093	3.075E+04	3.928E-07	7.078E-05
2094	3.075E+04	3.736E-07	6.733E-05
2095	3.075E+04	3.554E-07	6.405E-05
2096	3.075E+04	3.381E-07	6.092E-05
2097	3.075E+04	3.216E-07	5.795E-05
2098	3.075E+04	3.059E-07	5.513E-05
2099	3.075E+04	2.910E-07	5.244E-05
2100	3.075E+04	2.768E-07	4.988E-05
2101	3.075E+04	2.633E-07	4.745E-05
2102	3.075E+04	2.504E-07	4.513E-05
2103	3.075E+04	2.382E-07	4.293E-05
2104	3.075E+04	2.266E-07	4.084E-05
2105	3.075E+04	2.156E-07	3.885E-05
2106	3.075E+04	2.050E-07	3.695E-05
2107	3.075E+04	1.950E-07	3.515E-05
2108	3.075E+04	1.855E-07	3.344E-05
2109	3.075E+04	1.765E-07	3.180E-05
2110	3.075E+04	1.679E-07	3.025E-05
2111	3.075E+04	1.597E-07	2.878E-05
2112	3.075E+04	1.519E-07	2.737E-05
2113	3.075E+04	1.445E-07	2.604E-05
2114	3.075E+04	1.374E-07	2.477E-05
2115	3.075E+04	1.307E-07	2.356E-05
2116	3.075E+04	1.244E-07	2.241E-05
2117	3.075E+04	1.183E-07	2.132E-05
2118	3.075E+04	1.125E-07	2.028E-05
2119	3.075E+04	1.070E-07	1.929E-05
2120	3.075E+04	1.018E-07	1.835E-05
2121	3.075E+04	9.686E-08	1.745E-05
2122	3.075E+04	9.213E-08	1.660E-05
2123	3.075E+04	8.764E-08	1.579E-05
2124	3.075E+04	8.336E-08	1.502E-05
2125	3.075E+04	7.930E-08	1.429E-05
2126	3.075E+04	7.543E-08	1.359E-05
2127	3.075E+04	7.175E-08	1.293E-05
2128	3.075E+04	6.825E-08	1.230E-05
2129	3.075E+04	6.492E-08	1.170E-05
2130	3.075E+04	6.176E-08	1.113E-05
2131	3.075E+04	5.875E-08	1.059E-05
2132	3.075E+04	5.588E-08	1.007E-05
2133	3.075E+04	5.316E-08	9.579E-06
2134	3.075E+04	5.056E-08	9.112E-06
2135	3.075E+04	4.810E-08	8.668E-06
2136	3.075E+04	4.575E-08	8.245E-06
2137	3.075E+04	4.352E-08	7.843E-06
2138	3.075E+04	4.140E-08	7.460E-06
2139	3.075E+04	3.938E-08	7.097E-06
2140	3.075E+04	3.746E-08	6.751E-06
2141	3.075E+04	3.563E-08	6.421E-06
2142	3.075E+04	3.389E-08	6.108E-06
2143	3.075E+04	3.224E-08	5.810E-06
2144	3.075E+04	3.067E-08	5.527E-06
2145	3.075E+04	2.917E-08	5.257E-06
2146	3.075E+04	2.775E-08	5.001E-06
2147	3.075E+04	2.640E-08	4.757E-06
2148	3.075E+04	2.511E-08	4.525E-06
2149	3.075E+04	2.388E-08	4.304E-06
2150	3.075E+04	2.272E-08	4.094E-06
2151	3.075E+04	2.161E-08	3.895E-06
2152	3.075E+04	2.056E-08	3.705E-06
2153	3.075E+04	1.955E-08	3.524E-06
2154	3.075E+04	1.860E-08	3.352E-06
2155	3.075E+04	1.769E-08	3.189E-06
2156	3.075E+04	1.683E-08	3.033E-06
2157	3.075E+04	1.601E-08	2.885E-06
2158	3.075E+04	1.523E-08	2.745E-06

continued

Table D-51. Emisson Rate of 1,1,1-Trichloroethane from Parcel 4 for Years 1975 to 2203 (concluded).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2159	3.075E+04	1.449E-08	2.611E-06
2160	3.075E+04	1.378E-08	2.483E-06
2161	3.075E+04	1.311E-08	2.362E-06
2162	3.075E+04	1.247E-08	2.247E-06
2163	3.075E+04	1.186E-08	2.137E-06
2164	3.075E+04	1.128E-08	2.033E-06
2165	3.075E+04	1.073E-08	1.934E-06
2166	3.075E+04	1.021E-08	1.840E-06
2167	3.075E+04	9.711E-09	1.750E-06
2168	3.075E+04	9.237E-09	1.665E-06
2169	3.075E+04	8.787E-09	1.583E-06
2170	3.075E+04	8.358E-09	1.506E-06
2171	3.075E+04	7.950E-09	1.433E-06
2172	3.075E+04	7.563E-09	1.363E-06
2173	3.075E+04	7.194E-09	1.296E-06
2174	3.075E+04	6.843E-09	1.233E-06
2175	3.075E+04	6.509E-09	1.173E-06
2176	3.075E+04	6.192E-09	1.116E-06
2177	3.075E+04	5.890E-09	1.061E-06
2178	3.075E+04	5.603E-09	1.010E-06
2179	3.075E+04	5.329E-09	9.604E-07
2180	3.075E+04	5.069E-09	9.136E-07
2181	3.075E+04	4.822E-09	8.690E-07
2182	3.075E+04	4.587E-09	8.266E-07
2183	3.075E+04	4.363E-09	7.863E-07
2184	3.075E+04	4.150E-09	7.480E-07
2185	3.075E+04	3.948E-09	7.115E-07
2186	3.075E+04	3.755E-09	6.768E-07
2187	3.075E+04	3.572E-09	6.438E-07
2188	3.075E+04	3.398E-09	6.124E-07
2189	3.075E+04	3.232E-09	5.825E-07
2190	3.075E+04	3.075E-09	5.541E-07
2191	3.075E+04	2.925E-09	5.271E-07
2192	3.075E+04	2.782E-09	5.014E-07
2193	3.075E+04	2.646E-09	4.769E-07
2194	3.075E+04	2.517E-09	4.537E-07
2195	3.075E+04	2.395E-09	4.315E-07
2196	3.075E+04	2.278E-09	4.105E-07
2197	3.075E+04	2.167E-09	3.905E-07
2198	3.075E+04	2.061E-09	3.714E-07
2199	3.075E+04	1.961E-09	3.533E-07
2200	3.075E+04	1.865E-09	3.361E-07
2201	3.075E+04	1.774E-09	3.197E-07
2202	3.075E+04	1.687E-09	3.041E-07

Table D-52. Emisson Rate of 1,1-Dichloroethene from Parcel 4 for Years 1975 to 2203.

Source: H:\3000\030177~2.000\030177~1.003\BUSHVA~1\STRATA4.PRM

Model Parameters

Lo : 170.00 m^3 / Mg
k : 0.0500 1/yr
NMOC : 1870.00 ppmv
Methane : 64.0000 % volume
Carbon Dioxide : 36.0000 % volume
Air Pollutant : 1,1-Dichloroethene (HAP/VOC)
Molecular Wt = 96.94 Concentration = 0.040000 ppmV

Landfill Parameters

Landfill type : Co-Disposal
Year Opened : 1974 Current Year : 2004 Closure Year: 2003
Capacity : 30752 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 5271.79 Mg/year

Model Results

Year	Refuse In Place (Mg)	1,1-Dichloroethene (HAP/VOC) Emission Rate (Mg/yr)	(Cubic m/yr)
1975	3.075E+03	6.587E-06	1.634E-03
1976	6.150E+03	1.285E-05	3.188E-03
1977	9.226E+03	1.881E-05	4.666E-03
1978	1.230E+04	2.448E-05	6.072E-03
1979	1.538E+04	2.988E-05	7.410E-03
1980	1.845E+04	3.501E-05	8.682E-03
1981	2.153E+04	3.989E-05	9.892E-03
1982	2.460E+04	4.453E-05	1.104E-02
1983	2.768E+04	4.894E-05	1.214E-02
1984	3.075E+04	5.314E-05	1.318E-02
1985	3.075E+04	5.055E-05	1.254E-02
1986	3.075E+04	4.809E-05	1.193E-02
1987	3.075E+04	4.574E-05	1.134E-02
1988	3.075E+04	4.351E-05	1.079E-02
1989	3.075E+04	4.139E-05	1.026E-02
1990	3.075E+04	3.937E-05	9.764E-03
1991	3.075E+04	3.745E-05	9.288E-03
1992	3.075E+04	3.562E-05	8.835E-03
1993	3.075E+04	3.389E-05	8.404E-03
1994	3.075E+04	3.223E-05	7.994E-03
1995	3.075E+04	3.066E-05	7.604E-03
1996	3.075E+04	2.917E-05	7.233E-03
1997	3.075E+04	2.774E-05	6.881E-03
1998	3.075E+04	2.639E-05	6.545E-03
1999	3.075E+04	2.510E-05	6.226E-03
2000	3.075E+04	2.388E-05	5.922E-03
2001	3.075E+04	2.271E-05	5.633E-03
2002	3.075E+04	2.161E-05	5.359E-03
2003	3.075E+04	2.055E-05	5.097E-03
2004	3.075E+04	1.955E-05	4.849E-03
2005	3.075E+04	1.860E-05	4.612E-03
2006	3.075E+04	1.769E-05	4.387E-03
2007	3.075E+04	1.683E-05	4.173E-03
2008	3.075E+04	1.601E-05	3.970E-03
2009	3.075E+04	1.523E-05	3.776E-03
2010	3.075E+04	1.448E-05	3.592E-03
2011	3.075E+04	1.378E-05	3.417E-03
2012	3.075E+04	1.310E-05	3.250E-03
2013	3.075E+04	1.247E-05	3.092E-03
2014	3.075E+04	1.186E-05	2.941E-03
2015	3.075E+04	1.128E-05	2.797E-03
2016	3.075E+04	1.073E-05	2.661E-03
2017	3.075E+04	1.021E-05	2.531E-03
2018	3.075E+04	9.708E-06	2.408E-03

continued

Table D-52. Emisson Rate of 1,1-Dichloroethene from Parcel 4 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2019	3.075E+04	9.235E-06	2.290E-03
2020	3.075E+04	8.784E-06	2.179E-03
2021	3.075E+04	8.356E-06	2.072E-03
2022	3.075E+04	7.949E-06	1.971E-03
2023	3.075E+04	7.561E-06	1.875E-03
2024	3.075E+04	7.192E-06	1.784E-03
2025	3.075E+04	6.841E-06	1.697E-03
2026	3.075E+04	6.508E-06	1.614E-03
2027	3.075E+04	6.190E-06	1.535E-03
2028	3.075E+04	5.888E-06	1.460E-03
2029	3.075E+04	5.601E-06	1.389E-03
2030	3.075E+04	5.328E-06	1.321E-03
2031	3.075E+04	5.068E-06	1.257E-03
2032	3.075E+04	4.821E-06	1.196E-03
2033	3.075E+04	4.586E-06	1.137E-03
2034	3.075E+04	4.362E-06	1.082E-03
2035	3.075E+04	4.149E-06	1.029E-03
2036	3.075E+04	3.947E-06	9.789E-04
2037	3.075E+04	3.755E-06	9.312E-04
2038	3.075E+04	3.572E-06	8.858E-04
2039	3.075E+04	3.397E-06	8.426E-04
2040	3.075E+04	3.232E-06	8.015E-04
2041	3.075E+04	3.074E-06	7.624E-04
2042	3.075E+04	2.924E-06	7.252E-04
2043	3.075E+04	2.781E-06	6.899E-04
2044	3.075E+04	2.646E-06	6.562E-04
2045	3.075E+04	2.517E-06	6.242E-04
2046	3.075E+04	2.394E-06	5.938E-04
2047	3.075E+04	2.277E-06	5.648E-04
2048	3.075E+04	2.166E-06	5.373E-04
2049	3.075E+04	2.061E-06	5.111E-04
2050	3.075E+04	1.960E-06	4.861E-04
2051	3.075E+04	1.864E-06	4.624E-04
2052	3.075E+04	1.774E-06	4.399E-04
2053	3.075E+04	1.687E-06	4.184E-04
2054	3.075E+04	1.605E-06	3.980E-04
2055	3.075E+04	1.527E-06	3.786E-04
2056	3.075E+04	1.452E-06	3.601E-04
2057	3.075E+04	1.381E-06	3.426E-04
2058	3.075E+04	1.314E-06	3.259E-04
2059	3.075E+04	1.250E-06	3.100E-04
2060	3.075E+04	1.189E-06	2.949E-04
2061	3.075E+04	1.131E-06	2.805E-04
2062	3.075E+04	1.076E-06	2.668E-04
2063	3.075E+04	1.023E-06	2.538E-04
2064	3.075E+04	9.733E-07	2.414E-04
2065	3.075E+04	9.259E-07	2.296E-04
2066	3.075E+04	8.807E-07	2.184E-04
2067	3.075E+04	8.378E-07	2.078E-04
2068	3.075E+04	7.969E-07	1.976E-04
2069	3.075E+04	7.580E-07	1.880E-04
2070	3.075E+04	7.211E-07	1.788E-04
2071	3.075E+04	6.859E-07	1.701E-04
2072	3.075E+04	6.525E-07	1.618E-04
2073	3.075E+04	6.206E-07	1.539E-04
2074	3.075E+04	5.904E-07	1.464E-04
2075	3.075E+04	5.616E-07	1.393E-04
2076	3.075E+04	5.342E-07	1.325E-04
2077	3.075E+04	5.081E-07	1.260E-04
2078	3.075E+04	4.834E-07	1.199E-04
2079	3.075E+04	4.598E-07	1.140E-04
2080	3.075E+04	4.374E-07	1.085E-04
2081	3.075E+04	4.160E-07	1.032E-04
2082	3.075E+04	3.957E-07	9.815E-05
2083	3.075E+04	3.764E-07	9.336E-05
2084	3.075E+04	3.581E-07	8.881E-05
2085	3.075E+04	3.406E-07	8.448E-05
2086	3.075E+04	3.240E-07	8.036E-05
2087	3.075E+04	3.082E-07	7.644E-05
2088	3.075E+04	2.932E-07	7.271E-05

continued

Table D-52. Emisson Rate of 1,1-Dichloroethene from Parcel 4 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2089	3.075E+04	2.789E-07	6.916E-05
2090	3.075E+04	2.653E-07	6.579E-05
2091	3.075E+04	2.523E-07	6.258E-05
2092	3.075E+04	2.400E-07	5.953E-05
2093	3.075E+04	2.283E-07	5.663E-05
2094	3.075E+04	2.172E-07	5.386E-05
2095	3.075E+04	2.066E-07	5.124E-05
2096	3.075E+04	1.965E-07	4.874E-05
2097	3.075E+04	1.869E-07	4.636E-05
2098	3.075E+04	1.778E-07	4.410E-05
2099	3.075E+04	1.691E-07	4.195E-05
2100	3.075E+04	1.609E-07	3.990E-05
2101	3.075E+04	1.530E-07	3.796E-05
2102	3.075E+04	1.456E-07	3.611E-05
2103	3.075E+04	1.385E-07	3.435E-05
2104	3.075E+04	1.317E-07	3.267E-05
2105	3.075E+04	1.253E-07	3.108E-05
2106	3.075E+04	1.192E-07	2.956E-05
2107	3.075E+04	1.134E-07	2.812E-05
2108	3.075E+04	1.079E-07	2.675E-05
2109	3.075E+04	1.026E-07	2.544E-05
2110	3.075E+04	9.759E-08	2.420E-05
2111	3.075E+04	9.283E-08	2.302E-05
2112	3.075E+04	8.830E-08	2.190E-05
2113	3.075E+04	8.399E-08	2.083E-05
2114	3.075E+04	7.990E-08	1.982E-05
2115	3.075E+04	7.600E-08	1.885E-05
2116	3.075E+04	7.229E-08	1.793E-05
2117	3.075E+04	6.877E-08	1.706E-05
2118	3.075E+04	6.541E-08	1.622E-05
2119	3.075E+04	6.222E-08	1.543E-05
2120	3.075E+04	5.919E-08	1.468E-05
2121	3.075E+04	5.630E-08	1.396E-05
2122	3.075E+04	5.356E-08	1.328E-05
2123	3.075E+04	5.094E-08	1.264E-05
2124	3.075E+04	4.846E-08	1.202E-05
2125	3.075E+04	4.610E-08	1.143E-05
2126	3.075E+04	4.385E-08	1.088E-05
2127	3.075E+04	4.171E-08	1.034E-05
2128	3.075E+04	3.968E-08	9.840E-06
2129	3.075E+04	3.774E-08	9.360E-06
2130	3.075E+04	3.590E-08	8.904E-06
2131	3.075E+04	3.415E-08	8.470E-06
2132	3.075E+04	3.248E-08	8.056E-06
2133	3.075E+04	3.090E-08	7.664E-06
2134	3.075E+04	2.939E-08	7.290E-06
2135	3.075E+04	2.796E-08	6.934E-06
2136	3.075E+04	2.660E-08	6.596E-06
2137	3.075E+04	2.530E-08	6.274E-06
2138	3.075E+04	2.406E-08	5.968E-06
2139	3.075E+04	2.289E-08	5.677E-06
2140	3.075E+04	2.177E-08	5.400E-06
2141	3.075E+04	2.071E-08	5.137E-06
2142	3.075E+04	1.970E-08	4.887E-06
2143	3.075E+04	1.874E-08	4.648E-06
2144	3.075E+04	1.783E-08	4.421E-06
2145	3.075E+04	1.696E-08	4.206E-06
2146	3.075E+04	1.613E-08	4.001E-06
2147	3.075E+04	1.534E-08	3.806E-06
2148	3.075E+04	1.460E-08	3.620E-06
2149	3.075E+04	1.388E-08	3.443E-06
2150	3.075E+04	1.321E-08	3.276E-06
2151	3.075E+04	1.256E-08	3.116E-06
2152	3.075E+04	1.195E-08	2.964E-06
2153	3.075E+04	1.137E-08	2.819E-06
2154	3.075E+04	1.081E-08	2.682E-06
2155	3.075E+04	1.029E-08	2.551E-06
2156	3.075E+04	9.784E-09	2.427E-06
2157	3.075E+04	9.307E-09	2.308E-06
2158	3.075E+04	8.853E-09	2.196E-06

continued

Table D-52. Emisson Rate of 1,1-Dichloroethene from Parcel 4 for Years 1975 to 2203 (concluded).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2159	3.075E+04	8.421E-09	2.089E-06
2160	3.075E+04	8.010E-09	1.987E-06
2161	3.075E+04	7.620E-09	1.890E-06
2162	3.075E+04	7.248E-09	1.798E-06
2163	3.075E+04	6.895E-09	1.710E-06
2164	3.075E+04	6.558E-09	1.627E-06
2165	3.075E+04	6.239E-09	1.547E-06
2166	3.075E+04	5.934E-09	1.472E-06
2167	3.075E+04	5.645E-09	1.400E-06
2168	3.075E+04	5.370E-09	1.332E-06
2169	3.075E+04	5.108E-09	1.267E-06
2170	3.075E+04	4.859E-09	1.205E-06
2171	3.075E+04	4.622E-09	1.146E-06
2172	3.075E+04	4.396E-09	1.090E-06
2173	3.075E+04	4.182E-09	1.037E-06
2174	3.075E+04	3.978E-09	9.866E-07
2175	3.075E+04	3.784E-09	9.385E-07
2176	3.075E+04	3.599E-09	8.927E-07
2177	3.075E+04	3.424E-09	8.491E-07
2178	3.075E+04	3.257E-09	8.077E-07
2179	3.075E+04	3.098E-09	7.683E-07
2180	3.075E+04	2.947E-09	7.309E-07
2181	3.075E+04	2.803E-09	6.952E-07
2182	3.075E+04	2.666E-09	6.613E-07
2183	3.075E+04	2.536E-09	6.291E-07
2184	3.075E+04	2.413E-09	5.984E-07
2185	3.075E+04	2.295E-09	5.692E-07
2186	3.075E+04	2.183E-09	5.414E-07
2187	3.075E+04	2.077E-09	5.150E-07
2188	3.075E+04	1.975E-09	4.899E-07
2189	3.075E+04	1.879E-09	4.660E-07
2190	3.075E+04	1.787E-09	4.433E-07
2191	3.075E+04	1.700E-09	4.217E-07
2192	3.075E+04	1.617E-09	4.011E-07
2193	3.075E+04	1.538E-09	3.815E-07
2194	3.075E+04	1.463E-09	3.629E-07
2195	3.075E+04	1.392E-09	3.452E-07
2196	3.075E+04	1.324E-09	3.284E-07
2197	3.075E+04	1.260E-09	3.124E-07
2198	3.075E+04	1.198E-09	2.971E-07
2199	3.075E+04	1.140E-09	2.827E-07
2200	3.075E+04	1.084E-09	2.689E-07
2201	3.075E+04	1.031E-09	2.558E-07
2202	3.075E+04	9.809E-10	2.433E-07

Table D-53. Emisson Rate of 1,2-Dichloroethane from Parcel 4 for Years 1975 to 2203.

Source: H:\3000\030177~2.000\030177~1.003\BUSHVA~1\STRATA4.PRM

Model Parameters

Lo : 170.00 m^3 / Mg
k : 0.0500 1/yr
NMOC : 1870.00 ppmv
Methane : 64.0000 % volume
Carbon Dioxide : 36.0000 % volume
Air Pollutant : 1,2-Dichloroethane (HAP/VOC)
Molecular Wt = 98.96 Concentration = 0.100000 ppmV

Landfill Parameters

Landfill type : Co-Disposal
Year Opened : 1974 Current Year : 2004 Closure Year: 2003
Capacity : 30752 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 5271.79 Mg/year

Model Results

Year	Refuse In Place (Mg)	1,2-Dichloroethane (HAP/VOC) Emission Rate (Mg/yr)	(Cubic m/yr)
1975	3.075E+03	1.681E-05	4.084E-03
1976	6.150E+03	3.280E-05	7.969E-03
1977	9.226E+03	4.801E-05	1.166E-02
1978	1.230E+04	6.248E-05	1.518E-02
1979	1.538E+04	7.625E-05	1.852E-02
1980	1.845E+04	8.934E-05	2.171E-02
1981	2.153E+04	1.018E-04	2.473E-02
1982	2.460E+04	1.136E-04	2.761E-02
1983	2.768E+04	1.249E-04	3.035E-02
1984	3.075E+04	1.356E-04	3.295E-02
1985	3.075E+04	1.290E-04	3.134E-02
1986	3.075E+04	1.227E-04	2.982E-02
1987	3.075E+04	1.167E-04	2.836E-02
1988	3.075E+04	1.110E-04	2.698E-02
1989	3.075E+04	1.056E-04	2.566E-02
1990	3.075E+04	1.005E-04	2.441E-02
1991	3.075E+04	9.557E-05	2.322E-02
1992	3.075E+04	9.091E-05	2.209E-02
1993	3.075E+04	8.648E-05	2.101E-02
1994	3.075E+04	8.226E-05	1.999E-02
1995	3.075E+04	7.825E-05	1.901E-02
1996	3.075E+04	7.443E-05	1.808E-02
1997	3.075E+04	7.080E-05	1.720E-02
1998	3.075E+04	6.735E-05	1.636E-02
1999	3.075E+04	6.407E-05	1.556E-02
2000	3.075E+04	6.094E-05	1.481E-02
2001	3.075E+04	5.797E-05	1.408E-02
2002	3.075E+04	5.514E-05	1.340E-02
2003	3.075E+04	5.245E-05	1.274E-02
2004	3.075E+04	4.989E-05	1.212E-02
2005	3.075E+04	4.746E-05	1.153E-02
2006	3.075E+04	4.515E-05	1.097E-02
2007	3.075E+04	4.294E-05	1.043E-02
2008	3.075E+04	4.085E-05	9.925E-03
2009	3.075E+04	3.886E-05	9.441E-03
2010	3.075E+04	3.696E-05	8.980E-03
2011	3.075E+04	3.516E-05	8.542E-03
2012	3.075E+04	3.344E-05	8.126E-03
2013	3.075E+04	3.181E-05	7.729E-03
2014	3.075E+04	3.026E-05	7.352E-03
2015	3.075E+04	2.879E-05	6.994E-03
2016	3.075E+04	2.738E-05	6.653E-03
2017	3.075E+04	2.605E-05	6.328E-03
2018	3.075E+04	2.478E-05	6.020E-03

continued

Table D-53. Emisson Rate of 1,2-Dichloroethane from Parcel 4 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2019	3.075E+04	2.357E-05	5.726E-03
2020	3.075E+04	2.242E-05	5.447E-03
2021	3.075E+04	2.133E-05	5.181E-03
2022	3.075E+04	2.029E-05	4.928E-03
2023	3.075E+04	1.930E-05	4.688E-03
2024	3.075E+04	1.835E-05	4.459E-03
2025	3.075E+04	1.746E-05	4.242E-03
2026	3.075E+04	1.661E-05	4.035E-03
2027	3.075E+04	1.580E-05	3.838E-03
2028	3.075E+04	1.503E-05	3.651E-03
2029	3.075E+04	1.429E-05	3.473E-03
2030	3.075E+04	1.360E-05	3.304E-03
2031	3.075E+04	1.293E-05	3.142E-03
2032	3.075E+04	1.230E-05	2.989E-03
2033	3.075E+04	1.170E-05	2.843E-03
2034	3.075E+04	1.113E-05	2.705E-03
2035	3.075E+04	1.059E-05	2.573E-03
2036	3.075E+04	1.007E-05	2.447E-03
2037	3.075E+04	9.582E-06	2.328E-03
2038	3.075E+04	9.115E-06	2.214E-03
2039	3.075E+04	8.670E-06	2.106E-03
2040	3.075E+04	8.247E-06	2.004E-03
2041	3.075E+04	7.845E-06	1.906E-03
2042	3.075E+04	7.463E-06	1.813E-03
2043	3.075E+04	7.099E-06	1.725E-03
2044	3.075E+04	6.752E-06	1.641E-03
2045	3.075E+04	6.423E-06	1.561E-03
2046	3.075E+04	6.110E-06	1.484E-03
2047	3.075E+04	5.812E-06	1.412E-03
2048	3.075E+04	5.528E-06	1.343E-03
2049	3.075E+04	5.259E-06	1.278E-03
2050	3.075E+04	5.002E-06	1.215E-03
2051	3.075E+04	4.758E-06	1.156E-03
2052	3.075E+04	4.526E-06	1.100E-03
2053	3.075E+04	4.306E-06	1.046E-03
2054	3.075E+04	4.096E-06	9.950E-04
2055	3.075E+04	3.896E-06	9.465E-04
2056	3.075E+04	3.706E-06	9.003E-04
2057	3.075E+04	3.525E-06	8.564E-04
2058	3.075E+04	3.353E-06	8.147E-04
2059	3.075E+04	3.190E-06	7.749E-04
2060	3.075E+04	3.034E-06	7.371E-04
2061	3.075E+04	2.886E-06	7.012E-04
2062	3.075E+04	2.745E-06	6.670E-04
2063	3.075E+04	2.611E-06	6.345E-04
2064	3.075E+04	2.484E-06	6.035E-04
2065	3.075E+04	2.363E-06	5.741E-04
2066	3.075E+04	2.248E-06	5.461E-04
2067	3.075E+04	2.138E-06	5.194E-04
2068	3.075E+04	2.034E-06	4.941E-04
2069	3.075E+04	1.935E-06	4.700E-04
2070	3.075E+04	1.840E-06	4.471E-04
2071	3.075E+04	1.750E-06	4.253E-04
2072	3.075E+04	1.665E-06	4.045E-04
2073	3.075E+04	1.584E-06	3.848E-04
2074	3.075E+04	1.507E-06	3.660E-04
2075	3.075E+04	1.433E-06	3.482E-04
2076	3.075E+04	1.363E-06	3.312E-04
2077	3.075E+04	1.297E-06	3.151E-04
2078	3.075E+04	1.234E-06	2.997E-04
2079	3.075E+04	1.173E-06	2.851E-04
2080	3.075E+04	1.116E-06	2.712E-04
2081	3.075E+04	1.062E-06	2.580E-04
2082	3.075E+04	1.010E-06	2.454E-04
2083	3.075E+04	9.607E-07	2.334E-04
2084	3.075E+04	9.138E-07	2.220E-04
2085	3.075E+04	8.693E-07	2.112E-04
2086	3.075E+04	8.269E-07	2.009E-04
2087	3.075E+04	7.865E-07	1.911E-04
2088	3.075E+04	7.482E-07	1.818E-04

continued

Table D-53. Emisson Rate of 1,2-Dichloroethane from Parcel 4 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2089	3.075E+04	7.117E-07	1.729E-04
2090	3.075E+04	6.770E-07	1.645E-04
2091	3.075E+04	6.440E-07	1.565E-04
2092	3.075E+04	6.126E-07	1.488E-04
2093	3.075E+04	5.827E-07	1.416E-04
2094	3.075E+04	5.543E-07	1.347E-04
2095	3.075E+04	5.272E-07	1.281E-04
2096	3.075E+04	5.015E-07	1.218E-04
2097	3.075E+04	4.771E-07	1.159E-04
2098	3.075E+04	4.538E-07	1.103E-04
2099	3.075E+04	4.317E-07	1.049E-04
2100	3.075E+04	4.106E-07	9.976E-05
2101	3.075E+04	3.906E-07	9.489E-05
2102	3.075E+04	3.715E-07	9.027E-05
2103	3.075E+04	3.534E-07	8.586E-05
2104	3.075E+04	3.362E-07	8.168E-05
2105	3.075E+04	3.198E-07	7.769E-05
2106	3.075E+04	3.042E-07	7.390E-05
2107	3.075E+04	2.894E-07	7.030E-05
2108	3.075E+04	2.752E-07	6.687E-05
2109	3.075E+04	2.618E-07	6.361E-05
2110	3.075E+04	2.491E-07	6.051E-05
2111	3.075E+04	2.369E-07	5.756E-05
2112	3.075E+04	2.254E-07	5.475E-05
2113	3.075E+04	2.144E-07	5.208E-05
2114	3.075E+04	2.039E-07	4.954E-05
2115	3.075E+04	1.940E-07	4.712E-05
2116	3.075E+04	1.845E-07	4.483E-05
2117	3.075E+04	1.755E-07	4.264E-05
2118	3.075E+04	1.669E-07	4.056E-05
2119	3.075E+04	1.588E-07	3.858E-05
2120	3.075E+04	1.511E-07	3.670E-05
2121	3.075E+04	1.437E-07	3.491E-05
2122	3.075E+04	1.367E-07	3.321E-05
2123	3.075E+04	1.300E-07	3.159E-05
2124	3.075E+04	1.237E-07	3.005E-05
2125	3.075E+04	1.176E-07	2.858E-05
2126	3.075E+04	1.119E-07	2.719E-05
2127	3.075E+04	1.064E-07	2.586E-05
2128	3.075E+04	1.013E-07	2.460E-05
2129	3.075E+04	9.632E-08	2.340E-05
2130	3.075E+04	9.162E-08	2.226E-05
2131	3.075E+04	8.715E-08	2.117E-05
2132	3.075E+04	8.290E-08	2.014E-05
2133	3.075E+04	7.886E-08	1.916E-05
2134	3.075E+04	7.501E-08	1.822E-05
2135	3.075E+04	7.135E-08	1.734E-05
2136	3.075E+04	6.787E-08	1.649E-05
2137	3.075E+04	6.456E-08	1.569E-05
2138	3.075E+04	6.142E-08	1.492E-05
2139	3.075E+04	5.842E-08	1.419E-05
2140	3.075E+04	5.557E-08	1.350E-05
2141	3.075E+04	5.286E-08	1.284E-05
2142	3.075E+04	5.028E-08	1.222E-05
2143	3.075E+04	4.783E-08	1.162E-05
2144	3.075E+04	4.550E-08	1.105E-05
2145	3.075E+04	4.328E-08	1.051E-05
2146	3.075E+04	4.117E-08	1.000E-05
2147	3.075E+04	3.916E-08	9.514E-06
2148	3.075E+04	3.725E-08	9.050E-06
2149	3.075E+04	3.543E-08	8.609E-06
2150	3.075E+04	3.371E-08	8.189E-06
2151	3.075E+04	3.206E-08	7.789E-06
2152	3.075E+04	3.050E-08	7.410E-06
2153	3.075E+04	2.901E-08	7.048E-06
2154	3.075E+04	2.760E-08	6.704E-06
2155	3.075E+04	2.625E-08	6.377E-06
2156	3.075E+04	2.497E-08	6.066E-06
2157	3.075E+04	2.375E-08	5.771E-06
2158	3.075E+04	2.259E-08	5.489E-06

continued

Table D-53. Emisson Rate of 1,2-Dichloroethane from Parcel 4 for Years 1975 to 2203 (concluded).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2159	3.075E+04	2.149E-08	5.221E-06
2160	3.075E+04	2.044E-08	4.967E-06
2161	3.075E+04	1.945E-08	4.725E-06
2162	3.075E+04	1.850E-08	4.494E-06
2163	3.075E+04	1.760E-08	4.275E-06
2164	3.075E+04	1.674E-08	4.066E-06
2165	3.075E+04	1.592E-08	3.868E-06
2166	3.075E+04	1.514E-08	3.679E-06
2167	3.075E+04	1.441E-08	3.500E-06
2168	3.075E+04	1.370E-08	3.329E-06
2169	3.075E+04	1.304E-08	3.167E-06
2170	3.075E+04	1.240E-08	3.012E-06
2171	3.075E+04	1.179E-08	2.866E-06
2172	3.075E+04	1.122E-08	2.726E-06
2173	3.075E+04	1.067E-08	2.593E-06
2174	3.075E+04	1.015E-08	2.466E-06
2175	3.075E+04	9.657E-09	2.346E-06
2176	3.075E+04	9.186E-09	2.232E-06
2177	3.075E+04	8.738E-09	2.123E-06
2178	3.075E+04	8.312E-09	2.019E-06
2179	3.075E+04	7.906E-09	1.921E-06
2180	3.075E+04	7.521E-09	1.827E-06
2181	3.075E+04	7.154E-09	1.738E-06
2182	3.075E+04	6.805E-09	1.653E-06
2183	3.075E+04	6.473E-09	1.573E-06
2184	3.075E+04	6.157E-09	1.496E-06
2185	3.075E+04	5.857E-09	1.423E-06
2186	3.075E+04	5.571E-09	1.354E-06
2187	3.075E+04	5.300E-09	1.288E-06
2188	3.075E+04	5.041E-09	1.225E-06
2189	3.075E+04	4.795E-09	1.165E-06
2190	3.075E+04	4.562E-09	1.108E-06
2191	3.075E+04	4.339E-09	1.054E-06
2192	3.075E+04	4.127E-09	1.003E-06
2193	3.075E+04	3.926E-09	9.539E-07
2194	3.075E+04	3.735E-09	9.073E-07
2195	3.075E+04	3.553E-09	8.631E-07
2196	3.075E+04	3.379E-09	8.210E-07
2197	3.075E+04	3.214E-09	7.810E-07
2198	3.075E+04	3.058E-09	7.429E-07
2199	3.075E+04	2.909E-09	7.066E-07
2200	3.075E+04	2.767E-09	6.722E-07
2201	3.075E+04	2.632E-09	6.394E-07
2202	3.075E+04	2.503E-09	6.082E-07

Table D-54. Emisson Rate of Benzene from Parcel 4 for Years 1975 to 2203.

Source: H:\3000\030177~2.000\030177~1.003\BUSHVA~1\STRATA4.PRM

Model Parameters

Lo : 170.00 m^3 / Mg
k : 0.0500 1/yr
NMOC : 1870.00 ppmv
Methane : 64.0000 % volume
Carbon Dioxide : 36.0000 % volume
Air Pollutant : Benzene (HAP/VOC)
Molecular Wt = 78.12 Concentration = 0.840000 ppmV

Landfill Parameters

Landfill type : Co-Disposal
Year Opened : 1974 Current Year : 2004 Closure Year: 2003
Capacity : 30752 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 5271.79 Mg/year

Model Results

Year	Refuse In Place (Mg)	Benzene (HAP/VOC) Emission Rate (Mg/yr)	(Cubic m/yr)
1975	3.075E+03	1.115E-04	3.431E-02
1976	6.150E+03	2.175E-04	6.694E-02
1977	9.226E+03	3.184E-04	9.799E-02
1978	1.230E+04	4.143E-04	1.275E-01
1979	1.538E+04	5.056E-04	1.556E-01
1980	1.845E+04	5.924E-04	1.823E-01
1981	2.153E+04	6.750E-04	2.077E-01
1982	2.460E+04	7.535E-04	2.319E-01
1983	2.768E+04	8.283E-04	2.549E-01
1984	3.075E+04	8.993E-04	2.768E-01
1985	3.075E+04	8.555E-04	2.633E-01
1986	3.075E+04	8.138E-04	2.504E-01
1987	3.075E+04	7.741E-04	2.382E-01
1988	3.075E+04	7.363E-04	2.266E-01
1989	3.075E+04	7.004E-04	2.156E-01
1990	3.075E+04	6.662E-04	2.050E-01
1991	3.075E+04	6.338E-04	1.950E-01
1992	3.075E+04	6.028E-04	1.855E-01
1993	3.075E+04	5.734E-04	1.765E-01
1994	3.075E+04	5.455E-04	1.679E-01
1995	3.075E+04	5.189E-04	1.597E-01
1996	3.075E+04	4.936E-04	1.519E-01
1997	3.075E+04	4.695E-04	1.445E-01
1998	3.075E+04	4.466E-04	1.374E-01
1999	3.075E+04	4.248E-04	1.307E-01
2000	3.075E+04	4.041E-04	1.244E-01
2001	3.075E+04	3.844E-04	1.183E-01
2002	3.075E+04	3.656E-04	1.125E-01
2003	3.075E+04	3.478E-04	1.070E-01
2004	3.075E+04	3.308E-04	1.018E-01
2005	3.075E+04	3.147E-04	9.686E-02
2006	3.075E+04	2.994E-04	9.213E-02
2007	3.075E+04	2.848E-04	8.764E-02
2008	3.075E+04	2.709E-04	8.337E-02
2009	3.075E+04	2.577E-04	7.930E-02
2010	3.075E+04	2.451E-04	7.543E-02
2011	3.075E+04	2.331E-04	7.175E-02
2012	3.075E+04	2.218E-04	6.825E-02
2013	3.075E+04	2.110E-04	6.493E-02
2014	3.075E+04	2.007E-04	6.176E-02
2015	3.075E+04	1.909E-04	5.875E-02
2016	3.075E+04	1.816E-04	5.588E-02
2017	3.075E+04	1.727E-04	5.316E-02
2018	3.075E+04	1.643E-04	5.056E-02

continued

Table D-54. Emisson Rate of Benzene from Parcel 4 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2019	3.075E+04	1.563E-04	4.810E-02
2020	3.075E+04	1.487E-04	4.575E-02
2021	3.075E+04	1.414E-04	4.352E-02
2022	3.075E+04	1.345E-04	4.140E-02
2023	3.075E+04	1.280E-04	3.938E-02
2024	3.075E+04	1.217E-04	3.746E-02
2025	3.075E+04	1.158E-04	3.563E-02
2026	3.075E+04	1.101E-04	3.389E-02
2027	3.075E+04	1.048E-04	3.224E-02
2028	3.075E+04	9.965E-05	3.067E-02
2029	3.075E+04	9.479E-05	2.917E-02
2030	3.075E+04	9.017E-05	2.775E-02
2031	3.075E+04	8.577E-05	2.640E-02
2032	3.075E+04	8.159E-05	2.511E-02
2033	3.075E+04	7.761E-05	2.388E-02
2034	3.075E+04	7.382E-05	2.272E-02
2035	3.075E+04	7.022E-05	2.161E-02
2036	3.075E+04	6.680E-05	2.056E-02
2037	3.075E+04	6.354E-05	1.956E-02
2038	3.075E+04	6.044E-05	1.860E-02
2039	3.075E+04	5.749E-05	1.769E-02
2040	3.075E+04	5.469E-05	1.683E-02
2041	3.075E+04	5.202E-05	1.601E-02
2042	3.075E+04	4.948E-05	1.523E-02
2043	3.075E+04	4.707E-05	1.449E-02
2044	3.075E+04	4.478E-05	1.378E-02
2045	3.075E+04	4.259E-05	1.311E-02
2046	3.075E+04	4.051E-05	1.247E-02
2047	3.075E+04	3.854E-05	1.186E-02
2048	3.075E+04	3.666E-05	1.128E-02
2049	3.075E+04	3.487E-05	1.073E-02
2050	3.075E+04	3.317E-05	1.021E-02
2051	3.075E+04	3.155E-05	9.711E-03
2052	3.075E+04	3.001E-05	9.237E-03
2053	3.075E+04	2.855E-05	8.787E-03
2054	3.075E+04	2.716E-05	8.358E-03
2055	3.075E+04	2.583E-05	7.951E-03
2056	3.075E+04	2.457E-05	7.563E-03
2057	3.075E+04	2.337E-05	7.194E-03
2058	3.075E+04	2.223E-05	6.843E-03
2059	3.075E+04	2.115E-05	6.509E-03
2060	3.075E+04	2.012E-05	6.192E-03
2061	3.075E+04	1.914E-05	5.890E-03
2062	3.075E+04	1.820E-05	5.603E-03
2063	3.075E+04	1.732E-05	5.329E-03
2064	3.075E+04	1.647E-05	5.070E-03
2065	3.075E+04	1.567E-05	4.822E-03
2066	3.075E+04	1.490E-05	4.587E-03
2067	3.075E+04	1.418E-05	4.363E-03
2068	3.075E+04	1.349E-05	4.151E-03
2069	3.075E+04	1.283E-05	3.948E-03
2070	3.075E+04	1.220E-05	3.756E-03
2071	3.075E+04	1.161E-05	3.572E-03
2072	3.075E+04	1.104E-05	3.398E-03
2073	3.075E+04	1.050E-05	3.232E-03
2074	3.075E+04	9.991E-06	3.075E-03
2075	3.075E+04	9.504E-06	2.925E-03
2076	3.075E+04	9.040E-06	2.782E-03
2077	3.075E+04	8.599E-06	2.647E-03
2078	3.075E+04	8.180E-06	2.517E-03
2079	3.075E+04	7.781E-06	2.395E-03
2080	3.075E+04	7.401E-06	2.278E-03
2081	3.075E+04	7.040E-06	2.167E-03
2082	3.075E+04	6.697E-06	2.061E-03
2083	3.075E+04	6.370E-06	1.961E-03
2084	3.075E+04	6.060E-06	1.865E-03
2085	3.075E+04	5.764E-06	1.774E-03
2086	3.075E+04	5.483E-06	1.687E-03
2087	3.075E+04	5.216E-06	1.605E-03
2088	3.075E+04	4.961E-06	1.527E-03

continued

Table D-54. Emisson Rate of Benzene from Parcel 4 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2089	3.075E+04	4.719E-06	1.452E-03
2090	3.075E+04	4.489E-06	1.382E-03
2091	3.075E+04	4.270E-06	1.314E-03
2092	3.075E+04	4.062E-06	1.250E-03
2093	3.075E+04	3.864E-06	1.189E-03
2094	3.075E+04	3.675E-06	1.131E-03
2095	3.075E+04	3.496E-06	1.076E-03
2096	3.075E+04	3.326E-06	1.024E-03
2097	3.075E+04	3.163E-06	9.736E-04
2098	3.075E+04	3.009E-06	9.261E-04
2099	3.075E+04	2.862E-06	8.809E-04
2100	3.075E+04	2.723E-06	8.380E-04
2101	3.075E+04	2.590E-06	7.971E-04
2102	3.075E+04	2.464E-06	7.582E-04
2103	3.075E+04	2.344E-06	7.213E-04
2104	3.075E+04	2.229E-06	6.861E-04
2105	3.075E+04	2.121E-06	6.526E-04
2106	3.075E+04	2.017E-06	6.208E-04
2107	3.075E+04	1.919E-06	5.905E-04
2108	3.075E+04	1.825E-06	5.617E-04
2109	3.075E+04	1.736E-06	5.343E-04
2110	3.075E+04	1.651E-06	5.083E-04
2111	3.075E+04	1.571E-06	4.835E-04
2112	3.075E+04	1.494E-06	4.599E-04
2113	3.075E+04	1.421E-06	4.375E-04
2114	3.075E+04	1.352E-06	4.161E-04
2115	3.075E+04	1.286E-06	3.958E-04
2116	3.075E+04	1.223E-06	3.765E-04
2117	3.075E+04	1.164E-06	3.582E-04
2118	3.075E+04	1.107E-06	3.407E-04
2119	3.075E+04	1.053E-06	3.241E-04
2120	3.075E+04	1.002E-06	3.083E-04
2121	3.075E+04	9.528E-07	2.932E-04
2122	3.075E+04	9.063E-07	2.789E-04
2123	3.075E+04	8.621E-07	2.653E-04
2124	3.075E+04	8.201E-07	2.524E-04
2125	3.075E+04	7.801E-07	2.401E-04
2126	3.075E+04	7.421E-07	2.284E-04
2127	3.075E+04	7.059E-07	2.172E-04
2128	3.075E+04	6.714E-07	2.066E-04
2129	3.075E+04	6.387E-07	1.966E-04
2130	3.075E+04	6.075E-07	1.870E-04
2131	3.075E+04	5.779E-07	1.779E-04
2132	3.075E+04	5.497E-07	1.692E-04
2133	3.075E+04	5.229E-07	1.609E-04
2134	3.075E+04	4.974E-07	1.531E-04
2135	3.075E+04	4.732E-07	1.456E-04
2136	3.075E+04	4.501E-07	1.385E-04
2137	3.075E+04	4.281E-07	1.318E-04
2138	3.075E+04	4.072E-07	1.253E-04
2139	3.075E+04	3.874E-07	1.192E-04
2140	3.075E+04	3.685E-07	1.134E-04
2141	3.075E+04	3.505E-07	1.079E-04
2142	3.075E+04	3.334E-07	1.026E-04
2143	3.075E+04	3.172E-07	9.761E-05
2144	3.075E+04	3.017E-07	9.285E-05
2145	3.075E+04	2.870E-07	8.832E-05
2146	3.075E+04	2.730E-07	8.402E-05
2147	3.075E+04	2.597E-07	7.992E-05
2148	3.075E+04	2.470E-07	7.602E-05
2149	3.075E+04	2.350E-07	7.231E-05
2150	3.075E+04	2.235E-07	6.879E-05
2151	3.075E+04	2.126E-07	6.543E-05
2152	3.075E+04	2.022E-07	6.224E-05
2153	3.075E+04	1.924E-07	5.920E-05
2154	3.075E+04	1.830E-07	5.632E-05
2155	3.075E+04	1.741E-07	5.357E-05
2156	3.075E+04	1.656E-07	5.096E-05
2157	3.075E+04	1.575E-07	4.847E-05
2158	3.075E+04	1.498E-07	4.611E-05

continued

Table D-54. Emisson Rate of Benzene from Parcel 4 for Years 1975 to 2203 (concluded).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2159	3.075E+04	1.425E-07	4.386E-05
2160	3.075E+04	1.356E-07	4.172E-05
2161	3.075E+04	1.289E-07	3.969E-05
2162	3.075E+04	1.227E-07	3.775E-05
2163	3.075E+04	1.167E-07	3.591E-05
2164	3.075E+04	1.110E-07	3.416E-05
2165	3.075E+04	1.056E-07	3.249E-05
2166	3.075E+04	1.004E-07	3.091E-05
2167	3.075E+04	9.553E-08	2.940E-05
2168	3.075E+04	9.087E-08	2.797E-05
2169	3.075E+04	8.644E-08	2.660E-05
2170	3.075E+04	8.222E-08	2.530E-05
2171	3.075E+04	7.821E-08	2.407E-05
2172	3.075E+04	7.440E-08	2.290E-05
2173	3.075E+04	7.077E-08	2.178E-05
2174	3.075E+04	6.732E-08	2.072E-05
2175	3.075E+04	6.403E-08	1.971E-05
2176	3.075E+04	6.091E-08	1.875E-05
2177	3.075E+04	5.794E-08	1.783E-05
2178	3.075E+04	5.511E-08	1.696E-05
2179	3.075E+04	5.243E-08	1.614E-05
2180	3.075E+04	4.987E-08	1.535E-05
2181	3.075E+04	4.744E-08	1.460E-05
2182	3.075E+04	4.512E-08	1.389E-05
2183	3.075E+04	4.292E-08	1.321E-05
2184	3.075E+04	4.083E-08	1.257E-05
2185	3.075E+04	3.884E-08	1.195E-05
2186	3.075E+04	3.694E-08	1.137E-05
2187	3.075E+04	3.514E-08	1.082E-05
2188	3.075E+04	3.343E-08	1.029E-05
2189	3.075E+04	3.180E-08	9.786E-06
2190	3.075E+04	3.025E-08	9.309E-06
2191	3.075E+04	2.877E-08	8.855E-06
2192	3.075E+04	2.737E-08	8.423E-06
2193	3.075E+04	2.603E-08	8.012E-06
2194	3.075E+04	2.476E-08	7.622E-06
2195	3.075E+04	2.356E-08	7.250E-06
2196	3.075E+04	2.241E-08	6.896E-06
2197	3.075E+04	2.132E-08	6.560E-06
2198	3.075E+04	2.028E-08	6.240E-06
2199	3.075E+04	1.929E-08	5.936E-06
2200	3.075E+04	1.835E-08	5.646E-06
2201	3.075E+04	1.745E-08	5.371E-06
2202	3.075E+04	1.660E-08	5.109E-06

Table D-55. Emisson Rate of Chlorobenzene from Parcel 4 for Years 1975 to 2203.

Source: H:\3000\030177~2.000\030177~1.003\BUSHVA~1\STRATA4.PRM

Model Parameters

Lo : 170.00 m^3 / Mg
k : 0.0500 1/yr
NMOC : 1870.00 ppmv
Methane : 64.0000 % volume
Carbon Dioxide : 36.0000 % volume
Air Pollutant : Chlorobenzene (HAP/VOC)
Molecular Wt = 112.56 Concentration = 0.220000 ppmV

Landfill Parameters

Landfill type : Co-Disposal
Year Opened : 1974 Current Year : 2004 Closure Year: 2003
Capacity : 30752 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 5271.79 Mg/year

Model Results

Year	Refuse In Place (Mg)	Chlorobenzene (HAP/VOC) Emission Rate (Mg/yr)	(Cubic m/yr)
1975	3.075E+03	4.207E-05	8.985E-03
1976	6.150E+03	8.208E-05	1.753E-02
1977	9.226E+03	1.201E-04	2.566E-02
1978	1.230E+04	1.564E-04	3.340E-02
1979	1.538E+04	1.908E-04	4.075E-02
1980	1.845E+04	2.236E-04	4.775E-02
1981	2.153E+04	2.547E-04	5.441E-02
1982	2.460E+04	2.844E-04	6.074E-02
1983	2.768E+04	3.126E-04	6.676E-02
1984	3.075E+04	3.394E-04	7.249E-02
1985	3.075E+04	3.228E-04	6.896E-02
1986	3.075E+04	3.071E-04	6.559E-02
1987	3.075E+04	2.921E-04	6.239E-02
1988	3.075E+04	2.779E-04	5.935E-02
1989	3.075E+04	2.643E-04	5.646E-02
1990	3.075E+04	2.514E-04	5.370E-02
1991	3.075E+04	2.392E-04	5.108E-02
1992	3.075E+04	2.275E-04	4.859E-02
1993	3.075E+04	2.164E-04	4.622E-02
1994	3.075E+04	2.058E-04	4.397E-02
1995	3.075E+04	1.958E-04	4.182E-02
1996	3.075E+04	1.863E-04	3.978E-02
1997	3.075E+04	1.772E-04	3.784E-02
1998	3.075E+04	1.685E-04	3.600E-02
1999	3.075E+04	1.603E-04	3.424E-02
2000	3.075E+04	1.525E-04	3.257E-02
2001	3.075E+04	1.451E-04	3.098E-02
2002	3.075E+04	1.380E-04	2.947E-02
2003	3.075E+04	1.313E-04	2.804E-02
2004	3.075E+04	1.249E-04	2.667E-02
2005	3.075E+04	1.188E-04	2.537E-02
2006	3.075E+04	1.130E-04	2.413E-02
2007	3.075E+04	1.075E-04	2.295E-02
2008	3.075E+04	1.022E-04	2.183E-02
2009	3.075E+04	9.723E-05	2.077E-02
2010	3.075E+04	9.249E-05	1.976E-02
2011	3.075E+04	8.798E-05	1.879E-02
2012	3.075E+04	8.369E-05	1.788E-02
2013	3.075E+04	7.961E-05	1.700E-02
2014	3.075E+04	7.573E-05	1.618E-02
2015	3.075E+04	7.203E-05	1.539E-02
2016	3.075E+04	6.852E-05	1.464E-02
2017	3.075E+04	6.518E-05	1.392E-02
2018	3.075E+04	6.200E-05	1.324E-02

continued

Table D-55. Emisson Rate of Chlorobenzene from Parcel 4 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2019	3.075E+04	5.898E-05	1.260E-02
2020	3.075E+04	5.610E-05	1.198E-02
2021	3.075E+04	5.336E-05	1.140E-02
2022	3.075E+04	5.076E-05	1.084E-02
2023	3.075E+04	4.829E-05	1.031E-02
2024	3.075E+04	4.593E-05	9.811E-03
2025	3.075E+04	4.369E-05	9.332E-03
2026	3.075E+04	4.156E-05	8.877E-03
2027	3.075E+04	3.953E-05	8.444E-03
2028	3.075E+04	3.760E-05	8.032E-03
2029	3.075E+04	3.577E-05	7.641E-03
2030	3.075E+04	3.403E-05	7.268E-03
2031	3.075E+04	3.237E-05	6.913E-03
2032	3.075E+04	3.079E-05	6.576E-03
2033	3.075E+04	2.929E-05	6.256E-03
2034	3.075E+04	2.786E-05	5.950E-03
2035	3.075E+04	2.650E-05	5.660E-03
2036	3.075E+04	2.521E-05	5.384E-03
2037	3.075E+04	2.398E-05	5.122E-03
2038	3.075E+04	2.281E-05	4.872E-03
2039	3.075E+04	2.170E-05	4.634E-03
2040	3.075E+04	2.064E-05	4.408E-03
2041	3.075E+04	1.963E-05	4.193E-03
2042	3.075E+04	1.867E-05	3.989E-03
2043	3.075E+04	1.776E-05	3.794E-03
2044	3.075E+04	1.690E-05	3.609E-03
2045	3.075E+04	1.607E-05	3.433E-03
2046	3.075E+04	1.529E-05	3.266E-03
2047	3.075E+04	1.454E-05	3.106E-03
2048	3.075E+04	1.383E-05	2.955E-03
2049	3.075E+04	1.316E-05	2.811E-03
2050	3.075E+04	1.252E-05	2.674E-03
2051	3.075E+04	1.191E-05	2.543E-03
2052	3.075E+04	1.133E-05	2.419E-03
2053	3.075E+04	1.077E-05	2.301E-03
2054	3.075E+04	1.025E-05	2.189E-03
2055	3.075E+04	9.749E-06	2.082E-03
2056	3.075E+04	9.273E-06	1.981E-03
2057	3.075E+04	8.821E-06	1.884E-03
2058	3.075E+04	8.391E-06	1.792E-03
2059	3.075E+04	7.982E-06	1.705E-03
2060	3.075E+04	7.592E-06	1.622E-03
2061	3.075E+04	7.222E-06	1.543E-03
2062	3.075E+04	6.870E-06	1.467E-03
2063	3.075E+04	6.535E-06	1.396E-03
2064	3.075E+04	6.216E-06	1.328E-03
2065	3.075E+04	5.913E-06	1.263E-03
2066	3.075E+04	5.624E-06	1.201E-03
2067	3.075E+04	5.350E-06	1.143E-03
2068	3.075E+04	5.089E-06	1.087E-03
2069	3.075E+04	4.841E-06	1.034E-03
2070	3.075E+04	4.605E-06	9.836E-04
2071	3.075E+04	4.380E-06	9.356E-04
2072	3.075E+04	4.167E-06	8.900E-04
2073	3.075E+04	3.964E-06	8.466E-04
2074	3.075E+04	3.770E-06	8.053E-04
2075	3.075E+04	3.586E-06	7.660E-04
2076	3.075E+04	3.411E-06	7.287E-04
2077	3.075E+04	3.245E-06	6.931E-04
2078	3.075E+04	3.087E-06	6.593E-04
2079	3.075E+04	2.936E-06	6.272E-04
2080	3.075E+04	2.793E-06	5.966E-04
2081	3.075E+04	2.657E-06	5.675E-04
2082	3.075E+04	2.527E-06	5.398E-04
2083	3.075E+04	2.404E-06	5.135E-04
2084	3.075E+04	2.287E-06	4.884E-04
2085	3.075E+04	2.175E-06	4.646E-04
2086	3.075E+04	2.069E-06	4.420E-04
2087	3.075E+04	1.968E-06	4.204E-04
2088	3.075E+04	1.872E-06	3.999E-04

continued

Table D-55. Emisson Rate of Chlorobenzene from Parcel 4 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2089	3.075E+04	1.781E-06	3.804E-04
2090	3.075E+04	1.694E-06	3.618E-04
2091	3.075E+04	1.611E-06	3.442E-04
2092	3.075E+04	1.533E-06	3.274E-04
2093	3.075E+04	1.458E-06	3.114E-04
2094	3.075E+04	1.387E-06	2.963E-04
2095	3.075E+04	1.319E-06	2.818E-04
2096	3.075E+04	1.255E-06	2.681E-04
2097	3.075E+04	1.194E-06	2.550E-04
2098	3.075E+04	1.136E-06	2.426E-04
2099	3.075E+04	1.080E-06	2.307E-04
2100	3.075E+04	1.027E-06	2.195E-04
2101	3.075E+04	9.774E-07	2.088E-04
2102	3.075E+04	9.297E-07	1.986E-04
2103	3.075E+04	8.844E-07	1.889E-04
2104	3.075E+04	8.412E-07	1.797E-04
2105	3.075E+04	8.002E-07	1.709E-04
2106	3.075E+04	7.612E-07	1.626E-04
2107	3.075E+04	7.241E-07	1.547E-04
2108	3.075E+04	6.888E-07	1.471E-04
2109	3.075E+04	6.552E-07	1.399E-04
2110	3.075E+04	6.232E-07	1.331E-04
2111	3.075E+04	5.928E-07	1.266E-04
2112	3.075E+04	5.639E-07	1.204E-04
2113	3.075E+04	5.364E-07	1.146E-04
2114	3.075E+04	5.102E-07	1.090E-04
2115	3.075E+04	4.854E-07	1.037E-04
2116	3.075E+04	4.617E-07	9.862E-05
2117	3.075E+04	4.392E-07	9.381E-05
2118	3.075E+04	4.178E-07	8.923E-05
2119	3.075E+04	3.974E-07	8.488E-05
2120	3.075E+04	3.780E-07	8.074E-05
2121	3.075E+04	3.596E-07	7.680E-05
2122	3.075E+04	3.420E-07	7.306E-05
2123	3.075E+04	3.253E-07	6.949E-05
2124	3.075E+04	3.095E-07	6.610E-05
2125	3.075E+04	2.944E-07	6.288E-05
2126	3.075E+04	2.800E-07	5.981E-05
2127	3.075E+04	2.664E-07	5.690E-05
2128	3.075E+04	2.534E-07	5.412E-05
2129	3.075E+04	2.410E-07	5.148E-05
2130	3.075E+04	2.293E-07	4.897E-05
2131	3.075E+04	2.181E-07	4.658E-05
2132	3.075E+04	2.074E-07	4.431E-05
2133	3.075E+04	1.973E-07	4.215E-05
2134	3.075E+04	1.877E-07	4.009E-05
2135	3.075E+04	1.786E-07	3.814E-05
2136	3.075E+04	1.698E-07	3.628E-05
2137	3.075E+04	1.616E-07	3.451E-05
2138	3.075E+04	1.537E-07	3.283E-05
2139	3.075E+04	1.462E-07	3.123E-05
2140	3.075E+04	1.391E-07	2.970E-05
2141	3.075E+04	1.323E-07	2.825E-05
2142	3.075E+04	1.258E-07	2.688E-05
2143	3.075E+04	1.197E-07	2.557E-05
2144	3.075E+04	1.139E-07	2.432E-05
2145	3.075E+04	1.083E-07	2.313E-05
2146	3.075E+04	1.030E-07	2.200E-05
2147	3.075E+04	9.799E-08	2.093E-05
2148	3.075E+04	9.321E-08	1.991E-05
2149	3.075E+04	8.867E-08	1.894E-05
2150	3.075E+04	8.434E-08	1.802E-05
2151	3.075E+04	8.023E-08	1.714E-05
2152	3.075E+04	7.632E-08	1.630E-05
2153	3.075E+04	7.259E-08	1.551E-05
2154	3.075E+04	6.905E-08	1.475E-05
2155	3.075E+04	6.569E-08	1.403E-05
2156	3.075E+04	6.248E-08	1.335E-05
2157	3.075E+04	5.944E-08	1.270E-05
2158	3.075E+04	5.654E-08	1.208E-05

continued

Table D-55. Emisson Rate of Chlorobenzene from Parcel 4 for Years 1975 to 2203 (concluded).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2159	3.075E+04	5.378E-08	1.149E-05
2160	3.075E+04	5.116E-08	1.093E-05
2161	3.075E+04	4.866E-08	1.039E-05
2162	3.075E+04	4.629E-08	9.887E-06
2163	3.075E+04	4.403E-08	9.405E-06
2164	3.075E+04	4.188E-08	8.946E-06
2165	3.075E+04	3.984E-08	8.510E-06
2166	3.075E+04	3.790E-08	8.095E-06
2167	3.075E+04	3.605E-08	7.700E-06
2168	3.075E+04	3.429E-08	7.325E-06
2169	3.075E+04	3.262E-08	6.967E-06
2170	3.075E+04	3.103E-08	6.627E-06
2171	3.075E+04	2.951E-08	6.304E-06
2172	3.075E+04	2.808E-08	5.997E-06
2173	3.075E+04	2.671E-08	5.704E-06
2174	3.075E+04	2.540E-08	5.426E-06
2175	3.075E+04	2.416E-08	5.161E-06
2176	3.075E+04	2.299E-08	4.910E-06
2177	3.075E+04	2.186E-08	4.670E-06
2178	3.075E+04	2.080E-08	4.443E-06
2179	3.075E+04	1.978E-08	4.226E-06
2180	3.075E+04	1.882E-08	4.020E-06
2181	3.075E+04	1.790E-08	3.824E-06
2182	3.075E+04	1.703E-08	3.637E-06
2183	3.075E+04	1.620E-08	3.460E-06
2184	3.075E+04	1.541E-08	3.291E-06
2185	3.075E+04	1.466E-08	3.131E-06
2186	3.075E+04	1.394E-08	2.978E-06
2187	3.075E+04	1.326E-08	2.833E-06
2188	3.075E+04	1.261E-08	2.695E-06
2189	3.075E+04	1.200E-08	2.563E-06
2190	3.075E+04	1.141E-08	2.438E-06
2191	3.075E+04	1.086E-08	2.319E-06
2192	3.075E+04	1.033E-08	2.206E-06
2193	3.075E+04	9.825E-09	2.099E-06
2194	3.075E+04	9.345E-09	1.996E-06
2195	3.075E+04	8.890E-09	1.899E-06
2196	3.075E+04	8.456E-09	1.806E-06
2197	3.075E+04	8.044E-09	1.718E-06
2198	3.075E+04	7.651E-09	1.634E-06
2199	3.075E+04	7.278E-09	1.555E-06
2200	3.075E+04	6.923E-09	1.479E-06
2201	3.075E+04	6.586E-09	1.407E-06
2202	3.075E+04	6.264E-09	1.338E-06

Table D-56. Emisson Rate of Chloroethane from Parcel 4 for Years 1975 to 2203.

Source: H:\3000\030177~2.000\030177~1.003\BUSHVA~1\STRATA4.PRM

Model Parameters

Lo : 170.00 m^3 / Mg
k : 0.0500 1/yr
NMOC : 1870.00 ppmv
Methane : 64.0000 % volume
Carbon Dioxide : 36.0000 % volume
Air Pollutant : Chloroethane (HAP/VOC)
Molecular Wt = 64.52 Concentration = 0.430000 ppmV

Landfill Parameters

Landfill type : Co-Disposal
Year Opened : 1974 Current Year : 2004 Closure Year: 2003
Capacity : 30752 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 5271.79 Mg/year

Model Results

Year	Refuse In Place (Mg)	Chloroethane (HAP/VOC) Emission Rate (Mg/yr)	(Cubic m/yr)
1975	3.075E+03	4.713E-05	1.756E-02
1976	6.150E+03	9.196E-05	3.427E-02
1977	9.226E+03	1.346E-04	5.016E-02
1978	1.230E+04	1.752E-04	6.528E-02
1979	1.538E+04	2.138E-04	7.965E-02
1980	1.845E+04	2.505E-04	9.333E-02
1981	2.153E+04	2.854E-04	1.063E-01
1982	2.460E+04	3.186E-04	1.187E-01
1983	2.768E+04	3.502E-04	1.305E-01
1984	3.075E+04	3.802E-04	1.417E-01
1985	3.075E+04	3.617E-04	1.348E-01
1986	3.075E+04	3.440E-04	1.282E-01
1987	3.075E+04	3.273E-04	1.220E-01
1988	3.075E+04	3.113E-04	1.160E-01
1989	3.075E+04	2.961E-04	1.103E-01
1990	3.075E+04	2.817E-04	1.050E-01
1991	3.075E+04	2.679E-04	9.985E-02
1992	3.075E+04	2.549E-04	9.498E-02
1993	3.075E+04	2.424E-04	9.034E-02
1994	3.075E+04	2.306E-04	8.594E-02
1995	3.075E+04	2.194E-04	8.175E-02
1996	3.075E+04	2.087E-04	7.776E-02
1997	3.075E+04	1.985E-04	7.397E-02
1998	3.075E+04	1.888E-04	7.036E-02
1999	3.075E+04	1.796E-04	6.693E-02
2000	3.075E+04	1.708E-04	6.366E-02
2001	3.075E+04	1.625E-04	6.056E-02
2002	3.075E+04	1.546E-04	5.761E-02
2003	3.075E+04	1.471E-04	5.480E-02
2004	3.075E+04	1.399E-04	5.212E-02
2005	3.075E+04	1.331E-04	4.958E-02
2006	3.075E+04	1.266E-04	4.716E-02
2007	3.075E+04	1.204E-04	4.486E-02
2008	3.075E+04	1.145E-04	4.268E-02
2009	3.075E+04	1.089E-04	4.059E-02
2010	3.075E+04	1.036E-04	3.861E-02
2011	3.075E+04	9.857E-05	3.673E-02
2012	3.075E+04	9.376E-05	3.494E-02
2013	3.075E+04	8.919E-05	3.324E-02
2014	3.075E+04	8.484E-05	3.161E-02
2015	3.075E+04	8.070E-05	3.007E-02
2016	3.075E+04	7.677E-05	2.861E-02
2017	3.075E+04	7.302E-05	2.721E-02
2018	3.075E+04	6.946E-05	2.588E-02

continued

Table D-56. Emisson Rate of Chloroethane from Parcel 4 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2019	3.075E+04	6.607E-05	2.462E-02
2020	3.075E+04	6.285E-05	2.342E-02
2021	3.075E+04	5.979E-05	2.228E-02
2022	3.075E+04	5.687E-05	2.119E-02
2023	3.075E+04	5.410E-05	2.016E-02
2024	3.075E+04	5.146E-05	1.918E-02
2025	3.075E+04	4.895E-05	1.824E-02
2026	3.075E+04	4.656E-05	1.735E-02
2027	3.075E+04	4.429E-05	1.650E-02
2028	3.075E+04	4.213E-05	1.570E-02
2029	3.075E+04	4.008E-05	1.493E-02
2030	3.075E+04	3.812E-05	1.421E-02
2031	3.075E+04	3.626E-05	1.351E-02
2032	3.075E+04	3.449E-05	1.285E-02
2033	3.075E+04	3.281E-05	1.223E-02
2034	3.075E+04	3.121E-05	1.163E-02
2035	3.075E+04	2.969E-05	1.106E-02
2036	3.075E+04	2.824E-05	1.052E-02
2037	3.075E+04	2.686E-05	1.001E-02
2038	3.075E+04	2.555E-05	9.522E-03
2039	3.075E+04	2.431E-05	9.058E-03
2040	3.075E+04	2.312E-05	8.616E-03
2041	3.075E+04	2.199E-05	8.196E-03
2042	3.075E+04	2.092E-05	7.796E-03
2043	3.075E+04	1.990E-05	7.416E-03
2044	3.075E+04	1.893E-05	7.054E-03
2045	3.075E+04	1.801E-05	6.710E-03
2046	3.075E+04	1.713E-05	6.383E-03
2047	3.075E+04	1.629E-05	6.072E-03
2048	3.075E+04	1.550E-05	5.776E-03
2049	3.075E+04	1.474E-05	5.494E-03
2050	3.075E+04	1.402E-05	5.226E-03
2051	3.075E+04	1.334E-05	4.971E-03
2052	3.075E+04	1.269E-05	4.729E-03
2053	3.075E+04	1.207E-05	4.498E-03
2054	3.075E+04	1.148E-05	4.279E-03
2055	3.075E+04	1.092E-05	4.070E-03
2056	3.075E+04	1.039E-05	3.871E-03
2057	3.075E+04	9.883E-06	3.683E-03
2058	3.075E+04	9.401E-06	3.503E-03
2059	3.075E+04	8.942E-06	3.332E-03
2060	3.075E+04	8.506E-06	3.170E-03
2061	3.075E+04	8.091E-06	3.015E-03
2062	3.075E+04	7.697E-06	2.868E-03
2063	3.075E+04	7.321E-06	2.728E-03
2064	3.075E+04	6.964E-06	2.595E-03
2065	3.075E+04	6.625E-06	2.469E-03
2066	3.075E+04	6.301E-06	2.348E-03
2067	3.075E+04	5.994E-06	2.234E-03
2068	3.075E+04	5.702E-06	2.125E-03
2069	3.075E+04	5.424E-06	2.021E-03
2070	3.075E+04	5.159E-06	1.923E-03
2071	3.075E+04	4.908E-06	1.829E-03
2072	3.075E+04	4.668E-06	1.740E-03
2073	3.075E+04	4.441E-06	1.655E-03
2074	3.075E+04	4.224E-06	1.574E-03
2075	3.075E+04	4.018E-06	1.497E-03
2076	3.075E+04	3.822E-06	1.424E-03
2077	3.075E+04	3.636E-06	1.355E-03
2078	3.075E+04	3.458E-06	1.289E-03
2079	3.075E+04	3.290E-06	1.226E-03
2080	3.075E+04	3.129E-06	1.166E-03
2081	3.075E+04	2.977E-06	1.109E-03
2082	3.075E+04	2.831E-06	1.055E-03
2083	3.075E+04	2.693E-06	1.004E-03
2084	3.075E+04	2.562E-06	9.547E-04
2085	3.075E+04	2.437E-06	9.081E-04
2086	3.075E+04	2.318E-06	8.638E-04
2087	3.075E+04	2.205E-06	8.217E-04
2088	3.075E+04	2.098E-06	7.816E-04

continued

Table D-56. Emisson Rate of Chloroethane from Parcel 4 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2089	3.075E+04	1.995E-06	7.435E-04
2090	3.075E+04	1.898E-06	7.072E-04
2091	3.075E+04	1.805E-06	6.728E-04
2092	3.075E+04	1.717E-06	6.399E-04
2093	3.075E+04	1.634E-06	6.087E-04
2094	3.075E+04	1.554E-06	5.790E-04
2095	3.075E+04	1.478E-06	5.508E-04
2096	3.075E+04	1.406E-06	5.239E-04
2097	3.075E+04	1.337E-06	4.984E-04
2098	3.075E+04	1.272E-06	4.741E-04
2099	3.075E+04	1.210E-06	4.510E-04
2100	3.075E+04	1.151E-06	4.290E-04
2101	3.075E+04	1.095E-06	4.080E-04
2102	3.075E+04	1.042E-06	3.881E-04
2103	3.075E+04	9.908E-07	3.692E-04
2104	3.075E+04	9.425E-07	3.512E-04
2105	3.075E+04	8.965E-07	3.341E-04
2106	3.075E+04	8.528E-07	3.178E-04
2107	3.075E+04	8.112E-07	3.023E-04
2108	3.075E+04	7.716E-07	2.875E-04
2109	3.075E+04	7.340E-07	2.735E-04
2110	3.075E+04	6.982E-07	2.602E-04
2111	3.075E+04	6.642E-07	2.475E-04
2112	3.075E+04	6.318E-07	2.354E-04
2113	3.075E+04	6.010E-07	2.239E-04
2114	3.075E+04	5.717E-07	2.130E-04
2115	3.075E+04	5.438E-07	2.026E-04
2116	3.075E+04	5.173E-07	1.927E-04
2117	3.075E+04	4.920E-07	1.833E-04
2118	3.075E+04	4.680E-07	1.744E-04
2119	3.075E+04	4.452E-07	1.659E-04
2120	3.075E+04	4.235E-07	1.578E-04
2121	3.075E+04	4.028E-07	1.501E-04
2122	3.075E+04	3.832E-07	1.428E-04
2123	3.075E+04	3.645E-07	1.358E-04
2124	3.075E+04	3.467E-07	1.292E-04
2125	3.075E+04	3.298E-07	1.229E-04
2126	3.075E+04	3.137E-07	1.169E-04
2127	3.075E+04	2.984E-07	1.112E-04
2128	3.075E+04	2.839E-07	1.058E-04
2129	3.075E+04	2.700E-07	1.006E-04
2130	3.075E+04	2.569E-07	9.572E-05
2131	3.075E+04	2.443E-07	9.105E-05
2132	3.075E+04	2.324E-07	8.661E-05
2133	3.075E+04	2.211E-07	8.238E-05
2134	3.075E+04	2.103E-07	7.837E-05
2135	3.075E+04	2.000E-07	7.454E-05
2136	3.075E+04	1.903E-07	7.091E-05
2137	3.075E+04	1.810E-07	6.745E-05
2138	3.075E+04	1.722E-07	6.416E-05
2139	3.075E+04	1.638E-07	6.103E-05
2140	3.075E+04	1.558E-07	5.805E-05
2141	3.075E+04	1.482E-07	5.522E-05
2142	3.075E+04	1.410E-07	5.253E-05
2143	3.075E+04	1.341E-07	4.997E-05
2144	3.075E+04	1.276E-07	4.753E-05
2145	3.075E+04	1.213E-07	4.521E-05
2146	3.075E+04	1.154E-07	4.301E-05
2147	3.075E+04	1.098E-07	4.091E-05
2148	3.075E+04	1.044E-07	3.892E-05
2149	3.075E+04	9.934E-08	3.702E-05
2150	3.075E+04	9.449E-08	3.521E-05
2151	3.075E+04	8.988E-08	3.349E-05
2152	3.075E+04	8.550E-08	3.186E-05
2153	3.075E+04	8.133E-08	3.031E-05
2154	3.075E+04	7.736E-08	2.883E-05
2155	3.075E+04	7.359E-08	2.742E-05
2156	3.075E+04	7.000E-08	2.609E-05
2157	3.075E+04	6.659E-08	2.481E-05
2158	3.075E+04	6.334E-08	2.360E-05

continued

Table D-56. Emisson Rate of Chloroethane from Parcel 4 for Years 1975 to 2203 (concluded).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2159	3.075E+04	6.025E-08	2.245E-05
2160	3.075E+04	5.731E-08	2.136E-05
2161	3.075E+04	5.452E-08	2.032E-05
2162	3.075E+04	5.186E-08	1.932E-05
2163	3.075E+04	4.933E-08	1.838E-05
2164	3.075E+04	4.692E-08	1.749E-05
2165	3.075E+04	4.464E-08	1.663E-05
2166	3.075E+04	4.246E-08	1.582E-05
2167	3.075E+04	4.039E-08	1.505E-05
2168	3.075E+04	3.842E-08	1.432E-05
2169	3.075E+04	3.654E-08	1.362E-05
2170	3.075E+04	3.476E-08	1.295E-05
2171	3.075E+04	3.307E-08	1.232E-05
2172	3.075E+04	3.145E-08	1.172E-05
2173	3.075E+04	2.992E-08	1.115E-05
2174	3.075E+04	2.846E-08	1.061E-05
2175	3.075E+04	2.707E-08	1.009E-05
2176	3.075E+04	2.575E-08	9.596E-06
2177	3.075E+04	2.450E-08	9.128E-06
2178	3.075E+04	2.330E-08	8.683E-06
2179	3.075E+04	2.217E-08	8.260E-06
2180	3.075E+04	2.108E-08	7.857E-06
2181	3.075E+04	2.006E-08	7.474E-06
2182	3.075E+04	1.908E-08	7.109E-06
2183	3.075E+04	1.815E-08	6.762E-06
2184	3.075E+04	1.726E-08	6.433E-06
2185	3.075E+04	1.642E-08	6.119E-06
2186	3.075E+04	1.562E-08	5.820E-06
2187	3.075E+04	1.486E-08	5.537E-06
2188	3.075E+04	1.413E-08	5.267E-06
2189	3.075E+04	1.344E-08	5.010E-06
2190	3.075E+04	1.279E-08	4.765E-06
2191	3.075E+04	1.216E-08	4.533E-06
2192	3.075E+04	1.157E-08	4.312E-06
2193	3.075E+04	1.101E-08	4.102E-06
2194	3.075E+04	1.047E-08	3.902E-06
2195	3.075E+04	9.960E-09	3.711E-06
2196	3.075E+04	9.474E-09	3.530E-06
2197	3.075E+04	9.012E-09	3.358E-06
2198	3.075E+04	8.572E-09	3.194E-06
2199	3.075E+04	8.154E-09	3.039E-06
2200	3.075E+04	7.756E-09	2.890E-06
2201	3.075E+04	7.378E-09	2.749E-06
2202	3.075E+04	7.018E-09	2.615E-06

Table D-57. Emisson Rate of 1,4-Dichlorobenzene from Parcel 4 for Years 1975 to 2203.

Source: H:\3000\030177~2.000\030177~1.003\BUSHVA~1\STRATA4.PRM

Model Parameters

Lo : 170.00 m^3 / Mg
k : 0.0500 1/yr
NMOC : 1870.00 ppmv
Methane : 64.0000 % volume
Carbon Dioxide : 36.0000 % volume
Air Pollutant : Dichlorobenzene (VOC/HAP for 1,4 isomer)
Molecular Wt = 147.00 Concentration = 0.080000 ppmV

Landfill Parameters

Landfill type : Co-Disposal
Year Opened : 1974 Current Year : 2004 Closure Year: 2003
Capacity : 30752 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 5271.79 Mg/year

Model Results

Year	Refuse In Place (Mg)	Dichlorobenzene (VOC/HAP for 1,4 isomer) Emission R (Mg/yr)	(Cubic m/yr)
1975	3.075E+03	1.998E-05	3.267E-03
1976	6.150E+03	3.898E-05	6.375E-03
1977	9.226E+03	5.706E-05	9.332E-03
1978	1.230E+04	7.425E-05	1.214E-02
1979	1.538E+04	9.061E-05	1.482E-02
1980	1.845E+04	1.062E-04	1.736E-02
1981	2.153E+04	1.210E-04	1.978E-02
1982	2.460E+04	1.350E-04	2.209E-02
1983	2.768E+04	1.484E-04	2.428E-02
1984	3.075E+04	1.612E-04	2.636E-02
1985	3.075E+04	1.533E-04	2.507E-02
1986	3.075E+04	1.458E-04	2.385E-02
1987	3.075E+04	1.387E-04	2.269E-02
1988	3.075E+04	1.320E-04	2.158E-02
1989	3.075E+04	1.255E-04	2.053E-02
1990	3.075E+04	1.194E-04	1.953E-02
1991	3.075E+04	1.136E-04	1.858E-02
1992	3.075E+04	1.080E-04	1.767E-02
1993	3.075E+04	1.028E-04	1.681E-02
1994	3.075E+04	9.776E-05	1.599E-02
1995	3.075E+04	9.299E-05	1.521E-02
1996	3.075E+04	8.845E-05	1.447E-02
1997	3.075E+04	8.414E-05	1.376E-02
1998	3.075E+04	8.004E-05	1.309E-02
1999	3.075E+04	7.613E-05	1.245E-02
2000	3.075E+04	7.242E-05	1.184E-02
2001	3.075E+04	6.889E-05	1.127E-02
2002	3.075E+04	6.553E-05	1.072E-02
2003	3.075E+04	6.233E-05	1.019E-02
2004	3.075E+04	5.929E-05	9.698E-03
2005	3.075E+04	5.640E-05	9.225E-03
2006	3.075E+04	5.365E-05	8.775E-03
2007	3.075E+04	5.103E-05	8.347E-03
2008	3.075E+04	4.854E-05	7.940E-03
2009	3.075E+04	4.618E-05	7.552E-03
2010	3.075E+04	4.392E-05	7.184E-03
2011	3.075E+04	4.178E-05	6.834E-03
2012	3.075E+04	3.974E-05	6.500E-03
2013	3.075E+04	3.781E-05	6.183E-03
2014	3.075E+04	3.596E-05	5.882E-03
2015	3.075E+04	3.421E-05	5.595E-03
2016	3.075E+04	3.254E-05	5.322E-03
2017	3.075E+04	3.095E-05	5.063E-03
2018	3.075E+04	2.944E-05	4.816E-03

continued

Table D-57. Emisson Rate of 1,4-Dichlorobenzene from Parcel 4 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2019	3.075E+04	2.801E-05	4.581E-03
2020	3.075E+04	2.664E-05	4.357E-03
2021	3.075E+04	2.534E-05	4.145E-03
2022	3.075E+04	2.411E-05	3.943E-03
2023	3.075E+04	2.293E-05	3.750E-03
2024	3.075E+04	2.181E-05	3.568E-03
2025	3.075E+04	2.075E-05	3.394E-03
2026	3.075E+04	1.974E-05	3.228E-03
2027	3.075E+04	1.877E-05	3.071E-03
2028	3.075E+04	1.786E-05	2.921E-03
2029	3.075E+04	1.699E-05	2.778E-03
2030	3.075E+04	1.616E-05	2.643E-03
2031	3.075E+04	1.537E-05	2.514E-03
2032	3.075E+04	1.462E-05	2.391E-03
2033	3.075E+04	1.391E-05	2.275E-03
2034	3.075E+04	1.323E-05	2.164E-03
2035	3.075E+04	1.258E-05	2.058E-03
2036	3.075E+04	1.197E-05	1.958E-03
2037	3.075E+04	1.139E-05	1.862E-03
2038	3.075E+04	1.083E-05	1.772E-03
2039	3.075E+04	1.030E-05	1.685E-03
2040	3.075E+04	9.801E-06	1.603E-03
2041	3.075E+04	9.323E-06	1.525E-03
2042	3.075E+04	8.868E-06	1.450E-03
2043	3.075E+04	8.436E-06	1.380E-03
2044	3.075E+04	8.024E-06	1.312E-03
2045	3.075E+04	7.633E-06	1.248E-03
2046	3.075E+04	7.261E-06	1.188E-03
2047	3.075E+04	6.907E-06	1.130E-03
2048	3.075E+04	6.570E-06	1.075E-03
2049	3.075E+04	6.249E-06	1.022E-03
2050	3.075E+04	5.945E-06	9.723E-04
2051	3.075E+04	5.655E-06	9.248E-04
2052	3.075E+04	5.379E-06	8.797E-04
2053	3.075E+04	5.117E-06	8.368E-04
2054	3.075E+04	4.867E-06	7.960E-04
2055	3.075E+04	4.630E-06	7.572E-04
2056	3.075E+04	4.404E-06	7.203E-04
2057	3.075E+04	4.189E-06	6.851E-04
2058	3.075E+04	3.985E-06	6.517E-04
2059	3.075E+04	3.790E-06	6.199E-04
2060	3.075E+04	3.606E-06	5.897E-04
2061	3.075E+04	3.430E-06	5.609E-04
2062	3.075E+04	3.262E-06	5.336E-04
2063	3.075E+04	3.103E-06	5.076E-04
2064	3.075E+04	2.952E-06	4.828E-04
2065	3.075E+04	2.808E-06	4.593E-04
2066	3.075E+04	2.671E-06	4.369E-04
2067	3.075E+04	2.541E-06	4.156E-04
2068	3.075E+04	2.417E-06	3.953E-04
2069	3.075E+04	2.299E-06	3.760E-04
2070	3.075E+04	2.187E-06	3.577E-04
2071	3.075E+04	2.080E-06	3.402E-04
2072	3.075E+04	1.979E-06	3.236E-04
2073	3.075E+04	1.882E-06	3.079E-04
2074	3.075E+04	1.790E-06	2.928E-04
2075	3.075E+04	1.703E-06	2.786E-04
2076	3.075E+04	1.620E-06	2.650E-04
2077	3.075E+04	1.541E-06	2.520E-04
2078	3.075E+04	1.466E-06	2.398E-04
2079	3.075E+04	1.394E-06	2.281E-04
2080	3.075E+04	1.326E-06	2.169E-04
2081	3.075E+04	1.262E-06	2.064E-04
2082	3.075E+04	1.200E-06	1.963E-04
2083	3.075E+04	1.142E-06	1.867E-04
2084	3.075E+04	1.086E-06	1.776E-04
2085	3.075E+04	1.033E-06	1.690E-04
2086	3.075E+04	9.826E-07	1.607E-04
2087	3.075E+04	9.347E-07	1.529E-04
2088	3.075E+04	8.891E-07	1.454E-04

continued

Table D-57. Emisson Rate of 1,4-Dichlorobenzene from Parcel 4 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2089	3.075E+04	8.458E-07	1.383E-04
2090	3.075E+04	8.045E-07	1.316E-04
2091	3.075E+04	7.653E-07	1.252E-04
2092	3.075E+04	7.279E-07	1.191E-04
2093	3.075E+04	6.924E-07	1.133E-04
2094	3.075E+04	6.587E-07	1.077E-04
2095	3.075E+04	6.266E-07	1.025E-04
2096	3.075E+04	5.960E-07	9.748E-05
2097	3.075E+04	5.669E-07	9.272E-05
2098	3.075E+04	5.393E-07	8.820E-05
2099	3.075E+04	5.130E-07	8.390E-05
2100	3.075E+04	4.880E-07	7.981E-05
2101	3.075E+04	4.642E-07	7.592E-05
2102	3.075E+04	4.415E-07	7.221E-05
2103	3.075E+04	4.200E-07	6.869E-05
2104	3.075E+04	3.995E-07	6.534E-05
2105	3.075E+04	3.800E-07	6.215E-05
2106	3.075E+04	3.615E-07	5.912E-05
2107	3.075E+04	3.439E-07	5.624E-05
2108	3.075E+04	3.271E-07	5.350E-05
2109	3.075E+04	3.111E-07	5.089E-05
2110	3.075E+04	2.960E-07	4.841E-05
2111	3.075E+04	2.815E-07	4.605E-05
2112	3.075E+04	2.678E-07	4.380E-05
2113	3.075E+04	2.547E-07	4.166E-05
2114	3.075E+04	2.423E-07	3.963E-05
2115	3.075E+04	2.305E-07	3.770E-05
2116	3.075E+04	2.193E-07	3.586E-05
2117	3.075E+04	2.086E-07	3.411E-05
2118	3.075E+04	1.984E-07	3.245E-05
2119	3.075E+04	1.887E-07	3.087E-05
2120	3.075E+04	1.795E-07	2.936E-05
2121	3.075E+04	1.708E-07	2.793E-05
2122	3.075E+04	1.624E-07	2.657E-05
2123	3.075E+04	1.545E-07	2.527E-05
2124	3.075E+04	1.470E-07	2.404E-05
2125	3.075E+04	1.398E-07	2.287E-05
2126	3.075E+04	1.330E-07	2.175E-05
2127	3.075E+04	1.265E-07	2.069E-05
2128	3.075E+04	1.203E-07	1.968E-05
2129	3.075E+04	1.145E-07	1.872E-05
2130	3.075E+04	1.089E-07	1.781E-05
2131	3.075E+04	1.036E-07	1.694E-05
2132	3.075E+04	9.852E-08	1.611E-05
2133	3.075E+04	9.371E-08	1.533E-05
2134	3.075E+04	8.914E-08	1.458E-05
2135	3.075E+04	8.479E-08	1.387E-05
2136	3.075E+04	8.066E-08	1.319E-05
2137	3.075E+04	7.673E-08	1.255E-05
2138	3.075E+04	7.298E-08	1.194E-05
2139	3.075E+04	6.942E-08	1.135E-05
2140	3.075E+04	6.604E-08	1.080E-05
2141	3.075E+04	6.282E-08	1.027E-05
2142	3.075E+04	5.975E-08	9.773E-06
2143	3.075E+04	5.684E-08	9.296E-06
2144	3.075E+04	5.407E-08	8.843E-06
2145	3.075E+04	5.143E-08	8.412E-06
2146	3.075E+04	4.892E-08	8.001E-06
2147	3.075E+04	4.654E-08	7.611E-06
2148	3.075E+04	4.427E-08	7.240E-06
2149	3.075E+04	4.211E-08	6.887E-06
2150	3.075E+04	4.005E-08	6.551E-06
2151	3.075E+04	3.810E-08	6.232E-06
2152	3.075E+04	3.624E-08	5.928E-06
2153	3.075E+04	3.447E-08	5.639E-06
2154	3.075E+04	3.279E-08	5.364E-06
2155	3.075E+04	3.119E-08	5.102E-06
2156	3.075E+04	2.967E-08	4.853E-06
2157	3.075E+04	2.823E-08	4.616E-06
2158	3.075E+04	2.685E-08	4.391E-06

continued

Table D-57. Emisson Rate of 1,4-Dichlorobenzene from Parcel 4 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2159	3.075E+04	2.554E-08	4.177E-06
2160	3.075E+04	2.429E-08	3.973E-06
2161	3.075E+04	2.311E-08	3.780E-06
2162	3.075E+04	2.198E-08	3.595E-06
2163	3.075E+04	2.091E-08	3.420E-06
2164	3.075E+04	1.989E-08	3.253E-06
2165	3.075E+04	1.892E-08	3.094E-06
2166	3.075E+04	1.800E-08	2.944E-06
2167	3.075E+04	1.712E-08	2.800E-06
2168	3.075E+04	1.628E-08	2.663E-06
2169	3.075E+04	1.549E-08	2.534E-06
2170	3.075E+04	1.474E-08	2.410E-06
2171	3.075E+04	1.402E-08	2.292E-06
2172	3.075E+04	1.333E-08	2.181E-06
2173	3.075E+04	1.268E-08	2.074E-06
2174	3.075E+04	1.206E-08	1.973E-06
2175	3.075E+04	1.148E-08	1.877E-06
2176	3.075E+04	1.092E-08	1.785E-06
2177	3.075E+04	1.038E-08	1.698E-06
2178	3.075E+04	9.877E-09	1.615E-06
2179	3.075E+04	9.395E-09	1.537E-06
2180	3.075E+04	8.937E-09	1.462E-06
2181	3.075E+04	8.501E-09	1.390E-06
2182	3.075E+04	8.087E-09	1.323E-06
2183	3.075E+04	7.692E-09	1.258E-06
2184	3.075E+04	7.317E-09	1.197E-06
2185	3.075E+04	6.960E-09	1.138E-06
2186	3.075E+04	6.621E-09	1.083E-06
2187	3.075E+04	6.298E-09	1.030E-06
2188	3.075E+04	5.991E-09	9.798E-07
2189	3.075E+04	5.699E-09	9.320E-07
2190	3.075E+04	5.421E-09	8.866E-07
2191	3.075E+04	5.156E-09	8.433E-07
2192	3.075E+04	4.905E-09	8.022E-07
2193	3.075E+04	4.666E-09	7.631E-07
2194	3.075E+04	4.438E-09	7.259E-07
2195	3.075E+04	4.222E-09	6.905E-07
2196	3.075E+04	4.016E-09	6.568E-07
2197	3.075E+04	3.820E-09	6.248E-07
2198	3.075E+04	3.634E-09	5.943E-07
2199	3.075E+04	3.456E-09	5.653E-07
2200	3.075E+04	3.288E-09	5.377E-07
2201	3.075E+04	3.127E-09	5.115E-07
2202	3.075E+04	2.975E-09	4.866E-07

Table D-58. Emisson Rate of Methylene Chloride from Parcel 4 for Years 1975 to 2203.

Source: H:\3000\030177~2.000\030177~1.003\BUSHVA~1\STRATA4.PRM

Model Parameters

Lo : 170.00 m^3 / Mg
k : 0.0500 1/yr
NMOC : 1870.00 ppmv
Methane : 64.0000 % volume
Carbon Dioxide : 36.0000 % volume
Air Pollutant : Methylene Chloride
Molecular Wt = 84.90 Concentration = 0.170000 ppmV

Landfill Parameters

Landfill type : Co-Disposal
Year Opened : 1974 Current Year : 2004 Closure Year: 2003
Capacity : 30752 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 5271.79 Mg/year

Model Results

Year	Refuse In Place (Mg)	Methylene Chloride Emission Rate (Mg/yr)	(Cubic m/yr)
1975	3.075E+03	2.452E-05	6.943E-03
1976	6.150E+03	4.784E-05	1.355E-02
1977	9.226E+03	7.003E-05	1.983E-02
1978	1.230E+04	9.113E-05	2.581E-02
1979	1.538E+04	1.112E-04	3.149E-02
1980	1.845E+04	1.303E-04	3.690E-02
1981	2.153E+04	1.485E-04	4.204E-02
1982	2.460E+04	1.657E-04	4.694E-02
1983	2.768E+04	1.822E-04	5.159E-02
1984	3.075E+04	1.978E-04	5.602E-02
1985	3.075E+04	1.882E-04	5.328E-02
1986	3.075E+04	1.790E-04	5.069E-02
1987	3.075E+04	1.703E-04	4.821E-02
1988	3.075E+04	1.619E-04	4.586E-02
1989	3.075E+04	1.541E-04	4.363E-02
1990	3.075E+04	1.465E-04	4.150E-02
1991	3.075E+04	1.394E-04	3.947E-02
1992	3.075E+04	1.326E-04	3.755E-02
1993	3.075E+04	1.261E-04	3.572E-02
1994	3.075E+04	1.200E-04	3.398E-02
1995	3.075E+04	1.141E-04	3.232E-02
1996	3.075E+04	1.086E-04	3.074E-02
1997	3.075E+04	1.033E-04	2.924E-02
1998	3.075E+04	9.823E-05	2.782E-02
1999	3.075E+04	9.344E-05	2.646E-02
2000	3.075E+04	8.888E-05	2.517E-02
2001	3.075E+04	8.455E-05	2.394E-02
2002	3.075E+04	8.042E-05	2.277E-02
2003	3.075E+04	7.650E-05	2.166E-02
2004	3.075E+04	7.277E-05	2.061E-02
2005	3.075E+04	6.922E-05	1.960E-02
2006	3.075E+04	6.584E-05	1.865E-02
2007	3.075E+04	6.263E-05	1.774E-02
2008	3.075E+04	5.958E-05	1.687E-02
2009	3.075E+04	5.667E-05	1.605E-02
2010	3.075E+04	5.391E-05	1.527E-02
2011	3.075E+04	5.128E-05	1.452E-02
2012	3.075E+04	4.878E-05	1.381E-02
2013	3.075E+04	4.640E-05	1.314E-02
2014	3.075E+04	4.414E-05	1.250E-02
2015	3.075E+04	4.198E-05	1.189E-02
2016	3.075E+04	3.994E-05	1.131E-02
2017	3.075E+04	3.799E-05	1.076E-02
2018	3.075E+04	3.614E-05	1.023E-02

continued

Table D-58. Emisson Rate of Methylene Chloride from Parcel 4 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2019	3.075E+04	3.437E-05	9.734E-03
2020	3.075E+04	3.270E-05	9.259E-03
2021	3.075E+04	3.110E-05	8.808E-03
2022	3.075E+04	2.959E-05	8.378E-03
2023	3.075E+04	2.814E-05	7.970E-03
2024	3.075E+04	2.677E-05	7.581E-03
2025	3.075E+04	2.546E-05	7.211E-03
2026	3.075E+04	2.422E-05	6.860E-03
2027	3.075E+04	2.304E-05	6.525E-03
2028	3.075E+04	2.192E-05	6.207E-03
2029	3.075E+04	2.085E-05	5.904E-03
2030	3.075E+04	1.983E-05	5.616E-03
2031	3.075E+04	1.886E-05	5.342E-03
2032	3.075E+04	1.794E-05	5.082E-03
2033	3.075E+04	1.707E-05	4.834E-03
2034	3.075E+04	1.624E-05	4.598E-03
2035	3.075E+04	1.545E-05	4.374E-03
2036	3.075E+04	1.469E-05	4.161E-03
2037	3.075E+04	1.398E-05	3.958E-03
2038	3.075E+04	1.329E-05	3.765E-03
2039	3.075E+04	1.265E-05	3.581E-03
2040	3.075E+04	1.203E-05	3.406E-03
2041	3.075E+04	1.144E-05	3.240E-03
2042	3.075E+04	1.088E-05	3.082E-03
2043	3.075E+04	1.035E-05	2.932E-03
2044	3.075E+04	9.848E-06	2.789E-03
2045	3.075E+04	9.368E-06	2.653E-03
2046	3.075E+04	8.911E-06	2.523E-03
2047	3.075E+04	8.476E-06	2.400E-03
2048	3.075E+04	8.063E-06	2.283E-03
2049	3.075E+04	7.670E-06	2.172E-03
2050	3.075E+04	7.296E-06	2.066E-03
2051	3.075E+04	6.940E-06	1.965E-03
2052	3.075E+04	6.601E-06	1.869E-03
2053	3.075E+04	6.279E-06	1.778E-03
2054	3.075E+04	5.973E-06	1.692E-03
2055	3.075E+04	5.682E-06	1.609E-03
2056	3.075E+04	5.405E-06	1.531E-03
2057	3.075E+04	5.141E-06	1.456E-03
2058	3.075E+04	4.890E-06	1.385E-03
2059	3.075E+04	4.652E-06	1.317E-03
2060	3.075E+04	4.425E-06	1.253E-03
2061	3.075E+04	4.209E-06	1.192E-03
2062	3.075E+04	4.004E-06	1.134E-03
2063	3.075E+04	3.809E-06	1.079E-03
2064	3.075E+04	3.623E-06	1.026E-03
2065	3.075E+04	3.446E-06	9.759E-04
2066	3.075E+04	3.278E-06	9.283E-04
2067	3.075E+04	3.118E-06	8.831E-04
2068	3.075E+04	2.966E-06	8.400E-04
2069	3.075E+04	2.822E-06	7.990E-04
2070	3.075E+04	2.684E-06	7.601E-04
2071	3.075E+04	2.553E-06	7.230E-04
2072	3.075E+04	2.429E-06	6.877E-04
2073	3.075E+04	2.310E-06	6.542E-04
2074	3.075E+04	2.197E-06	6.223E-04
2075	3.075E+04	2.090E-06	5.919E-04
2076	3.075E+04	1.988E-06	5.631E-04
2077	3.075E+04	1.891E-06	5.356E-04
2078	3.075E+04	1.799E-06	5.095E-04
2079	3.075E+04	1.711E-06	4.846E-04
2080	3.075E+04	1.628E-06	4.610E-04
2081	3.075E+04	1.549E-06	4.385E-04
2082	3.075E+04	1.473E-06	4.171E-04
2083	3.075E+04	1.401E-06	3.968E-04
2084	3.075E+04	1.333E-06	3.774E-04
2085	3.075E+04	1.268E-06	3.590E-04
2086	3.075E+04	1.206E-06	3.415E-04
2087	3.075E+04	1.147E-06	3.249E-04
2088	3.075E+04	1.091E-06	3.090E-04

continued

Table D-58. Emisson Rate of Methylene Chloride from Parcel 4 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2089	3.075E+04	1.038E-06	2.939E-04
2090	3.075E+04	9.874E-07	2.796E-04
2091	3.075E+04	9.392E-07	2.660E-04
2092	3.075E+04	8.934E-07	2.530E-04
2093	3.075E+04	8.498E-07	2.407E-04
2094	3.075E+04	8.084E-07	2.289E-04
2095	3.075E+04	7.690E-07	2.178E-04
2096	3.075E+04	7.315E-07	2.071E-04
2097	3.075E+04	6.958E-07	1.970E-04
2098	3.075E+04	6.619E-07	1.874E-04
2099	3.075E+04	6.296E-07	1.783E-04
2100	3.075E+04	5.989E-07	1.696E-04
2101	3.075E+04	5.697E-07	1.613E-04
2102	3.075E+04	5.419E-07	1.535E-04
2103	3.075E+04	5.155E-07	1.460E-04
2104	3.075E+04	4.903E-07	1.389E-04
2105	3.075E+04	4.664E-07	1.321E-04
2106	3.075E+04	4.437E-07	1.256E-04
2107	3.075E+04	4.220E-07	1.195E-04
2108	3.075E+04	4.014E-07	1.137E-04
2109	3.075E+04	3.819E-07	1.081E-04
2110	3.075E+04	3.632E-07	1.029E-04
2111	3.075E+04	3.455E-07	9.785E-05
2112	3.075E+04	3.287E-07	9.307E-05
2113	3.075E+04	3.126E-07	8.853E-05
2114	3.075E+04	2.974E-07	8.422E-05
2115	3.075E+04	2.829E-07	8.011E-05
2116	3.075E+04	2.691E-07	7.620E-05
2117	3.075E+04	2.560E-07	7.249E-05
2118	3.075E+04	2.435E-07	6.895E-05
2119	3.075E+04	2.316E-07	6.559E-05
2120	3.075E+04	2.203E-07	6.239E-05
2121	3.075E+04	2.096E-07	5.935E-05
2122	3.075E+04	1.993E-07	5.645E-05
2123	3.075E+04	1.896E-07	5.370E-05
2124	3.075E+04	1.804E-07	5.108E-05
2125	3.075E+04	1.716E-07	4.859E-05
2126	3.075E+04	1.632E-07	4.622E-05
2127	3.075E+04	1.553E-07	4.397E-05
2128	3.075E+04	1.477E-07	4.182E-05
2129	3.075E+04	1.405E-07	3.978E-05
2130	3.075E+04	1.336E-07	3.784E-05
2131	3.075E+04	1.271E-07	3.600E-05
2132	3.075E+04	1.209E-07	3.424E-05
2133	3.075E+04	1.150E-07	3.257E-05
2134	3.075E+04	1.094E-07	3.098E-05
2135	3.075E+04	1.041E-07	2.947E-05
2136	3.075E+04	9.899E-08	2.803E-05
2137	3.075E+04	9.416E-08	2.667E-05
2138	3.075E+04	8.957E-08	2.537E-05
2139	3.075E+04	8.520E-08	2.413E-05
2140	3.075E+04	8.105E-08	2.295E-05
2141	3.075E+04	7.710E-08	2.183E-05
2142	3.075E+04	7.334E-08	2.077E-05
2143	3.075E+04	6.976E-08	1.975E-05
2144	3.075E+04	6.636E-08	1.879E-05
2145	3.075E+04	6.312E-08	1.787E-05
2146	3.075E+04	6.004E-08	1.700E-05
2147	3.075E+04	5.711E-08	1.617E-05
2148	3.075E+04	5.433E-08	1.539E-05
2149	3.075E+04	5.168E-08	1.463E-05
2150	3.075E+04	4.916E-08	1.392E-05
2151	3.075E+04	4.676E-08	1.324E-05
2152	3.075E+04	4.448E-08	1.260E-05
2153	3.075E+04	4.231E-08	1.198E-05
2154	3.075E+04	4.025E-08	1.140E-05
2155	3.075E+04	3.828E-08	1.084E-05
2156	3.075E+04	3.642E-08	1.031E-05
2157	3.075E+04	3.464E-08	9.810E-06
2158	3.075E+04	3.295E-08	9.332E-06

continued

Table D-58. Emisson Rate of Methylene Chloride from Parcel 4 for Years 1975 to 2203 (concluded).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2159	3.075E+04	3.134E-08	8.876E-06
2160	3.075E+04	2.982E-08	8.443E-06
2161	3.075E+04	2.836E-08	8.032E-06
2162	3.075E+04	2.698E-08	7.640E-06
2163	3.075E+04	2.566E-08	7.267E-06
2164	3.075E+04	2.441E-08	6.913E-06
2165	3.075E+04	2.322E-08	6.576E-06
2166	3.075E+04	2.209E-08	6.255E-06
2167	3.075E+04	2.101E-08	5.950E-06
2168	3.075E+04	1.999E-08	5.660E-06
2169	3.075E+04	1.901E-08	5.384E-06
2170	3.075E+04	1.808E-08	5.121E-06
2171	3.075E+04	1.720E-08	4.871E-06
2172	3.075E+04	1.636E-08	4.634E-06
2173	3.075E+04	1.557E-08	4.408E-06
2174	3.075E+04	1.481E-08	4.193E-06
2175	3.075E+04	1.408E-08	3.988E-06
2176	3.075E+04	1.340E-08	3.794E-06
2177	3.075E+04	1.274E-08	3.609E-06
2178	3.075E+04	1.212E-08	3.433E-06
2179	3.075E+04	1.153E-08	3.265E-06
2180	3.075E+04	1.097E-08	3.106E-06
2181	3.075E+04	1.043E-08	2.955E-06
2182	3.075E+04	9.925E-09	2.811E-06
2183	3.075E+04	9.441E-09	2.674E-06
2184	3.075E+04	8.980E-09	2.543E-06
2185	3.075E+04	8.542E-09	2.419E-06
2186	3.075E+04	8.126E-09	2.301E-06
2187	3.075E+04	7.729E-09	2.189E-06
2188	3.075E+04	7.353E-09	2.082E-06
2189	3.075E+04	6.994E-09	1.981E-06
2190	3.075E+04	6.653E-09	1.884E-06
2191	3.075E+04	6.328E-09	1.792E-06
2192	3.075E+04	6.020E-09	1.705E-06
2193	3.075E+04	5.726E-09	1.622E-06
2194	3.075E+04	5.447E-09	1.542E-06
2195	3.075E+04	5.181E-09	1.467E-06
2196	3.075E+04	4.929E-09	1.396E-06
2197	3.075E+04	4.688E-09	1.328E-06
2198	3.075E+04	4.460E-09	1.263E-06
2199	3.075E+04	4.242E-09	1.201E-06
2200	3.075E+04	4.035E-09	1.143E-06
2201	3.075E+04	3.838E-09	1.087E-06
2202	3.075E+04	3.651E-09	1.034E-06

Table D-59. Emisson Rate of Tetrachloroethene from Parcel 4 for Years 1975 to 2203.

Source: H:\3000\030177~2.000\030177~1.003\BUSHVA~1\STRATA4.PRM

Model Parameters

Lo : 170.00 m^3 / Mg
k : 0.0500 1/yr
NMOC : 1870.00 ppmv
Methane : 64.0000 % volume
Carbon Dioxide : 36.0000 % volume
Air Pollutant : Tetrachloroethene
Molecular Wt = 165.83 Concentration = 0.900000 ppmV

Landfill Parameters

Landfill type : Co-Disposal
Year Opened : 1974 Current Year : 2004 Closure Year: 2003
Capacity : 30752 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 5271.79 Mg/year

Model Results

Year	Refuse In Place (Mg)	Tetrachloroethene Emission Rate (Mg/yr)	(Cubic m/yr)
1975	3.075E+03	2.535E-04	3.676E-02
1976	6.150E+03	4.947E-04	7.172E-02
1977	9.226E+03	7.241E-04	1.050E-01
1978	1.230E+04	9.423E-04	1.366E-01
1979	1.538E+04	1.150E-03	1.667E-01
1980	1.845E+04	1.347E-03	1.953E-01
1981	2.153E+04	1.535E-03	2.226E-01
1982	2.460E+04	1.714E-03	2.485E-01
1983	2.768E+04	1.884E-03	2.731E-01
1984	3.075E+04	2.045E-03	2.966E-01
1985	3.075E+04	1.946E-03	2.821E-01
1986	3.075E+04	1.851E-03	2.683E-01
1987	3.075E+04	1.761E-03	2.552E-01
1988	3.075E+04	1.675E-03	2.428E-01
1989	3.075E+04	1.593E-03	2.310E-01
1990	3.075E+04	1.515E-03	2.197E-01
1991	3.075E+04	1.441E-03	2.090E-01
1992	3.075E+04	1.371E-03	1.988E-01
1993	3.075E+04	1.304E-03	1.891E-01
1994	3.075E+04	1.241E-03	1.799E-01
1995	3.075E+04	1.180E-03	1.711E-01
1996	3.075E+04	1.123E-03	1.628E-01
1997	3.075E+04	1.068E-03	1.548E-01
1998	3.075E+04	1.016E-03	1.473E-01
1999	3.075E+04	9.662E-04	1.401E-01
2000	3.075E+04	9.191E-04	1.333E-01
2001	3.075E+04	8.743E-04	1.268E-01
2002	3.075E+04	8.316E-04	1.206E-01
2003	3.075E+04	7.911E-04	1.147E-01
2004	3.075E+04	7.525E-04	1.091E-01
2005	3.075E+04	7.158E-04	1.038E-01
2006	3.075E+04	6.809E-04	9.872E-02
2007	3.075E+04	6.477E-04	9.390E-02
2008	3.075E+04	6.161E-04	8.932E-02
2009	3.075E+04	5.860E-04	8.496E-02
2010	3.075E+04	5.574E-04	8.082E-02
2011	3.075E+04	5.303E-04	7.688E-02
2012	3.075E+04	5.044E-04	7.313E-02
2013	3.075E+04	4.798E-04	6.956E-02
2014	3.075E+04	4.564E-04	6.617E-02
2015	3.075E+04	4.341E-04	6.294E-02
2016	3.075E+04	4.130E-04	5.987E-02
2017	3.075E+04	3.928E-04	5.695E-02
2018	3.075E+04	3.737E-04	5.418E-02

continued

Table D-59. Emisson Rate of Tetrachloroethene from Parcel 4 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2019	3.075E+04	3.554E-04	5.153E-02
2020	3.075E+04	3.381E-04	4.902E-02
2021	3.075E+04	3.216E-04	4.663E-02
2022	3.075E+04	3.059E-04	4.436E-02
2023	3.075E+04	2.910E-04	4.219E-02
2024	3.075E+04	2.768E-04	4.013E-02
2025	3.075E+04	2.633E-04	3.818E-02
2026	3.075E+04	2.505E-04	3.632E-02
2027	3.075E+04	2.383E-04	3.454E-02
2028	3.075E+04	2.266E-04	3.286E-02
2029	3.075E+04	2.156E-04	3.126E-02
2030	3.075E+04	2.051E-04	2.973E-02
2031	3.075E+04	1.951E-04	2.828E-02
2032	3.075E+04	1.856E-04	2.690E-02
2033	3.075E+04	1.765E-04	2.559E-02
2034	3.075E+04	1.679E-04	2.434E-02
2035	3.075E+04	1.597E-04	2.316E-02
2036	3.075E+04	1.519E-04	2.203E-02
2037	3.075E+04	1.445E-04	2.095E-02
2038	3.075E+04	1.375E-04	1.993E-02
2039	3.075E+04	1.308E-04	1.896E-02
2040	3.075E+04	1.244E-04	1.803E-02
2041	3.075E+04	1.183E-04	1.715E-02
2042	3.075E+04	1.125E-04	1.632E-02
2043	3.075E+04	1.071E-04	1.552E-02
2044	3.075E+04	1.018E-04	1.476E-02
2045	3.075E+04	9.687E-05	1.404E-02
2046	3.075E+04	9.215E-05	1.336E-02
2047	3.075E+04	8.765E-05	1.271E-02
2048	3.075E+04	8.338E-05	1.209E-02
2049	3.075E+04	7.931E-05	1.150E-02
2050	3.075E+04	7.544E-05	1.094E-02
2051	3.075E+04	7.176E-05	1.040E-02
2052	3.075E+04	6.826E-05	9.897E-03
2053	3.075E+04	6.493E-05	9.414E-03
2054	3.075E+04	6.177E-05	8.955E-03
2055	3.075E+04	5.875E-05	8.518E-03
2056	3.075E+04	5.589E-05	8.103E-03
2057	3.075E+04	5.316E-05	7.708E-03
2058	3.075E+04	5.057E-05	7.332E-03
2059	3.075E+04	4.810E-05	6.974E-03
2060	3.075E+04	4.576E-05	6.634E-03
2061	3.075E+04	4.353E-05	6.311E-03
2062	3.075E+04	4.140E-05	6.003E-03
2063	3.075E+04	3.938E-05	5.710E-03
2064	3.075E+04	3.746E-05	5.432E-03
2065	3.075E+04	3.564E-05	5.167E-03
2066	3.075E+04	3.390E-05	4.915E-03
2067	3.075E+04	3.225E-05	4.675E-03
2068	3.075E+04	3.067E-05	4.447E-03
2069	3.075E+04	2.918E-05	4.230E-03
2070	3.075E+04	2.775E-05	4.024E-03
2071	3.075E+04	2.640E-05	3.828E-03
2072	3.075E+04	2.511E-05	3.641E-03
2073	3.075E+04	2.389E-05	3.463E-03
2074	3.075E+04	2.272E-05	3.294E-03
2075	3.075E+04	2.161E-05	3.134E-03
2076	3.075E+04	2.056E-05	2.981E-03
2077	3.075E+04	1.956E-05	2.836E-03
2078	3.075E+04	1.860E-05	2.697E-03
2079	3.075E+04	1.770E-05	2.566E-03
2080	3.075E+04	1.683E-05	2.441E-03
2081	3.075E+04	1.601E-05	2.322E-03
2082	3.075E+04	1.523E-05	2.208E-03
2083	3.075E+04	1.449E-05	2.101E-03
2084	3.075E+04	1.378E-05	1.998E-03
2085	3.075E+04	1.311E-05	1.901E-03
2086	3.075E+04	1.247E-05	1.808E-03
2087	3.075E+04	1.186E-05	1.720E-03
2088	3.075E+04	1.128E-05	1.636E-03

continued

Table D-59. Emisson Rate of Tetrachloroethene from Parcel 4 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2089	3.075E+04	1.073E-05	1.556E-03
2090	3.075E+04	1.021E-05	1.480E-03
2091	3.075E+04	9.712E-06	1.408E-03
2092	3.075E+04	9.238E-06	1.339E-03
2093	3.075E+04	8.788E-06	1.274E-03
2094	3.075E+04	8.359E-06	1.212E-03
2095	3.075E+04	7.952E-06	1.153E-03
2096	3.075E+04	7.564E-06	1.097E-03
2097	3.075E+04	7.195E-06	1.043E-03
2098	3.075E+04	6.844E-06	9.923E-04
2099	3.075E+04	6.510E-06	9.439E-04
2100	3.075E+04	6.193E-06	8.978E-04
2101	3.075E+04	5.891E-06	8.541E-04
2102	3.075E+04	5.603E-06	8.124E-04
2103	3.075E+04	5.330E-06	7.728E-04
2104	3.075E+04	5.070E-06	7.351E-04
2105	3.075E+04	4.823E-06	6.992E-04
2106	3.075E+04	4.588E-06	6.651E-04
2107	3.075E+04	4.364E-06	6.327E-04
2108	3.075E+04	4.151E-06	6.018E-04
2109	3.075E+04	3.949E-06	5.725E-04
2110	3.075E+04	3.756E-06	5.446E-04
2111	3.075E+04	3.573E-06	5.180E-04
2112	3.075E+04	3.399E-06	4.927E-04
2113	3.075E+04	3.233E-06	4.687E-04
2114	3.075E+04	3.075E-06	4.459E-04
2115	3.075E+04	2.925E-06	4.241E-04
2116	3.075E+04	2.783E-06	4.034E-04
2117	3.075E+04	2.647E-06	3.838E-04
2118	3.075E+04	2.518E-06	3.650E-04
2119	3.075E+04	2.395E-06	3.472E-04
2120	3.075E+04	2.278E-06	3.303E-04
2121	3.075E+04	2.167E-06	3.142E-04
2122	3.075E+04	2.061E-06	2.989E-04
2123	3.075E+04	1.961E-06	2.843E-04
2124	3.075E+04	1.865E-06	2.704E-04
2125	3.075E+04	1.774E-06	2.572E-04
2126	3.075E+04	1.688E-06	2.447E-04
2127	3.075E+04	1.605E-06	2.328E-04
2128	3.075E+04	1.527E-06	2.214E-04
2129	3.075E+04	1.453E-06	2.106E-04
2130	3.075E+04	1.382E-06	2.003E-04
2131	3.075E+04	1.314E-06	1.906E-04
2132	3.075E+04	1.250E-06	1.813E-04
2133	3.075E+04	1.189E-06	1.724E-04
2134	3.075E+04	1.131E-06	1.640E-04
2135	3.075E+04	1.076E-06	1.560E-04
2136	3.075E+04	1.024E-06	1.484E-04
2137	3.075E+04	9.737E-07	1.412E-04
2138	3.075E+04	9.262E-07	1.343E-04
2139	3.075E+04	8.811E-07	1.277E-04
2140	3.075E+04	8.381E-07	1.215E-04
2141	3.075E+04	7.972E-07	1.156E-04
2142	3.075E+04	7.583E-07	1.099E-04
2143	3.075E+04	7.214E-07	1.046E-04
2144	3.075E+04	6.862E-07	9.948E-05
2145	3.075E+04	6.527E-07	9.463E-05
2146	3.075E+04	6.209E-07	9.002E-05
2147	3.075E+04	5.906E-07	8.563E-05
2148	3.075E+04	5.618E-07	8.145E-05
2149	3.075E+04	5.344E-07	7.748E-05
2150	3.075E+04	5.083E-07	7.370E-05
2151	3.075E+04	4.835E-07	7.010E-05
2152	3.075E+04	4.600E-07	6.669E-05
2153	3.075E+04	4.375E-07	6.343E-05
2154	3.075E+04	4.162E-07	6.034E-05
2155	3.075E+04	3.959E-07	5.740E-05
2156	3.075E+04	3.766E-07	5.460E-05
2157	3.075E+04	3.582E-07	5.193E-05
2158	3.075E+04	3.407E-07	4.940E-05

continued

Table D-59. Emisson Rate of Tetrachloroethene from Parcel 4 for Years 1975 to 2203 (concluded).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2159	3.075E+04	3.241E-07	4.699E-05
2160	3.075E+04	3.083E-07	4.470E-05
2161	3.075E+04	2.933E-07	4.252E-05
2162	3.075E+04	2.790E-07	4.045E-05
2163	3.075E+04	2.654E-07	3.847E-05
2164	3.075E+04	2.524E-07	3.660E-05
2165	3.075E+04	2.401E-07	3.481E-05
2166	3.075E+04	2.284E-07	3.312E-05
2167	3.075E+04	2.173E-07	3.150E-05
2168	3.075E+04	2.067E-07	2.996E-05
2169	3.075E+04	1.966E-07	2.850E-05
2170	3.075E+04	1.870E-07	2.711E-05
2171	3.075E+04	1.779E-07	2.579E-05
2172	3.075E+04	1.692E-07	2.453E-05
2173	3.075E+04	1.610E-07	2.334E-05
2174	3.075E+04	1.531E-07	2.220E-05
2175	3.075E+04	1.456E-07	2.112E-05
2176	3.075E+04	1.385E-07	2.009E-05
2177	3.075E+04	1.318E-07	1.911E-05
2178	3.075E+04	1.254E-07	1.817E-05
2179	3.075E+04	1.192E-07	1.729E-05
2180	3.075E+04	1.134E-07	1.644E-05
2181	3.075E+04	1.079E-07	1.564E-05
2182	3.075E+04	1.026E-07	1.488E-05
2183	3.075E+04	9.762E-08	1.415E-05
2184	3.075E+04	9.286E-08	1.346E-05
2185	3.075E+04	8.833E-08	1.281E-05
2186	3.075E+04	8.403E-08	1.218E-05
2187	3.075E+04	7.993E-08	1.159E-05
2188	3.075E+04	7.603E-08	1.102E-05
2189	3.075E+04	7.232E-08	1.049E-05
2190	3.075E+04	6.879E-08	9.974E-06
2191	3.075E+04	6.544E-08	9.488E-06
2192	3.075E+04	6.225E-08	9.025E-06
2193	3.075E+04	5.921E-08	8.585E-06
2194	3.075E+04	5.632E-08	8.166E-06
2195	3.075E+04	5.358E-08	7.768E-06
2196	3.075E+04	5.096E-08	7.389E-06
2197	3.075E+04	4.848E-08	7.029E-06
2198	3.075E+04	4.611E-08	6.686E-06
2199	3.075E+04	4.387E-08	6.360E-06
2200	3.075E+04	4.173E-08	6.050E-06
2201	3.075E+04	3.969E-08	5.755E-06
2202	3.075E+04	3.776E-08	5.474E-06

Table D-60. Emisson Rate of Toluene from Parcel 4 for Years 1975 to 2203.

Source: H:\3000\030177~2.000\030177~1.003\BUSHVA~1\STRATA4.PRM

Model Parameters

Lo : 170.00 m^3 / Mg
k : 0.0500 1/yr
NMOC : 1870.00 ppmv
Methane : 64.0000 % volume
Carbon Dioxide : 36.0000 % volume
Air Pollutant : Toluene (HAP/VOC)
Molecular Wt = 92.14 Concentration = 0.110000 ppmV

Landfill Parameters

Landfill type : Co-Disposal
Year Opened : 1974 Current Year : 2004 Closure Year: 2003
Capacity : 30752 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 5271.79 Mg/year

Model Results

Year	Refuse In Place (Mg)	Toluene (HAP/VOC) Emission Rate (Mg/yr)	(Cubic m/yr)
1975	3.075E+03	1.722E-05	4.493E-03
1976	6.150E+03	3.360E-05	8.766E-03
1977	9.226E+03	4.917E-05	1.283E-02
1978	1.230E+04	6.399E-05	1.670E-02
1979	1.538E+04	7.809E-05	2.038E-02
1980	1.845E+04	9.150E-05	2.388E-02
1981	2.153E+04	1.043E-04	2.720E-02
1982	2.460E+04	1.164E-04	3.037E-02
1983	2.768E+04	1.279E-04	3.338E-02
1984	3.075E+04	1.389E-04	3.625E-02
1985	3.075E+04	1.321E-04	3.448E-02
1986	3.075E+04	1.257E-04	3.280E-02
1987	3.075E+04	1.196E-04	3.120E-02
1988	3.075E+04	1.137E-04	2.968E-02
1989	3.075E+04	1.082E-04	2.823E-02
1990	3.075E+04	1.029E-04	2.685E-02
1991	3.075E+04	9.789E-05	2.554E-02
1992	3.075E+04	9.311E-05	2.430E-02
1993	3.075E+04	8.857E-05	2.311E-02
1994	3.075E+04	8.425E-05	2.198E-02
1995	3.075E+04	8.014E-05	2.091E-02
1996	3.075E+04	7.623E-05	1.989E-02
1997	3.075E+04	7.252E-05	1.892E-02
1998	3.075E+04	6.898E-05	1.800E-02
1999	3.075E+04	6.561E-05	1.712E-02
2000	3.075E+04	6.241E-05	1.629E-02
2001	3.075E+04	5.937E-05	1.549E-02
2002	3.075E+04	5.648E-05	1.474E-02
2003	3.075E+04	5.372E-05	1.402E-02
2004	3.075E+04	5.110E-05	1.333E-02
2005	3.075E+04	4.861E-05	1.268E-02
2006	3.075E+04	4.624E-05	1.207E-02
2007	3.075E+04	4.398E-05	1.148E-02
2008	3.075E+04	4.184E-05	1.092E-02
2009	3.075E+04	3.980E-05	1.038E-02
2010	3.075E+04	3.786E-05	9.878E-03
2011	3.075E+04	3.601E-05	9.396E-03
2012	3.075E+04	3.425E-05	8.938E-03
2013	3.075E+04	3.258E-05	8.502E-03
2014	3.075E+04	3.099E-05	8.088E-03
2015	3.075E+04	2.948E-05	7.693E-03
2016	3.075E+04	2.804E-05	7.318E-03
2017	3.075E+04	2.668E-05	6.961E-03
2018	3.075E+04	2.538E-05	6.622E-03

continued

Table D-60. Emisson Rate of Toluene from Parcel 4 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2019	3.075E+04	2.414E-05	6.299E-03
2020	3.075E+04	2.296E-05	5.991E-03
2021	3.075E+04	2.184E-05	5.699E-03
2022	3.075E+04	2.078E-05	5.421E-03
2023	3.075E+04	1.976E-05	5.157E-03
2024	3.075E+04	1.880E-05	4.905E-03
2025	3.075E+04	1.788E-05	4.666E-03
2026	3.075E+04	1.701E-05	4.439E-03
2027	3.075E+04	1.618E-05	4.222E-03
2028	3.075E+04	1.539E-05	4.016E-03
2029	3.075E+04	1.464E-05	3.820E-03
2030	3.075E+04	1.393E-05	3.634E-03
2031	3.075E+04	1.325E-05	3.457E-03
2032	3.075E+04	1.260E-05	3.288E-03
2033	3.075E+04	1.199E-05	3.128E-03
2034	3.075E+04	1.140E-05	2.975E-03
2035	3.075E+04	1.085E-05	2.830E-03
2036	3.075E+04	1.032E-05	2.692E-03
2037	3.075E+04	9.814E-06	2.561E-03
2038	3.075E+04	9.335E-06	2.436E-03
2039	3.075E+04	8.880E-06	2.317E-03
2040	3.075E+04	8.447E-06	2.204E-03
2041	3.075E+04	8.035E-06	2.097E-03
2042	3.075E+04	7.643E-06	1.994E-03
2043	3.075E+04	7.270E-06	1.897E-03
2044	3.075E+04	6.916E-06	1.805E-03
2045	3.075E+04	6.578E-06	1.717E-03
2046	3.075E+04	6.258E-06	1.633E-03
2047	3.075E+04	5.952E-06	1.553E-03
2048	3.075E+04	5.662E-06	1.477E-03
2049	3.075E+04	5.386E-06	1.405E-03
2050	3.075E+04	5.123E-06	1.337E-03
2051	3.075E+04	4.873E-06	1.272E-03
2052	3.075E+04	4.636E-06	1.210E-03
2053	3.075E+04	4.410E-06	1.151E-03
2054	3.075E+04	4.195E-06	1.095E-03
2055	3.075E+04	3.990E-06	1.041E-03
2056	3.075E+04	3.795E-06	9.904E-04
2057	3.075E+04	3.610E-06	9.421E-04
2058	3.075E+04	3.434E-06	8.961E-04
2059	3.075E+04	3.267E-06	8.524E-04
2060	3.075E+04	3.107E-06	8.108E-04
2061	3.075E+04	2.956E-06	7.713E-04
2062	3.075E+04	2.812E-06	7.337E-04
2063	3.075E+04	2.675E-06	6.979E-04
2064	3.075E+04	2.544E-06	6.639E-04
2065	3.075E+04	2.420E-06	6.315E-04
2066	3.075E+04	2.302E-06	6.007E-04
2067	3.075E+04	2.190E-06	5.714E-04
2068	3.075E+04	2.083E-06	5.435E-04
2069	3.075E+04	1.981E-06	5.170E-04
2070	3.075E+04	1.885E-06	4.918E-04
2071	3.075E+04	1.793E-06	4.678E-04
2072	3.075E+04	1.705E-06	4.450E-04
2073	3.075E+04	1.622E-06	4.233E-04
2074	3.075E+04	1.543E-06	4.027E-04
2075	3.075E+04	1.468E-06	3.830E-04
2076	3.075E+04	1.396E-06	3.643E-04
2077	3.075E+04	1.328E-06	3.466E-04
2078	3.075E+04	1.263E-06	3.297E-04
2079	3.075E+04	1.202E-06	3.136E-04
2080	3.075E+04	1.143E-06	2.983E-04
2081	3.075E+04	1.087E-06	2.837E-04
2082	3.075E+04	1.034E-06	2.699E-04
2083	3.075E+04	9.839E-07	2.567E-04
2084	3.075E+04	9.359E-07	2.442E-04
2085	3.075E+04	8.903E-07	2.323E-04
2086	3.075E+04	8.469E-07	2.210E-04
2087	3.075E+04	8.056E-07	2.102E-04
2088	3.075E+04	7.663E-07	2.000E-04

continued

Table D-60. Emisson Rate of Toluene from Parcel 4 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2089	3.075E+04	7.289E-07	1.902E-04
2090	3.075E+04	6.934E-07	1.809E-04
2091	3.075E+04	6.596E-07	1.721E-04
2092	3.075E+04	6.274E-07	1.637E-04
2093	3.075E+04	5.968E-07	1.557E-04
2094	3.075E+04	5.677E-07	1.481E-04
2095	3.075E+04	5.400E-07	1.409E-04
2096	3.075E+04	5.137E-07	1.340E-04
2097	3.075E+04	4.886E-07	1.275E-04
2098	3.075E+04	4.648E-07	1.213E-04
2099	3.075E+04	4.421E-07	1.154E-04
2100	3.075E+04	4.205E-07	1.097E-04
2101	3.075E+04	4.000E-07	1.044E-04
2102	3.075E+04	3.805E-07	9.929E-05
2103	3.075E+04	3.620E-07	9.445E-05
2104	3.075E+04	3.443E-07	8.984E-05
2105	3.075E+04	3.275E-07	8.546E-05
2106	3.075E+04	3.115E-07	8.129E-05
2107	3.075E+04	2.964E-07	7.733E-05
2108	3.075E+04	2.819E-07	7.356E-05
2109	3.075E+04	2.682E-07	6.997E-05
2110	3.075E+04	2.551E-07	6.656E-05
2111	3.075E+04	2.426E-07	6.331E-05
2112	3.075E+04	2.308E-07	6.022E-05
2113	3.075E+04	2.195E-07	5.729E-05
2114	3.075E+04	2.088E-07	5.449E-05
2115	3.075E+04	1.987E-07	5.184E-05
2116	3.075E+04	1.890E-07	4.931E-05
2117	3.075E+04	1.797E-07	4.690E-05
2118	3.075E+04	1.710E-07	4.462E-05
2119	3.075E+04	1.626E-07	4.244E-05
2120	3.075E+04	1.547E-07	4.037E-05
2121	3.075E+04	1.472E-07	3.840E-05
2122	3.075E+04	1.400E-07	3.653E-05
2123	3.075E+04	1.332E-07	3.475E-05
2124	3.075E+04	1.267E-07	3.305E-05
2125	3.075E+04	1.205E-07	3.144E-05
2126	3.075E+04	1.146E-07	2.991E-05
2127	3.075E+04	1.090E-07	2.845E-05
2128	3.075E+04	1.037E-07	2.706E-05
2129	3.075E+04	9.865E-08	2.574E-05
2130	3.075E+04	9.384E-08	2.449E-05
2131	3.075E+04	8.926E-08	2.329E-05
2132	3.075E+04	8.491E-08	2.216E-05
2133	3.075E+04	8.077E-08	2.107E-05
2134	3.075E+04	7.683E-08	2.005E-05
2135	3.075E+04	7.308E-08	1.907E-05
2136	3.075E+04	6.952E-08	1.814E-05
2137	3.075E+04	6.613E-08	1.725E-05
2138	3.075E+04	6.290E-08	1.641E-05
2139	3.075E+04	5.983E-08	1.561E-05
2140	3.075E+04	5.692E-08	1.485E-05
2141	3.075E+04	5.414E-08	1.413E-05
2142	3.075E+04	5.150E-08	1.344E-05
2143	3.075E+04	4.899E-08	1.278E-05
2144	3.075E+04	4.660E-08	1.216E-05
2145	3.075E+04	4.433E-08	1.157E-05
2146	3.075E+04	4.216E-08	1.100E-05
2147	3.075E+04	4.011E-08	1.047E-05
2148	3.075E+04	3.815E-08	9.955E-06
2149	3.075E+04	3.629E-08	9.470E-06
2150	3.075E+04	3.452E-08	9.008E-06
2151	3.075E+04	3.284E-08	8.568E-06
2152	3.075E+04	3.124E-08	8.150E-06
2153	3.075E+04	2.971E-08	7.753E-06
2154	3.075E+04	2.826E-08	7.375E-06
2155	3.075E+04	2.688E-08	7.015E-06
2156	3.075E+04	2.557E-08	6.673E-06
2157	3.075E+04	2.433E-08	6.348E-06
2158	3.075E+04	2.314E-08	6.038E-06

continued

Table D-60. Emisson Rate of Toluene from Parcel 4 for Years 1975 to 2203 (concluded).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2159	3.075E+04	2.201E-08	5.744E-06
2160	3.075E+04	2.094E-08	5.463E-06
2161	3.075E+04	1.992E-08	5.197E-06
2162	3.075E+04	1.895E-08	4.944E-06
2163	3.075E+04	1.802E-08	4.702E-06
2164	3.075E+04	1.714E-08	4.473E-06
2165	3.075E+04	1.631E-08	4.255E-06
2166	3.075E+04	1.551E-08	4.047E-06
2167	3.075E+04	1.475E-08	3.850E-06
2168	3.075E+04	1.404E-08	3.662E-06
2169	3.075E+04	1.335E-08	3.484E-06
2170	3.075E+04	1.270E-08	3.314E-06
2171	3.075E+04	1.208E-08	3.152E-06
2172	3.075E+04	1.149E-08	2.998E-06
2173	3.075E+04	1.093E-08	2.852E-06
2174	3.075E+04	1.040E-08	2.713E-06
2175	3.075E+04	9.890E-09	2.581E-06
2176	3.075E+04	9.408E-09	2.455E-06
2177	3.075E+04	8.949E-09	2.335E-06
2178	3.075E+04	8.513E-09	2.221E-06
2179	3.075E+04	8.098E-09	2.113E-06
2180	3.075E+04	7.703E-09	2.010E-06
2181	3.075E+04	7.327E-09	1.912E-06
2182	3.075E+04	6.970E-09	1.819E-06
2183	3.075E+04	6.630E-09	1.730E-06
2184	3.075E+04	6.306E-09	1.646E-06
2185	3.075E+04	5.999E-09	1.565E-06
2186	3.075E+04	5.706E-09	1.489E-06
2187	3.075E+04	5.428E-09	1.416E-06
2188	3.075E+04	5.163E-09	1.347E-06
2189	3.075E+04	4.911E-09	1.282E-06
2190	3.075E+04	4.672E-09	1.219E-06
2191	3.075E+04	4.444E-09	1.160E-06
2192	3.075E+04	4.227E-09	1.103E-06
2193	3.075E+04	4.021E-09	1.049E-06
2194	3.075E+04	3.825E-09	9.981E-07
2195	3.075E+04	3.638E-09	9.494E-07
2196	3.075E+04	3.461E-09	9.031E-07
2197	3.075E+04	3.292E-09	8.591E-07
2198	3.075E+04	3.132E-09	8.172E-07
2199	3.075E+04	2.979E-09	7.773E-07
2200	3.075E+04	2.834E-09	7.394E-07
2201	3.075E+04	2.695E-09	7.033E-07
2202	3.075E+04	2.564E-09	6.690E-07

Table D-61. Emisson Rate of Trichloroethene from Parcel 4 for Years 1975 to 2203.

Source: H:\3000\030177~2.000\030177~1.003\BUSHVA~1\STRATA4.PRM

Model Parameters

Lo : 170.00 m^3 / Mg
k : 0.0500 1/yr
NMOC : 1870.00 ppmv
Methane : 64.0000 % volume
Carbon Dioxide : 36.0000 % volume
Air Pollutant : Trichloroethene (HAP/VOC)
Molecular Wt = 131.38 Concentration = 0.820000 ppmV

Landfill Parameters

Landfill type : Co-Disposal
Year Opened : 1974 Current Year : 2004 Closure Year: 2003
Capacity : 30752 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 5271.79 Mg/year

Model Results

Year	Refuse In Place (Mg)	Trichloroethene (HAP/VOC) Emission Rate (Mg/yr)	(Cubic m/yr)
1975	3.075E+03	1.830E-04	3.349E-02
1976	6.150E+03	3.571E-04	6.535E-02
1977	9.226E+03	5.227E-04	9.565E-02
1978	1.230E+04	6.802E-04	1.245E-01
1979	1.538E+04	8.300E-04	1.519E-01
1980	1.845E+04	9.726E-04	1.780E-01
1981	2.153E+04	1.108E-03	2.028E-01
1982	2.460E+04	1.237E-03	2.264E-01
1983	2.768E+04	1.360E-03	2.488E-01
1984	3.075E+04	1.476E-03	2.702E-01
1985	3.075E+04	1.404E-03	2.570E-01
1986	3.075E+04	1.336E-03	2.445E-01
1987	3.075E+04	1.271E-03	2.326E-01
1988	3.075E+04	1.209E-03	2.212E-01
1989	3.075E+04	1.150E-03	2.104E-01
1990	3.075E+04	1.094E-03	2.002E-01
1991	3.075E+04	1.040E-03	1.904E-01
1992	3.075E+04	9.897E-04	1.811E-01
1993	3.075E+04	9.414E-04	1.723E-01
1994	3.075E+04	8.955E-04	1.639E-01
1995	3.075E+04	8.519E-04	1.559E-01
1996	3.075E+04	8.103E-04	1.483E-01
1997	3.075E+04	7.708E-04	1.411E-01
1998	3.075E+04	7.332E-04	1.342E-01
1999	3.075E+04	6.974E-04	1.276E-01
2000	3.075E+04	6.634E-04	1.214E-01
2001	3.075E+04	6.311E-04	1.155E-01
2002	3.075E+04	6.003E-04	1.099E-01
2003	3.075E+04	5.710E-04	1.045E-01
2004	3.075E+04	5.432E-04	9.940E-02
2005	3.075E+04	5.167E-04	9.455E-02
2006	3.075E+04	4.915E-04	8.994E-02
2007	3.075E+04	4.675E-04	8.555E-02
2008	3.075E+04	4.447E-04	8.138E-02
2009	3.075E+04	4.230E-04	7.741E-02
2010	3.075E+04	4.024E-04	7.364E-02
2011	3.075E+04	3.828E-04	7.005E-02
2012	3.075E+04	3.641E-04	6.663E-02
2013	3.075E+04	3.463E-04	6.338E-02
2014	3.075E+04	3.294E-04	6.029E-02
2015	3.075E+04	3.134E-04	5.735E-02
2016	3.075E+04	2.981E-04	5.455E-02
2017	3.075E+04	2.836E-04	5.189E-02
2018	3.075E+04	2.697E-04	4.936E-02

continued

Table D-61. Emisson Rate of Trichloroethene from Parcel 4 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2019	3.075E+04	2.566E-04	4.695E-02
2020	3.075E+04	2.441E-04	4.466E-02
2021	3.075E+04	2.322E-04	4.248E-02
2022	3.075E+04	2.208E-04	4.041E-02
2023	3.075E+04	2.101E-04	3.844E-02
2024	3.075E+04	1.998E-04	3.657E-02
2025	3.075E+04	1.901E-04	3.478E-02
2026	3.075E+04	1.808E-04	3.309E-02
2027	3.075E+04	1.720E-04	3.147E-02
2028	3.075E+04	1.636E-04	2.994E-02
2029	3.075E+04	1.556E-04	2.848E-02
2030	3.075E+04	1.480E-04	2.709E-02
2031	3.075E+04	1.408E-04	2.577E-02
2032	3.075E+04	1.339E-04	2.451E-02
2033	3.075E+04	1.274E-04	2.332E-02
2034	3.075E+04	1.212E-04	2.218E-02
2035	3.075E+04	1.153E-04	2.110E-02
2036	3.075E+04	1.097E-04	2.007E-02
2037	3.075E+04	1.043E-04	1.909E-02
2038	3.075E+04	9.923E-05	1.816E-02
2039	3.075E+04	9.439E-05	1.727E-02
2040	3.075E+04	8.978E-05	1.643E-02
2041	3.075E+04	8.541E-05	1.563E-02
2042	3.075E+04	8.124E-05	1.487E-02
2043	3.075E+04	7.728E-05	1.414E-02
2044	3.075E+04	7.351E-05	1.345E-02
2045	3.075E+04	6.992E-05	1.280E-02
2046	3.075E+04	6.651E-05	1.217E-02
2047	3.075E+04	6.327E-05	1.158E-02
2048	3.075E+04	6.018E-05	1.101E-02
2049	3.075E+04	5.725E-05	1.048E-02
2050	3.075E+04	5.446E-05	9.966E-03
2051	3.075E+04	5.180E-05	9.480E-03
2052	3.075E+04	4.927E-05	9.017E-03
2053	3.075E+04	4.687E-05	8.578E-03
2054	3.075E+04	4.459E-05	8.159E-03
2055	3.075E+04	4.241E-05	7.761E-03
2056	3.075E+04	4.034E-05	7.383E-03
2057	3.075E+04	3.838E-05	7.023E-03
2058	3.075E+04	3.650E-05	6.680E-03
2059	3.075E+04	3.472E-05	6.354E-03
2060	3.075E+04	3.303E-05	6.044E-03
2061	3.075E+04	3.142E-05	5.750E-03
2062	3.075E+04	2.989E-05	5.469E-03
2063	3.075E+04	2.843E-05	5.203E-03
2064	3.075E+04	2.704E-05	4.949E-03
2065	3.075E+04	2.572E-05	4.707E-03
2066	3.075E+04	2.447E-05	4.478E-03
2067	3.075E+04	2.328E-05	4.259E-03
2068	3.075E+04	2.214E-05	4.052E-03
2069	3.075E+04	2.106E-05	3.854E-03
2070	3.075E+04	2.003E-05	3.666E-03
2071	3.075E+04	1.906E-05	3.487E-03
2072	3.075E+04	1.813E-05	3.317E-03
2073	3.075E+04	1.724E-05	3.156E-03
2074	3.075E+04	1.640E-05	3.002E-03
2075	3.075E+04	1.560E-05	2.855E-03
2076	3.075E+04	1.484E-05	2.716E-03
2077	3.075E+04	1.412E-05	2.584E-03
2078	3.075E+04	1.343E-05	2.458E-03
2079	3.075E+04	1.277E-05	2.338E-03
2080	3.075E+04	1.215E-05	2.224E-03
2081	3.075E+04	1.156E-05	2.115E-03
2082	3.075E+04	1.099E-05	2.012E-03
2083	3.075E+04	1.046E-05	1.914E-03
2084	3.075E+04	9.948E-06	1.821E-03
2085	3.075E+04	9.463E-06	1.732E-03
2086	3.075E+04	9.002E-06	1.647E-03
2087	3.075E+04	8.563E-06	1.567E-03
2088	3.075E+04	8.145E-06	1.491E-03

continued

Table D-61. Emisson Rate of Trichloroethene from Parcel 4 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2089	3.075E+04	7.748E-06	1.418E-03
2090	3.075E+04	7.370E-06	1.349E-03
2091	3.075E+04	7.011E-06	1.283E-03
2092	3.075E+04	6.669E-06	1.220E-03
2093	3.075E+04	6.343E-06	1.161E-03
2094	3.075E+04	6.034E-06	1.104E-03
2095	3.075E+04	5.740E-06	1.050E-03
2096	3.075E+04	5.460E-06	9.991E-04
2097	3.075E+04	5.194E-06	9.504E-04
2098	3.075E+04	4.940E-06	9.041E-04
2099	3.075E+04	4.699E-06	8.600E-04
2100	3.075E+04	4.470E-06	8.180E-04
2101	3.075E+04	4.252E-06	7.781E-04
2102	3.075E+04	4.045E-06	7.402E-04
2103	3.075E+04	3.847E-06	7.041E-04
2104	3.075E+04	3.660E-06	6.697E-04
2105	3.075E+04	3.481E-06	6.371E-04
2106	3.075E+04	3.312E-06	6.060E-04
2107	3.075E+04	3.150E-06	5.765E-04
2108	3.075E+04	2.996E-06	5.483E-04
2109	3.075E+04	2.850E-06	5.216E-04
2110	3.075E+04	2.711E-06	4.962E-04
2111	3.075E+04	2.579E-06	4.720E-04
2112	3.075E+04	2.453E-06	4.489E-04
2113	3.075E+04	2.334E-06	4.271E-04
2114	3.075E+04	2.220E-06	4.062E-04
2115	3.075E+04	2.112E-06	3.864E-04
2116	3.075E+04	2.009E-06	3.676E-04
2117	3.075E+04	1.911E-06	3.496E-04
2118	3.075E+04	1.817E-06	3.326E-04
2119	3.075E+04	1.729E-06	3.164E-04
2120	3.075E+04	1.644E-06	3.009E-04
2121	3.075E+04	1.564E-06	2.863E-04
2122	3.075E+04	1.488E-06	2.723E-04
2123	3.075E+04	1.415E-06	2.590E-04
2124	3.075E+04	1.346E-06	2.464E-04
2125	3.075E+04	1.281E-06	2.344E-04
2126	3.075E+04	1.218E-06	2.229E-04
2127	3.075E+04	1.159E-06	2.121E-04
2128	3.075E+04	1.102E-06	2.017E-04
2129	3.075E+04	1.049E-06	1.919E-04
2130	3.075E+04	9.974E-07	1.825E-04
2131	3.075E+04	9.488E-07	1.736E-04
2132	3.075E+04	9.025E-07	1.652E-04
2133	3.075E+04	8.585E-07	1.571E-04
2134	3.075E+04	8.166E-07	1.494E-04
2135	3.075E+04	7.768E-07	1.422E-04
2136	3.075E+04	7.389E-07	1.352E-04
2137	3.075E+04	7.029E-07	1.286E-04
2138	3.075E+04	6.686E-07	1.224E-04
2139	3.075E+04	6.360E-07	1.164E-04
2140	3.075E+04	6.050E-07	1.107E-04
2141	3.075E+04	5.755E-07	1.053E-04
2142	3.075E+04	5.474E-07	1.002E-04
2143	3.075E+04	5.207E-07	9.529E-05
2144	3.075E+04	4.953E-07	9.064E-05
2145	3.075E+04	4.711E-07	8.622E-05
2146	3.075E+04	4.482E-07	8.202E-05
2147	3.075E+04	4.263E-07	7.802E-05
2148	3.075E+04	4.055E-07	7.421E-05
2149	3.075E+04	3.857E-07	7.059E-05
2150	3.075E+04	3.669E-07	6.715E-05
2151	3.075E+04	3.490E-07	6.387E-05
2152	3.075E+04	3.320E-07	6.076E-05
2153	3.075E+04	3.158E-07	5.780E-05
2154	3.075E+04	3.004E-07	5.498E-05
2155	3.075E+04	2.858E-07	5.230E-05
2156	3.075E+04	2.718E-07	4.974E-05
2157	3.075E+04	2.586E-07	4.732E-05
2158	3.075E+04	2.460E-07	4.501E-05

continued

Table D-61. Emisson Rate of Trichloroethene from Parcel 4 for Years 1975 to 2203 (concluded).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2159	3.075E+04	2.340E-07	4.282E-05
2160	3.075E+04	2.226E-07	4.073E-05
2161	3.075E+04	2.117E-07	3.874E-05
2162	3.075E+04	2.014E-07	3.685E-05
2163	3.075E+04	1.916E-07	3.505E-05
2164	3.075E+04	1.822E-07	3.334E-05
2165	3.075E+04	1.733E-07	3.172E-05
2166	3.075E+04	1.649E-07	3.017E-05
2167	3.075E+04	1.568E-07	2.870E-05
2168	3.075E+04	1.492E-07	2.730E-05
2169	3.075E+04	1.419E-07	2.597E-05
2170	3.075E+04	1.350E-07	2.470E-05
2171	3.075E+04	1.284E-07	2.350E-05
2172	3.075E+04	1.221E-07	2.235E-05
2173	3.075E+04	1.162E-07	2.126E-05
2174	3.075E+04	1.105E-07	2.022E-05
2175	3.075E+04	1.051E-07	1.924E-05
2176	3.075E+04	1.000E-07	1.830E-05
2177	3.075E+04	9.512E-08	1.741E-05
2178	3.075E+04	9.048E-08	1.656E-05
2179	3.075E+04	8.607E-08	1.575E-05
2180	3.075E+04	8.187E-08	1.498E-05
2181	3.075E+04	7.788E-08	1.425E-05
2182	3.075E+04	7.408E-08	1.356E-05
2183	3.075E+04	7.047E-08	1.290E-05
2184	3.075E+04	6.703E-08	1.227E-05
2185	3.075E+04	6.376E-08	1.167E-05
2186	3.075E+04	6.065E-08	1.110E-05
2187	3.075E+04	5.769E-08	1.056E-05
2188	3.075E+04	5.488E-08	1.004E-05
2189	3.075E+04	5.220E-08	9.553E-06
2190	3.075E+04	4.966E-08	9.088E-06
2191	3.075E+04	4.724E-08	8.644E-06
2192	3.075E+04	4.493E-08	8.223E-06
2193	3.075E+04	4.274E-08	7.822E-06
2194	3.075E+04	4.066E-08	7.440E-06
2195	3.075E+04	3.867E-08	7.077E-06
2196	3.075E+04	3.679E-08	6.732E-06
2197	3.075E+04	3.499E-08	6.404E-06
2198	3.075E+04	3.329E-08	6.092E-06
2199	3.075E+04	3.166E-08	5.794E-06
2200	3.075E+04	3.012E-08	5.512E-06
2201	3.075E+04	2.865E-08	5.243E-06
2202	3.075E+04	2.725E-08	4.987E-06

Table D-62. Emisson Rate of Vinyl Chloride from Parcel 4 for Years 1975 to 2203.

Source: H:\3000\030177~2.000\030177~1.003\BUSHVA~1\STRATA4.PRM

Model Parameters

Lo : 170.00 m^3 / Mg
k : 0.0500 1/yr
NMOC : 1870.00 ppmv
Methane : 64.0000 % volume
Carbon Dioxide : 36.0000 % volume
Air Pollutant : Vinyl Chloride (HAP/VOC)
Molecular Wt = 62.50 Concentration = 0.850000 ppmV

Landfill Parameters

Landfill type : Co-Disposal
Year Opened : 1974 Current Year : 2004 Closure Year: 2003
Capacity : 30752 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 5271.79 Mg/year

Model Results

Year	Refuse In Place (Mg)	Vinyl Chloride (HAP/VOC) Emission Rate (Mg/yr)	(Cubic m/yr)
1975	3.075E+03	9.025E-05	3.472E-02
1976	6.150E+03	1.761E-04	6.774E-02
1977	9.226E+03	2.578E-04	9.915E-02
1978	1.230E+04	3.354E-04	1.290E-01
1979	1.538E+04	4.093E-04	1.575E-01
1980	1.845E+04	4.796E-04	1.845E-01
1981	2.153E+04	5.465E-04	2.102E-01
1982	2.460E+04	6.101E-04	2.347E-01
1983	2.768E+04	6.705E-04	2.579E-01
1984	3.075E+04	7.281E-04	2.801E-01
1985	3.075E+04	6.926E-04	2.664E-01
1986	3.075E+04	6.588E-04	2.534E-01
1987	3.075E+04	6.267E-04	2.411E-01
1988	3.075E+04	5.961E-04	2.293E-01
1989	3.075E+04	5.670E-04	2.181E-01
1990	3.075E+04	5.394E-04	2.075E-01
1991	3.075E+04	5.131E-04	1.974E-01
1992	3.075E+04	4.880E-04	1.877E-01
1993	3.075E+04	4.642E-04	1.786E-01
1994	3.075E+04	4.416E-04	1.699E-01
1995	3.075E+04	4.201E-04	1.616E-01
1996	3.075E+04	3.996E-04	1.537E-01
1997	3.075E+04	3.801E-04	1.462E-01
1998	3.075E+04	3.616E-04	1.391E-01
1999	3.075E+04	3.439E-04	1.323E-01
2000	3.075E+04	3.271E-04	1.258E-01
2001	3.075E+04	3.112E-04	1.197E-01
2002	3.075E+04	2.960E-04	1.139E-01
2003	3.075E+04	2.816E-04	1.083E-01
2004	3.075E+04	2.678E-04	1.030E-01
2005	3.075E+04	2.548E-04	9.801E-02
2006	3.075E+04	2.424E-04	9.323E-02
2007	3.075E+04	2.305E-04	8.868E-02
2008	3.075E+04	2.193E-04	8.436E-02
2009	3.075E+04	2.086E-04	8.024E-02
2010	3.075E+04	1.984E-04	7.633E-02
2011	3.075E+04	1.887E-04	7.261E-02
2012	3.075E+04	1.795E-04	6.907E-02
2013	3.075E+04	1.708E-04	6.570E-02
2014	3.075E+04	1.625E-04	6.249E-02
2015	3.075E+04	1.545E-04	5.945E-02
2016	3.075E+04	1.470E-04	5.655E-02
2017	3.075E+04	1.398E-04	5.379E-02
2018	3.075E+04	1.330E-04	5.117E-02

continued

Table D-62. Emisson Rate of Vinyl Chloride from Parcel 4 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2019	3.075E+04	2.566E-04	4.695E-02
2020	3.075E+04	2.441E-04	4.466E-02
2021	3.075E+04	2.322E-04	4.248E-02
2022	3.075E+04	2.208E-04	4.041E-02
2023	3.075E+04	2.101E-04	3.844E-02
2024	3.075E+04	1.998E-04	3.657E-02
2025	3.075E+04	1.901E-04	3.478E-02
2026	3.075E+04	1.808E-04	3.309E-02
2027	3.075E+04	1.720E-04	3.147E-02
2028	3.075E+04	1.636E-04	2.994E-02
2029	3.075E+04	1.556E-04	2.848E-02
2030	3.075E+04	1.480E-04	2.709E-02
2031	3.075E+04	1.408E-04	2.577E-02
2032	3.075E+04	1.339E-04	2.451E-02
2033	3.075E+04	1.274E-04	2.332E-02
2034	3.075E+04	1.212E-04	2.218E-02
2035	3.075E+04	1.153E-04	2.110E-02
2036	3.075E+04	1.097E-04	2.007E-02
2037	3.075E+04	1.043E-04	1.909E-02
2038	3.075E+04	9.923E-05	1.816E-02
2039	3.075E+04	9.439E-05	1.727E-02
2040	3.075E+04	8.978E-05	1.643E-02
2041	3.075E+04	8.541E-05	1.563E-02
2042	3.075E+04	8.124E-05	1.487E-02
2043	3.075E+04	7.728E-05	1.414E-02
2044	3.075E+04	7.351E-05	1.345E-02
2045	3.075E+04	6.992E-05	1.280E-02
2046	3.075E+04	6.651E-05	1.217E-02
2047	3.075E+04	6.327E-05	1.158E-02
2048	3.075E+04	6.018E-05	1.101E-02
2049	3.075E+04	5.725E-05	1.048E-02
2050	3.075E+04	5.446E-05	9.966E-03
2051	3.075E+04	5.180E-05	9.480E-03
2052	3.075E+04	4.927E-05	9.017E-03
2053	3.075E+04	4.687E-05	8.578E-03
2054	3.075E+04	4.459E-05	8.159E-03
2055	3.075E+04	4.241E-05	7.761E-03
2056	3.075E+04	4.034E-05	7.383E-03
2057	3.075E+04	3.838E-05	7.023E-03
2058	3.075E+04	3.650E-05	6.680E-03
2059	3.075E+04	3.472E-05	6.354E-03
2060	3.075E+04	3.303E-05	6.044E-03
2061	3.075E+04	3.142E-05	5.750E-03
2062	3.075E+04	2.989E-05	5.469E-03
2063	3.075E+04	2.843E-05	5.203E-03
2064	3.075E+04	2.704E-05	4.949E-03
2065	3.075E+04	2.572E-05	4.707E-03
2066	3.075E+04	2.447E-05	4.478E-03
2067	3.075E+04	2.328E-05	4.259E-03
2068	3.075E+04	2.214E-05	4.052E-03
2069	3.075E+04	2.106E-05	3.854E-03
2070	3.075E+04	2.003E-05	3.666E-03
2071	3.075E+04	1.906E-05	3.487E-03
2072	3.075E+04	1.813E-05	3.317E-03
2073	3.075E+04	1.724E-05	3.156E-03
2074	3.075E+04	1.640E-05	3.002E-03
2075	3.075E+04	1.560E-05	2.855E-03
2076	3.075E+04	1.484E-05	2.716E-03
2077	3.075E+04	1.412E-05	2.584E-03
2078	3.075E+04	1.343E-05	2.458E-03
2079	3.075E+04	1.277E-05	2.338E-03
2080	3.075E+04	1.215E-05	2.224E-03
2081	3.075E+04	1.156E-05	2.115E-03
2082	3.075E+04	1.099E-05	2.012E-03
2083	3.075E+04	1.046E-05	1.914E-03
2084	3.075E+04	9.948E-06	1.821E-03
2085	3.075E+04	9.463E-06	1.732E-03
2086	3.075E+04	9.002E-06	1.647E-03
2087	3.075E+04	8.563E-06	1.567E-03
2088	3.075E+04	8.145E-06	1.491E-03

continued

Table D-62. Emisson Rate of Vinyl Chloride from Parcel 4 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2089	3.075E+04	3.821E-06	1.470E-03
2090	3.075E+04	3.634E-06	1.398E-03
2091	3.075E+04	3.457E-06	1.330E-03
2092	3.075E+04	3.288E-06	1.265E-03
2093	3.075E+04	3.128E-06	1.203E-03
2094	3.075E+04	2.976E-06	1.145E-03
2095	3.075E+04	2.830E-06	1.089E-03
2096	3.075E+04	2.692E-06	1.036E-03
2097	3.075E+04	2.561E-06	9.852E-04
2098	3.075E+04	2.436E-06	9.371E-04
2099	3.075E+04	2.317E-06	8.914E-04
2100	3.075E+04	2.204E-06	8.480E-04
2101	3.075E+04	2.097E-06	8.066E-04
2102	3.075E+04	1.995E-06	7.673E-04
2103	3.075E+04	1.897E-06	7.298E-04
2104	3.075E+04	1.805E-06	6.943E-04
2105	3.075E+04	1.717E-06	6.604E-04
2106	3.075E+04	1.633E-06	6.282E-04
2107	3.075E+04	1.553E-06	5.975E-04
2108	3.075E+04	1.478E-06	5.684E-04
2109	3.075E+04	1.406E-06	5.407E-04
2110	3.075E+04	1.337E-06	5.143E-04
2111	3.075E+04	1.272E-06	4.892E-04
2112	3.075E+04	1.210E-06	4.654E-04
2113	3.075E+04	1.151E-06	4.427E-04
2114	3.075E+04	1.095E-06	4.211E-04
2115	3.075E+04	1.041E-06	4.005E-04
2116	3.075E+04	9.905E-07	3.810E-04
2117	3.075E+04	9.422E-07	3.624E-04
2118	3.075E+04	8.962E-07	3.448E-04
2119	3.075E+04	8.525E-07	3.279E-04
2120	3.075E+04	8.109E-07	3.119E-04
2121	3.075E+04	7.714E-07	2.967E-04
2122	3.075E+04	7.338E-07	2.823E-04
2123	3.075E+04	6.980E-07	2.685E-04
2124	3.075E+04	6.639E-07	2.554E-04
2125	3.075E+04	6.315E-07	2.429E-04
2126	3.075E+04	6.007E-07	2.311E-04
2127	3.075E+04	5.714E-07	2.198E-04
2128	3.075E+04	5.436E-07	2.091E-04
2129	3.075E+04	5.171E-07	1.989E-04
2130	3.075E+04	4.918E-07	1.892E-04
2131	3.075E+04	4.679E-07	1.800E-04
2132	3.075E+04	4.450E-07	1.712E-04
2133	3.075E+04	4.233E-07	1.629E-04
2134	3.075E+04	4.027E-07	1.549E-04
2135	3.075E+04	3.831E-07	1.474E-04
2136	3.075E+04	3.644E-07	1.402E-04
2137	3.075E+04	3.466E-07	1.333E-04
2138	3.075E+04	3.297E-07	1.268E-04
2139	3.075E+04	3.136E-07	1.206E-04
2140	3.075E+04	2.983E-07	1.148E-04
2141	3.075E+04	2.838E-07	1.092E-04
2142	3.075E+04	2.699E-07	1.038E-04
2143	3.075E+04	2.568E-07	9.877E-05
2144	3.075E+04	2.442E-07	9.396E-05
2145	3.075E+04	2.323E-07	8.937E-05
2146	3.075E+04	2.210E-07	8.502E-05
2147	3.075E+04	2.102E-07	8.087E-05
2148	3.075E+04	2.000E-07	7.693E-05
2149	3.075E+04	1.902E-07	7.317E-05
2150	3.075E+04	1.809E-07	6.960E-05
2151	3.075E+04	1.721E-07	6.621E-05
2152	3.075E+04	1.637E-07	6.298E-05
2153	3.075E+04	1.557E-07	5.991E-05
2154	3.075E+04	1.481E-07	5.699E-05
2155	3.075E+04	1.409E-07	5.421E-05
2156	3.075E+04	1.340E-07	5.156E-05
2157	3.075E+04	1.275E-07	4.905E-05
2158	3.075E+04	1.213E-07	4.666E-05

continued

Table D-62. Emisson Rate of Vinyl Chloride from Parcel 4 for Years 1975 to 2203 (concluded).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2159	3.075E+04	1.154E-07	4.438E-05
2160	3.075E+04	1.097E-07	4.222E-05
2161	3.075E+04	1.044E-07	4.016E-05
2162	3.075E+04	9.930E-08	3.820E-05
2163	3.075E+04	9.446E-08	3.634E-05
2164	3.075E+04	8.985E-08	3.456E-05
2165	3.075E+04	8.547E-08	3.288E-05
2166	3.075E+04	8.130E-08	3.128E-05
2167	3.075E+04	7.734E-08	2.975E-05
2168	3.075E+04	7.357E-08	2.830E-05
2169	3.075E+04	6.998E-08	2.692E-05
2170	3.075E+04	6.656E-08	2.561E-05
2171	3.075E+04	6.332E-08	2.436E-05
2172	3.075E+04	6.023E-08	2.317E-05
2173	3.075E+04	5.729E-08	2.204E-05
2174	3.075E+04	5.450E-08	2.096E-05
2175	3.075E+04	5.184E-08	1.994E-05
2176	3.075E+04	4.931E-08	1.897E-05
2177	3.075E+04	4.691E-08	1.804E-05
2178	3.075E+04	4.462E-08	1.716E-05
2179	3.075E+04	4.244E-08	1.633E-05
2180	3.075E+04	4.037E-08	1.553E-05
2181	3.075E+04	3.840E-08	1.477E-05
2182	3.075E+04	3.653E-08	1.405E-05
2183	3.075E+04	3.475E-08	1.337E-05
2184	3.075E+04	3.305E-08	1.272E-05
2185	3.075E+04	3.144E-08	1.210E-05
2186	3.075E+04	2.991E-08	1.151E-05
2187	3.075E+04	2.845E-08	1.094E-05
2188	3.075E+04	2.706E-08	1.041E-05
2189	3.075E+04	2.574E-08	9.903E-06
2190	3.075E+04	2.449E-08	9.420E-06
2191	3.075E+04	2.329E-08	8.961E-06
2192	3.075E+04	2.216E-08	8.524E-06
2193	3.075E+04	2.108E-08	8.108E-06
2194	3.075E+04	2.005E-08	7.712E-06
2195	3.075E+04	1.907E-08	7.336E-06
2196	3.075E+04	1.814E-08	6.979E-06
2197	3.075E+04	1.726E-08	6.638E-06
2198	3.075E+04	1.641E-08	6.314E-06
2199	3.075E+04	1.561E-08	6.006E-06
2200	3.075E+04	1.485E-08	5.714E-06
2201	3.075E+04	1.413E-08	5.435E-06
2202	3.075E+04	1.344E-08	5.170E-06

Table D-63. Emisson Rate of m,p-Xylene from Parcel 4 for Years 1975 to 2203.

Source: H:\3000\030177~2.000\030177~1.003\BUSHVA~1\STRATA4.PRM

Model Parameters

Lo : 170.00 m^3 / Mg
k : 0.0500 1/yr
NMOC : 1870.00 ppmv
Methane : 64.0000 % volume
Carbon Dioxide : 36.0000 % volume
Air Pollutant : mpXylene (HAP/VOC)
Molecular Wt = 106.17 Concentration = 1.260000 ppmV

Landfill Parameters

Landfill type : Co-Disposal
Year Opened : 1974 Current Year : 2004 Closure Year: 2003
Capacity : 30752 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 5271.79 Mg/year

Model Results

Year	Refuse In Place (Mg)	mpXylene (HAP/VOC) Emission Rate (Mg/yr)	(Cubic m/yr)
1975	3.075E+03	2.273E-04	5.146E-02
1976	6.150E+03	4.434E-04	1.004E-01
1977	9.226E+03	6.490E-04	1.470E-01
1978	1.230E+04	8.446E-04	1.913E-01
1979	1.538E+04	1.031E-03	2.334E-01
1980	1.845E+04	1.208E-03	2.735E-01
1981	2.153E+04	1.376E-03	3.116E-01
1982	2.460E+04	1.536E-03	3.479E-01
1983	2.768E+04	1.689E-03	3.824E-01
1984	3.075E+04	1.833E-03	4.152E-01
1985	3.075E+04	1.744E-03	3.949E-01
1986	3.075E+04	1.659E-03	3.757E-01
1987	3.075E+04	1.578E-03	3.573E-01
1988	3.075E+04	1.501E-03	3.399E-01
1989	3.075E+04	1.428E-03	3.233E-01
1990	3.075E+04	1.358E-03	3.076E-01
1991	3.075E+04	1.292E-03	2.926E-01
1992	3.075E+04	1.229E-03	2.783E-01
1993	3.075E+04	1.169E-03	2.647E-01
1994	3.075E+04	1.112E-03	2.518E-01
1995	3.075E+04	1.058E-03	2.395E-01
1996	3.075E+04	1.006E-03	2.279E-01
1997	3.075E+04	9.571E-04	2.167E-01
1998	3.075E+04	9.104E-04	2.062E-01
1999	3.075E+04	8.660E-04	1.961E-01
2000	3.075E+04	8.238E-04	1.866E-01
2001	3.075E+04	7.836E-04	1.775E-01
2002	3.075E+04	7.454E-04	1.688E-01
2003	3.075E+04	7.090E-04	1.606E-01
2004	3.075E+04	6.745E-04	1.527E-01
2005	3.075E+04	6.416E-04	1.453E-01
2006	3.075E+04	6.103E-04	1.382E-01
2007	3.075E+04	5.805E-04	1.315E-01
2008	3.075E+04	5.522E-04	1.250E-01
2009	3.075E+04	5.253E-04	1.190E-01
2010	3.075E+04	4.997E-04	1.131E-01
2011	3.075E+04	4.753E-04	1.076E-01
2012	3.075E+04	4.521E-04	1.024E-01
2013	3.075E+04	4.301E-04	9.739E-02
2014	3.075E+04	4.091E-04	9.264E-02
2015	3.075E+04	3.891E-04	8.812E-02
2016	3.075E+04	3.702E-04	8.382E-02
2017	3.075E+04	3.521E-04	7.974E-02
2018	3.075E+04	3.349E-04	7.585E-02

continued

Table D-63. Emisson Rate of m,p-Xylene from Parcel 4 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2019	3.075E+04	3.186E-04	7.215E-02
2020	3.075E+04	3.031E-04	6.863E-02
2021	3.075E+04	2.883E-04	6.528E-02
2022	3.075E+04	2.742E-04	6.210E-02
2023	3.075E+04	2.608E-04	5.907E-02
2024	3.075E+04	2.481E-04	5.619E-02
2025	3.075E+04	2.360E-04	5.345E-02
2026	3.075E+04	2.245E-04	5.084E-02
2027	3.075E+04	2.136E-04	4.836E-02
2028	3.075E+04	2.031E-04	4.600E-02
2029	3.075E+04	1.932E-04	4.376E-02
2030	3.075E+04	1.838E-04	4.163E-02
2031	3.075E+04	1.748E-04	3.960E-02
2032	3.075E+04	1.663E-04	3.766E-02
2033	3.075E+04	1.582E-04	3.583E-02
2034	3.075E+04	1.505E-04	3.408E-02
2035	3.075E+04	1.432E-04	3.242E-02
2036	3.075E+04	1.362E-04	3.084E-02
2037	3.075E+04	1.295E-04	2.933E-02
2038	3.075E+04	1.232E-04	2.790E-02
2039	3.075E+04	1.172E-04	2.654E-02
2040	3.075E+04	1.115E-04	2.525E-02
2041	3.075E+04	1.061E-04	2.402E-02
2042	3.075E+04	1.009E-04	2.284E-02
2043	3.075E+04	9.596E-05	2.173E-02
2044	3.075E+04	9.128E-05	2.067E-02
2045	3.075E+04	8.683E-05	1.966E-02
2046	3.075E+04	8.259E-05	1.870E-02
2047	3.075E+04	7.856E-05	1.779E-02
2048	3.075E+04	7.473E-05	1.692E-02
2049	3.075E+04	7.109E-05	1.610E-02
2050	3.075E+04	6.762E-05	1.531E-02
2051	3.075E+04	6.432E-05	1.457E-02
2052	3.075E+04	6.119E-05	1.386E-02
2053	3.075E+04	5.820E-05	1.318E-02
2054	3.075E+04	5.536E-05	1.254E-02
2055	3.075E+04	5.266E-05	1.193E-02
2056	3.075E+04	5.010E-05	1.134E-02
2057	3.075E+04	4.765E-05	1.079E-02
2058	3.075E+04	4.533E-05	1.026E-02
2059	3.075E+04	4.312E-05	9.764E-03
2060	3.075E+04	4.101E-05	9.288E-03
2061	3.075E+04	3.901E-05	8.835E-03
2062	3.075E+04	3.711E-05	8.404E-03
2063	3.075E+04	3.530E-05	7.994E-03
2064	3.075E+04	3.358E-05	7.604E-03
2065	3.075E+04	3.194E-05	7.233E-03
2066	3.075E+04	3.038E-05	6.881E-03
2067	3.075E+04	2.890E-05	6.545E-03
2068	3.075E+04	2.749E-05	6.226E-03
2069	3.075E+04	2.615E-05	5.922E-03
2070	3.075E+04	2.488E-05	5.633E-03
2071	3.075E+04	2.366E-05	5.359E-03
2072	3.075E+04	2.251E-05	5.097E-03
2073	3.075E+04	2.141E-05	4.849E-03
2074	3.075E+04	2.037E-05	4.612E-03
2075	3.075E+04	1.937E-05	4.387E-03
2076	3.075E+04	1.843E-05	4.173E-03
2077	3.075E+04	1.753E-05	3.970E-03
2078	3.075E+04	1.668E-05	3.776E-03
2079	3.075E+04	1.586E-05	3.592E-03
2080	3.075E+04	1.509E-05	3.417E-03
2081	3.075E+04	1.435E-05	3.250E-03
2082	3.075E+04	1.365E-05	3.092E-03
2083	3.075E+04	1.299E-05	2.941E-03
2084	3.075E+04	1.235E-05	2.797E-03
2085	3.075E+04	1.175E-05	2.661E-03
2086	3.075E+04	1.118E-05	2.531E-03
2087	3.075E+04	1.063E-05	2.408E-03
2088	3.075E+04	1.011E-05	2.290E-03

continued

Table D-63. Emisson Rate of m,p-Xylene from Parcel 4 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2089	3.075E+04	9.621E-06	2.179E-03
2090	3.075E+04	9.152E-06	2.072E-03
2091	3.075E+04	8.705E-06	1.971E-03
2092	3.075E+04	8.281E-06	1.875E-03
2093	3.075E+04	7.877E-06	1.784E-03
2094	3.075E+04	7.493E-06	1.697E-03
2095	3.075E+04	7.127E-06	1.614E-03
2096	3.075E+04	6.780E-06	1.535E-03
2097	3.075E+04	6.449E-06	1.460E-03
2098	3.075E+04	6.134E-06	1.389E-03
2099	3.075E+04	5.835E-06	1.321E-03
2100	3.075E+04	5.551E-06	1.257E-03
2101	3.075E+04	5.280E-06	1.196E-03
2102	3.075E+04	5.022E-06	1.137E-03
2103	3.075E+04	4.778E-06	1.082E-03
2104	3.075E+04	4.545E-06	1.029E-03
2105	3.075E+04	4.323E-06	9.789E-04
2106	3.075E+04	4.112E-06	9.312E-04
2107	3.075E+04	3.912E-06	8.858E-04
2108	3.075E+04	3.721E-06	8.426E-04
2109	3.075E+04	3.539E-06	8.015E-04
2110	3.075E+04	3.367E-06	7.624E-04
2111	3.075E+04	3.202E-06	7.252E-04
2112	3.075E+04	3.046E-06	6.898E-04
2113	3.075E+04	2.898E-06	6.562E-04
2114	3.075E+04	2.756E-06	6.242E-04
2115	3.075E+04	2.622E-06	5.938E-04
2116	3.075E+04	2.494E-06	5.648E-04
2117	3.075E+04	2.372E-06	5.373E-04
2118	3.075E+04	2.257E-06	5.110E-04
2119	3.075E+04	2.147E-06	4.861E-04
2120	3.075E+04	2.042E-06	4.624E-04
2121	3.075E+04	1.942E-06	4.399E-04
2122	3.075E+04	1.848E-06	4.184E-04
2123	3.075E+04	1.758E-06	3.980E-04
2124	3.075E+04	1.672E-06	3.786E-04
2125	3.075E+04	1.590E-06	3.601E-04
2126	3.075E+04	1.513E-06	3.426E-04
2127	3.075E+04	1.439E-06	3.259E-04
2128	3.075E+04	1.369E-06	3.100E-04
2129	3.075E+04	1.302E-06	2.948E-04
2130	3.075E+04	1.239E-06	2.805E-04
2131	3.075E+04	1.178E-06	2.668E-04
2132	3.075E+04	1.121E-06	2.538E-04
2133	3.075E+04	1.066E-06	2.414E-04
2134	3.075E+04	1.014E-06	2.296E-04
2135	3.075E+04	9.646E-07	2.184E-04
2136	3.075E+04	9.175E-07	2.078E-04
2137	3.075E+04	8.728E-07	1.976E-04
2138	3.075E+04	8.302E-07	1.880E-04
2139	3.075E+04	7.897E-07	1.788E-04
2140	3.075E+04	7.512E-07	1.701E-04
2141	3.075E+04	7.146E-07	1.618E-04
2142	3.075E+04	6.797E-07	1.539E-04
2143	3.075E+04	6.466E-07	1.464E-04
2144	3.075E+04	6.150E-07	1.393E-04
2145	3.075E+04	5.850E-07	1.325E-04
2146	3.075E+04	5.565E-07	1.260E-04
2147	3.075E+04	5.294E-07	1.199E-04
2148	3.075E+04	5.035E-07	1.140E-04
2149	3.075E+04	4.790E-07	1.085E-04
2150	3.075E+04	4.556E-07	1.032E-04
2151	3.075E+04	4.334E-07	9.815E-05
2152	3.075E+04	4.123E-07	9.336E-05
2153	3.075E+04	3.922E-07	8.881E-05
2154	3.075E+04	3.730E-07	8.448E-05
2155	3.075E+04	3.548E-07	8.036E-05
2156	3.075E+04	3.375E-07	7.644E-05
2157	3.075E+04	3.211E-07	7.271E-05
2158	3.075E+04	3.054E-07	6.916E-05

continued

Table D-63. Emisson Rate of m,p-Xylene from Parcel 4 for Years 1975 to 2203 (concluded).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2159	3.075E+04	2.905E-07	6.579E-05
2160	3.075E+04	2.764E-07	6.258E-05
2161	3.075E+04	2.629E-07	5.953E-05
2162	3.075E+04	2.501E-07	5.663E-05
2163	3.075E+04	2.379E-07	5.386E-05
2164	3.075E+04	2.263E-07	5.124E-05
2165	3.075E+04	2.152E-07	4.874E-05
2166	3.075E+04	2.047E-07	4.636E-05
2167	3.075E+04	1.947E-07	4.410E-05
2168	3.075E+04	1.852E-07	4.195E-05
2169	3.075E+04	1.762E-07	3.990E-05
2170	3.075E+04	1.676E-07	3.796E-05
2171	3.075E+04	1.594E-07	3.611E-05
2172	3.075E+04	1.517E-07	3.435E-05
2173	3.075E+04	1.443E-07	3.267E-05
2174	3.075E+04	1.372E-07	3.108E-05
2175	3.075E+04	1.305E-07	2.956E-05
2176	3.075E+04	1.242E-07	2.812E-05
2177	3.075E+04	1.181E-07	2.675E-05
2178	3.075E+04	1.124E-07	2.544E-05
2179	3.075E+04	1.069E-07	2.420E-05
2180	3.075E+04	1.017E-07	2.302E-05
2181	3.075E+04	9.671E-08	2.190E-05
2182	3.075E+04	9.199E-08	2.083E-05
2183	3.075E+04	8.750E-08	1.982E-05
2184	3.075E+04	8.324E-08	1.885E-05
2185	3.075E+04	7.918E-08	1.793E-05
2186	3.075E+04	7.531E-08	1.706E-05
2187	3.075E+04	7.164E-08	1.622E-05
2188	3.075E+04	6.815E-08	1.543E-05
2189	3.075E+04	6.482E-08	1.468E-05
2190	3.075E+04	6.166E-08	1.396E-05
2191	3.075E+04	5.866E-08	1.328E-05
2192	3.075E+04	5.579E-08	1.263E-05
2193	3.075E+04	5.307E-08	1.202E-05
2194	3.075E+04	5.049E-08	1.143E-05
2195	3.075E+04	4.802E-08	1.087E-05
2196	3.075E+04	4.568E-08	1.034E-05
2197	3.075E+04	4.345E-08	9.840E-06
2198	3.075E+04	4.133E-08	9.360E-06
2199	3.075E+04	3.932E-08	8.904E-06
2200	3.075E+04	3.740E-08	8.469E-06
2201	3.075E+04	3.558E-08	8.056E-06
2202	3.075E+04	3.384E-08	7.663E-06

Table D-64. Emisson Rate of o-Xylene from Parcel 4 for Years 1975 to 2203.

Source: H:\3000\030177~2.000\030177~1.003\BUSHVA~1\STRATA4.PRM

Model Parameters

Lo : 170.00 m^3 / Mg
k : 0.0500 1/yr
NMOC : 1870.00 ppmv
Methane : 64.0000 % volume
Carbon Dioxide : 36.0000 % volume
Air Pollutant : oXylene (HAP/VOC)
Molecular Wt = 106.17 Concentration = 0.300000 ppmV

Landfill Parameters

Landfill type : Co-Disposal
Year Opened : 1974 Current Year : 2004 Closure Year: 2003
Capacity : 30752 Mg
Average Acceptance Rate Required from
Current Year to Closure Year : 5271.79 Mg/year

Model Results

Year	Refuse In Place (Mg)	oXylene (HAP/VOC) Emission Rate (Mg/yr)	(Cubic m/yr)
1975	3.075E+03	5.411E-05	1.225E-02
1976	6.150E+03	1.056E-04	2.391E-02
1977	9.226E+03	1.545E-04	3.499E-02
1978	1.230E+04	2.011E-04	4.554E-02
1979	1.538E+04	2.454E-04	5.557E-02
1980	1.845E+04	2.875E-04	6.512E-02
1981	2.153E+04	3.276E-04	7.419E-02
1982	2.460E+04	3.658E-04	8.283E-02
1983	2.768E+04	4.020E-04	9.104E-02
1984	3.075E+04	4.365E-04	9.885E-02
1985	3.075E+04	4.152E-04	9.403E-02
1986	3.075E+04	3.950E-04	8.945E-02
1987	3.075E+04	3.757E-04	8.508E-02
1988	3.075E+04	3.574E-04	8.093E-02
1989	3.075E+04	3.400E-04	7.699E-02
1990	3.075E+04	3.234E-04	7.323E-02
1991	3.075E+04	3.076E-04	6.966E-02
1992	3.075E+04	2.926E-04	6.626E-02
1993	3.075E+04	2.783E-04	6.303E-02
1994	3.075E+04	2.648E-04	5.996E-02
1995	3.075E+04	2.519E-04	5.703E-02
1996	3.075E+04	2.396E-04	5.425E-02
1997	3.075E+04	2.279E-04	5.161E-02
1998	3.075E+04	2.168E-04	4.909E-02
1999	3.075E+04	2.062E-04	4.669E-02
2000	3.075E+04	1.961E-04	4.442E-02
2001	3.075E+04	1.866E-04	4.225E-02
2002	3.075E+04	1.775E-04	4.019E-02
2003	3.075E+04	1.688E-04	3.823E-02
2004	3.075E+04	1.606E-04	3.637E-02
2005	3.075E+04	1.528E-04	3.459E-02
2006	3.075E+04	1.453E-04	3.291E-02
2007	3.075E+04	1.382E-04	3.130E-02
2008	3.075E+04	1.315E-04	2.977E-02
2009	3.075E+04	1.251E-04	2.832E-02
2010	3.075E+04	1.190E-04	2.694E-02
2011	3.075E+04	1.132E-04	2.563E-02
2012	3.075E+04	1.076E-04	2.438E-02
2013	3.075E+04	1.024E-04	2.319E-02
2014	3.075E+04	9.740E-05	2.206E-02
2015	3.075E+04	9.265E-05	2.098E-02
2016	3.075E+04	8.813E-05	1.996E-02
2017	3.075E+04	8.383E-05	1.898E-02
2018	3.075E+04	7.975E-05	1.806E-02

continued

Table D-64. Emisson Rate of o-Xylene from Parcel 4 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2019	3.075E+04	7.586E-05	1.718E-02
2020	3.075E+04	7.216E-05	1.634E-02
2021	3.075E+04	6.864E-05	1.554E-02
2022	3.075E+04	6.529E-05	1.479E-02
2023	3.075E+04	6.211E-05	1.406E-02
2024	3.075E+04	5.908E-05	1.338E-02
2025	3.075E+04	5.620E-05	1.273E-02
2026	3.075E+04	5.345E-05	1.211E-02
2027	3.075E+04	5.085E-05	1.151E-02
2028	3.075E+04	4.837E-05	1.095E-02
2029	3.075E+04	4.601E-05	1.042E-02
2030	3.075E+04	4.377E-05	9.911E-03
2031	3.075E+04	4.163E-05	9.427E-03
2032	3.075E+04	3.960E-05	8.968E-03
2033	3.075E+04	3.767E-05	8.530E-03
2034	3.075E+04	3.583E-05	8.114E-03
2035	3.075E+04	3.408E-05	7.719E-03
2036	3.075E+04	3.242E-05	7.342E-03
2037	3.075E+04	3.084E-05	6.984E-03
2038	3.075E+04	2.934E-05	6.643E-03
2039	3.075E+04	2.791E-05	6.319E-03
2040	3.075E+04	2.654E-05	6.011E-03
2041	3.075E+04	2.525E-05	5.718E-03
2042	3.075E+04	2.402E-05	5.439E-03
2043	3.075E+04	2.285E-05	5.174E-03
2044	3.075E+04	2.173E-05	4.922E-03
2045	3.075E+04	2.067E-05	4.682E-03
2046	3.075E+04	1.966E-05	4.453E-03
2047	3.075E+04	1.871E-05	4.236E-03
2048	3.075E+04	1.779E-05	4.029E-03
2049	3.075E+04	1.693E-05	3.833E-03
2050	3.075E+04	1.610E-05	3.646E-03
2051	3.075E+04	1.532E-05	3.468E-03
2052	3.075E+04	1.457E-05	3.299E-03
2053	3.075E+04	1.386E-05	3.138E-03
2054	3.075E+04	1.318E-05	2.985E-03
2055	3.075E+04	1.254E-05	2.839E-03
2056	3.075E+04	1.193E-05	2.701E-03
2057	3.075E+04	1.135E-05	2.569E-03
2058	3.075E+04	1.079E-05	2.444E-03
2059	3.075E+04	1.027E-05	2.325E-03
2060	3.075E+04	9.765E-06	2.211E-03
2061	3.075E+04	9.289E-06	2.104E-03
2062	3.075E+04	8.836E-06	2.001E-03
2063	3.075E+04	8.405E-06	1.903E-03
2064	3.075E+04	7.995E-06	1.811E-03
2065	3.075E+04	7.605E-06	1.722E-03
2066	3.075E+04	7.234E-06	1.638E-03
2067	3.075E+04	6.882E-06	1.558E-03
2068	3.075E+04	6.546E-06	1.482E-03
2069	3.075E+04	6.227E-06	1.410E-03
2070	3.075E+04	5.923E-06	1.341E-03
2071	3.075E+04	5.634E-06	1.276E-03
2072	3.075E+04	5.359E-06	1.214E-03
2073	3.075E+04	5.098E-06	1.154E-03
2074	3.075E+04	4.849E-06	1.098E-03
2075	3.075E+04	4.613E-06	1.045E-03
2076	3.075E+04	4.388E-06	9.936E-04
2077	3.075E+04	4.174E-06	9.452E-04
2078	3.075E+04	3.970E-06	8.991E-04
2079	3.075E+04	3.777E-06	8.552E-04
2080	3.075E+04	3.592E-06	8.135E-04
2081	3.075E+04	3.417E-06	7.739E-04
2082	3.075E+04	3.251E-06	7.361E-04
2083	3.075E+04	3.092E-06	7.002E-04
2084	3.075E+04	2.941E-06	6.661E-04
2085	3.075E+04	2.798E-06	6.336E-04
2086	3.075E+04	2.661E-06	6.027E-04
2087	3.075E+04	2.532E-06	5.733E-04
2088	3.075E+04	2.408E-06	5.453E-04

continued

Table D-64. Emisson Rate of o-Xylene from Parcel 4 for Years 1975 to 2203 (continued).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2089	3.075E+04	2.291E-06	5.187E-04
2090	3.075E+04	2.179E-06	4.934E-04
2091	3.075E+04	2.073E-06	4.694E-04
2092	3.075E+04	1.972E-06	4.465E-04
2093	3.075E+04	1.875E-06	4.247E-04
2094	3.075E+04	1.784E-06	4.040E-04
2095	3.075E+04	1.697E-06	3.843E-04
2096	3.075E+04	1.614E-06	3.655E-04
2097	3.075E+04	1.535E-06	3.477E-04
2098	3.075E+04	1.461E-06	3.308E-04
2099	3.075E+04	1.389E-06	3.146E-04
2100	3.075E+04	1.322E-06	2.993E-04
2101	3.075E+04	1.257E-06	2.847E-04
2102	3.075E+04	1.196E-06	2.708E-04
2103	3.075E+04	1.138E-06	2.576E-04
2104	3.075E+04	1.082E-06	2.450E-04
2105	3.075E+04	1.029E-06	2.331E-04
2106	3.075E+04	9.791E-07	2.217E-04
2107	3.075E+04	9.313E-07	2.109E-04
2108	3.075E+04	8.859E-07	2.006E-04
2109	3.075E+04	8.427E-07	1.908E-04
2110	3.075E+04	8.016E-07	1.815E-04
2111	3.075E+04	7.625E-07	1.727E-04
2112	3.075E+04	7.253E-07	1.642E-04
2113	3.075E+04	6.899E-07	1.562E-04
2114	3.075E+04	6.563E-07	1.486E-04
2115	3.075E+04	6.243E-07	1.414E-04
2116	3.075E+04	5.938E-07	1.345E-04
2117	3.075E+04	5.649E-07	1.279E-04
2118	3.075E+04	5.373E-07	1.217E-04
2119	3.075E+04	5.111E-07	1.157E-04
2120	3.075E+04	4.862E-07	1.101E-04
2121	3.075E+04	4.625E-07	1.047E-04
2122	3.075E+04	4.399E-07	9.962E-05
2123	3.075E+04	4.185E-07	9.476E-05
2124	3.075E+04	3.981E-07	9.014E-05
2125	3.075E+04	3.786E-07	8.575E-05
2126	3.075E+04	3.602E-07	8.156E-05
2127	3.075E+04	3.426E-07	7.759E-05
2128	3.075E+04	3.259E-07	7.380E-05
2129	3.075E+04	3.100E-07	7.020E-05
2130	3.075E+04	2.949E-07	6.678E-05
2131	3.075E+04	2.805E-07	6.352E-05
2132	3.075E+04	2.668E-07	6.042E-05
2133	3.075E+04	2.538E-07	5.748E-05
2134	3.075E+04	2.414E-07	5.467E-05
2135	3.075E+04	2.297E-07	5.201E-05
2136	3.075E+04	2.185E-07	4.947E-05
2137	3.075E+04	2.078E-07	4.706E-05
2138	3.075E+04	1.977E-07	4.476E-05
2139	3.075E+04	1.880E-07	4.258E-05
2140	3.075E+04	1.789E-07	4.050E-05
2141	3.075E+04	1.701E-07	3.853E-05
2142	3.075E+04	1.618E-07	3.665E-05
2143	3.075E+04	1.539E-07	3.486E-05
2144	3.075E+04	1.464E-07	3.316E-05
2145	3.075E+04	1.393E-07	3.154E-05
2146	3.075E+04	1.325E-07	3.001E-05
2147	3.075E+04	1.260E-07	2.854E-05
2148	3.075E+04	1.199E-07	2.715E-05
2149	3.075E+04	1.140E-07	2.583E-05
2150	3.075E+04	1.085E-07	2.457E-05
2151	3.075E+04	1.032E-07	2.337E-05
2152	3.075E+04	9.816E-08	2.223E-05
2153	3.075E+04	9.337E-08	2.114E-05
2154	3.075E+04	8.882E-08	2.011E-05
2155	3.075E+04	8.449E-08	1.913E-05
2156	3.075E+04	8.037E-08	1.820E-05
2157	3.075E+04	7.645E-08	1.731E-05
2158	3.075E+04	7.272E-08	1.647E-05

continued

Table D-64. Emisson Rate of o-Xylene from Parcel 4 for Years 1975 to 2203 (concluded).

Year	Refuse In Place (Mg)	(Mg/yr)	(Cubic m/yr)
2159	3.075E+04	6.917E-08	1.566E-05
2160	3.075E+04	6.580E-08	1.490E-05
2161	3.075E+04	6.259E-08	1.417E-05
2162	3.075E+04	5.954E-08	1.348E-05
2163	3.075E+04	5.663E-08	1.282E-05
2164	3.075E+04	5.387E-08	1.220E-05
2165	3.075E+04	5.124E-08	1.160E-05
2166	3.075E+04	4.874E-08	1.104E-05
2167	3.075E+04	4.637E-08	1.050E-05
2168	3.075E+04	4.411E-08	9.988E-06
2169	3.075E+04	4.195E-08	9.501E-06
2170	3.075E+04	3.991E-08	9.037E-06
2171	3.075E+04	3.796E-08	8.597E-06
2172	3.075E+04	3.611E-08	8.177E-06
2173	3.075E+04	3.435E-08	7.779E-06
2174	3.075E+04	3.267E-08	7.399E-06
2175	3.075E+04	3.108E-08	7.038E-06
2176	3.075E+04	2.957E-08	6.695E-06
2177	3.075E+04	2.812E-08	6.369E-06
2178	3.075E+04	2.675E-08	6.058E-06
2179	3.075E+04	2.545E-08	5.763E-06
2180	3.075E+04	2.421E-08	5.482E-06
2181	3.075E+04	2.303E-08	5.214E-06
2182	3.075E+04	2.190E-08	4.960E-06
2183	3.075E+04	2.083E-08	4.718E-06
2184	3.075E+04	1.982E-08	4.488E-06
2185	3.075E+04	1.885E-08	4.269E-06
2186	3.075E+04	1.793E-08	4.061E-06
2187	3.075E+04	1.706E-08	3.863E-06
2188	3.075E+04	1.623E-08	3.674E-06
2189	3.075E+04	1.543E-08	3.495E-06
2190	3.075E+04	1.468E-08	3.325E-06
2191	3.075E+04	1.397E-08	3.163E-06
2192	3.075E+04	1.328E-08	3.008E-06
2193	3.075E+04	1.264E-08	2.862E-06
2194	3.075E+04	1.202E-08	2.722E-06
2195	3.075E+04	1.143E-08	2.589E-06
2196	3.075E+04	1.088E-08	2.463E-06
2197	3.075E+04	1.035E-08	2.343E-06
2198	3.075E+04	9.841E-09	2.229E-06
2199	3.075E+04	9.361E-09	2.120E-06
2200	3.075E+04	8.905E-09	2.017E-06
2201	3.075E+04	8.471E-09	1.918E-06
2202	3.075E+04	8.057E-09	1.825E-06

Appendix E
SCREEN3 Model Runs

SCREEN3 Model for Parcel 1.

Strata 1.OUT

02/17/04
11:31:46

```
 ***  SCREEN3 MODEL RUN  ***
 *** VERSION DATED 96043 ***

Bush Valley Strata 1

SIMPLE TERRAIN INPUTS:
   SOURCE TYPE                =          AREA
   EMISSION RATE (G/(S-M**2))  =     0.217450E-04
   SOURCE HEIGHT (M)           =        0.0000
   LENGTH OF LARGER SIDE (M)   =      274.3200
   LENGTH OF SMALLER SIDE (M)  =      167.6400
   RECEPTOR HEIGHT (M)         =        0.0000
   URBAN/RURAL OPTION          =         RURAL
THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

   MODEL ESTIMATES DIRECTION TO MAX CONCENTRATION


BUOY. FLUX =    0.000 M**4/S**3;  MOM. FLUX =    0.000 M**4/S**2.

*** FULL METEOROLOGY ***

**********************************
*** SCREEN AUTOMATED DISTANCES ***
**********************************

*** TERRAIN HEIGHT OF    0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***
```

DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	MAX DIR (DEG)
1.	2678.	6	1.0	1.0	10000.0	0.00	30.
100.	3079.	6	1.0	1.0	10000.0	0.00	29.
200.	1675.	6	1.0	1.0	10000.0	0.00	31.
300.	1019.	6	1.0	1.0	10000.0	0.00	30.
400.	769.8	6	1.0	1.0	10000.0	0.00	28.
500.	626.0	6	1.0	1.0	10000.0	0.00	27.
600.	529.7	6	1.0	1.0	10000.0	0.00	26.
700.	461.5	6	1.0	1.0	10000.0	0.00	24.
800.	411.1	6	1.0	1.0	10000.0	0.00	22.
900.	372.5	6	1.0	1.0	10000.0	0.00	20.
1000.	341.3	6	1.0	1.0	10000.0	0.00	17.
1100.	315.4	6	1.0	1.0	10000.0	0.00	14.
1200.	293.6	6	1.0	1.0	10000.0	0.00	8.
1300.	274.6	6	1.0	1.0	10000.0	0.00	0.
1400.	257.2	6	1.0	1.0	10000.0	0.00	0.
1500.	241.2	6	1.0	1.0	10000.0	0.00	0.
1600.	226.6	6	1.0	1.0	10000.0	0.00	0.
1700.	213.1	6	1.0	1.0	10000.0	0.00	0.
1800.	200.8	6	1.0	1.0	10000.0	0.00	0.
1900.	189.4	6	1.0	1.0	10000.0	0.00	0.
2000.	179.1	6	1.0	1.0	10000.0	0.00	0.
2100.	169.9	6	1.0	1.0	10000.0	0.00	0.
2200.	161.5	6	1.0	1.0	10000.0	0.00	1.
2300.	153.8	6	1.0	1.0	10000.0	0.00	0.
2400.	146.6	6	1.0	1.0	10000.0	0.00	0.
2500.	139.9	6	1.0	1.0	10000.0	0.00	0.
2600.	133.7	6	1.0	1.0	10000.0	0.00	0.
2700.	127.9	6	1.0	1.0	10000.0	0.00	1.
2800.	122.4	6	1.0	1.0	10000.0	0.00	0.

continued

SCREEN3 Model for Parcel 1 (concluded).

```
                                        Strata 1.OUT
   2900.    117.4        6     1.0     1.0 10000.0     0.00       0.
   3000.    112.7        6     1.0     1.0 10000.0     0.00       0.
   3500.    94.01        6     1.0     1.0 10000.0     0.00       0.
   4000.    79.97        6     1.0     1.0 10000.0     0.00       0.
   4500.    69.09        6     1.0     1.0 10000.0     0.00       0.
   5000.    60.51        6     1.0     1.0 10000.0     0.00       0.
   5500.    53.57        6     1.0     1.0 10000.0     0.00       0.
   6000.    47.91        6     1.0     1.0 10000.0     0.00       0.
   6500.    43.16        6     1.0     1.0 10000.0     0.00       0.
   7000.    39.21        6     1.0     1.0 10000.0     0.00       0.
   7500.    35.96        6     1.0     1.0 10000.0     0.00       0.
   8000.    33.12        6     1.0     1.0 10000.0     0.00       0.
   8500.    30.65        6     1.0     1.0 10000.0     0.00       0.
   9000.    28.50        6     1.0     1.0 10000.0     0.00       0.
   9500.    26.60        6     1.0     1.0 10000.0     0.00       0.
  10000.    24.92        6     1.0     1.0 10000.0     0.00       0.
  15000.    14.81        6     1.0     1.0 10000.0     0.00       0.
  20000.    10.48        6     1.0     1.0 10000.0     0.00       0.
  25000.    8.014        6     1.0     1.0 10000.0     0.00       0.
  30000.    6.440        6     1.0     1.0 10000.0     0.00       0.
  40000.    4.633        6     1.0     1.0 10000.0     0.00       0.
  50000.    3.589        6     1.0     1.0 10000.0     0.00       0.

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND     1. M:
   160.    3270.        6     1.0     1.0 10000.0     0.00      30.

     ****************************************
     *** SUMMARY OF SCREEN MODEL RESULTS ***
     ****************************************

 CALCULATION         MAX CONC     DIST TO    TERRAIN
  PROCEDURE         (UG/M**3)     MAX (M)     HT (M)
--------------     -----------    -------    -------
SIMPLE TERRAIN       3270.          160.         0.
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SCREEN3 Model for Parcel 2.

Strata 2.OUT

02/17/04
15:34:25

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 ***  SCREEN3 MODEL RUN  ***
 *** VERSION DATED 96043 ***

Bush Valley Strata 2

SIMPLE TERRAIN INPUTS:
   SOURCE TYPE                =          AREA
   EMISSION RATE (G/(S-M**2)) =     0.368000E-04
   SOURCE HEIGHT (M)          =       0.0000
   LENGTH OF LARGER SIDE (M)  =     198.1200
   LENGTH OF SMALLER SIDE (M) =     137.1600
   RECEPTOR HEIGHT (M)        =       0.0000
   URBAN/RURAL OPTION         =        RURAL
THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

   MODEL ESTIMATES DIRECTION TO MAX CONCENTRATION


BUOY. FLUX =    0.000 M**4/S**3;  MOM. FLUX =    0.000 M**4/S**2.

*** FULL METEOROLOGY ***

**********************************
*** SCREEN AUTOMATED DISTANCES ***
**********************************

*** TERRAIN HEIGHT OF    0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***
```

DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	MAX DIR (DEG)
1.	4134.	6	1.0	1.0	10000.0	0.00	33.
100.	4954.	6	1.0	1.0	10000.0	0.00	33.
200.	1842.	6	1.0	1.0	10000.0	0.00	34.
300.	1219.	6	1.0	1.0	10000.0	0.00	32.
400.	932.8	6	1.0	1.0	10000.0	0.00	31.
500.	758.5	6	1.0	1.0	10000.0	0.00	29.
600.	639.5	6	1.0	1.0	10000.0	0.00	28.
700.	553.9	6	1.0	1.0	10000.0	0.00	26.
800.	490.9	6	1.0	1.0	10000.0	0.00	23.
900.	441.9	6	1.0	1.0	10000.0	0.00	20.
1000.	401.5	6	1.0	1.0	10000.0	0.00	17.
1100.	368.2	6	1.0	1.0	10000.0	0.00	10.
1200.	339.7	6	1.0	1.0	10000.0	0.00	0.
1300.	314.2	6	1.0	1.0	10000.0	0.00	2.
1400.	291.3	6	1.0	1.0	10000.0	0.00	0.
1500.	270.6	6	1.0	1.0	10000.0	0.00	2.
1600.	251.9	6	1.0	1.0	10000.0	0.00	0.
1700.	235.1	6	1.0	1.0	10000.0	0.00	0.
1800.	219.8	6	1.0	1.0	10000.0	0.00	1.
1900.	205.9	6	1.0	1.0	10000.0	0.00	0.
2000.	193.5	6	1.0	1.0	10000.0	0.00	0.
2100.	182.6	6	1.0	1.0	10000.0	0.00	0.
2200.	172.8	6	1.0	1.0	10000.0	0.00	1.
2300.	163.8	6	1.0	1.0	10000.0	0.00	1.
2400.	155.6	6	1.0	1.0	10000.0	0.00	0.
2500.	147.9	6	1.0	1.0	10000.0	0.00	0.
2600.	140.8	6	1.0	1.0	10000.0	0.00	1.
2700.	134.3	6	1.0	1.0	10000.0	0.00	0.
2800.	128.3	6	1.0	1.0	10000.0	0.00	0.

continued

SCREEN3 Model for Parcel 2 (concluded).

```
                                        Strata 2.OUT
  2900.    122.6        6     1.0     1.0 10000.0     0.00       0.
  3000.    117.4        6     1.0     1.0 10000.0     0.00       1.
  3500.    97.04        6     1.0     1.0 10000.0     0.00       1.
  4000.    82.05        6     1.0     1.0 10000.0     0.00       1.
  4500.    70.57        6     1.0     1.0 10000.0     0.00       1.
  5000.    61.57        6     1.0     1.0 10000.0     0.00       1.
  5500.    54.37        6     1.0     1.0 10000.0     0.00       1.
  6000.    48.56        6     1.0     1.0 10000.0     0.00       0.
  6500.    43.65        6     1.0     1.0 10000.0     0.00       1.
  7000.    39.57        6     1.0     1.0 10000.0     0.00       1.
  7500.    36.23        6     1.0     1.0 10000.0     0.00       1.
  8000.    33.37        6     1.0     1.0 10000.0     0.00       1.
  8500.    30.88        6     1.0     1.0 10000.0     0.00       0.
  9000.    28.68        6     1.0     1.0 10000.0     0.00       1.
  9500.    26.75        6     1.0     1.0 10000.0     0.00       1.
 10000.    25.04        6     1.0     1.0 10000.0     0.00       1.
 15000.    14.85        6     1.0     1.0 10000.0     0.00       1.
 20000.    10.49        6     1.0     1.0 10000.0     0.00       1.
 25000.    8.024        6     1.0     1.0 10000.0     0.00       1.
 30000.    6.447        6     1.0     1.0 10000.0     0.00       1.
 40000.    4.633        6     1.0     1.0 10000.0     0.00       0.
 50000.    3.589        6     1.0     1.0 10000.0     0.00       0.

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND     1. M:
   120.    5082.        6     1.0     1.0 10000.0     0.00      33.

     ****************************************
     *** SUMMARY OF SCREEN MODEL RESULTS ***
     ****************************************

 CALCULATION         MAX CONC     DIST TO    TERRAIN
  PROCEDURE         (UG/M**3)     MAX (M)     HT (M)
--------------     -----------    -------    -------
SIMPLE TERRAIN       5082.          120.         0.
```

SCREEN3 Model for Parcel 3.

Strata 3.OUT

02/17/04
15:44:58

*** SCREEN3 MODEL RUN ***
*** VERSION DATED 96043 ***

Bush Valley Strata 3

SIMPLE TERRAIN INPUTS:

SOURCE TYPE	=	AREA
EMISSION RATE (G/(S-M**2))	=	0.405420E-04
SOURCE HEIGHT (M)	=	0.0000
LENGTH OF LARGER SIDE (M)	=	179.8320
LENGTH OF SMALLER SIDE (M)	=	137.1600
RECEPTOR HEIGHT (M)	=	0.0000
URBAN/RURAL OPTION	=	RURAL

THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

MODEL ESTIMATES DIRECTION TO MAX CONCENTRATION

BUOY. FLUX = 0.000 M**4/S**3; MOM. FLUX = 0.000 M**4/S**2.

*** FULL METEOROLOGY ***

****
*** SCREEN AUTOMATED DISTANCES ***
****

*** TERRAIN HEIGHT OF 0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	MAX DIR (DEG)
1.	4462.	6	1.0	1.0	10000.0	0.00	36.
100.	5402.	6	1.0	1.0	10000.0	0.00	36.
200.	1868.	6	1.0	1.0	10000.0	0.00	36.
300.	1246.	6	1.0	1.0	10000.0	0.00	35.
400.	953.5	6	1.0	1.0	10000.0	0.00	34.
500.	774.4	6	1.0	1.0	10000.0	0.00	33.
600.	651.4	6	1.0	1.0	10000.0	0.00	32.
700.	562.8	6	1.0	1.0	10000.0	0.00	30.
800.	497.6	6	1.0	1.0	10000.0	0.00	28.
900.	446.5	6	1.0	1.0	10000.0	0.00	25.
1000.	404.5	6	1.0	1.0	10000.0	0.00	23.
1100.	369.8	6	1.0	1.0	10000.0	0.00	20.
1200.	340.2	6	1.0	1.0	10000.0	0.00	15.
1300.	314.2	6	1.0	1.0	10000.0	0.00	11.
1400.	291.3	6	1.0	1.0	10000.0	0.00	2.
1500.	270.6	6	1.0	1.0	10000.0	0.00	2.
1600.	251.9	6	1.0	1.0	10000.0	0.00	1.
1700.	235.0	6	1.0	1.0	10000.0	0.00	0.
1800.	219.7	6	1.0	1.0	10000.0	0.00	1.
1900.	205.9	6	1.0	1.0	10000.0	0.00	0.
2000.	193.5	6	1.0	1.0	10000.0	0.00	0.
2100.	182.6	6	1.0	1.0	10000.0	0.00	0.
2200.	172.8	6	1.0	1.0	10000.0	0.00	1.
2300.	163.8	6	1.0	1.0	10000.0	0.00	1.
2400.	155.5	6	1.0	1.0	10000.0	0.00	0.
2500.	147.9	6	1.0	1.0	10000.0	0.00	0.
2600.	140.8	6	1.0	1.0	10000.0	0.00	1.
2700.	134.3	6	1.0	1.0	10000.0	0.00	0.
2800.	128.2	6	1.0	1.0	10000.0	0.00	0.

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continued

SCREEN3 Model for Parcel 3 (concluded).

```
                                        Strata 3.OUT
  2900.    122.6        6     1.0     1.0 10000.0     0.00       1.
  3000.    117.4        6     1.0     1.0 10000.0     0.00       1.
  3500.    97.03        6     1.0     1.0 10000.0     0.00       1.
  4000.    82.04        6     1.0     1.0 10000.0     0.00       1.
  4500.    70.57        6     1.0     1.0 10000.0     0.00       1.
  5000.    61.57        6     1.0     1.0 10000.0     0.00       1.
  5500.    54.37        6     1.0     1.0 10000.0     0.00       1.
  6000.    48.55        6     1.0     1.0 10000.0     0.00       0.
  6500.    43.65        6     1.0     1.0 10000.0     0.00       1.
  7000.    39.57        6     1.0     1.0 10000.0     0.00       0.
  7500.    36.23        6     1.0     1.0 10000.0     0.00       1.
  8000.    33.37        6     1.0     1.0 10000.0     0.00       1.
  8500.    30.88        6     1.0     1.0 10000.0     0.00       1.
  9000.    28.68        6     1.0     1.0 10000.0     0.00       1.
  9500.    26.75        6     1.0     1.0 10000.0     0.00       1.
 10000.    25.04        6     1.0     1.0 10000.0     0.00       1.
 15000.    14.85        6     1.0     1.0 10000.0     0.00       1.
 20000.    10.49        6     1.0     1.0 10000.0     0.00       1.
 25000.    8.024        6     1.0     1.0 10000.0     0.00       1.
 30000.    6.447        6     1.0     1.0 10000.0     0.00       1.
 40000.    4.633        6     1.0     1.0 10000.0     0.00       1.
 50000.    3.589        6     1.0     1.0 10000.0     0.00       1.

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND     1. M:
   113.    5497.        6     1.0     1.0 10000.0     0.00      36.

     ****************************************
     *** SUMMARY OF SCREEN MODEL RESULTS ***
     ****************************************

 CALCULATION         MAX CONC     DIST TO    TERRAIN
  PROCEDURE         (UG/M**3)     MAX (M)     HT (M)
--------------     -----------    -------    -------
SIMPLE TERRAIN       5497.          113.         0.
```

SCREEN3 Model for Parcel 4.

Strata 4.OUT

02/17/04
16:06:15

```
 ***  SCREEN3 MODEL RUN  ***
 *** VERSION DATED 96043 ***

Bush Valley Strata 4

SIMPLE TERRAIN INPUTS:
   SOURCE TYPE                =          AREA
   EMISSION RATE (G/(S-M**2)) =     0.717590E-04
   SOURCE HEIGHT (M)          =        0.0000
   LENGTH OF LARGER SIDE (M)  =      152.4000
   LENGTH OF SMALLER SIDE (M) =       91.4400
   RECEPTOR HEIGHT (M)        =        0.0000
   URBAN/RURAL OPTION         =         RURAL
THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

   MODEL ESTIMATES DIRECTION TO MAX CONCENTRATION


BUOY. FLUX =    0.000 M**4/S**3;  MOM. FLUX =    0.000 M**4/S**2.

*** FULL METEOROLOGY ***

**********************************
*** SCREEN AUTOMATED DISTANCES ***
**********************************

*** TERRAIN HEIGHT OF    0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***
```

DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	MAX DIR (DEG)
1.	7305.	6	1.0	1.0	10000.0	0.00	29.
100.	5935.	6	1.0	1.0	10000.0	0.00	31.
200.	2465.	6	1.0	1.0	10000.0	0.00	28.
300.	1679.	6	1.0	1.0	10000.0	0.00	25.
400.	1287.	6	1.0	1.0	10000.0	0.00	22.
500.	1044.	6	1.0	1.0	10000.0	0.00	17.
600.	876.3	6	1.0	1.0	10000.0	0.00	10.
700.	753.0	6	1.0	1.0	10000.0	0.00	0.
800.	658.4	6	1.0	1.0	10000.0	0.00	0.
900.	580.7	6	1.0	1.0	10000.0	0.00	0.
1000.	515.7	6	1.0	1.0	10000.0	0.00	0.
1100.	462.1	6	1.0	1.0	10000.0	0.00	0.
1200.	416.6	6	1.0	1.0	10000.0	0.00	0.
1300.	377.4	6	1.0	1.0	10000.0	0.00	0.
1400.	343.6	6	1.0	1.0	10000.0	0.00	1.
1500.	314.2	6	1.0	1.0	10000.0	0.00	0.
1600.	288.5	6	1.0	1.0	10000.0	0.00	0.
1700.	265.9	6	1.0	1.0	10000.0	0.00	0.
1800.	246.1	6	1.0	1.0	10000.0	0.00	0.
1900.	228.4	6	1.0	1.0	10000.0	0.00	0.
2000.	212.9	6	1.0	1.0	10000.0	0.00	0.
2100.	199.5	6	1.0	1.0	10000.0	0.00	0.
2200.	187.5	6	1.0	1.0	10000.0	0.00	0.
2300.	176.8	6	1.0	1.0	10000.0	0.00	0.
2400.	167.1	6	1.0	1.0	10000.0	0.00	0.
2500.	158.1	6	1.0	1.0	10000.0	0.00	0.
2600.	149.9	6	1.0	1.0	10000.0	0.00	0.
2700.	142.3	6	1.0	1.0	10000.0	0.00	0.
2800.	135.5	6	1.0	1.0	10000.0	0.00	0.

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continued

SCREEN3 Model for Parcel 4 (concluded).

```
                                        Strata 4.OUT
  2900.    129.1         6      1.0     1.0 10000.0     0.00        0.
  3000.    123.4         6      1.0     1.0 10000.0     0.00        0.
  3500.    100.8         6      1.0     1.0 10000.0     0.00        0.
  4000.    84.54         6      1.0     1.0 10000.0     0.00        0.
  4500.    72.26         6      1.0     1.0 10000.0     0.00        0.
  5000.    62.81         6      1.0     1.0 10000.0     0.00        0.
  5500.    55.31         6      1.0     1.0 10000.0     0.00        0.
  6000.    49.20         6      1.0     1.0 10000.0     0.00        0.
  6500.    44.18         6      1.0     1.0 10000.0     0.00        0.
  7000.    40.01         6      1.0     1.0 10000.0     0.00        0.
  7500.    36.60         6      1.0     1.0 10000.0     0.00        0.
  8000.    33.68         6      1.0     1.0 10000.0     0.00        0.
  8500.    31.14         6      1.0     1.0 10000.0     0.00        0.
  9000.    28.90         6      1.0     1.0 10000.0     0.00        0.
  9500.    26.94         6      1.0     1.0 10000.0     0.00        0.
 10000.    25.20         6      1.0     1.0 10000.0     0.00        0.
 15000.    14.88         6      1.0     1.0 10000.0     0.00        0.
 20000.    10.51         6      1.0     1.0 10000.0     0.00        0.
 25000.    8.030         6      1.0     1.0 10000.0     0.00        0.
 30000.    6.447         6      1.0     1.0 10000.0     0.00        0.
 40000.    4.633         6      1.0     1.0 10000.0     0.00        0.
 50000.    3.589         6      1.0     1.0 10000.0     0.00        0.

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND      1. M:
    89.    9066.         6      1.0     1.0 10000.0     0.00       29.

     ****************************************
     *** SUMMARY OF SCREEN MODEL RESULTS ***
     ****************************************

 CALCULATION          MAX CONC      DIST TO     TERRAIN
  PROCEDURE          (UG/M**3)      MAX (M)      HT (M)
--------------      -----------     -------     -------
SIMPLE TERRAIN        9066.           89.          0.
```